Usenet Newsgroup Archive: rec.radio.amateur.antenna

2002-07 - 2002-09

These Usenet messages were preserved as a plain-text archive. This PDF was generated by Digital Library of Amateur Radio & Communications from the source text file in 2026.

Date span: 2002-07-01 through 2002-09-30

Source text: rec.radio.amateur.antenna.txt

Source item: https://archive.org/details/usenet-rec

Messages included in this PDF: 5,898

Message records with no readable body available in the source text: 1

Messages are presented chronologically by archived date.

Binary or encoded payloads are not printed as blocks of encoded text; a placeholder appears where such material was detected. The original source text is unchanged.

1. Re: Ideas for 75 Meter Homebrew Mobile Antenna?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-01 00:02:21 UTC
From: Ed Juge/NM <ed@juge.org>
Message-ID: <3d1f9beb.0@oracle.zianet.com>
Source record: 139794

Hi, Chris...

The only "EFFECTIVE" 75-meter mobile antennas I know have large, center-loading coils at least 3" in diameter (up to 5" or more) and are at least 13-14 feet in overall length. A lot depends on your definition of "effective."

If your interest in 75 mobile is casual, a hamstick-type of antenna will make contacts for you at a small fraction of the cost of homebrewing anything... and it's the least obtrusive thing you can choose. Most 75-meter mobilers I know who build their own are using outrageous center-loaded "bugcatcher coils" for the highest level of efficiency they can achieve. And most of them put out 3-5 S-units more signal than the hamstick types. The difference can be even greater measured against plain whips fed with tune-anything tuners. Don't get me wrong... any of these will work and let you make contacts. It depends on how well you want it to work.

By the time you buy or build a sturdy 3-4 foot stainless steel base section, locate a commercial 5-inch diameter coil and build the center insulator and supports for it, you are almost surely going to have more dollars invested (not including your time) than the cost of, say, one of Henry Allen's great "Texas Bugcatchers." A good screwdriver like Charlie Guines' Stealth-4, if you don't mind a $550 pricetag, will do just about the same job AND offer tunability from the driver's seat.

Good luck and have fun!!

73... Ed, W5EJ

"Christopher A. Bowne" <radiobwn@riconnect.com> wrote in message news:uhu2n4m005o2b7@corp.supernews.com...
> Looking for ideas and construction info on making an EFFECTIVE 75 meter
> mobile antenna to mount either on a bracket attached to a Thule bumper hitch
> type bike carrier (described below) , or on a military type antenna base
> mounted on the side of a stake bodied utuilty trailer towed behind the
> subject vehicle (97 Taurus Wagon). I have a two section nominal 10 foot
> fiberglass military whip (the ones you see on Humvees with the big rubber
> tip) that I am considering using as the basis of a center loaded 75 meter
> antenna. Would like to use something high Q like 1/4 inch OD copper tubing
> for the loading coil.
>
> BTW, the Thule bike mount has proven a very effective installation for
> Hamwhips on 40 through 10 meters, allowing me to work worldwide with a

Yeesu
> FT-100D. I use an L bracket from a trucker type mirror mount, bolted to
the
> top of the nominal 3 foot long 2"x2" pedestal of the bike rack. A small
> plastic enclosure near the feed point allows for feed line termination as
> well as housing any required feed point shunt capacitors (500 pF on 40
> meters). To keep the installation clean looking, I have removed the
actual
> bike rack hardware from the pedestal. The feedpont for the whips is about
4
> feet off the ground, and gets the whole antenna way up and in the clear
with
> slight rake to aft. Heavy wire is used to bond the pedestal to the hitch
> frame as well as directly to the vehicle body.
>
> 73,
>
> Chris, AJ1G
> Stonington, CT
>
>
>
>

2. Re: Choke on Tuner input or output?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-01 00:31:58 UTC
From: Reg Edwards <g4fgq.regp@btinternet.com>
Message-ID: <afo7tujgj1@venus.btinternet.com>
Source record: 139795

```
For radiation from coax feedline download program FEEDPOWR.
----
========================
Regards from Reg G4FGQ
Free Radio Modelling Software
Go to http://www.g4fgq.com
========================
```

3. Re: Choke on Tuner input or output?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-01 00:38:44 UTC
From: richardharrison@webtv.net
Message-ID: <12412-3D1FA494-72@storefull-2392.public.lawson.webtv.net>
Source record: 139797

Gary, K4FMX wrote:
"Without a balun in the case with coax feed, could there not still be radiation by the coax shield as it could look like and share part of the current that the leg of the antenna is commonwith?"

Yes.

If we have a perfectly balanced dipole connected to coax at 90 degrees, and no balun at the junction, the inside surface of the coax shield has two outlets versus one for the center conductor of the coax.

Without a connection to the exterior of the coax shield, loads on both feedline conductors would be alike. But there are two outlets for the inner shield, the dipole element and the outside surface of the coax.

Inherently, without a balun there is imbalance unless we can make the outside of the coax a very high impedance. Make the outside of the coax resonant, and it may have high enough impedance to balasnce the dipole. A broad-band balun may be more satisfactory if you are interested in more than one frequency.

Best regards, Richard Harrison, KB5WZI

4. Re: Choke on Tuner input or output?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-01 00:40:24 UTC
From: gaschafer@attbi.com
Message-ID: <3d1fa4fa.11603830@netnews.attbi.com>
Source record: 139796

On Sun, 30 Jun 2002 18:23:17 -0500, CAM <w5dxp@hotmail.com> wrote:

>Gary Schafer wrote:
>> Without a balun in the case with coax feed, could there not still be
>> radiation by the coax shield
>> as it could look like and share part of the current that the leg of
>> the antenna is common with?
>> Especially if the coax length was close to a 1/4 wave length. Or are
>> you saying that because the
>> coax is 90 degrees from the antenna the antenna would accept all the
>> current?
>
>The thing that saves coax fed resonant dipoles from severe common mode
>problems is that the resonant dipole is a relatively low impedance.
>The impedance looking down the outside of the coax can vary from
>high to low and odds are, one will avoid that lowest impedance due
>to sheer chance (luck). Only hams unlucky enough to pick an outside
>braid length close to a multiple of 1/2WL are likely to encounter
>intolerable common mode problems necessitating the installation of
>a choke. Unfortunately, I have a scar on my lip from my 1950's
>encounter with such an unlucky length along with a metal microphone.
>--
>cheers, CAM http://www.qsl.net/w5dxp
>
>

What I am trying to get at is using the example that Gene described
with the transmitter isolated
(battery powered) from ground. Using a quarter wave length feed line
to a dipole with coax and
no balun. It seems to me that there would be plenty of common mode
current in this case.

This would be a situation where there could be common mode current on
the feed line and no
ground path at the bottom end of the feed line. In other words common
mode current doesn't
necessarily have to flow to ground to be called common mode current
does it?

73
Gary K4FMX

5. Re: Fractal Antenna Information

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-01 00:48:55 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <nv8vhuoh9obkus5kv6beb3qh60o159vl9r@4ax.com>
Source record: 139798

On 30 Jun 2002 15:42:33 -0700, klocko@toad.net (Bill Klocko) wrote:

>fractenna@aol.com (Fractenna) wrote in message
news:<20020630130033.23758.00003018@mb-df.aol.com>...
>> >> I suspect you may be somewhat confused on a thin wire dipole such as
>> commonly
>> >> used by 'hams', which is not self similar about a point. Thus it is not
>> >> surprising that it is not frequency independent.
>> >
>> >The "bow tie" with a 0.000001-degree flare angle is not much different
>> >from a thin wire dipole. 73,
>> >Bill N3WK
>> >
>>
>> Good thinking Bill.
>>
>> No; it has to be self similar about a point.
>>
>> Ask yourself: if I magnify this, zooming in at the feedpoint,at ,say, mag 1 to
>> mag 10, do I see the same image? That is self similarity about a point. That's
>> what gives you the log periodic behavior--in this case continuously. Now think
>> about the opening angle that gives this for this trivial case.
>
>Alright, let's try it again. I zoom in on a bow tie with an opening
>angle of 0.000001-degrees. I see the same image for all zoom factors.
>Are you saying that this particular bow tie is frequency independent?
>73,
>Bill N3WK

Um, Bill,

It was most obvious to the rest of us that though you fit the
definition, the definition (like the claims of the EH or CFA) did not
fit reality. You have independently proven that the author of the
posting responding to you from an insecure terminal at this aol
address is NOT who he claims to be (and is a masquerader wholly
unfamiliar with the topic in spite of spoofed claims to the contrary).

By-the-by, check the last button down the left at:
http://home.attbi.com/~kb7qhc/
for the download you want, let me know if that works.

73's
Richard Clark, KB7QHC

6. Re: Choke on Tuner input or output?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-01 01:00:17 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <i6avhu8pm206bs9fofk3scac09c8vlcfd6@4ax.com>
Source record: 139799

On Mon, 01 Jul 2002 00:40:24 GMT, gaschafer@attbi.com (Gary Schafer) wrote:

>What I am trying to get at is using the example that Gene described
>with the transmitter isolated
>(battery powered) from ground. Using a quarter wave length feed line
>to a dipole with coax and
>no balun. It seems to me that there would be plenty of common mode
>current in this case.
>
>This would be a situation where there could be common mode current on
>the feed line and no
>ground path at the bottom end of the feed line. In other words common
>mode current doesn't
>necessarily have to flow to ground to be called common mode current
>does it?
>
>73
>Gary K4FMX

Hi Gary,

Common Mode quite often means there is a ground reference involved (although not necessarily). The question to you is just what constitutes the reference (if not ground) of the current you describe such as to make it Common Mode? In other words, just what is the Common you rely on? In a balanced system with differential current, it must by definition be a third point outside of that system. Name the third point (inferences from you argument are presumably neither ground, nor from within the system).

73's
Richard Clark, KB7QHC

7. Re: BACK TO BASICS - EM waves, E and H fields, in phase or inquadr...

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-01 01:04:34 UTC
From: stefano <sgalast@tin.it>
Message-ID: <CUNT8.21534$Jj7.567370@news1.tin.it>
Source record: 139800

Hello Tom and others,
I will post my last comment here. I don't like to hear your same observations after so many months.
Many of you are just so skeptic , so closed minded , so negative.

1) the CFa can do the job, but there is some inefficiencies. Please go to the antennex archive and look for the "stefano's cfa experiment". Please follow step by step every instruction. The cfa described will be about 0 - 2db to a vertical full size on 7 mhz.
I personally guided a very skilled italian team on it. They duplicated my data.I can still support anybody wants have a try.
Why the entire world is not filled by CFA? good question, but i think to know the answer.
The inventors decided to be "money oriented" only, keeping all secrets, refusing inspections at the antennas sites. In this way all the engineers went to visiting the installations , couldn't check what they claimed...THEN there are some objective inefficiencies.
Is a very long story. the ham tried to investigate didn't want to hear me.
The experiments were quite expensive, so they gave up.
Is much easy to say..is an hoax, than work for almost one year on it as I did.

2) At the moment we sold about 30 antennas. We have 40 more on the back order . we will deliver them the next week.
All, I repeat, all customers were very happy. about 50% of them run a complete test comparing the eh against a full sized dipole.
They were astonished. The EH antennas performed as claimed.I personally follow each customer.

3) I personally have BIG doubts the disappointed hams you are reporting build and tuned them correctely. I am speaking for personnel experiences. I have offered my help to everybody. I am continuoing to say..please let me know ..if you have bad results ,please send me an email, I will drive you in a complete success. You don't have an idea how many mistakes , how many errors for some "fantasy" creations . the eh antenna is a completely new application. Is important follow some rules, but many "skilled" ham think to know all....who is Steve? I am nobody ,in fact, but I know very well the EH antenna, I am one of the two father.Do you want follow me? Ok, you will be successfull, otherwise no way.
Tom, in the Ted's web site there is a complete document about build a 40 meter eh. Ok , please just follow it, if you have any doubts , please ask me. Don't be creative, just follow the instructions and the hints and kinks.
I have big doubts your friends built one of it....

4) the line....another long long story.
you can use 1 ,5, 10 30 meters and so on long line...but the overall performances will be the same.
the antenna 's pattern is quite spherical, there is some radiation toward the line too....hence there is some rf field coupling with the external coax shield. having a good rf ground in the shack is possible to fix all...
again....you can use 1 meter, half meter of line and the eh antenna will perform the esame, ok?
The EH natenna use a phase to work...the use of ferrites or baluns or....can cause a phase shift to the antenna connector. If you don't compensate it, the antenna stop to work.....you must retune the network, my be change it....but nobody wants hearing us about this topic....we are fool, we are stupid we are speaking of non sense ....and so on....
NO, the reason is different, we have something completely new here, is not on any antenna's book.

simply do this:
connect a EH antenna directely to the rtx with a angle connector, then power it using a CAR battery.
Put all this stuff on a roof or at 5 meters from ground.

where is the ground?
where is the line?
no line, no ground. ok the antenna will perform perfect. I verified it many times.Try it.

5) the entire EH antenna research costs money, a lot of them.
we invested , we have a factory, we have the man workers, we are partecipating to many ham fairs, we are spending money to advertising..do you really think we are stupid?
I could sell one antenna....but then???? if it was an hoax, the day after I would have the antenna back for sure....
where is the benefit? No guys, the EH antenna is real.

I have so many happy customers comments . Please have a look on the www.qrz.com forum at "it really works" .
there are so many american hams experimenting with the antenna, mnay of them are astonished, reporting excellent results.
dear friends you are not updated, there are hundreds of happy EH antenna users....We need just time...you will see it....
The concept is spreading out in Europe....now....

I want attach here one of so many good reports I am receiving daily.

Hello Stefano,
Some progress at last, the rain held off long enough to conduct some on air tests last night.

This is 80 meters, 160 mm pipe, 340 mm elements spaced at 160 mm.
Antenna at ground level
power 10 watts SSB

Comparison Antenna at this QTH --- 2 x 60 foot doublet at 25 feet above ground fed with 600 ohm open wire
feeder
same power to both antennas via coax switch.
further tests will be made with each antenna connected to the TX/RX on its own to ensure that
one ant does not influence the other by having the coax shields connected together by the coax switch.

Distance to other station is only about 8 Kmeters, due West of my QTH
Antenna at other station is 2 x 90 feet doublet fed with 600 ohm open wire at 30 feet above ground.
Both doublets run North - South.
On these first tests the other station had no idea which antenna was in use until the conclusion of the tests.

2:1 SWR points are out of band in that the low is around 3.480 MHz and the upper is 3.820 MHz
1:1 is at 3.620 so not quite symmetrical.

After the tests were completed and the other station reported his findings only then was he informed which antenna was which.

Conclusions
On transmit from Me to remote station
remote station reported :-
antenna 1 readable S 7
antenna 2 readable S7-8 and audio sounded much better than Antenna 1
Very High noise levels were apparent at this time of test -- 19:30 GMT.

Received signal from remote station at my QTH :-
antenna 1

Just readable, s meter at S9 noise report given 3-4/7
S meter did not move from noise level of S9
so the report was a guess!.

Antenna 2
noise level S0
received signal report given 5 /7 perfectly readable
with no difficulties.

Antenna 1 was the doublet
Antenna 2 was the E-H

I have experimented with different coil turns and capacitor values.

given the sizes of pipe and element size What number of turns and what size of capacitor do you recommend for 80
meters?????

Hope this info is of use

Mike

MM3EIY/GM8FYJ

---

ok is just an experiment....but I hope you noted what kind of
results....!!!!
for me is normal, I received so many like this one.
You can't explain such results with the Hertz antennas theory.

humilty, humilty this is the problem.
I can understand....I am just a dumb italian, spending countless houres
investigating on some crazy antennas.
Ok , we are giving the possibilities to everybody, without any secrets, to
see a real news after 100 years in the antennas.
Do you prefere talk and talk, without try it? Ok you are free to do it, but,
please don't comment. IF you don't see it you never believe it . two years
ago I decided to go deep and deep on it. I was right and now I am trying to
help any ham , sharing with everybody what we have learned. It's free.why
not?

I am still available to help everybody to have a working EH on hands.
For those still saying is a waste of time, I can't do anything.we are living
in a democracy.
Sincerly stefano (steve) IK5IIR

"Tom W8JI" <2w8ji@contesting.com> ha scritto nel messaggio
news:3d1cf707.899048731@news.akorn.net...
> On Fri, 28 Jun 2002 11:43:25 GMT, "stefano" <sgalast@tin.it> wrote:
>
> >HI Tom,
> >How are you?
>
> Fine.
>
> I will pay you $10,000 cash US if you have a working CFA or EH antenna
> without significant feedline radiations that comes withing 10dB of my
> 1/4 wl monopole on 160 meters.
>
> I have the field strength meters and monopole, do YOU or Ted (who only
> lives 50 miles away) have a working EH antenna ?
>
> >You can take a 1% wav. EH antenna and compare it against a full size
> >vertical .
> >Ok the overall performances will be the same. that's it.
> >For sure ,in the future, a skilled physicist could explain with the help
of
> >math what we have here.
> >For sure is not a Hertz antenna.
>
> Where is a working antenna for others to see? Do you sell them with a
> money back guarantee?
>
> Or should we take your word for the fact you and Ted have a two-foot

> antenna with 100% efficiency and wide bandwidth?
>
> The EH antenna is based ion the same flawed theories behind the CFA
> antenna.
>
> After years of charging money for plans to build a CFA antenna, where
> are all the working CFA antennas at? Please tell me some US commercial
> stations using working CFA antennas. When the CFA antennas did not
> work, did Antennex refund money for the plans?
>
> Do you agree there is a fine line between enthusaism and
> experimenting, and taking money and time for false claims?
>
> 73 Tom

8. Re: Remote Balanced Tuner.

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-01 01:05:44 UTC
From: 2w8ji@contesting.com
Message-ID: <3d1fa7be.9184951@news.akorn.net>
Source record: 139801

On Sun, 30 Jun 2002 13:08:36 -0500, CAM <w5dxp@hotmail.com> wrote:

>Back to insults, eh?

Why not? I follow, I don't lead.

> I'm sorry, Tom, your statement is simply an Old
>Wives' Tale. Not only are common mode currents related to differential
>mode currents, they are even phase locked.

They are phase locked because they come from one generator or source,
not because they are directly related in impedance values or
interaction.

One case or even a dozen cases where something through a random set of
circumstances tracks does not make it a "rule" when there are clear
exceptions the model does not account for.

I find it ironic and frustrating that you picked at me for an example
that IS always true withing the boundaries I gave, then take liberty
to make a rule without clear well-defined boundaries and dismiss
counter-examples with "well, they aren't common antennas". The
sideways thinking that common mode and differetial mode operation is
directly related is why you were wrong about the tuner, and took hours
to budge from that position.

73 Tom

9. Re: Ideas for 75 Meter Homebrew Mobile Antenna?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-01 01:18:36 UTC
From: Gary - KJ6Q <davison7@gte.net>
Message-ID: <M5OT8.22769$vr5.14620@nwrddc01.gnilink.net>
Source record: 139802

Forget the copper tubing bit for the loading coil - far greater efficiency and compact mass will be
obtained with relatively close-wound wire in the 12-16 guage range...

--
Gary - KJ6Q
****
Two things we'll never see:
1. Perpetual motion...
2. A liberal Democrat complaining
about "Too much government"
"Christopher A. Bowne" <radiobwn@riconnect.com> wrote in message
news:uhu2n4m005o2b7@corp.supernews.com...

<Snippages...>

> Looking for ideas and construction info on making an EFFECTIVE 75 meter
> mobile antenna
> antenna. Would like to use something high Q like 1/4 inch OD copper tubing
> for the loading coil.
>
> Chris, AJ1G
> Stonington, CT
>
>
>
>

10. Re: Fractal Antenna Information

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-01 01:26:41 UTC
From: k1bqt@aol.com
Message-ID: <20020630212641.14380.00001270@mb-mn.aol.com>
Source record: 139803

>Isn't "fathering your own pet" against the law?<

Only if you get caught!

:-) Rick

11. Re: Choke on Tuner input or output?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-01 01:45:21 UTC
From: gaschafer@attbi.com
Message-ID: <3d1fb40f.15466183@netnews.attbi.com>
Source record: 139804

On Sun, 30 Jun 2002 19:38:44 -0500 (CDT), richardharrison@webtv.net (Richard Harrison) wrote:

>Gary, K4FMX wrote:
>"Without a balun in the case with coax feed, could there not still be
>radiation by the coax shield as it could look like and share part of the
>current that the leg of the antenna is commonwith?"
>
>Yes.
>
>If we have a perfectly balanced dipole connected to coax at 90 degrees,
>and no balun at the junction, the inside surface of the coax shield has
>two outlets versus one for the center conductor of the coax.
>
>Without a connection to the exterior of the coax shield, loads on both
>feedline conductors would be alike. But there are two outlets for the
>inner shield, the dipole element and the outside surface of the coax.
>
>Inherently, without a balun there is imbalance unless we can make the
>outside of the coax a very high impedance. Make the outside of the coax
>resonant, and it may have high enough impedance to balasnce the dipole.
>A broad-band balun may be more satisfactory if you are interested in
>more than one frequency.
>
>Best regards, Richard Harrison, KB5WZI
>

Thank you Richard,

I have been following the arguments of moving the balun from one side of a tuner to the other on
these threads. I am trying to sort out fact from fluff.

As Richard Clark asked of me, "what is the third point". I am looking at the current on the coax
outer shield that is originated at the junction of the coax and antenna connection. Whether or not
the opposite end of the coax (where the transmitter is) is grounded or not there can still be
current on the coax shield as you have stated. From all the discussion that has been going on I
am taking that current to be called common mode current.

Let's say we have a 1/2 wave antenna and that a balun is placed at the antenna and a tuner right

behind it. That is fed with coax cable. Swapping positions of the balun and tuner should make
little if any difference in what is called common mode current as there is going to be about the
same impedance on the input of the tuner as there is on the output of it.
.
But if the antenna is a full wave antenna and the balun is at the antenna then the tuner, the balun
is going to be at a high impedance point and less able to reject the common mode current
because it has a lower relative impedance. Now put the tuner at the antenna then the balun to
the coax. Now the balun is operating at a much lower impedance (it is seeing 50 ohms of the
tuner input) than it did when it was at the antenna.

Wouldn't the balun be better able to reject the current that would flow on the feed line in this
case?

Isn't this similar to tuning the frequency up or down from resonance of the antenna when just a
balun is connected to the antenna. In this instance as Cecil has said the common mode current
increases because of the change in load that the antenna presents.

Not trying to re write anything here. Just trying to understand what has already been said.

Thanks
Gary K4FMX

12. FA - Limited Anniversary Release ME-109E RC Plane

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-01 01:54:45 UTC
From: Glenn <ggrrhh@hotmail.com>
Message-ID: <EFOT8.213$KO6.182086@newsfeed.slurp.net>
Source record: 139805

House of Balsa ME-109E Airplane Kit
Limited Anniversary Release Craftsmanship Series
ME-109E Radio Controlled Airplane

http://cgi.ebay.com/aw-cgi/eBayISAPI.dll?ViewItem&item=1745613867

Thanks

13. Re: Remote Balanced Tuner.

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-01 02:16:17 UTC
From: richardharrison@webtv.net
Message-ID: <23543-3D1FBB71-45@storefull-2396.public.lawson.webtv.net>
Source record: 139807

Tom, W8JI wrote:
"They are phase locked because they come from one generator or source,
not because they are directly related in impedance values or
interaction."

No interaction?!

The unbalanced differential-mode signal and the common-mode signal share
a mutual impedance in the exterior of the feedline.

Evidence of mutual impedance is current in one element caused by voltage
across another element, or voltage across one element caused by current
in another element.

Current in an unbalanced antenna places common-mode voltage across a
feedline.

Best regards, Richard Harrison, KB5WZI

14. Re: Fractal antenna, list of web links

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-01 02:37:21 UTC
From: nedrog@aol.comNOSPAM
Message-ID: <20020630223721.14069.00000182@mb-mn.aol.com>
Source record: 139806

The senator is probably looking for a "FRACTUAL" donation..

15. Re: Choke on Tuner input or output?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-01 02:44:02 UTC
From: richardharrison@webtv.net
Message-ID: <20949-3D1FC1F2-260@storefull-2397.public.lawson.webtv.net>
Source record: 139810

Gary, K4FMX wrote:
"Using a quarter wave length line to a dipole with coax and no balun. It seems to me there would be plenty of common mode current in this case."

A 1/2-wave is resonant in the "free-space" example Gary proposes. The exterior of his 1/4-wave coax is directly connected to one element of the dipole. This element is also a 1/4-wave. This combination makes a 1/2-wave Vee. It is resonant and susceptible to excitation.

Best regards, Richard Harrison, KB5WZI

16. Re: Tuner Loss?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-01 03:00:20 UTC
From: Dick Carroll <dixie@townsqr.com>
Message-ID: <afogk4$t04$0@208.207.71.129>
Source record: 139808

Tom W8JI wrote:
>
> On 30 Jun 2002 13:27:59 GMT, Dick Carroll <dixie@townsqr.com> wrote:
>
> >
> > When I did that I found that all my rigs' autotuners and my Drake
> >MN2700 high power manual tuner all had an almost uniform 10 to 12 %
> >loss. Inputting 100 watts I got 88 to 90 watts out.
>
> While I'm not saying it is impossible, that sounds odd.
>
> Most tuners approach 100% efficiency when tuned to 50 ohm or higher
> impedances using maximum possible capacitance.

I was surprised that the loss was that much, but it appeared
consistent.. The method was less than scientific, but was as good as I
had available. I'm glad to hear that it was likely wrong - on that side
of the scale.

Thanks es 73, Dick

>
> They generally have the highest loss into low impedance capacitive
> reactance loads on the lowest bands, and even the worse tuners only
> approach 20% loss into loads of a dozen ohms or less.
>
> The biggest problem with measuring loss is the meters we use. You
> would have to have a fixed reference meter, and move the actual power
> measurement meter from tuner input to output so readings used in
> measuring loss are taken with the same metering system.
>
> Of course it is possible to calibrate two different meters to track,
> but it is generally a very difficult process and less accurate than
> just moving the meter while maintaing power level on a reference meter
> at the rig output.
>
> The best way to measure loss is to measure heat from the tuner. Small
> amounts of loss show up as significant temperature rise over time, and
> that would let you calculate loss with good accuracy into any type of
> load.
>
> In any case, loss is almost always not worth worrying about unless the
> tuner fails from heat.
>
> 73 Tom

17. Re: Fractal Antenna Information

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-01 03:08:03 UTC
From: 'Doc <w5lz@icok.net>
Message-ID: <3D1FC780.2FB202A8@icok.net>
Source record: 139809

Richard,
If I'm reading your post correctly, it sounds
like you're say that if you spread ol'Fraci's
information on a garden, you are certain to see
measurable benefits. Did I get close?
'Doc

18. Re: Choke on Tuner input or output?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-01 03:09:29 UTC
From: richardharrison@webtv.net
Message-ID: <12411-3D1FC7E9-206@storefull-2392.public.lawson.webtv.net>
Source record: 139811

Gary, K4FMX wrote:
"As Richard Clark asked of me, where is the third point?"

Look at the dipole/feedline point. One side of the dipole and the coax exterior are common. They share the other side of the dipole as the other "half" of the antenna.

Best regards, Richard Harrison, KB5WZI

19. Re: Best Coax for HF antenna?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-01 03:25:25 UTC
From: Dick Carroll <dixie@townsqr.com>
Message-ID: <afoi35$2nl$0@208.207.71.129>
Source record: 139812

Ed Juge/NM wrote:
>
> Another option is Belden's 9913F, the "flexible" version of 9913. It does
> not contain air space yet the db loss figures are very, very close to 9913.
>

A few years
> ago, I put a measured 100 watts at 2meters into one end of an 75-ft run of
> new 9913 and measured 40 watts out at the other end... less than I would
> have expected based on the specs.

Thanks, ed. I didn't know about 9913F.

A ham I know tried to use some of the inexpensive silver colored RG8X
on his two meter rig with a run of about 125 feet. With 45 watts in, he
measured 5 watts out at the far end!

73, Dick W0EX

20. Re: Remote Balanced Tuner.

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-01 03:42:44 UTC
From: CAM <w5dxp@hotmail.com>
Message-ID: <3D1FCFB4.6C783592@hotmail.com>
Source record: 139813

Tom W8JI wrote:
>
> CAM <w5dxp@hotmail.com> wrote:
> > I'm sorry, Tom, your statement is simply an Old
> >Wives' Tale. Not only are common mode currents related to differential
> >mode currents, they are even phase locked.
>
> They are phase locked because they come from one generator or source,
> not because they are directly related in impedance values or
> interaction.

How can they come from one source, be phase locked, and still be unrelated? Your example of a feedline coming off at a 45 degree angle proves that even you know how to turn differential currents into common mode currents. We know a number of things we can do to a system to minimize common mode currents. If common mode conditions were unrelated to differential conditions, taking those steps would not accomplish anything.

And I never said they are "directly" related. They can certainly be indirectly related as in the case of inducted currents. But you said they are "not related" and refuse to budge from that position. As I said earlier, we are just going to have to agree to disagree on this one.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

21. Re: Metal Roofs...

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-01 04:04:59 UTC
From: Wayne Faris <wfaris@inebraska.com>
Message-ID: <3D1FD4EB.17A43857@inebraska.com>
Source record: 139814

Back in the mid 60's, I used a Hy-Gain 18HT (Hightower) on a 3 story metal roofed building. The thing worked great for dx on the low bands. Shorter hops or on the upper bands were sometimes a problem.

Wayne L. Faris, KEï¿½BZ

22. Re: Tuner Loss?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-01 04:12:19 UTC
From: "John D. Farr" <jfarr@comcast.net>
Message-ID: <DEQT8.490989$%y.33809765@bin4.nnrp.aus1.giganews.com>
Source record: 139815

Bill:

A loss that needs to be considered when using a tuner is increased transmission line losses. Even though you get a good match with a tuner, the losses in the transmission line increase with increasing VSWR of the antenna, even though your tuner gives you a good match at the transmitter. The ARRL antenna handbook has curves for this. An example. If the VSWR is 2:1 at the antenna, and there are 3 dB of transmission line losses (from transmission line tables or measurement in a matched system), the experienced losses will be about 3.3 dB. This isn't bad. If the VSWR at the antenna is 10:1 under the same conditions, the loss experienced goes to about 6.7 dB. With a 20:1 VSWR the experienced losses goes to 9.4 dB. You need to consider this phenomenon when using tuners with mismatched loads, particularly with random wires and mobile whip antennas that are not resonant.

John
KC4ZXX

"Bill Cherepy" <jcherepy@mediaone.net> wrote in message
news:qjkshu4n995hja6h2p2vt1i8ikudbbrhl7@4ax.com...
> How much loss (If any) does a well made/designed tuner introduce?
>
> Thanks,
>
> Bill - WB4WTN
>
>
> Bill Cherepy
> Grayson, GA

23. Re: Shipping antennas

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-01 04:14:46 UTC
From: Wayne Faris <wfaris@inebraska.com>
Message-ID: <3D1FD736.9B597135@inebraska.com>
Source record: 139816

I shipped an oversized vertical antenna a few months back by UPS. The oversize charge was not too bad, but they stick you with something I think they called a density charge. They have some sort of ratio of volume to weight. They figure that any given volume needs to have a certain amount of weight. If you have a light bulky item, you are taking up space they could be filling with more packages from other customers. Because of this, they charge you for the weight that would normally fill that space. I ended up having to pay for 30 pounds when the packaged antenna only weighed 10 pounds. Fortunately, I was only shipping it a couple of hundred miles.

Wayne L. Faris, KEï¿½BZ

Dan Richardson wrote:

> I beleive UPS will, for an extra charge, accept some over weight and
> size packages. Have you double checked it see if that is possible?
>
> Danny
>
> On 14 Jun 2002 21:04:20 GMT, hrbcrb@aol.com.goaway (KF6HHS) wrote:
>
> >I have to get an antenna shiped from Ohio to Southern California. The antenna
> >will be packed in a 6 inch tube 10 foot long, estimated weight of 40 pounds.
> >UPS has a limit of 9 feet/108", my tube is 10 feet/120". Called Consolidated
> >Freight and they quote over $257.00 - anyone have a suggestion.
> >
> >How do they ship thoes 20 foot Station Masters!
> >
> >Thanks and regards, Hugh KF6HHS
> >Retired, now life moves at my pace.
> >please note spam filter

24. Re: Choke on Tuner input or output?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-01 04:25:16 UTC
From: richardharrison@webtv.net
Message-ID: <23541-3D1FD9AC-295@storefull-2396.public.lawson.webtv.net>
Source record: 139817

Gary, K4FMX wrote:
"Swapping positions of the balun and tuner should make little difference in what is called common mode current as there is going to be about the same (common-mode) impedance on the input of it as there is on the output of it."

Well said.

"But if the antenna is a full wave antenna and the balun is at the antenna then the tuner, the balun is going to be at a high impedance point and less able to reject the common mode current because it has a lower relative impedance."

Certainly true when the balun is at the antenna. Feedline length could make things better at the tuner for balun placement with the balun`s limited inductance as an opponent of unbalanced current.

"Now put the tuner at the antenna then the balun to the coax. Now the balun is at a much lower impedance---."

That`s it! The balun can be effective with an ungrounded tuner. The balun shouldn`t be overstressed and the coax should not radiate or burn Cecil`s lips.

One problem is access to tuner adjustments. Cecil`s plan for controlling impedance on the earth end of the aerial feedline may be a way to bring things down to earth.

Best regards, Richard Harrison, KB5WZI

25. Re: BACK TO BASICS - EM waves, E and H fields, in phase or inquadr...

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-01 04:54:47 UTC
From: richardharrison@webtv.net
Message-ID: <23541-3D1FE097-296@storefull-2396.public.lawson.webtv.net>
Source record: 139669

EH antenna trial:
"Comparison Antenna at this QTH --- 2x60 foot doublet at 25 feet above
ground with 600 ohm open wire feeder"

Was this vertically polarized?

There is no ground wave propagation of horizontally polarized waves.

Best regards, Richard Harrison, KB5WZI

26. Re: Apartment HF antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-01 05:05:04 UTC
From: ckesler@chartermi.net
Message-ID: <uhvo669c196pe1@corp.supernews.com>
Source record: 139818

"Dick Hughes" <rhughes33@cableone.net> wrote in message
news:524uhukkk546ocfaqt6rc5bmhcfmqcpal3@4ax.com...
> Take a look at this month's QST magazine. There is a small, 10 thru
> 40 vertical in there that only costs a few dollars, and can be taken
> down to 2-foot sections quickly. Would be perfect for your balcony.

Are you referring to the June or July issue? I have the July issue, and there are several ads for "apartment" / mobile antennas. The MFJ-1622 has sparked my interest. If you could tell me more information about this antenna, such as where in the QST mag, that would be great. Like I said, I'm new to amateur radio, and I am learning from every post. I would really just like a HF antenna that can be put up and taken down quickly.

I also want to thank everone who has replied to this post so far. The posts have given me more ideas and options on how to accomplish HF "stealth" hamming operation. Of course, the more ideas the better.

73

Kes
KC8UIE

27. Re: CAM?? Parallel dipoles for 80 m and 40 m?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-01 05:33:42 UTC
From: John <my-callsign@qsl.net>
Message-ID: <WQRT8.1128$ee3.180679@news11-gui.server.ntli.net>
Source record: 139670

I use 5 dipoles in parallel for 20 thru 10 and have a low SWR on all bands.
The wires run parallel at about 5 inches apart.
All seems to work fine.

John,G4IRN.

"StarGazer" <pti@capnet.com> wrote in message
news:3D1F5D4B.44C19721@capnet.com...
> What is the disadvantage of using 2 dipoles (1 for 80 m and the
> other for 40 m) cut for the center of their bands.... fed at the
> same point with the 150' length of RG-8 and run parallel about
> 6 inches apart?? The 40 m has its own insulators on its ends,
> of course, and cut for 66'.
>
> Is their any disadvantage with BW, too much loss somewhere
> or some other reason? Compared to having 2 seperate dipole
> for 80 m and 40 m fed withseperate RG-8 runs.
>
> I still can't understand how ladder line can work so well being
> so much higher of a Z than the input Z of any dipole its connected
> to. Seems like it would always need a tuner to work.
>
> thanks
>
>
>

28. Re: Choke on Tuner input or output?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-01 05:56:06 UTC
From: CAM <w5dxp@hotmail.com>
Message-ID: <3D1FEEF6.CE5EA1CA@hotmail.com>
Source record: 139672

Gary Schafer wrote:
> But if the antenna is a full wave antenna and the balun is at the
> antenna then the tuner, the balun
> is going to be at a high impedance point and less able to reject the
> common mode current
> because it has a lower relative impedance. Now put the tuner at the
> antenna then the balun to
> the coax. Now the balun is operating at a much lower impedance (it is
> seeing 50 ohms of the
> tuner input) than it did when it was at the antenna.

I apologize if I am the source of this misunderstanding. Tom's explanation made me realize that moving the balun/choke doesn't move the unbalanced/balanced junction point. If the balun is the only thing that changes position, whatever conditions existed conducive to the origination of conducted common mode currents still exist at the same unbalanced/balanced point no matter where the balun/choke is located. The principle is easy to see in the following examples:

XMTR------------coax-------choke-x-------ladder-line-----balanced antenna

XMTR--choke-----coax-------------x-------ladder-line-----balanced antenna

Even though the choke has moved, the problem area continues to be at point (x) and the stress on both chokes originates at point (x). And I am not saying that the common mode currents would be equal in the two cases.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
------== Over 80,000 Newsgroups - 16 Different Servers! =-----

29. Re: CAM?? Parallel dipoles for 80 m and 40 m?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-01 05:57:32 UTC
From: CAM <w5dxp@hotmail.com>
Message-ID: <3D1FEF4C.C7632C28@hotmail.com>
Source record: 139673

John wrote:
> I use 5 dipoles in parallel for 20 thru 10 and have a low SWR on all bands.
> The wires run parallel at about 5 inches apart. All seems to work fine.

During trimming, how much interaction did you experience?
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

30. info for a Coax Monopole Antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-01 08:34:38 UTC
From: OE1MWW <no.mail@please.com>
Message-ID: <il40iuolbs98sf59vca2epq1btnodi66mf@4ax.com>
Source record: 139674

Hi all,

I have updated my web page with an Excel sheet to calculate a Coax Monopole for short wave. I am using such antennas for 17 and 20 m and worked from OE portable a lot of Eurpeans and a W3 - with 5 watts only!

Have a look and have fun! http://www.qsl.net/oe1mww/ and go to 'station'. The antenna info is at the bottom of the page. Download the .pdf and the .exe or the .xls to make your own design.

Feel free to contact me at oe1mww @qsl.net (remove the space before the @)

73's
Wolfgang OE1MWW

31. Re: BACK TO BASICS - EM waves, E and H fields, in phase or inquadr...

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-01 09:15:56 UTC
From: Francesco Messineo <frank@ares.ccii.unipi.it>
Message-ID: <afp6kc$cm4$1@serra.unipi.it>
Source record: 139675

Roy Lewallen <w7el@eznec.com> wrote:

> You seem to be just about the only person who can do this. Nearly
> everyone else who has tried has failed.

Just for the record, take a look at the following pages, I believe these
tests are made with a good amount of knowledge and without leaving
too much room for luckiness.

http://www.qsl.net/iz7ath/web/02_brew/18_eh/index.htm

73
Francesco IZ5DWF

32. Re: Patch Antennas

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-01 09:18:18 UTC
From: samsvl@nlr.nl
Message-ID: <Xns923E72FFD881Dsamsvlnlrnl@137.17.96.14>
Source record: 139676

"George Sarmonikas" <george@sarmonikas.com> wrote in
news:3d14711d$1$8511$ed9e5944@reading.news.pipex.net:

> Anybody has any ideas or design docs for Patch antennas?
>
> Thanks
>
>
Hi George,

Search Google with 'patch antenna'

Sam

33. Re: BACK TO BASICS - EM waves, E and H fields, in phase or inquadr...

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-01 10:08:12 UTC
From: stefano <sgalast@tin.it>
Message-ID: <gSVT8.22041$Jj7.586160@news1.tin.it>
Source record: 139677

Hello,
the Talino 's experiment is just an experiment ....Taino knows it very well.
You don't have to assume as "bible" just an experiment.
Dear Francesco, I sent my congratulations to Talino , but I think should be
a must include in front of his or your words..
a simple statement:
The Talino's antenna is showing...or
his antenna showed this data...or
at the moment the Talino's antenna is saying us....

BUT instead of this I am reading a lot of affirmations..wrong
affirmations...
The EH antenna is ....
The EH antenna is ...db under....
and so on...

first of all we should be professional.
when the commercial 160 meters eh will be ready, it will keep our promises.
steve Ik5IIR

"Francesco Messineo" <frank@ares.ccii.unipi.it> ha scritto nel messaggio
news:afp6kc$cm4$1@serra.unipi.it...
> Roy Lewallen <w7el@eznec.com> wrote:
>
> > You seem to be just about the only person who can do this. Nearly
> > everyone else who has tried has failed.
>
> Just for the record, take a look at the following pages, I believe these
> tests are made with a good amount of knowledge and without leaving
> too much room for luckiness.
>
> http://www.qsl.net/iz7ath/web/02_brew/18_eh/index.htm
>
> 73
> Francesco IZ5DWF

34. Re: Remote Balanced Tuner.

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-01 11:03:38 UTC
From: 2w8ji@contesting.com
Message-ID: <3d203632.45657999@news.akorn.net>
Source record: 139678

On Sun, 30 Jun 2002 22:42:44 -0500, CAM <w5dxp@hotmail.com> wrote:

>Tom W8JI wrote:
>>
>> CAM <w5dxp@hotmail.com> wrote:
>> > I'm sorry, Tom, your statement is simply an Old
>> >Wives' Tale. Not only are common mode currents related to differential
>> >mode currents, they are even phase locked.
>>
>> They are phase locked because they come from one generator or source,
>> not because they are directly related in impedance values or
>> interaction.
>
>How can they come from one source, be phase locked, and still be
>unrelated?

The IMPEDANCES and INTERACTIONS with regard to voltage and current,
which is at the root of the whole discussion, are unrelated.

You keep trying, because the same source supplies energy, to tie them
dorectly together in some sort of unbendable relationship...which is
what continually gets you in trouble with sssystems like baluns and
tuners.

Good night Cecil, go play head games with someione else.

35. Re: BACK TO BASICS - EM waves, E and H fields, in phase or inquadr...

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-01 11:10:16 UTC
From: Michele IZ2EAS <iz2eas@libero.it>
Message-ID: <afpd6v$fuh3t$1@ID-149021.news.dfncis.de>
Source record: 139679

"stefano" <sgalast@tin.it> ha scritto nel messaggio
news:gSVT8.22041$Jj7.586160@news1.tin.it...
> first of all we should be professional.
> steve Ik5IIR

Professional is exactly what you are NOT being... may I suggest you to post
on your WEB site the results of some actual measurements professionally made
(at least at "the Talino's way") ?? So far, his measurements are the ONLY
one available to the public; so we can refer only to them !
Best 73,

Michele

36. Re: BACK TO BASICS - EM waves, E and H fields, in phase or inquadr...

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-01 11:48:47 UTC
From: UnTale <io@io.it>
Message-ID: <zkXT8.92390$j65.2243390@twister1.libero.it>
Source record: 139680

> Hello,

Hi

> the Talino 's experiment is just an experiment ....Talino knows it very
>well.

Ok, I like call it just a simple "test"; experiment is something for man of
science,
I'm simply a radioamateur :-))
I've just made what you said me to make: no more!
measures, tuning procedure and other thing are exactly as you have suggested
to me.

> You don't have to assume as "bible" just an experiment.
> Dear Francesco, I sent my congratulations to Talino , but I think should
>be a must include in front of his or your words..
> a simple statement:
> The Talino's antenna is showing...or
> his antenna showed this data...or
> at the moment the Talino's antenna is saying us....
> BUT instead of this I am reading a lot of affirmations..wrong
> affirmations...

Oh, I think that's exactly what I 've made on my web! read it!

> The EH antenna is ....
> The EH antenna is ...db under....
> and so on...
> first of all we should be professional.

I'm sorry, if somebody will pay me, I'll be professional,
for the moment I just enjoy "playing" with EH.
By the way, my aim was simply one: compare the EH with
a common antenna for 160 mt (a 10 mt vertical);
If what people say about EH is true ("it performs as well as a full size
dipole"),
then I'll be the first to use EH instead of other antennas;
but at moment these are my results, and they say to me that
EH does not perform as well as a full size dipole;
I'm not sure (at present time) if these results are due to a my mistake or
not,
but a friend gave me his "original" EH (made by you) for 40 mt band for some
week;
when I'll have free time, I want to compare it with a horizotal dipole and a
1/4 lambda vertical;

May be that's the only way to see if EH "performs as well as a full size
dipole" or not.
ciao
--
73 de iz7ath, Talino
Homebrew, RF projects and digital tecniques on
http://www.qsl.net/iz7ath
IZ7ATH Talino +39 338 5029196

37. Re: BACK TO BASICS - EM waves, E and H fields, in phase or inquadr...

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-01 11:54:45 UTC
From: 2w8ji@contesting.com
Message-ID: <3d203782.45994580@news.akorn.net>
Source record: 139681

On Mon, 01 Jul 2002 01:04:34 GMT, "stefano" <sgalast@tin.it> wrote:

>Hello Tom and others,
>I will post my last comment here. I don't like to hear your same
>observations after so many months.
>Many of you are just so skeptic , so closed minded , so negative.

It is your opinion the rest of the world is closed minded:

1.) It is your team who refuses to provide an antenna that we can compare in a test. You say you have them working, and I will pay you $10,000 if you bring one here that ties or beats my monopole. (Feedline radiation is NOT allowed, the antenna must radiate) All you need to do is pay me for the engineering time at $100 dollars an hour if it does NOT.

If I had an antenna that worked, and lived only 50 miles away (like Hart does) I'd throw it in a car and make a quick $10,000 dollars.

2.) It is your team who dismisses the many tests that can not make your antenna work. Is your antenna simple to build and make work, or is it not? Which is it?

3.) It is your team who keeps saying "we have an antenna that works" and a few minute later changes it to "you will see as soon as we get one working" Which is it? Do you have one working, or do you not?

4.) It is your team who can not answer simple technical questions, like how it is possible to feed a two-terminal system (a dipole) with current in each half 90 degrees out-of-phase from voltage and have NO reacytance at the feedpoint and no common mode current making the feedline radiate.

5.) It is your team who thinks radiation comes from electric and magnetic static fields, and not charge acceleration. Nothing in physics agrees with that. Fields are ways we explain interactions of charges, they are NOT the cause of interactions.

6.) It is your team that dismisses clear signs the feedline is radiating, such as reports of severe RFI when the feedline is near noise sources.

>1) the CFa can do the job, but there is some inefficiencies. Please go to
>the antennex archive and look for the "stefano's cfa experiment". Please
>follow step by step every instruction. The cfa described will be about 0 -
>2db to a vertical full size on 7 mhz.

Just a few years ago, Ted Hart and others in your group proclaimed the CFA a working system. They reported it worked as claimed, which was several dB above a full size antenna.

After selling plans for money to people, it was suddenly declared the CFA does not work as claimed, and is impossible to build because it is "too critical to adjust". The EH was the answer, easy to build and full efficiency.

Now once again, no one else makes one work. Only the people selling the idea.

HOW MUCH MONEY WAS RETURNED TO PEOPLE FROM THE CFA that did not work?

>I personally guided a very skilled italian team on it. They duplicated my
>data.I can still support anybody wants have a try.

Where is this "skilled team" and antenna, and how do you train to build an antenna? The only working CFA is in Egypt, where is the working EH antenna hidden?

>Why the entire world is not filled by CFA? good question, but i think to
>know the answer.
>The inventors decided to be "money oriented" only, keeping all secrets,
>refusing inspections at the antennas sites. In this way all the engineers
>went to visiting the installations , couldn't check what they claimed...THEN
>there are some objective inefficiencies.

There may be other reasons why engineers could not check. As I understand, they never let them look at the feedlines or power in feedlines. They only allowed them to measure FS at a distance, and not actually see what antenna was being used.

Allowing someone to see what feedline has power, or to sniff RF around the feedlines is NOT keeping a trade secret. It is hiding something else, not technology!

One early report that said the system was measured by an independent source showed the CFA 10 or more dB down from a normal antenna. Perhaps that is the real reson why no one was allowed to make further measuremnents near the antenna.

That may also be why no one is allowed to see a working EH antenna in a test environment.

>Is a very long story. the ham tried to investigate didn't want to hear me.
>The experiments were quite expensive, so they gave up.
>Is much easy to say..is an hoax, than work for almost one year on it as I
>did.

So you have a simple easy to build broadband antenna that takes the only people in the world who know how it works one year to make work.

If I took one year to make a simple antenna with two or three coils and two capacitors and two pieces of tubing work, I'd go find another

occupation!

>2) At the moment we sold about 30 antennas. We have 40 more on the back
>order . we will deliver them the next week.
>All, I repeat, all customers were very happy. about 50% of them run a
>complete test comparing the eh against a full sized dipole.
>They were astonished. The EH antennas performed as claimed.I personally
>follow each customer.

Please publish some names, or better tell us where to see one. If you have them working, why not bring one here?

I will pay all the costs to test an antenna in an accredited lab recognized to do this work professionally IF the antenna works as claimed, and the feedline does not radiate. If it does not work as claimed, YOU pay all the costs for everyone. Isn't that fair?

>3) I personally have BIG doubts the disappointed hams you are reporting
>build and tuned them correctely. I am speaking for personnel experiences.

I have big doubts the antenna works as claimed. We are even.

The proof is seeing one.

>5) the entire EH antenna research costs money, a lot of them.
>we invested , we have a factory, we have the man workers, we are
>partecipating to many ham fairs, we are spending money to advertising..do
>you really think we are stupid?

Yes, I do. Very much so.

Anyone who thinks a two-terminal load can be fed with 90-degree phase differences must be stupid.

Almost anything will radiate. Many people love antennas that are ten or more dB down from a d ipole. For example, you will find many B&W dipoles used on 80 meters or 160 meters, where they are 10% efficient and people love them.

You will find people who swear by the Gap antennas on lower bands, even when they measure nearly the same amount down from a conventional vertical.

You will find people who love the Sommer T-25, even though it is very inefficent on lower bands.

I make contacts with Europe and Australia on my small mobile antenna on 160-meters, and it is only 1% efficient. I could invent some big lie, and sell them and many poeple would be happy.

People pay hundreds of dollars to change PIN diodes in radios, when it makes no difference in performance.

Finding people who are happy with nothing or very little is not difficult to do, if you sell them that something works with enough

confusing stories about how wonderful it is. For example, people purchase magnets for fuel lines to improve automobile efficiency and even purchase little propellers to "supercharge", and if you ask them about hald say they work.

If you measure them, none work and some actually hurt.

What matters is how truthful the stories are.

Where can we see an antenna that works in a fair A-B comparison? Name a big technically skilled person with a history of being reliable who has one that works.

73 Tom

38. Re: Tuner Loss?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-01 12:17:59 UTC
From: Dan Richardson <k6mhe@arrl.net>
Message-ID: <okh0iu01k83nsim1h0vbesvjjgbfkarv8l@4ax.com>
Source record: 139682

On Mon, 01 Jul 2002 04:12:19 GMT, "John D. Farr" <jfarr@comcast.net>
wrote:

The db losses on the transmission line remain the same on the line
regardless if a tuner is used or not. If there is any increase in loss
it is because you are now putting more power into the system, but the
ratio remains the same.

The question should be how much more power am I radiating on a given
system with a tuner than without.

Additionally, losses are also frequency dependent. For example, using
a 100 feet of RG-213 on 80-meters a SWR of 10:1 will produce an
additional loss of of only 1 dB due to SWR. Re: ARRL handbook.

Danny, K6MHE

>Bill:
>
>A loss that needs to be considered when using a tuner is increased
>transmission line losses. Even though you get a good match with a tuner, the
>losses in the transmission line increase with increasing VSWR of the
>antenna, even though your tuner gives you a good match at the transmitter.
>The ARRL antenna handbook has curves for this. An example. If the VSWR is
>2:1 at the antenna, and there are 3 dB of transmission line losses (from
>transmission line tables or measurement in a matched system), the
>experienced losses will be about 3.3 dB. This isn't bad. If the VSWR at the
>antenna is 10:1 under the same conditions, the loss experienced goes to
>about 6.7 dB. With a 20:1 VSWR the experienced losses goes to 9.4 dB. You
>need to consider this phenomenon when using tuners with mismatched loads,
>particularly with random wires and mobile whip antennas that are not
>resonant.
>
>John
>KC4ZXX
>
>
>
>
>"Bill Cherepy" <jcherepy@mediaone.net> wrote in message
>news:qjkshu4n995hja6h2p2vt1i8ikudbbrhl7@4ax.com...
>> How much loss (If any) does a well made/designed tuner introduce?
>>
>> Thanks,
>>
>> Bill - WB4WTN

>>
>>
>> Bill Cherepy
>> Grayson, GA
>

39. Re: Remote Balanced Tuner.

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-01 12:37:17 UTC
From: CAM <w5dxp@hotmail.com>
Message-ID: <3D204CFD.EF9A2DF9@hotmail.com>
Source record: 139683

Tom W8JI wrote:
> You keep trying, because the same source supplies energy, to tie them
> dorectly together in some sort of unbendable relationship...

Saying that I said something that I didn't is simply a diversion, Tom.
The only question is: Are common mode currents and differential mode
currents unrelated as you say? The answer is no and you are simply
wrong to say so.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

40. Ham Band Use for Direct TV Dish and LNA?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-01 12:57:12 UTC
From: "Christopher A. Bowne" <radiobwn@riconnect.com>
Message-ID: <uhu1nt3spv7f6c@corp.supernews.com>
Source record: 139741

A discarded (for reasons unknown) DirecTV dish and LNA followed me home from the freebie shed at our local town dum..err. solid waste recycling facility. Other than mounting it on the house to fool the neighbors into thinking we have satellite TV, does it have any practical UHF ham band application?

Chris, AJ1G
Stonington, CT

41. Ham Band Use for Direct TV Dish and LNA?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-01 12:57:12 UTC
From: "Christopher A. Bowne" <radiobwn@riconnect.com>
Message-ID: <uhu1nu92c0ft6e@corp.supernews.com>
Source record: 139742

A discarded (for reasons unknown) DirecTV dish and LNA followed me home from the freebie shed at our local town dum..err. solid waste recycling facility. Other than mounting it on the house to fool the neighbors into thinking we have satellite TV, does it have any practical UHF ham band application?

Chris, AJ1G
Stonington, CT

42. Re: Auto tuner + MA5V = Full HF band TX?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-01 13:08:42 UTC
From: Vito <vito@crosslink.net>
Message-ID: <3D20545A.907B2A09@crosslink.net>
Source record: 139684

Bill wrote:
>
> I am possibly buying a Cushcraft MA5V for use with my Yaesu FT-840, a
> 100 watt rig.
>
> Whatever antenna I buy, I will connect an auto-tuner, likely the LDG
> AT-11, to it. ...

I used an ICOM remote *antenna* tuner - not the coax tuner - mast mounted under a bug catcher to make over 100 EZ contacts on field day. It tuned from 6 thru the very top of 75 with the coil tap on 20M and from 10 thru 75 with the coil set for 40M. Prolly *not* the most efficient setup but couldn't beat it for convenience: turn the knob til you heard somebody, punch the 'tune' button, wait a sec, then talk ... just like FM.
73, K3DWW

43. Re: Has anyone used the Diamond K400-3/8" trunk mount?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-01 13:18:34 UTC
From: k0bg@aol.com
Message-ID: <20020701091834.08903.00002488@mb-mw.aol.com>
Source record: 139685

Do yourself a favor. Go buy a good ballmount and drill a few holes. The difference in performance can be dramatic.

Alan, Kï¿½BG

44. Re: My Butternut HF2V situation in Los Angeles: Pathetic. Absolutely pathetic.

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-01 13:22:15 UTC
From: k0bg@aol.com
Message-ID: <20020701092215.08903.00002490@mb-mw.aol.com>
Source record: 139686

Don't you even own a VSWR bridge? Maybe the rig has one built-in? Although VSWR bridges (meter if you will) are as accruate as a good antenna bridge, it'll be close enough, especially if you don't have but a few radials. What say?

Alan, Kï¿½BG

45. Re: Auto tuner + MA5V = Full HF band TX?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-01 13:27:25 UTC
From: k0bg@aol.com
Message-ID: <20020701092725.08903.00002492@mb-mw.aol.com>
Source record: 139687

If you buy an R* from Cushcraft, I hope you have better luck with it than I did. After working with them to get it to work, they sent me a new one which I gave (!) away. Someone here suggested you use an Icom AH-4, but there are several others that work as well. You can get real creative running a long wire with parts of it vertically mounted, and some horizonally mounted, sloped, what have you, and use the tuner to tune it to the band you're on. You might just be surprise how good it works.

Alan, Kï¿½BG

46. Ideas for 75 Meter Homebrew Mobile Antenna?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-01 13:34:21 UTC
From: "Christopher A. Bowne" <radiobwn@riconnect.com>
Message-ID: <uhu2n4m005o2b7@corp.supernews.com>
Source record: 139747

Looking for ideas and construction info on making an EFFECTIVE 75 meter mobile antenna to mount either on a bracket attached to a Thule bumper hitch type bike carrier (described below) , or on a military type antenna base mounted on the side of a stake bodied utuilty trailer towed behind the subject vehicle (97 Taurus Wagon). I have a two section nominal 10 foot fiberglass military whip (the ones you see on Humvees with the big rubber tip) that I am considering using as the basis of a center loaded 75 meter antenna. Would like to use something high Q like 1/4 inch OD copper tubing for the loading coil.

BTW, the Thule bike mount has proven a very effective installation for Hamwhips on 40 through 10 meters, allowing me to work worldwide with a Yeesu FT-100D. I use an L bracket from a trucker type mirror mount, bolted to the top of the nominal 3 foot long 2"x2" pedestal of the bike rack. A small plastic enclosure near the feed point allows for feed line termination as well as housing any required feed point shunt capacitors (500 pF on 40 meters). To keep the installation clean looking, I have removed the actual bike rack hardware from the pedestal. The feedpont for the whips is about 4 feet off the ground, and gets the whole antenna way up and in the clear with slight rake to aft. Heavy wire is used to bond the pedestal to the hitch frame as well as directly to the vehicle body.

73,

Chris, AJ1G
Stonington, CT

47. Re: CAM?? Parallel dipoles for 80 m and 40 m?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-01 13:37:17 UTC
From: k0bg@aol.com
Message-ID: <20020701093717.08903.00002493@mb-mw.aol.com>
Source record: 139688

Cam's explanation is as good as any I have seen on this newsgroup recently. His remark about interaction is correct, and if you can, run the legs inan X figuration, as this will minimize the interaction. And don't be afraid to use coax, even if the VSWR is rather high. The additional losses due to high VSWR isn't worth worrying about, even on 10 meters.

Most antenna tuners use some sort ob 4:1 balun, and contrary to popular opinion, they DO NOT handle high VSWR very well and actually add more loss than using coax without the balun!

My doublet (dipole if you please) has two dipoles, one for 80 and one for 40. It also has pigtails hanging down approximately in their centers. The resonant VSWR on all bands from 80 thru 10, except 12, is less than 2.2 to 1 which the auto tuner handles very well.

Best advice? Hang, get it close to resonance, use the tuner if you have to, and just have fun.

Alan, Kï¿½BG

48. Re: Has anyone used the Diamond K400-3/8" trunk mount?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-01 13:41:12 UTC
From: derswede@aol.comspam.com
Message-ID: <20020701094112.01085.00001491@mb-cu.aol.com>
Source record: 139689

>Do yourself a favor. Go buy a good ballmount and drill a few holes. The
>difference in performance can be dramatic

As will the bill when the lease car is returned (per the contract we have w/our leasing company, in the range of $1000). I was following the question...some folks CAN cut holes, obviously much better for performance, but some can't have such mounts.

I'd love to mount something better on the plastic Poncho I have, but the only way is with a mount running from the frame under the car, around the (plastic) bumper and then up...NOT a good situation. Trunk mounts are the quickest way w/o welding up a major bracket (which I may do anyway....anyone have any spring steel?) Look at the new Pontiac Grand Prix, you'll see what I mean.

Cheers!
Andrew

49. Re: Help: Tacoma Fuel Pump Noise

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-01 13:43:43 UTC
From: k0bg@aol.com
Message-ID: <20020701094343.08903.00002494@mb-mw.aol.com>
Source record: 139690

This is a well know problem with Toyotas as it is for Fords. Call Palomar Engineers, 760-747-3433, and buy 3 or 4 split beads and their covers (FSB-1/2 and SBC-1/2) These are the 1/2" ones, and they also have 1/4" which are a little small for the Toyota, but work on the Ford. Forget the caps, they don't work. Mount them as close to the tank-mounted fuel pump as you can, and if your's is one with an extra long ground wire, shorten it as much as you can. You will not make the noise go completly away, but S1 is better than S9!

If anyone reading this has a Ford, see my comments about the problem on eham.net/forums,mobileham.

Alan, Kï¿½BG

50. Re: My Butternut HF2V situation in Los Angeles: Pathetic. Absolutely pathetic.

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-01 13:45:54 UTC
From: Bob Miller <bamiller@texas.net>
Message-ID: <n1ogPThUiMKYy=CaItiqxKfG2AqS@4ax.com>
Source record: 139691

"Dick" <nospam@nospam.com> wrote:

>I bought a new Butternut HF2V two band vertical (for 40m and 80m). It was a
>pain, because I didn't get all the parts and had to arrange for Bencher to
>send the rest, which they graciously did. (They also asked who's name was
>on the inspector slip. Glad it wasn't mine. :)
>
>I live in an antenna-restricted place, but it's been up there for the better
>part of a year and no one has said a thing!
>
>But I haven't had a single QSO because I don't have the equipment to tune
>it. Don't want to buy it either, because it will cost as much as the
>antenna.

Not true. All you need is an SWR meter. MFJ has one for as little as $34.99,
part number 816. Adjust the antenna for maximum power forward, minimum power
reverse. See http://www.mfjenterprises.com or http://www.aesham.com for the
meter.

Or, if your transceiver has an SWR meter built in, that will do fine.

Bob
k5qwg

> Will some kind Elmer in the LA area help me tune this thing? Or
>will someone buy it from me for $100? Preferably the former, because I only
>do CW and miss working 40 meters --it's a real rag-chewer's band. (Not into
>contests. I like pounding brass with someone for an hour at a time.)
>
>tjdick <AT> hotmail
>
>

51. Re: Building the Henf Antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-01 13:47:10 UTC
From: k0bg@aol.com
Message-ID: <20020701094710.08903.00002495@mb-mw.aol.com>
Source record: 139692

Antenna Specialists used to make (maybe still do) a highband "Railroad" antenna. The radiator was about one foot long, and about 2.5 inches in diameter. The 2:1 bandwidth easily covered 2 meters.

There is NOTHING new under the sun!

Alan, Kï¿½BG

52. Experiene with Cushcraft R8 Multiband Vertical?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-01 14:37:21 UTC
From: Bjorn Henrik Vangstein <vangste@online.no>
Message-ID: <BOZT8.1200$eY6.29350@news2.ulv.nextra.no>
Source record: 139693

Has anyone any experience with the Cushcraft R8 Multiband Vertical (40-6 m)?

It's claimed to be 'radial free' and covers 8 bands - it seems
like some compromise to mee. I'm considering this as my main HF-antenna as
I'm living in a building that restricts directive antenna with more size.
I have to mount it on the roof abt. 20 mtrs up above ground.

Any opinions/experiences?

LA5MDA - Henrik, Oslo

53. Re: Experiene with Cushcraft R8 Multiband Vertical?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-01 15:08:53 UTC
From: "H. Adam Stevens" <solo@totalaccess.net>
Message-ID: <ui0s7opc66r1d2@corp.supernews.com>
Source record: 139694

The antenna has two traps on top for 20 and 30 meters. It uses the whole thing for 40.
For the higher bands it uses resonator stubs like the old KLM beams. On 20 it compares well with a dipole.
The 6, 10, & 15 meter stubs and 20 meter trap seem redundant, since an end-fed half wave also works as an end-fed full wave.
It's heavy and long and needs a good mount. Mine fell in a storm, breaking off the traps.
I'm removing all the stubs and silly hats and will resurrect it for 20 (1/2 wave) and 10 (full wave) only.
Seems to me with a little thought you could use all bands with less of the junk with which they cover the antenna.
If I were you, I'd see if I could come up with an invisible wire loop.
Save the money for beer, I wish I had.

73, H

de NQ5H

--
"The dinosaurs did not have a space program.
That's why they died."
Duncan Steel

"Bjorn Henrik Vangstein" <vangste@online.no> wrote in message news:BOZT8.1200$eY6.29350@news2.ulv.nextra.no...
> Has anyone any experience with the Cushcraft R8 Multiband Vertical (40-6 m)?
>
> It's claimed to be 'radial free' and covers 8 bands - it seems
> like some compromise to mee. I'm considering this as my main HF-antenna as
> I'm living in a building that restricts directive antenna with more size.
> I have to mount it on the roof abt. 20 mtrs up above ground.
>
> Any opinions/experiences?
>
> LA5MDA - Henrik, Oslo
>
>

54. Re: Apartment HF antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-01 15:20:35 UTC
From: raiar@slacc.com.nospam
Message-ID: <3d206ce0.40355515@news.galilei.com>
Source record: 139695

Hi Kes

I know! I'm one thread off<G>

Years ago, I made a small loaded 10/20 meter vertical and disguised it, using plastic leaves and brances (with the wires pulled out) to resemble a small tropical palm tree. The antenna mast was covered with glued on cotton balls and small pieces of styrofoam, then wrapped with brown florists tape. This tape is dark brown until stretched, then it becomes light brown, so you can stretch more or less to get varying colors along the trunk of the tree. The purpose of the cotton balls and styrofoam pieces glued to the antenna was to give it the appearance of a regular palm trunk.

I also did a Copper-Cactus sculpture for a VHF/UHF multi-band and a Birch tree for a six-meter antenna.

An abandoned telephone line (already up, compliments of Ma Bell) but disconnected at the pole, was converted to an 80 meter dipole. As luck had it, a tree was close enough to the center that I could run the feed coax down the tree and underground to the shack.

The longer I lived in these apartments, the larger my antenna farm grew. Still undiscovered, I kept getting more brazen and eventually installed a whole radial bed and a fairly well exposed vertical. I disguised the traps near the base by building a small wishing well type fountain, that drew your eye away from the tall vertical portion above the roof. I couldn't believe the things I was getting by with.

You just don't know until you start trying things. A slingshot or bow and arrow make a great tool for getting a nearly invisible dipole up really high, that passes over your apartment property. If you use utility poles, expect these dipoles to be cut down by the utility companies. But neighboring trees are fair game. Hey, fly a kite and lose it in the tree and leave a string dangling. People become used to it and don't pay attention after about a week. That's when you shoot the guys for the dipole up over the treetops<G>.

TTUL
Gary

55. Re: Has anyone used the Diamond K400-3/8" trunk mount?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-01 17:05:09 UTC
From: jlouthan@totalaccess.net
Message-ID: <f75bde60.0207010905.c4e67ca@posting.google.com>
Source record: 139696

I've used a K400M for many years. It works fine...never had any problem.

JL

56. Re: UHF OR N CONNECTOR?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-01 17:37:33 UTC
From: David E Allen <davea@mse13.cos.agilent.com>
Message-ID: <1025545053.576666@goodnews.cos.agilent.com>
Source record: 139697

Owen Duffy <owen@oda.com.au> wrote:
: Re the soldering, by choice I would use crimp connectors where possible.

Gee. I thought crimp connectors were for CBers and cheap radio shack cables.
Do you prefer them from an RF standpoint, or simplicity, or ???

Thanks.
dave allen, wb0taq, colorado springs

57. Re: Help: Tacoma Fuel Pump Noise

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-01 17:41:20 UTC
From: Barry <luminosity@madriver.com>
Message-ID: <3D209440.FA93E8DE@madriver.com>
Source record: 139698

Thanks Alan.
I'll be overjoyed with S-1 !
The DSP in the IC-706IIG in conjunction with my Clearspeech
DSP speaker will take care of what's leftover.
Barry N1QWA

K0bg wrote:

> This is a well know problem with Toyotas as it is for Fords. Call Palomar
> Engineers, 760-747-3433, and buy 3 or 4 split beads and their covers (FSB-1/2
> and SBC-1/2) These are the 1/2" ones, and they also have 1/4" which are a
> little small for the Toyota, but work on the Ford. Forget the caps, they don't
> work. Mount them as close to the tank-mounted fuel pump as you can, and if
> your's is one with an extra long ground wire, shorten it as much as you can.
> You will not make the noise go completly away, but S1 is better than S9!
>
> If anyone reading this has a Ford, see my comments about the problem on
> eham.net/forums,mobileham.
>
> Alan, Kï¿½BG

--

Luminosity Studios est.1975
Fine Architectual Stained Glass & Custom Lighting
Arroyo Craftsman- Mica Lamp Co -Hammerton -Quoizel
Located in The Old Church Rt.100
Waitsfield, Vermont 05673
(802) 496-2231

Portfolio:
http://photos.yahoo.com/luminositystudios

SlideShow:
http://photos.yahoo.com/bc/luminositystudios/slideshow?.dir=/Luminosity+Studios+Waitsfield+Vermont&.view=t

58. Re: CAM?? Parallel dipoles for 80 m and 40 m?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-01 17:56:28 UTC
From: John <my-callsign@qsl.net>
Message-ID: <ZJ0U8.3439$fe.91652@news8-gui.server.ntli.net>
Source record: 139699

I have the five dipoles supported from two 15ft. fiberglass fishing rods that our joined together, end to end, on a wooden (well varnied) T piece that also has two U bolts through it to connect to the mast.

I tuned the dipoles on a 12ft pole at gound level starting with the 10mtr one and working up in wavelength. For this I used an MFJ259 analyser. When I mounted the dipole up at 28ft the resonant frequencies went up between 50Khz (20mtrs) and 200KHz (10mtrs). I'd bargained that this would happen (from my Mark 1 version) so deliberately tuned them low in frequency. Mark 1 version was just for 20/17/15 and can be seen here:
http://www.qsl.net/g4irn/parallel_dipoles.htm

I put the dipoles up - SWR less than 1.7:1 on all bands (though only about 300KHz is useable on 10mtrs).

Hope that's of use..

"CAM" <w5dxp@hotmail.com> wrote in message
news:3D1FEF4C.C7632C28@hotmail.com...
> John wrote:
> > I use 5 dipoles in parallel for 20 thru 10 and have a low SWR on all bands.
> > The wires run parallel at about 5 inches apart. All seems to work fine.
>
> During trimming, how much interaction did you experience?
> --
> cheers, CAM http://www.qsl.net/w5dxp
>
>
> -----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
> http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
> -----== Over 80,000 Newsgroups - 16 Different Servers! =-----

59. Re: UHF OR N CONNECTOR?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-01 18:04:41 UTC
From: Richard <richardtracy@nospam.com>
Message-ID: <3D20999A.E93AD963@nospam.com>
Source record: 139700

Hi,

If assembled properly, a crimp type connection is just as effective as a soldered connection.

Not everyone can solder these connectors properly, or like myself, my arthritis prevents me from using the soldering iron. Back when I used to make many of these connections.

BTW, why the need to reference CB or 'cheap' for crimp connectors ?

Many production radio has crimp connectors.

regards,
richard tracy

David wrote:

> Owen Duffy <owen@oda.com.au> wrote:
> : Re the soldering, by choice I would use crimp connectors where possible.
>
> Gee. I thought crimp connectors were for CBers and cheap radio shack cables.
> Do you prefer them from an RF standpoint, or simplicity, or ???
>
> Thanks.
> dave allen, wb0taq, colorado springs

60. Re: Experiene with Cushcraft R8 Multiband Vertical?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-01 18:18:23 UTC
From: plmills@attglobal.net
Message-ID: <3d20a0b4_3@news1.prserv.net>
Source record: 139701

I had one and liked it very much. It took a lightning
hit though and I discovered that Cushcraft was not
good with spare parts for new antennas. I am presently
using an R-7000 and like it too. If I had to buy a
new antenna though, I would probably buy a Hy-gain
simply because parts are more readily available.

good luck & 73,
Phil
W5BVB

"H. Adam Stevens" <solo@totalaccess.net> wrote in message
news:ui0s7opc66r1d2@corp.supernews.com...
> The antenna has two traps on top for 20 and 30 meters. It uses the whole
> thing for 40.
> For the higher bands it uses resonator stubs like the old KLM beams. On 20
> it compares well with a dipole.
> The 6, 10, & 15 meter stubs and 20 meter trap seem redundant, since an
> end-fed half wave also works as an end-fed full wave.
> It's heavy and long and needs a good mount. Mine fell in a storm, breaking
> off the traps.
> I'm removing all the stubs and silly hats and will resurrect it for 20
(1/2
> wave) and 10 (full wave) only.
> Seems to me with a little thought you could use all bands with less of the
> junk with which they cover the antenna.
> If I were you, I'd see if I could come up with an invisible wire loop.
> Save the money for beer, I wish I had.
>
> 73, H
>
> de NQ5H
>
>
> --
> "The dinosaurs did not have a space program.
> That's why they died."
> Duncan Steel
>
> "Bjorn Henrik Vangstein" <vangste@online.no> wrote in message
> news:BOZT8.1200$eY6.29350@news2.ulv.nextra.no...
> > Has anyone any experience with the Cushcraft R8 Multiband Vertical (40-6
> m)?
> >
> > It's claimed to be 'radial free' and covers 8 bands - it seems

> > like some compromise to mee. I'm considering this as my main HF-antenna
as
> > I'm living in a building that restricts directive antenna with more
size.
> > I have to mount it on the roof abt. 20 mtrs up above ground.
> >
> > Any opinions/experiences?
> >
> > LA5MDA - Henrik, Oslo
> >
> >
>
>

61. Re: Has anyone used the Diamond K400-3/8" trunk mount?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-01 18:58:02 UTC
From: Norm Freidin <ve3czi@arrl.net>
Message-ID: <eF1U8.80764$Yt.3335787@read1.cgocable.net>
Source record: 139702

JIm:
I bought a Diamond K400-3/8" at Dayton this year, and put it on my wife's 2002 Camry for a trip to the Maritimes.
I used a 20M & 17M Hamstick feeding them with an FT-817 & MFJ 971 tuner...worked a number of DX stations, and anyone with a 5 X 7 signal. 50 - 100 W in the vehicle is the way to go...5 Watts works but have to "earn" your contacts! Oh Yes, make sure you tie some fishing line from the antenna to the vehcle to take up the strain from speed. I really would not want to trust any trunk lip mount ALONE!

By the way..I also bought an OPEK Trunk Lip Mount for $15 at Dayton..NEW. When I got home was curious about the difference between the Diamond & OPEK. Was very surprised to find that that on the Diamond, there was continuity between the shield on the coax and the ground side of the 3/8" connector mounting plate..BUT.....the OPEK had NO Continuity between the mount screw and the adjustment bolt..and nothing to the mounting plate where the Connector would be placed.
I have to investigate further, but appears that OPEK is using a non-conducting material to make thier mounts...
Can anyone else confirm or deny this?
73...Norm VE3CZI

"KG4NEL" <tek_guy@hotmail.com> wrote in message news:cbf4a67d.0206301435.ad5823@posting.google.com...
> I'm looking to install a 5' antenna on my van and I'm looking at a
> Diamond trunk lip mount. I'm planning on mounting it on one of the
> back doors and routing mini coax through the weatherstripping. Does
> anyone have any personal experience with the Diamond K400-3/8" lip
> mount? If so, how is it? I've been reading posts on trunk lip mounts
> and have heard good things and bad things.
>
> 73s,
>
> Jim
> KG4NEL

62. Re: Shipping antennas

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-01 19:26:30 UTC
From: Alan White <alannc44@ix.netcom.com>
Message-ID: <G12U8.87$DE.4680@twister.southeast.rr.com>
Source record: 139703

Hey, we ship over 800 boxes of auto parts daily on either UPS or RPS. Both have their pluses and minuses, but it looks like RPS, at present, has more pluses.

My sympathies,
Alan
WN4HOG
--
Windsurfing Club: http://www.ibscc.org
Homepage: http://pw1.netcom.com/~alannc44/qsl.htm

"Wayne Faris" <wfaris@inebraska.com> wrote in message news:3D1FD736.9B597135@inebraska.com...
> I shipped an oversized vertical antenna a few months back by UPS. The oversize
> charge was not too bad, but they stick you with something I think they called a
> density charge. They have some sort of ratio of volume to weight. They figure
> that any given volume needs to have a certain amount of weight. If you have a
> light bulky item, you are taking up space they could be filling with more packages
> from other customers. Because of this, they charge you for the weight that would
> normally fill that space. I ended up having to pay for 30 pounds when the packaged
> antenna only weighed 10 pounds. Fortunately, I was only shipping it a couple of
> hundred miles.
>
> Wayne L. Faris, KEBZ
>
> Dan Richardson wrote:
>
> > I beleive UPS will, for an extra charge, accept some over weight and
> > size packages. Have you double checked it see if that is possible?
> >
> > Danny
> >
> > On 14 Jun 2002 21:04:20 GMT, hrbcrb@aol.com.goaway (KF6HHS) wrote:
> >
> > >I have to get an antenna shiped from Ohio to Southern California. The antenna

> > >will be packed in a 6 inch tube 10 foot long, estimated weight of 40 pounds.
> > >UPS has a limit of 9 feet/108", my tube is 10 feet/120". Called Consolidated
> > >Freight and they quote over $257.00 - anyone have a suggestion.
> > >
> > >How do they ship thoes 20 foot Station Masters!
> > >
> > >Thanks and regards, Hugh KF6HHS
> > >Retired, now life moves at my pace.
> > >please note spam filter
>

63. Re: Cliff Dweller Antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-01 19:57:14 UTC
From: Norm Freidin <ve3czi@arrl.net>
Message-ID: <kv2U8.64993$op.6449449@read2.cgocable.net>
Source record: 139704

Hi Len:
The Cliff Dweller Antenna would not be suitable for an apartment, as I is quite LONG. It was designed to operate on 40 & 80 Meters Only...but would work at 10 Meters.

I picked up 3 parts of this interestingly designed antenna, but am MISSING the centre part with the motors...the most important part. Have also obtained some Techical Information during my "searching".

If you can advise who was selling the Cliff Dweller at the Auction, I would appreciate it.

I have been Emailing with a couple of other chaps in USA, who are bringing this antenna out of mothballs, and getting it operational.

If anyone needs more info, perhaps we can exchange whatever data we have among ourselves.
73...Norm VE3CZI

<thompson@mindspring.com> wrote in message
news:afjaek$45v$1@slb6.atl.mindspring.net...
> Hustler Antennas made the Cliff Dweller which was a rotatable dipole for
75
> or 40 or both (dual band). Seems it was about 20 or 24 feet long. The
used
> ones I have seen over the years did not have a working motor/tuning unit.
> This was circa 1965 to 1970. There is someone who is selling a Cliff
> Dweller II on an auction site, Its a slinky antenna (made with slinky
> coils). I had a slinky dipole that sold commercially 20 years ago but
even
> at 40 feet on 80 it was too clumsy to put up outside. Both would work in
> the attic OK...if you can get up there to adjust it to frequency.
> Dave K4JRB
> LLevine537 <llevine537@aol.com> wrote in message
> news:20020628152307.05944.00001421@mb-mf.aol.com...
> > Does anyone have info about the Cliff Dweller. I am in an apartment
> house - no
> > balcony and can't use the roof.
> > Len N2GZJ
>
>

64. Re: BACK TO BASICS - EM waves, E and H fields, in phase or inquadr...

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-01 20:27:23 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <b2e1iucravirqfgik8d08h3qidmkrrhltl@4ax.com>
Source record: 139705

On Mon, 1 Jul 2002 09:15:56 +0000 (UTC), Francesco Messineo
<frank@ares.ccii.unipi.it> wrote:

>Roy Lewallen <w7el@eznec.com> wrote:
>
>> You seem to be just about the only person who can do this. Nearly
>> everyone else who has tried has failed.
>
>Just for the record, take a look at the following pages, I believe these
>tests are made with a good amount of knowledge and without leaving
>too much room for luckiness.
>
>http://www.qsl.net/iz7ath/web/02_brew/18_eh/index.htm
>
>73
>Francesco IZ5DWF

Hi Francesco,

Your link to iz7ath, Talino, goes again to confirm that the EH is a
tuned top hat to a coax monopole. Unfortunately tuning does not
impart the same benefits of his simple monopole with top hat (in other
words, the EH makes a poor top hat).

73's
Richard Clark, KB7QHC

65. Re: BACK TO BASICS - EM waves, E and H fields, in phase or inquadr...

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-01 20:36:47 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <jue1iuos640v6649pkpdl2baj85298d1ah@4ax.com>
Source record: 139706

On Mon, 01 Jul 2002 10:08:12 GMT, "stefano" <sgalast@tin.it> wrote:

>
>first of all we should be professional.

Hi Stefano,

Your model for a professional page, test, and report are to be found
at:
http://www.qsl.net/iz7ath/web/02_brew/18_eh/index.htm

Barring results of equal caliber, your arguments and presentation of
the EH does not meet your claims. Considering you haven't been able
to cobble together an independent test for the last 6 months, your
arguments and presentation of the EH does not meet your claims.

73's
Richard Clark, KB7QHC

66. Re: BACK TO BASICS - EM waves, E and H fields, in phase or inquadr...

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-01 20:50:38 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <5if1iukr2lbb5kk04ppi9ui9gq55kig679@4ax.com>
Source record: 139707

On Mon, 01 Jul 2002 11:48:47 GMT, "UnTale" <io@io.it> wrote:

>EH does not perform as well as a full size dipole;
>I'm not sure (at present time) if these results are due to a my mistake or
>not,
>but a friend gave me his "original" EH (made by you) for 40 mt band for some
>week;
>when I'll have free time, I want to compare it with a horizotal dipole and a
>1/4 lambda vertical;
>May be that's the only way to see if EH "performs as well as a full size
>dipole" or not.
>ciao
>--
>73 de iz7ath, Talino
>Homebrew, RF projects and digital tecniques on
>http://www.qsl.net/iz7ath
>IZ7ATH Talino +39 338 5029196
>

Hi Talino,

Your work far exceeds the poor effort shown by those who proclaim the EH the loudest. Your pages are clear and well designed. The photos are crisp and well sized showing all detail. You also handle your mistakes honestly and correct them. Bravo!

One question, I may have missed seeing it, but did you apply a W2DU style balun to the feed point of your EH? Did you examine the feedline for current?

My reading of your analysis was that as you raised the EH, it improved - but not to the quality of your other short vertical. This would suggest your feedline was becoming a radiator if it does not have isolation from the drive point. The correlation between improvement and height also points out that it is still a poor performer without the top hat.

73's
Richard Clark, KB7QHC

67. Re: Balun question..which one

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-01 21:08:45 UTC
From: David E Allen <davea@mse13.cos.agilent.com>
Message-ID: <1025557725.343256@goodnews.cos.agilent.com>
Source record: 139708

Beans <beans@gate.net> wrote:
: I need to get a balun today. I've been using a VG 1:1 for 100 watts on
: an inverted vee, but water has invaded it and the connections are not
: what they once were. Any suggestions? Are all baluns created equal? Will
: I notice a difference between brands or should I go with the VG again
: because it's cheap?

I just built a balun from an Amidon kit and am using it with a 30m vee.
Seems to work very well, and the price is $6.00 - $10.00. You do have to
build your own box for it. I built a little box out of pcboard material
that seems to be working out fine.

dave allen, wb0taq, colorado springs

68. Re: Has anyone used the Diamond K400-3/8" trunk mount?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-01 21:10:55 UTC
From: on4bam@yahoo.com
Message-ID: <3d20c1ad.274096304@news.be.easynet.net>
Source record: 139709

On Mon, 1 Jul 2002 14:58:02 -0400, "Norm Freidin" <ve3czi@arrl.net>
wrote:

>JIm:
>I bought a Diamond K400-3/8" at Dayton this year, and put it on my wife's
>2002 Camry for a trip to the Maritimes.
>I used a 20M & 17M Hamstick feeding them with an FT-817 & MFJ 971
>tuner...worked a number of DX stations, and anyone with a 5 X 7 signal.
> 50 - 100 W in the vehicle is the way to go...5 Watts works but have to
>"earn" your contacts! Oh Yes, make sure you tie some fishing line from the
>antenna to the vehcle to take up the strain from speed. I really would not
>want to trust any trunk lip mount ALONE!
>

>"KG4NEL" <tek_guy@hotmail.com> wrote in message
>news:cbf4a67d.0206301435.ad5823@posting.google.com...
>> I'm looking to install a 5' antenna on my van and I'm looking at a
>> Diamond trunk lip mount. I'm planning on mounting it on one of the
>> back doors and routing mini coax through the weatherstripping. Does
>> anyone have any personal experience with the Diamond K400-3/8" lip
>> mount? If so, how is it? I've been reading posts on trunk lip mounts
>> and have heard good things and bad things.
>>

I have a Diamond K400 on my car. I use an Outbacker Perth on it. The
mount was bought in 1996 and is still as good as new. I did have to
shorten the minicoax twice because it got stuck and damaged. It's
attached to the hatch (or whatever you guys call it...) you can see a
picture on: http://www.qsl.net/on4bam/html/scotland1.html
I also use a 'guy wire' as extra support for the antenna and to keep
the stresslevel down on the mount at (German) highway speeds.
I also used the mount on rental cars in W and ZS.. The only thing is
that you need to make a good connection to bare metal (ground)with the
4 screws. You'll notice a bad ground immediatelly .. higher noice
level and SWR problems...

Bye Maurice
--
Hamradio: ON4BAM / M0CIL http://www.qsl.net/on4bam
Travelstories from Alaska, Scotland South Africa,Iceland,
Faroe Isl. and IOTA activations
going to Thailand? http://www.f-tguesthousehuahin.com/

69. looking for antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-01 21:55:00 UTC
From: caretaker <horrorfilm@yahoo.com>
Message-ID: <afqj89$9rha$1@news3.infoave.net>
Source record: 139710

I am looking for a practical antenna for my Grundig Satellit shortwave radio. Something simple, yet effective, because I am new to shortwave. Any help would be greatly appreciated.

70. Re: Building the Henf Antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-01 22:22:09 UTC
From: k1bqt@aol.com
Message-ID: <20020701182209.14316.00001287@mb-mn.aol.com>
Source record: 139711

>There is NOTHING new under the sun!<

When it comes to antennas, I think you're right! Regardless of the author's rather novel interpretation of antenna theory, he still has a capacitively loaded asymetrically dipole. Collector? Generator? What's that all about? Think I'll re-designate the wire on my 80-meter dipole as a "Conduction-Based Electron Accelerator" and patent that! It's actually a much easier concept to defend because it's closer to reality! Goofy, this antenna business.

73

Rick K1BQT

71. Re: Building the Henf Antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-01 22:48:25 UTC
From: fractenna@aol.com
Message-ID: <20020701184825.23733.00003136@mb-df.aol.com>
Source record: 139712

>
>>There is NOTHING new under the sun!<
>
>When it comes to antennas, I think you're right! Regardless of the author's
>rather novel interpretation of antenna theory, he still has a capacitively
>loaded asymetrically dipole. Collector? Generator? What's that all about?
>Think
>I'll re-designate the wire on my 80-meter dipole as a "Conduction-Based
>Electron Accelerator" and patent that! It's actually a much easier concept to
>defend because it's closer to reality! Goofy, this antenna business.
>
>73
>
>Rick K1BQT
>

Rick--

Perhaps I missed it...did you make any gain measurements? As I said, that's
what really counts.

73
Chip N1IR

72. Re: looking for antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-01 22:53:26 UTC
From: Dan/W4NTI <w4nti@mindspringnospam.com>
Message-ID: <afqmff$vb1$1@slb7.atl.mindspring.net>
Source record: 139713

Get some small gauge wire. hook one end to the antenna connector of the
radio, and the other as long and clear as you can, outside preferable.
Inside if needed.

Dan/W4NTI

"caretaker" <horrorfilm@yahoo.com> wrote in message
news:afqj89$9rha$1@news3.infoave.net...
>
> I am looking for a practical antenna for my Grundig Satellit shortwave
> radio. Something simple, yet effective, because I am new to shortwave.
Any
> help would be greatly appreciated.
>
>

73. Re: UHF OR N CONNECTOR?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-01 23:03:23 UTC
From: Owen Duffy <owen@oda.com.au>
Message-ID: <3D20DFBB.28AAD6F7@oda.com.au>
Source record: 139714

David E Allen wrote:
>
> Owen Duffy <owen@oda.com.au> wrote:
> : Re the soldering, by choice I would use crimp connectors where possible.
>
> Gee. I thought crimp connectors were for CBers and cheap radio shack cables.
> Do you prefer them from an RF standpoint, or simplicity, or ???
>
> Thanks.
> dave allen, wb0taq, colorado springs

Check the specifications, or do some tests yourself on crimp connectors and the so-called "field serviceable" connectors, and note the differences.

Commonly, the braid attaching mechanism of crimp connectors is stronger, reducing the likelyhood of the cable being pulled out of the connector. (Check the specs on BNC for instance, it is not unusual to find that the crimp connector is rated at ten times the field serviceable).

Crimp connectors aren't necessarily cheap and nasty, but there are plenty of particular implementations that are a waste of money. Quality crimp tools are precision tools and are expensive, althogh it is possible to get medium cost tools that do a pretty reasonable job.

So, it is the old story to some extent: quality articles sustain higher prices.

The main arguments against crimping would be the cost of good tools, and the need to trim the cable correctly first time. Although weatherproof crimp versions of many many connectors are available, they are more difficult to obtain and one may often choose field serviceable connectors for weatherproof applications.

So, it is not so much that the RF performance of a crimp connector is better, but that the RF performance of a cable where the braid remains properly attached is better.

For my application, I am usually influenced by the better reliability than the lower cost of installation - that is a bonus.

If your experience is mostly about soldering PL259s onto RG8, then you might not appreciate much of this!

Owen

74. G5RV

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-02 00:12:17 UTC
From: Reg Edwards <g4fgq.regp@btinternet.com>
Message-ID: <afqr51$e6$1@venus.btinternet.com>
Source record: 139715

Year after year, I am tired of hearing and reading about the G5RV.

Insofar as G5RV's with their half or double-sized versions are concerned, it is recommended you make your minds a blank.

The Guru's, old wives and plagiarists interminably continue to propagate its special magical Marzipan properties to bolster their ego's and imagined reputations.

Most of these cranks are fully aware the G5RV has no better performance than any other multi-band, crudely omni-directional dipole, of random end-to-end length, fed with a random length balanced line of no specified impedance.

In fact it has a sub-standard performance if that attention-attracting length of coax is insisted upon just to retain the name.

I'm quite sure G5RV would agree if he was still around. It was others who have made a few bucks and are still attempting to make a few bucks out of suckers from his description of a simple basic, rather obvious dipole which had been around for years before his first relatively unimportant article on a one-band antenna.

It does at least work very well compared with the much-later cross-field and related inventions.

Its history has been turned into bunk by salesmen, magazine editors, authors and the antenna newsgroup establishment. Now let it rest in peace.

That's my unimportant two-penny-worth contribution anyway.

Reg, G4FGQ

75. Re: Building the Henf Antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-02 00:52:32 UTC
From: 2w8ji@contesting.com
Message-ID: <3d20f8a4.95443975@news.akorn.net>
Source record: 139716

On 01 Jul 2002 22:22:09 GMT, k1bqt@aol.com (Rick Littlefield) wrote:

>>There is NOTHING new under the sun!<
>
>When it comes to antennas, I think you're right! Regardless of the author's
>rather novel interpretation of antenna theory, he still has a capacitively
>loaded asymetrically dipole. Collector? Generator? What's that all about? Think
>I'll re-designate the wire on my 80-meter dipole as a "Conduction-Based
>Electron Accelerator" and patent that! It's actually a much easier concept to
>defend because it's closer to reality! Goofy, this antenna business.

What is Heff doing in the antenna business anyway? I thought he was
too busy getting loaded and collecting young blonds, and generating
revenue from asymetrical photo shots.

73 Tom

76. Re: Building the Henf Antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-02 01:06:20 UTC
From: k1bqt@aol.com
Message-ID: <20020701210620.27170.00001342@mb-cr.aol.com>
Source record: 139717

> I thought he was too busy getting loaded and collecting young blonds, and generating revenue from asymetrical photo shots.<

Last I saw on TV, ole' Heff (not to be confused with Henf or hemp) was looking for ways to make things taller rather than shorter. His "associates", aparently tired of lumped loading and fractal geometry, resolved the situation by giving him a new prescription for happiness.

Rick K1BQT

77. Re: Building the Henf Antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-02 01:37:02 UTC
From: k1bqt@aol.com
Message-ID: <20020701213702.27170.00001347@mb-cr.aol.com>
Source record: 139718

>Perhaps I missed it...did you make any gain measurements? As I said, that's what really counts.<

I thought, for openers, I might try to persuade the antenna to behave as its creator predicted. Succeeding that, I might measure gain. Failing that, I might find an attractive scented candle to install in its "emitter".

--Rick

78. Re: G5RV

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-02 01:38:10 UTC
From: Dan Richardson <k6mhe@arrl.net>
Message-ID: <am02iusq146tuu6ro16o83tbvpuje1mo9j@4ax.com>
Source record: 139620

If you are truly tired of hearing and reading about the antenna why on
earth would you add even more banter with this posting?

Danny

On Tue, 2 Jul 2002 00:12:17 +0000 (UTC), "Reg Edwards"
<g4fgq.regp@btinternet.com> wrote:

>Year after year, I am tired of hearing and reading about the G5RV.
>
>Insofar as G5RV's with their half or double-sized versions are concerned, it
>is recommended you make your minds a blank.
>
>The Guru's, old wives and plagiarists interminably continue to propagate its
>special magical Marzipan properties to bolster their ego's and imagined
>reputations.
>
>Most of these cranks are fully aware the G5RV has no better performance than
>any other multi-band, crudely omni-directional dipole, of random end-to-end
>length, fed with a random length balanced line of no specified impedance.
>
>In fact it has a sub-standard performance if that attention-attracting
>length of coax is insisted upon just to retain the name.
>
>I'm quite sure G5RV would agree if he was still around. It was others who
>have made a few bucks and are still attempting to make a few bucks out of
>suckers from his description of a simple basic, rather obvious dipole which
>had been around for years before his first relatively unimportant article on
>a one-band antenna.
>
>It does at least work very well compared with the much-later cross-field and
>related inventions.
>
>Its history has been turned into bunk by salesmen, magazine editors, authors
>and the antenna newsgroup establishment. Now let it rest in peace.
>
>That's my unimportant two-penny-worth contribution anyway.
>---
>Reg, G4FGQ
>
>

79. Re: Building the Henf Antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-02 01:54:48 UTC
From: fractenna@aol.com
Message-ID: <20020701215448.15716.00002267@mb-fx.aol.com>
Source record: 139619

>
>>Perhaps I missed it...did you make any gain measurements? As I said, that's
>what really counts.<
>
>I thought, for openers, I might try to persuade the antenna to behave as its
>creator predicted. Succeeding that, I might measure gain. Failing that, I
>might
>find an attractive scented candle to install in its "emitter".
>
>--Rick

OK; so you didn't measure gain. That's all I was wondering.

73,
Chip N1IR

80. Re: BACK TO BASICS - EM waves, E and H fields, in phase or inquadr...

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-02 01:57:11 UTC
From: richardharrison@webtv.net
Message-ID: <28760-3D210877-29@storefull-2395.public.lawson.webtv.net>
Source record: 139621

UnTale wrote:
"May be that`s the only way to see if EH "performs as well as a full size dipole" or not."

Daytime 160m testing of a vertically polarized EH antenna against a horizontal dipole is flawed.

Signal from the horizontal dipole is limited to the line of sight over good ground during the day.

Signal from a vertically polarized antenna propagates beyond the line of sight via the ground wave.

Please see Terman`s 1955 edition of "Radio and Electronic Engineering" page 803:
"The ground wave is vertically polarized, because any horizontal component of electric field in contact with the earth is short-circuited by the earth."

Best regards, Richard Harrison, KB5WZI

81. Hy Gain Boom To Mast Assy

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-02 03:01:17 UTC
From: Kenneth Fattmann <na0y@worldnet.att.net>
Message-ID: <1I8U8.63865$LC3.4873526@bgtnsc04-news.ops.worldnet.att.net>
Source record: 139622

I am in need of the sheet metal assy that connect the boom on most Hy Gain Yagis to the casat metal block of their Boom-To-Mast Assy.

I have the cast Aluninum block ans need the two sheet metal parts to complete the assy.

Please state condx and price.

Thanks de Ken NA0Y na0y@worldnet.att.net

82. Re: BACK TO BASICS - EM waves, E and H fields, in phase or inquadr...

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-02 03:37:58 UTC
From: nm5k@wt.net
Message-ID: <25eb70d7.0207011937.685dcb40@posting.google.com>
Source record: 139623

"stefano" <sgalast@tin.it> wrote in message news:<gSVT8.22041$Jj7.586160@news1.tin.it>...
> Hello,
> the Talino 's experiment is just an experiment ....Taino knows it very well.
> You don't have to assume as "bible" just an experiment.
> Dear Francesco, I sent my congratulations to Talino , but I think should be
> a must include in front of his or your words..
> a simple statement:
> The Talino's antenna is showing...or
> his antenna showed this data...or
> at the moment the Talino's antenna is saying us....
>
> BUT instead of this I am reading a lot of affirmations..wrong
> affirmations...
> The EH antenna is ....
> The EH antenna is ...db under....
> and so on...

Well, what do you want him to do, lie about it? In his tests, the EH
was beaten by the other antennas. None of which was close to being as
efficient as a 1/2 wave dipole. Even his short vertical seemed to beat
it quite handily. And there is no way on earth that vertical he used
is as efficient as a dipole. It was short, and used a "marginal at
best" ground system. IE: 4 uneven length radials. But the real kicker
was the change in performance when he added the choke at the
feedpoint. Didn't look good. The feedline is obviously radiating.
>
> first of all we should be professional.
> when the commercial 160 meters eh will be ready, it will keep our promises.
> steve Ik5IIR

I'm sure this will be true. Why? Because you say so. "chortle" :) .
MK

83. Re: BACK TO BASICS - EM waves, E and H fields, in phase or inquadr...

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-02 03:44:27 UTC
From: nm5k@wt.net
Message-ID: <25eb70d7.0207011944.5249be04@posting.google.com>
Source record: 139624

Richard Clark <kb7qhc@attbi.com> wrote in message
>
> Hi Talino,
>
> Your work far exceeds the poor effort shown by those who proclaim the
> EH the loudest. Your pages are clear and well designed. The photos
> are crisp and well sized showing all detail. You also handle your
> mistakes honestly and correct them. Bravo!

I concur...
>
> One question, I may have missed seeing it, but did you apply a W2DU
> style balun to the feed point of your EH? Did you examine the
> feedline for current?

He did mention adding a choke at the rig with no change. "naturally".
And he then said he added a "bead" type choke of some kind at the
feedpoint, and the antenna did go to heck...SWR wise, and performance
wise. The feedline is radiating. No doubt about it. MK

84. Re: Tuner Loss?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-02 03:52:58 UTC
From: tmgroatatpeakpeakdotcom
Message-ID: <3d2121a0.533056@news.peakpeak.com>
Source record: 139625

On Sun, 30 Jun 2002 14:04:16 -0400, "Ralph Mowery"
<rmowery@dialpoint.net> wrote:

If you have or can borrow a second tuner of the same type, connect them back to back. Connect one tuner's input to the transmitter, the second tuner's input to the wattmeter and a dummy load. Then connect the tuner outputs together, using a ground strap between them if they have single wire outputs.

Set the second tuner arbitarily, and adjust the first tuner for 1:1 SWR at the transmitter. Now you can see how much loss there is at various knob settings, for the two tuners combined. When loss is expressed in dB, divide by two to find the loss per tuner (assuming they are identical units).

Experiment to find the settings that work well for your tuner. If it's a "three knob" type (TEE network, etc.) you'll probably find multiple combinations that produce a match. Select the one that gives the most power to the dummy load.

This method also will find the losses for RF transformers, baluns, etc. In fact, I learned it from a Fair-Rite application note for measuring broadband transformers.

Good luck!

--KR0U

-- Tim Groat

To reply by e-mail, change the quoted words to
the corresponding punctuation marks.

85. Re: G5RV

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-02 04:00:19 UTC
From: Mike Coslo <mcoslo@adelphia.net>
Message-ID: <3D214F6F.60400@adelphia.net>
Source record: 139626

Dan Richardson wrote:

> If you are truly tired of hearing and reading about the antenna why on
> earth would you add even more banter with this posting?

Probably because it might be good to get some good info aside from all the bunkum on the G5RV?

I've never had one, but my antenna Elmer snorts when the G5RV is mentioned. And he's steered me right so far.

- Mike KB3EIA -

86. Re: G5RV

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-02 04:14:33 UTC
From: CAM <w5dxp@hotmail.com>
Message-ID: <3D2128A9.1077ECF@hotmail.com>
Source record: 139627

Mike Coslo wrote:
> I've never had one, but my antenna Elmer snorts when the G5RV is
> mentioned. And he's steered me right so far.

The G5RV was designed for 20m and performs well there with a multi-lobed pattern. It also works pretty well on 80m and 40m and I have Smith Charts on my web page that show why. The series section transformer actually does some matching on 80m and 40m. But it is not an all-HF-band antenna as it is sometimes advertised to be.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

87. Re: BACK TO BASICS - EM waves, E and H fields, in phase or inquadr...

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-02 05:24:58 UTC
From: nm5k@wt.net
Message-ID: <25eb70d7.0207012124.13e087ed@posting.google.com>
Source record: 139628

richardharrison@webtv.net (Richard Harrison) wrote in message news:<28760-3D210877-29@storefull-2395.public.lawson.webtv.net>...
> UnTale wrote:
> "May be that`s the only way to see if EH "performs as well as a full
> size dipole" or not."
>
> Daytime 160m testing of a vertically polarized EH antenna against a
> horizontal dipole is flawed.

That ain't no joke. Two totally different animals, day or night. And just because a certain antenna beats another one at a certain time or distance, doesn't mean it's more or just as efficient. I've had my 40m car mobile antenna dog my home dipole at longer distances at night. "Texas to Florida" Is the 40m mobile antenna more efficient? Not hardly...It's just radiating what little it has to offer at just the right angle for the path/distance, etc.
I'd like to see one of these whiz bang shorty 160m antennas compare to a full size 250 ft dipole at 200-300 mile high angle skip in the evening. I suspect the dipole would tear the "shorty" a new one. MK

88. Re: CAM?? Parallel dipoles for 80 m and 40 m?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-02 06:10:54 UTC
From: StarGazer <pti@capnet.com>
Message-ID: <3D2143EE.24A63053@capnet.com>
Source record: 139630

I'm starting to get it now. Except I can't see where 88' is 1/2 wavelength for
80 m. 120' would be 1/2 wavelength on 80 m.
And 100' would be 3/4 wavelength on 40 m. Using 468/f =
1/2 dipole length in feet.

With your antenna... could you get a W2DU BALUN on the
TX end of your ladder line and then use about 50' of RG-8
into the house without screwing anything up?

This is all starting to make more sense when one views all
of the parts as a system.

CAM wrote:

> StarGazer wrote:
> > What is the disadvantage of using 2 dipoles (1 for 80 m and the
> > other for 40 m) cut for the center of their bands.... fed at the
> > same point with the 150' length of RG-8 and run parallel about
> > 6 inches apart?? The 40 m has its own insulators on its ends,
> > of course, and cut for 66'.
>
> If you are going to parallel two resonant dipoles, you can use
> RG8 with no problem except trimming the dipoles to resonance.
> There may (or may not) be interaction between the two lengths.
> The 40m dipole is a high impedance on 80m and the 80m dipole is
> a high impedance on 40m so there should not be much interaction.
>
> > I still can't understand how ladder line can work so well being
> > so much higher of a Z than the input Z of any dipole its connected
> > to. Seems like it would always need a tuner to work.
>
> If the antenna is a resonant 1/2WL dipole, the SWR on the 450 ohm
> ladder-line will be around 9:1. The impedance 1/4WL away from the
> antenna will be about 9 * 450 = 4050 ohms. The impedance 1/2WL away
> from the resonant dipole will repeat the 50 ohms. This is the transforming
> function performed by a transmission line with an SWR other than 1:1.
> The concept is pretty hard for a beginner to grasp but it is possible
> for the transmission line to perform all of the tuning as a series
> section transformer plus N*(1/2WL). For instance, my 130 ft dipole
> uses 1/2WL of 450 ohm ladder-line on 80m and 3/4WL of 450 ohm ladder-
> line on 40m to achieve system resonance without a tuner.
>
> If you are going to use ladder-line, there's no real need to put up
> more than one dipole. For instance, with my 130 ft dipole and a
> 450 ohm feedline length of 88 ft., my antenna system is resonant

> on both 3.993 MHz and 7.216 MHz without the need for an antenna
> tuner. I can switch between 3.993 MHz and 7.216 MHz without touching
> anything except the frequency button on my IC-756pro. You will not
> be able to exactly duplicate those results but you may come close.
> --
> cheers, CAM http://www.qsl.net/w5dxp
>
> -----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
> http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
> ------== Over 80,000 Newsgroups - 16 Different Servers! =-----

89. Re: Fractal antenna information

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-02 06:17:31 UTC
From: Will White <googlyelmo@earthlink.net>
Message-ID: <3D21457F.9137E7F1@earthlink.net>
Source record: 139629

I am away from USENET for a few months, and it's deja vu all over again! This is a public forum, period. If you don't want your foolishness and muddy thinking pointed out, then I advise you to shut yourself up. Do you think were stupid enough to quake at your ridiculous threats of legal action? Please! Or maybe your just dumb enough to believe them yourself. As the man said:" ...yeah, yeah, that's it!"

Fractenna wrote:

> >Message-id: <3d16649a.468681844@news.akorn.net>
> >
> >On 23 Jun 2002 19:58:41 GMT, fractenna@aol.com (Fractenna) wrote:
> >>
> >>They've got me workin' weekends...even FD..if that's any measure of what's
> >hot.
> >>
> >>73
> >>Chip N1IR
> >
> >It takes a lot of effort to make a bad design work. It might be better
> >to go to more simple designs that are better performers.
> >
> >73 Tom
>
> Are you talking to me?
>
> If so, please be advised that I neither seek nor desire any sort of
> communication -- public or otherewise--from Charles Rauch, as per instruction
> of my attorneys. You should assume that it is in your best interest not to
> attempt any such communications.
>
> As you have sought a public forum to attempt this, I must make publicly clear
> what should have been apparent to you privately.
>
> Please consult your attorney if you wish to understand this request better.
>
> Nathan Cohen

--
Will White, KD7BFX
Seattle WA US
King County, Grid CN87tq
ITU Zone 6, CQ Zone 3
****
"The wireless telegraph is not difficult to understand.

The ordinary telegraph is like a very long cat.
You pull the tail in New York, and it meows in Los Angeles.
The wireless is the same, only without the cat."
- Albert Einstein
****

90. Re: G5RV

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-02 07:49:04 UTC
From: "W.G Ewald" <wgewald@att.net>
Message-ID: <ufm2ius14p5abmlbf7h83op9gfur3n2krf@4ax.com>
Source record: 139631

I enjoyed his banter. Especially the part about some who are making
"a few bucks and are still attempting to make a few bucks out of
suckers from his description of a simple basic, rather obvious
dipole."

On Mon, 01 Jul 2002 18:38:10 -0700, Dan Richardson <k6mhe@arrl.net>
wrote:

>If you are truly tired of hearing and reading about the antenna why on
>earth would you add even more banter with this posting?
>
>Danny
>
>On Tue, 2 Jul 2002 00:12:17 +0000 (UTC), "Reg Edwards"
><g4fgq.regp@btinternet.com> wrote:
>
>>Year after year, I am tired of hearing and reading about the G5RV.
>>
>>Insofar as G5RV's with their half or double-sized versions are concerned, it
>>is recommended you make your minds a blank.
>>
>>The Guru's, old wives and plagiarists interminably continue to propagate its
>>special magical Marzipan properties to bolster their ego's and imagined
>>reputations.
>>
>>Most of these cranks are fully aware the G5RV has no better performance than
>>any other multi-band, crudely omni-directional dipole, of random end-to-end
>>length, fed with a random length balanced line of no specified impedance.
>>
>>In fact it has a sub-standard performance if that attention-attracting
>>length of coax is insisted upon just to retain the name.
>>
>>I'm quite sure G5RV would agree if he was still around. It was others who
>>have made a few bucks and are still attempting to make a few bucks out of
>>suckers from his description of a simple basic, rather obvious dipole which
>>had been around for years before his first relatively unimportant article on
>>a one-band antenna.
>>
>>It does at least work very well compared with the much-later cross-field and
>>related inventions.
>>
>>Its history has been turned into bunk by salesmen, magazine editors, authors
>>and the antenna newsgroup establishment. Now let it rest in peace.
>>
>>That's my unimportant two-penny-worth contribution anyway.

>>---
>>Reg, G4FGQ
>>
>>

91. newbie needs help for.antenna tuner and doesn`t know any other hams.

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-02 07:57:10 UTC
From: CB750FSuperSpor@webtv.net
Message-ID: <17024-3D215CD6-438@storefull-2152.public.lawson.webtv.net>
Source record: 139632

I need information for an old antenna tuner and cannot find any info about it. I have a mfj versa tuner II. model number mfj-941 (not mfj-941e), just plain old 941. I guess it will be about 15 to 20 years old. The problem is that I want to get back on the air. I have a kw ts-520 and never operated it (don`tknow how) but have manual. Can I use this antenna tuner with that rig? I don`t know a whole lot and especially in how to operate the tuner. It also only has 1 needle and 2 lines (one is for swr and the other is for rf power. How am I supposed to know which line am I reading? And this is a hf tuner right? Has I said there`s nobody I can talk too so i`m winging it on my own and don`t have cash to spend. I taking xtra caution to make sure I don`t harm the tubes on my rig. Has for my antenna I don`t know yet but likely will build a 10 meter dipole for starters. Basicaly what I`m asking is what are the operating procedures for this tuner? I don`t have any experience except I used to run a radio shack 10 meter radio in my car with a mag mount. The radio died 10 years ago and I haven`t been on the air since, and now I`m being forced to break out my new 27 year old Kenwood and learn how to operate it along with this tuner I picked up at a swap meet back in 1988. I`m such a dunce. help. 73`s kyle

92. Re: Pneumatic antenna mast

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-02 08:53:27 UTC
From: Peter Thoms <048191-0001@t-online.de>
Message-ID: <afrsl7aft05$1@news.t-online.com>
Source record: 139634

Doctor Dave <HypnoBus@cfl.rr.com> schrieb in im Newsbeitrag:
ykPS8.82219$db.1307275@twister.tampabay.rr.com...
> Does anybody know where I can find an antenna mast out of an ENG
television
> news van? I'm building / converting a motorhome and am thinking that this
> would be a nice addition.
> [...]

Hi,

here is another but new one!
I asked for the price, it varies very much with the retraction-high: The
more elements the higher the price.
Ex.: 40feet pneumatic extended, 30kg headload, unguyded, the price swings
between roundabout 1500 to 2500Euro.

http://www.big-lift.de/

vy 73 de Peter, DL6LAT

93. Re: G5RV

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-02 09:30:42 UTC
From: Dan/W4NTI <w4nti@mindspringnospam.com>
Message-ID: <afrrqb$h7m$1@nntp9.atl.mindspring.net>
Source record: 139633

Agreed...I built one once. It did well on 20. But on 75 it was marginal at best. When I replaced it with a Delta loop on 20 and a 1/2 wave center fed with mini-8 on 75 my signal reports nearly doubled.

For what its worth.

Dan/W4NTI

"CAM" <w5dxp@hotmail.com> wrote in message
news:3D2128A9.1077ECF@hotmail.com...
> Mike Coslo wrote:
> > I've never had one, but my antenna Elmer snorts when the G5RV is
> > mentioned. And he's steered me right so far.
>
> The G5RV was designed for 20m and performs well there with a multi-
> lobed pattern. It also works pretty well on 80m and 40m and I have
> Smith Charts on my web page that show why. The series section
> transformer actually does some matching on 80m and 40m. But it is
> not an all-HF-band antenna as it is sometimes advertised to be.
> --
> cheers, CAM http://www.qsl.net/w5dxp
>
>
> -----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
> http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
> ------== Over 80,000 Newsgroups - 16 Different Servers! =-----

94. Re: Building the Henf Antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-02 10:33:31 UTC
From: k1bqt@aol.com
Message-ID: <20020702063331.26714.00000827@mb-cv.aol.com>
Source record: 139635

>OK; so you didn't measure gain. That's all I was wondering.<

Not yet. It has a date with the 8510 first. I just couldn't tell enough about it from what the MFJ-259B was telling me to know what was happening with it.

Rick

95. Re: S-Band (13 cm) RHCP Hemispherical Omni Antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-02 10:58:55 UTC
From: adamory <adamory@ntlworld.com>
Message-ID: <gCfU8.835$du.45150@news8-gui.server.ntli.net>
Source record: 139636
Cross-posted to: sci.electronics.equipment,rec.radio.amateur.space,rec.radio.amateur.equipment,rec.radio.amateur.antenna,sci.electronics.design,sci.engr.radar+sonar

would a QFH be useful?

OH2AUE's site has a design for a QFH which is fairly easy to make.
can't remember the URL, but a search on OH2AUE should bring results

cheers

Adam

"M.C. Maguire" <nomcmaguirespam@hotmail.com> wrote in message
news:3D07A5ED.29EE9FF8@hotmail.com...
> I am looking for a commercial supplier of an S-band (2300-2400 MHz)
> right hand circularly polarized antenna that has a broad hemispherical
> pattern (-3 dB at +-60 deg or more from boresite). Pattern is more
> important than gain. Must be suited for outdoor and low temperature
> use.
>
> Here is ideal antenna:
>
> http://www.condorsys.com/pdf_files/as48915.pdf
>
> Three problems: it costs 53 dB$ (~13 dB too much), it's space qualified
> (overkill on environmentals) and takes 150 days to get an order filled
> (need in 30 days).
>
> Thanks.
>
> mm
>
> mcnospammaguire@earthlink.net

96. Re: BACK TO BASICS - EM waves, E and H fields, in phase or inquadr...

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-02 11:15:24 UTC
From: richardharrison@webtv.net
Message-ID: <4601-3D218B4C-423@storefull-2394.public.lawson.webtv.net>
Source record: 139638

Mark, NM5K wrote:
"That ain`t no joke. Two totally different animals, day or night."

160 meters is a good frequency band for daytime testing. Low-angle radiation is closely related to ground wave radiation, taking into account earth conductivity. Field strength measurements from an EH may be all that is needed for comparison. FCC published curves with slight adjustment can be compared with EH data.

If comparison in real time is desired, a full 1/4-wave vertical over an excellent ground should be the standard of comparison.

The EH should not be located within 10-wavelengths of the 1/4-wave vertical, to avoid coupling.

Best regards, Richard Harrison, KB5WZI

97. Re: G5RV

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-02 11:37:09 UTC
From: Reg Edwards <g4fgq.regp@btinternet.com>
Message-ID: <afs395$4ff$1@knossos.btinternet.com>
Source record: 139637

> If you are truly tired of hearing and reading about the antenna why on
> earth would you add even more banter with this posting?
>
> Danny
==========
A predictable reply, Danny. ;o)

98. Re: newbie needs help for.antenna tuner and doesn`t know any otherhams.

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-02 11:59:38 UTC
From: captbrian <captbrian@ukonline.co.uk>
Message-ID: <3d21b3f5$0$24393$afc38c87@news.ukonline.co.uk>
Source record: 139649

With your inadequate knowledge, I , for one, would prefer it if you did not
come on the air. Have you a call-sign.?
Join a club.

Bryan G3GVB

kyle <CB750FSuperSpor@webtv.net> wrote in message
news:17024-3D215CD6-438@storefull-2152.public.lawson.webtv.net...
> I need information for an old antenna tuner and cannot find any info
> about it. I have a mfj versa tuner II. model number mfj-941 (not
> mfj-941e), just plain old 941. I guess it will be about 15 to 20 years
> old. The problem is that I want to get back on the air. I have a kw
> ts-520 and never operated it (don`tknow how) but have manual. Can I use
> this antenna tuner with that rig? I don`t know a whole lot and
> especially in how to operate the tuner. It also only has 1 needle and 2
> lines (one is for swr and the other is for rf power. How am I supposed
> to know which line am I reading? And this is a hf tuner right? Has I
> said there`s nobody I can talk too so i`m winging it on my own and don`t
> have cash to spend. I taking xtra caution to make sure I don`t harm the
> tubes on my rig. Has for my antenna I don`t know yet but likely will
> build a 10 meter dipole for starters. Basicaly what I`m asking is what
> are the operating procedures for this tuner? I don`t have any experience
> except I used to run a radio shack 10 meter radio in my car with a mag
> mount. The radio died 10 years ago and I haven`t been on the air since,
> and now I`m being forced to break out my new 27 year old Kenwood and
> learn how to operate it along with this tuner I picked up at a swap meet
> back in 1988. I`m such a dunce. help. 73`s kyle
>

99. Re: BACK TO BASICS - EM waves, E and H fields, in phase or inquadr...

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-02 12:13:57 UTC
From: 2w8ji@contesting.com
Message-ID: <3d2192c9.134911232@news.akorn.net>
Source record: 139639

On 1 Jul 2002 20:44:27 -0700, nm5k@wt.net (Mark Keith) wrote:

>> One question, I may have missed seeing it, but did you apply a W2DU
>> style balun to the feed point of your EH? Did you examine the
>> feedline for current?
>
>He did mention adding a choke at the rig with no change. "naturally".
>And he then said he added a "bead" type choke of some kind at the
>feedpoint, and the antenna did go to heck...SWR wise, and performance
>wise. The feedline is radiating. No doubt about it. MK

You also have to be very careful when adding baluns to systems with
high common mode excitation.

The E-H antenna would fit that descripition perfectly. If you
actually INTENTIONALLY designed a system to excite the coax as much as
possible, it would look like an EH antenna configuration!!!!

Ted Hart and Steve call themselves liars at every turn.

One strong point is the theory Ted Hart and Steve put out. They say
they feed TWO terminals in phase quadrature, or at least in phase
quadrature between voltage and current (which means by definition the
system can not consume ANY power from the rig).

It is always, by definition, IMPOSSIBLE to build an antenna or any
other load with 90 degree phase shift between the two terminal
terminals when the antenna or load only has two-terminals. It would
also be electrically impossible to present a zero-reactance 50-ohm
feed into an electrically short radiator, when the voltage and current
are exactly 90-degrees out of phase. By definition, that is a PURE
reactance with zero power absorbed from the generator!!

Circuit law simply does NOT allow such a feed into two terminals.

Because of that, a third path must be involved in the feed system.
There has to be a third leg carrying considerable current, and that
leg could carry any ratio of power.

A W2DU style balun easily may NOT have enough impedance, even when
installed at a LOW differential mode impedance point, to reduce common
mode current or isolate the feedline! It is a somewhat common mistake
to assume a low differential mode impedance means the common mode
requiremenst are also easy. The two mode are NOT related at all, and
can have any impedance relationship. As a matter of fact, adding a
choke can *increase* common mode currents, decrease them, or have NO
effect at all in current levels despite the fact the cable is

radiating.With the actual way the system works in mind, we can see adding a choke.

Virtually all of the supporting measurements clearly indicate the people making the measurements, like the people offering the theory, just don't completely understand what they are doing. They are stumbling around in the dark, without any idea what t do. In order to make a good measurement, you have to understand the system and how the system and the measuring instruments or protocol works.

On the other hand people with an open mind who use the scientific approach, and who attempt to do things right and double check themselves, universally conclude the antenna does not work as claimed.

73 Tom

100. Re: BACK TO BASICS - EM waves, E and H fields, in phase or inquadr...

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-02 12:19:36 UTC
From: 2w8ji@contesting.com
Message-ID: <3d219923.136537372@news.akorn.net>
Source record: 139640

On 1 Jul 2002 22:24:58 -0700, nm5k@wt.net (Mark Keith) wrote:

>richardharrison@webtv.net (Richard Harrison) wrote in message
news:<28760-3D210877-29@storefull-2395.public.lawson.webtv.net>...
>> UnTale wrote:
>> "May be that`s the only way to see if EH "performs as well as a full
>> size dipole" or not."
>>
>> Daytime 160m testing of a vertically polarized EH antenna against a
>> horizontal dipole is flawed.
>
>That ain't no joke. Two totally different animals, day or night. And
>just because a certain antenna beats another one at a certain time or
>distance, doesn't mean it's more or just as efficient. I've had my 40m
>car mobile antenna dog my home dipole at longer distances at night.
>"Texas to Florida" Is the 40m mobile antenna more efficient? Not
>hardly...It's just radiating what little it has to offer at just the
>right angle for the path/distance, etc.

My 10 foot tall 160-meter mobile antenna, with about 1% efficiency, is
significantly STRONGER on groundwave at ten miles with 100 watts
applied than my dipole at 300 feet is when I apply 1500 watts to the
dipole!

That's true day or night on 160, BROADSIDE to the dipole.

The dipole actually beats the vertical off the ends of the dipole,
under the same conditions. But only when the dipole is fed with about
ten times the power as the mobile runs.

73 Tom

101. Re: Tuner Loss?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-02 12:22:12 UTC
From: 2w8ji@contesting.com
Message-ID: <3d219a6b.136864697@news.akorn.net>
Source record: 139642

On Tue, 02 Jul 2002 03:52:58 GMT, tmgroat"at"peakpeak"dot"com (Tim Groat) wrote:

>Experiment to find the settings that work well for your tuner. If it's >a "three knob" type (TEE network, etc.) you'll probably find multiple >combinations that produce a match. Select the one that gives the most >power to the dummy load.

The highest efficiency normally appears when minimum inductance and maximum capacitance that permits matching the load is used.

The only exceptions come at the upper frequency limit of the tuner components.

73 Tom

102. Re: Building the Henf Antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-02 12:25:32 UTC
From: 2w8ji@contesting.com
Message-ID: <3d219b1f.137044879@news.akorn.net>
Source record: 139641

On 02 Jul 2002 01:06:20 GMT, k1bqt@aol.com (Rick Littlefield) wrote:

>> I thought he was too busy getting loaded and collecting young blonds, and
>generating revenue from asymetrical photo shots.<
>
>Last I saw on TV, ole' Heff (not to be confused with Henf or hemp) was looking
>for ways to make things taller rather than shorter. His "associates", aparently
>tired of lumped loading and fractal geometry, resolved the situation by giving
>him a new prescription for happiness.

Are you saying Henf and Hemp and Heff are not confused? Seems to me
like they are all associates in this design.

103. Re: My 85' dipole is actually 94'!! Another ??

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-02 12:41:23 UTC
From: Reg Edwards <g4fgq.regp@btinternet.com>
Message-ID: <afs71i$93e$1@knossos.btinternet.com>
Source record: 139643

"StarGazer" wrote
> I still have a question about using the tuner to match 150'
> of RG-8 to the 94' dipole.
> AFTER I tune it... Is there still that incredible 90% loss in
> power due to the 300:1 SWR?
> Or does that loss NOT EXIST after I tune it?
> This is really confusing me.
==========

I am not surprised at your confusion considering the nonsense which is plagiarised around the magazines, newsgroups and on the amateur chatter bands.

A tuner at the transmitter end of the line, where it usually is, has no effect whatsoever on the SWR on the transmission line. Neither can line loss be changed by anything you can do by adjusting the tuner.

Neither does your SWR meter indicate the SWR on the feedline. That is a very popular misconception.

But don't worry about it. Line loss on a 600-ohm line is small for very large SWRs. That is exactly why a 600-ohm line is chosen.

It is obvious that reflections and SWR on the line arise from the difference at the end of the line between the line impedance Zo the input impedance of the antenna. There is nothing which can be done about it at the transmitter end.

The purpose of the tuner is to transform the impedance seen looking into the feedline, whatever it might be, into the purely resistive 50 ohms required by the transmitter.
==========

> Also, is there something that I can change it from ladder line
> to coax right before it enters the house?
> Or does this defeat the whole purpose of using ladder line?

==========

It all depends on the length of coax which acts as a lump of capacitance across the end of the line. Too big a lump and the tuner is unable to tune it out without suffering a loss within itself.

To bring the 600 ohm line into the shack just bring the two wires close together for a few inches, with some additional insulation, and bring them through one relatively small hole in the window glass, window frame, or wall. Once inside the house you can continue with 450-ohm ladder line to

the tuner. Or put the tuner on the window ledge or conveniently near the window.

Once you have transformed down to 50 ohm coax electrically you can have it as long as you like. But it might be inconvenient to have to walk between transmitter and tuner when changing frequency and bands.

Reg, G4FGQ

104. Re: CAM?? Parallel dipoles for 80 m and 40 m?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-02 12:58:01 UTC
From: CAM <w5dxp@hotmail.com>
Message-ID: <3D21A359.6E69BAA9@hotmail.com>
Source record: 139645

StarGazer wrote:
>
> I'm starting to get it now. Except I can't see where 88' is 1/2 wavelength for
> 80 m. 120' would be 1/2 wavelength on 80 m.
> And 100' would be 3/4 wavelength on 40 m. Using 468/f =
> 1/2 dipole length in feet.

Let's take 80m first. With a 130 ft dipole and 88 ft of 450 ohm ladder-line, my antenna *system* is resonant on 3.993 MHz. However, the dipole *length* of 130 ft is resonant on 3.6 MHz. The antenna is actually 0.555 wavelengths long on 3.993 MHz so the feedline has to be made shorter than 1/2 wavelength to make the antenna *system* resonant on 3.993 MHz. This is the principle of changing the length of the ladder-line in order to cause a dipole *system* to resonate on some other frequency besides the frequency of the resonant length of the dipole.

Consider a 1/2 wavelength dipole fed by 1/2 wavelength of ladder-line. It is resonant on one fundamental frequency. If you increase the frequency, the antenna becomes too long so the feedline has to be shortened to achieve system resonance at the new frequency. If you decrease the frequency, the antenna becomes too short so the feedline has to be lengthened to achieve system resonance at the new frequency. The feedline acts similar to a shorted stub. Check out the description of my all-HF-band antenna on my web page for more details.

For 40m, the 130 ft dipole is longer than one wavelength so the feedline has to be made shorter than 3/4 wavelength to bring the antenna system into resonance at about 7.2 MHz. And you left out velocity factor of the ladder-line in your calculation above. For 450 ohm ladder-line, the 1/2 wavelength formula is approximately 440/f.

> With your antenna... could you get a W2DU BALUN on the
> TX end of your ladder line and then use about 50' of RG-8
> into the house without screwing anything up?

Yes, as long as my ladder-line remains constant at 88 ft. 88 ft of 450 ohm ladder-line feeding my 130 ft dipole at about 30 ft height, puts a current maximum point (minimum resistance) at the balun/choke and any length of coax from there would be OK. But you cannot duplicate my results by simply copying my dimensions. Your antenna environment varies from mine and so also will your antenna system dimensions for the same results. In fact, you may not be able to find a single ladder-line length that will cause antenna system resonance simultaneously on 75m and 40m but, with a little help from your antenna tuner, you can come close enough. An antenna system that is resonant on 4.1 MHz and 6.9 MHz can easily be tuned with an antenna tuner on either band. Or you can choose to use a different length of ladder-line on each of the two

bands. Note that resonating my 130 ft dipole on 3.6 MHz requires a feedline length of about 120 ft but I don't work 3.6 MHz so I never need that long a length of feedline.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

105. Re: Ham Band Use for Direct TV Dish and LNA?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-02 12:59:08 UTC
From: Dick Carroll <dixie@townsqr.com>
Message-ID: <afs82s$3tq$0@208.206.142.67>
Source record: 139644

"Christopher A. Bowne" wrote:
>
> A discarded (for reasons unknown) DirecTV dish and LNA followed me home from
> the freebie shed at our local town dum..err. solid waste recycling facility.
> Other than mounting it on the house to fool the neighbors into thinking we
> have satellite TV, does it have any practical UHF ham band application?
>

It'd make a good "dummy'. Mount it high and run RG58 to it-but don't
hook the dish end of the coax to anything, just let it float. Load the
coax shield as a random wire antenna vertically polarized. You won't
even have to worry about antenna insulators. Lay a 30-40 foot wire on
the ground in a flower bed etc. for the counterpoise.

I use a "spare" dish mounted on a discarded floor model electric fan
stand (which breaks down for compact storage) for portable satellite TV
when we travel.

Dick

106. Re: G5RV

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-02 13:08:13 UTC
From: CAM <w5dxp@hotmail.com>
Message-ID: <3D21A5BD.33009690@hotmail.com>
Source record: 139646

Dan/W4NTI wrote:
> Agreed...I built one once. It did well on 20. But on 75 it was marginal at
> best. When I replaced it with a Delta loop on 20 and a 1/2 wave center fed
> with mini-8 on 75 my signal reports nearly doubled.

Doubling is only 3dB. :-) With a well-designed G5RV the 75m results should
give only a slight S-unit edge to the 1/2WL CF. How much and what kind of
coax? Did you have a good choke at the coax/twinlead junction? Were both
antennas at the same height?
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

107. Re: G5RV

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-02 13:47:53 UTC
From: Dan/W4NTI <w4nti@mindspringnospam.com>
Message-ID: <afsasijmv1@slb6.atl.mindspring.net>
Source record: 139647

I am trying to recall....lets see I used 33' of 300 ohm line I think. As I recall it was a copy of the original G5RV. The one without any balun in it. And I think the horizontal part was 105'.

What I did was remove all the feed stuff and extend the length to 120' and fed with mini 8, which made it into a 75 meter half wave dipole.

I really don't recall the exact length of the line. 'CAM'. My main point was on 75 it didn't work all that well.

Dan/W4NTI

"CAM" <w5dxp@hotmail.com> wrote in message
news:3D21A5BD.33009690@hotmail.com...
> Dan/W4NTI wrote:
> > Agreed...I built one once. It did well on 20. But on 75 it was
marginal at
> > best. When I replaced it with a Delta loop on 20 and a 1/2 wave center
fed
> > with mini-8 on 75 my signal reports nearly doubled.
>
> Doubling is only 3dB. :-) With a well-designed G5RV the 75m results should
> give only a slight S-unit edge to the 1/2WL CF. How much and what kind of
> coax? Did you have a good choke at the coax/twinlead junction? Were both
> antennas at the same height?
> --
> cheers, CAM http://www.qsl.net/w5dxp
>
>
> -----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
> http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
> -----== Over 80,000 Newsgroups - 16 Different Servers! =-----

108. Re: Auto tuner + MA5V = Full HF band TX?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-02 13:48:59 UTC
From: Vito <vito@crosslink.net>
Message-ID: <3D21AF4B.D5A51068@crosslink.net>
Source record: 139648

K0bg wrote:
>
> .... You can get real creative running a long wire.... You might just be
> surprise how good it works.
>

Second that! I took the XYL's Butternut down to see why the SWR was
fluctuating just before some contest. She demanded an antenna so I
hooked two of the 'nuts 40M radials to and old balun in an inverted V
config. Works Europe on 20 & 40 better than the 'nut!! Go figure ...
73 K3DWW

109. Re: G5RV

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-02 14:05:34 UTC
From: Dan Richardson <k6mhe@arrl.net>
Message-ID: <1pc3iucpml306vjgsq90aadffh9b87p6qf@4ax.com>
Source record: 139656

On Tue, 2 Jul 2002 11:37:09 +0000 (UTC), "Reg Edwards"
<g4fgq.regp@btinternet.com> wrote:

>> If you are truly tired of hearing and reading about the antenna why on
>> earth would you add even more banter with this posting?
>>
>> Danny
>========================
>A predictable reply, Danny. ;o)
>

Likewise Reg.

110. Re: BACK TO BASICS - EM waves, E and H fields, in phase or inquadr...

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-02 14:12:15 UTC
From: CAM <w5dxp@hotmail.com>
Message-ID: <3D21B4BF.1BD04F8F@hotmail.com>
Source record: 139651

Tom W8JI wrote:
> The two mode are NOT related at all, and
> can have any impedance relationship.

Tom, if they have (as you say) any "relationship" at all then they are,
by root word definition, "related". Wouldn't it be better to say their
relationship is somewhat unpredictable instead of "NOT related"?

"NOT related" = no relationship

"any relationship" = unpredictably related (until measured)

I compared a symmetrical center fed dipole to an off-center-fed dipole.
I predicted that the common mode currents would be related to the
amount of unbalance in the differential feedpoint impedances. Just as
I predicted, the OCF dipole common mode current measured a magnitude
higher than the symmetrical CF dipole. If common mode conditions are
"NOT related" to differential mode conditions, how was I able to
predict the ballpark outcome of my measurements?
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
------== Over 80,000 Newsgroups - 16 Different Servers! =-----

111. Fractal Wire Antennas

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-02 14:13:21 UTC
From: VE9SRB <srbest@att.net>
Message-ID: <5yiU8.288$Iu6.16963@bgtnsc04-news.ops.worldnet.att.net>
Source record: 139650

This is not intended to be a "debate", just a statement of opinion (or fact depending on your perspective). This is also very long - sorry. I won't post any other long statements on this subject.

The electromagnetic behavior and performance properties of a wire antenna are a function of the antenna's physical properties. These physical properties include the antenna's size (height, area, occupied volume, etc.), total wire length, geometry and wire diameter. If we conclude that the electromagnetic behavior and/or performance properties of an antenna are uniquely or primarily a function of one of these physical properties, we must also conclude that significantly modifying this one physical property will significantly modify the antenna's electromagnetic behavior and/or performance properties.

If we are to conclude that antennas having fractal geometry behave in a manner differently or better than antennas with a non-fractal or some arbitrary geometry, then we must fix all of the antenna's other physical properties (size, total wire length and wire diameter) and compare the electromagnetic behavior and performance properties of the fractal antenna with those of antennas having different geometries. This is something that none of the proponents of fractal geometry have done in the open literature. Not one. Let's consider this further.

1) Cohen, in a series of Communications Quarterly articles, published the performance properties of the Minkowski Island fractal loop antenna. He demonstrated that with increasing fractal iteration these antennas exhibit a lower resonant frequency than a Euclidean (square or rectangular) loop of the same size (occupied area). He also demonstrated that in some regions of low frequency, the Minkowski Island fractal loops exhibit a higher radiation resistance than the Euclidean loop of the same size. Cohen concluded that the electromagnetic behavior and relative performance properties of the Minkowski Island fractal loops are primarily a function of the loops' fractal geometry. It is significant to note that two physical parameters of the antenna change with increasing fractal iteration. One is the antenna's geometry and the other is the antenna's total wire length. While the performance data presented by Cohen is mostly accurate, his conclusion is scientifically flawed because he is varying two of the antenna's physical properties but concludes that the antenna's electromagnetic behavior is primarily a function of only one of these physical property - its fractal geometry.

To scientifically validate his hypothesis, Cohen would have to compare the electromagnetic behavior and performance properties of the Minkowski Island fractal loop with those of other geometry loops having the same size, total wire length and wire diameter. He did not do this. When we compare the

Minkowski Island loop with loops of differing geometries but otherwise having the same size, total wire length and wire diameter, it is evident that they exhibit very similar electromagnetic behavior and performance properties. In some cases, the arbitrarily shaped loops behave better than the fractal loop and in some cases, the fractal loop behaves better than the arbitrarily shaped loop. In all of this however, the most significant fact to note is the following: when the total wire length of the arbitrarily shaped loops is adjusted such that their resonant frequency matches that of the Minkowski Island fractal loop, they have virtually identical radiation resistance and bandwidth. The resonant behavior of these loops is primarily a function of the loop size with respect to the resonant wavelength and the resonant properties of these loops are essentially the same independent of the differences in loops' geometry and total wire length.

2) Puente's work on the Koch fractal monopole suffers from the same scientific flaws as Cohen's work on the Minkowski Island loops. Puente describes the behavior and performance properties of the Koch fractal monopole as a function of increasing fractal iteration (increasing total wire length) and demonstrates that, when compared to a Euclidean (straight) monopole of the same height, the Koch fractal monopoles exhibit lower resonant frequency and increased radiation resistance in some regions of low frequency. Puente even goes as far as claiming that the complex shape of the Koch fractal curve enhances its radiation properties. Again, it is significant to note that Puente did not bother to compare the performance of the Koch fractal monopole with another monopole of different geometry but otherwise having the same physical properties (height, total wire length and wire diameter). For example, if we compare the Koch fractal monopole with a simple meander line monopole and normal mode helix of the same height and total wire length, we see that these simple geometries exhibit significantly lower resonant frequency and higher radiation resistance at low frequencies. As a function of height and total wire length, these simple structures are more effective radiators. Two points are even more significant: a) when the wire length of the meander line and normal mode helix antennas is shortened (while maintaining the same height) such that their resonant frequency matches that of the Koch fractal, they exhibit virtually identical radiation resistance and bandwidth. The resonant behavior of these monopole structures is primarily a function of their height with respect to the resonant wavelength and is essentially the same independent of the differences in geometry and total wire length. b) below the small antenna limit (ka < 0.5, k = 2pi/WL and a is the radius of a sphere encompassing the maximum dimension of the antenna), the radiation resistance of all these antennas converges to that of a Euclidean monopole of the same height.

3) One of the most profound and yet totally unsubstantiated conclusions regarding fractal antennas is that stated by Vinoy et al in an article titled "Hilbert Curve Fractal Antenna: A Small Resonant Antenna for VHF/UHF Applications" published in Microwave and Optical Technology Letters. In this article the authors claim "A fourth iterated fractal Hilbert curve geometry inscribed in a square of 7 cm is shown to result in a resonant frequency of 267 MHz, which is much lower than any other resonant antenna of similar size." How many other resonant antennas of the same size did they compare

with the Hilbert curve antenna? - zero, no even one. I fabricated a simple meander line antenna of the same size and total wire length as the Hilbert curve and it had a resonant frequency of 154 MHz.

The trend in the study of fractal wire antennas is to compare the fractal antenna with a simple Euclidean antenna and jump to a range of conclusions that are, for the most part, unsubstantiated. Comparing the fractal antennas with other geometry antennas of the same size, wire length and wire diameter provides clear evidence of this. It should be inherently obvious that increasing the wire length in a fixed size antenna lowers its resonant frequency and increases its radiation resistance over some range of low frequencies as compared to a straight Euclidean antenna. This behavior is simply not unique to antennas with fractal geometry. There is no inherent or unique benefit to a fractal geometry antenna compared to an antenna with virtually any other geometry. Fractal wire antennas do not behave in a unique manner nor do they behave in a manner significantly different than antennas with other geometries. This is especially true when the antennas are made to be resonant at the same frequency. It is interesting to note however, that in most cases, a self-similar fractal geometry is generally the least effective geometry in terms of lowering resonant frequency as a function of total wire length.

If the discussion turns to the concept that all bent wire geometries are "fractal" then the discussion gets even more ridiculous - we have assigned a new term to bent wire geometries but have learned nothing new about the fundamental behavior of antennas.

Steve VE9SRB

112. Re: G5RV

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-02 14:17:52 UTC
From: CAM <w5dxp@hotmail.com>
Message-ID: <3D21B610.82438E4F@hotmail.com>
Source record: 139652

Dan/W4NTI wrote:
>
> I am trying to recall....lets see I used 33' of 300 ohm line I think. As I
> recall it was a copy of the original G5RV. The one without any balun in it.
> And I think the horizontal part was 105'.
>
> What I did was remove all the feed stuff and extend the length to 120' and
> fed with mini 8, which made it into a 75 meter half wave dipole.
>
> I really don't recall the exact length of the line. 'CAM'. My main point
> was on 75 it didn't work all that well.

Perhaps the lack of a choke caused your feedline to radiate in undesirable
directions while preventing some of your RF from reaching the dipole.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
------== Over 80,000 Newsgroups - 16 Different Servers! =-----

113. Re: Auto tuner + MA5V = Full HF band TX?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-02 14:19:33 UTC
From: CAM <w5dxp@hotmail.com>
Message-ID: <3D21B675.55E0D3E3@hotmail.com>
Source record: 139653

Vito wrote:
> I took the XYL's Butternut down to see why the SWR was
> fluctuating just before some contest. She demanded an antenna so I
> hooked two of the 'nuts 40M radials to and old balun in an inverted V
> config. Works Europe on 20 & 40 better than the 'nut!! Go figure ...

Of course! It was closer to a horizontal dipole. :-)
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

114. Free Ham Radio manuals & schematics - most all brands,vintage too!

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-02 14:23:45 UTC
From: Charles Johnston <ctj92@hotmail.com>
Message-ID: <9bb48a360c340a5fb441b5392d4d2c5d.100795@mygate.mailgate.org>
Source record: 139654

Links to many free downloadable Ham Radio manuals and schematics at
this URL....

1. http://www.ab7sl.com/index.html?row1col2=links.html

Includes Alinco, Kenwood, Yaesu, Heathkit, Collins, Swan, Icom,
Heathkit, MFJ-Ameritron, Radio Shack and several others.

Also links for many "vintage" rigs manuals and schematics too such as
Hallicrafters, Hammarlund,Drake,Johnson,Kenwood-Trio,Lafayette and
over 125 more vintage rig manuals... 73'

--
Posted via Mailgate.ORG Server - http://www.Mailgate.ORG

115. Re: BACK TO BASICS - EM waves, E and H fields, in phase or inquadr...

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-02 14:30:36 UTC
From: richardharrison@webtv.net
Message-ID: <23541-3D21B90C-484@storefull-2396.public.lawson.webtv.net>
Source record: 139657

Tom, W8JI wrote:
"The two mode are NOT related at all, and can have any impedance relationship."

There he goes again!

When changing the voltage across a transmission line changes the current the line conductors carry as if in paralllel, the differential-mode is related to the common-mode.

An example to show what common-mode and differential-mode are is in order. You can use any a-c frequency fron audio to microwave in imagining this example. You may even use d-c for the common-mode signal, as is frequently done for control on an audio circuit.

Take a parallel-wire line and terminate it with center-tapped transformer windings at both ends.

Assume perfect balance in the line and transformers. We can use additional windings on the line transformers to input and output on the line.

Voltage between the transformer center-taps and ground is zero. That is because the circuit is balanced. The voltage between center taps is zero. The entire circuit is really a bridge circuit.

We can place a signal between one center-tap and ground and recover that signal between the other center-tap and ground. This is a common-mode signal because it is carried by both wires in the transmission-line as if they were parallel conductors using a ground connection to complete the circuit.

The common-mode signal using the center-taps of the transformers does not mix with the wire-to-wire differential-mode signal because the differential-mode signal is balanced and there is no "mutual impedance" shared by the signals. Without a mutual impedance, one signal does not become a "function" of the other signal. That is, imposing a change on one signal does not affect the other signal.

Unbalance the system, and the signals mix. One becomes a function of the other. When you change the differential-mode voltage it affects the common-mode voltage.

This is the same cause and effect we have been discussing with transmission-line imbalance or antenna imbalance, and r-f returning from the antenna on the coax exterior, or returning on parallel-line wires as a common-mode signal to the shack. Imbalance provides a mutual

impedance.

Tom just does know what he is talking about.

Best regards, Richard Harrison, KB5WZI

116. Re: Shunt Feed Grounded Tower ?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-02 14:34:39 UTC
From: thompson@mindspring.com
Message-ID: <afsdf6nra1@slb4.atl.mindspring.net>
Source record: 139655

As an alternative look at the article by N4KG in I think the May 1994 QST.
YOu hook the shield of the coax to the tower and the center to a set of
elevated radials (at least 4). I am guessing you an start at 30 feet.
Depends on whether the C31XR is plumbers delight or insulated from the boom.
73 Dave K4JRB

KB4QLZ <none_due_to_spam@nononono.net> wrote in message
news:uhof8cr4fmhjfc@corp.supernews.com...
> Rohn 25G at 125 ft. Force 12 C-19XR Beam. 4 sets of insulated guys. Tower
is
> grounded. How do I shunt feed this thing?????
>
>
>

117. Re: newbie needs help for.antenna tuner and doesn`t know any otherhams.

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-02 14:46:01 UTC
From: Gary McAdams <g.m.mcadams@worldnet.att.net>
Message-ID: <J0jU8.337$Iu6.18136@bgtnsc04-news.ops.worldnet.att.net>
Source record: 139658

Kyle,

I'll try to help, but this might be a little difficult..

First piece of advice: Ignore the arse-hole G3 who has
already replied and displayed his own ignorance and
arrogance. Hiding behind a keyboard brings out the
ass in all of us, but some are more severely affected!

That being said, lets try and figure this out, OK?

kyle <CB750FSuperSpor@webtv.net> wrote in message ...
> I need information for an old antenna tuner and cannot find any info
> about it. I have a mfj versa tuner II. model number mfj-941 (not
> mfj-941e), just plain old 941. I guess it will be about 15 to 20 years
> old.

Try to find a manual. Possibly through the MFJ company. See if there
is any help available on-line. In general, this is an HF antenna tuner,
without a dummy load. That is important, because with the TS-520S
you will want to tune the rig into the dummy load before you attempt to
tune the antenna. So, I would first acquire a dummy load of some sort.

The problem is that I want to get back on the air. I have a kw
> ts-520 and never operated it (don`tknow how) but have manual. Can I use
> this antenna tuner with that rig?

Yes.

I don`t know a whole lot and
> especially in how to operate the tuner. It also only has 1 needle and 2
> lines (one is for swr and the other is for rf power. How am I supposed
> to know which line am I reading?

Usually there is switch on the tuner labeled something like
"Forward/Reflected"
or "Power/SWR" or something similar. Since the meter only has one needle we
need to switch between power reading and SWR reading. Now, I have a 941C
which
must be very similar to your tuner, and it has a button labeled FWD/REF and
a
knob that is labeled SENS/Power. Assuming that you have an antenna attached,
what you do is turn the knob all the way to the right, which is the lowest
power setting.
Put the FWD/REF switch in the FWD position.Then feed in a little power, just
enough to bring the needle all the way to the right on the bottom, (SWR)
scale.

Then switch to the REF position. The meter is now reading SWR. You can use the tuner just for SWR readings or you can use it as an antenna tuner.

Realistically, You are better served just using the SWR function for now. A ten meter dipole is so easy to build and so small that a tuner is not needed.

Really! I would venture to sat that is true all the way down to 40 meters, where
a half-wave dipole is still only about 66 ft long!

Not to be sarcastic or anything, Kyle, but now is the time to begin reading about radio. Some reference works to consider:

1. "ARRL Handbook", any year.

2. "ARRL Antenna Manual", any year.

3. "Now You're Talking" also from ARRL pubs and available at Radio Shack.

4. "ARRL Operating Manual"

All of these publications are available through the ARRL, but most of them carry a premium price tag, with the possible exception of the "Now You're Talking", which as mentioned before, is available at Radio Shacks nationwide. Some of the ARRL publications may be in your local library.

Good luck, and don't let the buttheads, like the aforementioned G3 get you down. For some reason. hams on the Internet can be some of the most arrogant, assholes on the face of the planet. The funny thing is that just the opposite is generally true of the hams who you will meet on the air.

I suppose that the Internet just brings out the best in some people!

73, Gary WG7X

118. Re: newbie needs help for.antenna tuner and doesn`t know any otherhams.

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-02 15:54:20 UTC
From: Bob Miller <bamiller@texas.net>
Message-ID: <3sohPZaNjDXkZMr76Q+R8WYS=RMB@4ax.com>
Source record: 139659

"Gary McAdams" <g.m.mcadams@worldnet.att.net> wrote:

>
>
>All of these publications are available through the ARRL, but most
>of them carry a premium price tag, with the possible exception
>of the "Now You're Talking", which as mentioned before, is available
>at Radio Shacks nationwide. Some of the ARRL publications
>may be in your local library.

I would also add, since you live in L.A. and they have a good public library system there, you should go to the central branch of the library and look at the books they have on amateur radio, and they also probably have subscriptions to QST and CQ magazines. When I was a kid, the Dallas Public Library, downtown branch, had all that stuff, and it was a cheap way to get up to speed on ham radio technical stuff.

Best regards,

Bob
k5qwg
>

>
>
>73, Gary WG7X
>
>

119. Re: Apartment HF antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-02 15:56:41 UTC
From: raiar@slacc.com.nospam
Message-ID: <3d21ca3b.68206453@news.galilei.com>
Source record: 139660

Hi Dick

Thanks for the compliment!

Seeing your post set me back for a second. The particular apartment I lived in was owned by Ray Hughes (now deceased) his sons name was Richard.

When I opened the post I expected to see a comment about all the ground radials and a small part of a dipole I left behind when I moved. Then I thought to myself, that was over 20 years ago, the statute of limitations surely has run out, hi hi.....

One of the houses I moved into, the subdivision did not have very stringent CCRs and I put up a beam on a short 30 foot tower. They made me take it down. Even though there were 3 other hams in the same subdivision. A fourth moved in next door to me and put up a 75 foot tower and a couple of massive beams. I put my little 30 footer back up again and again was told (by certified letter) to take it down. I was a longtime member of the ARRL and got them involved in the issue. They came out full guns for the new ham, and he got to keep his antenna up by special permission of the subdivision trustees. Me, well my antenna had to come back down and they could care less about my situation. I have not been a member of the ARRL since!

TTUL
Gary

120. Re: Building the Henf Antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-02 17:03:18 UTC
From: tdonaly@aol.com
Message-ID: <20020702130318.01574.00002353@mb-cs.aol.com>
Source record: 139661

Rick wrote,
>
>>There is NOTHING new under the sun!<
>
>When it comes to antennas, I think you're right! Regardless of the author's
>rather novel interpretation of antenna theory, he still has a capacitively
>loaded asymetrically dipole. Collector? Generator? What's that all about?
>Think
>I'll re-designate the wire on my 80-meter dipole as a "Conduction-Based
>Electron Accelerator" and patent that! It's actually a much easier concept to
>defend because it's closer to reality! Goofy, this antenna business.
>
>73
>
>Rick K1BQT
>
Somewhere in the interesting explanation
of how this antenna works, the GAP
web site claims an "antenna resistance"
of 2.8 ohms on 20 meters. This is fairly
close to the 3.5 ohms feedpoint impedance
Sevick claimed for his short 40 meter
vertical as written up in some of the
ARRL antenna books. How do these
fellows feed these antennas, and how do
they know how much of the energy is radiated and how much is converted to heat?
(Sevick claimed high efficiency for his antenna, too.)

Tom Donaly KA6RUH

121. Re: Shunt Feed Grounded Tower ?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-02 17:06:48 UTC
From: richardharrison@webtv.net
Message-ID: <10144-3D21DDA8-432@storefull-2398.public.lawson.webtv.net>
Source record: 139662

CAM, W5DXP wrote:
"Gamma match."

Page 26-9 of the 19th edition of the ARRL Antenna Book goes into the gamma match. It works with a grounded tower as if the dipole element shown in Fig 10 were the earth.

A sloping wire can be used between capacitor "C" and the point found up the tower which matches your coax. It`s been used by some medium wave broadcasters with single towers. Radiation from the slant-wire can be troublesome to maintenance of a directional array pattern. Shunt-feed also requires cut-and-try because calculations for the feed-point on the tower are inexact.

Best regards, Richard Harrison, KB5WZI

122. GAP Titan/Titam

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-02 17:43:06 UTC
From: Biggles <hamsat@totalise.co.uk>
Message-ID: <o4k3iu87irt02cq5muejrob5bs01rm20tq@4ax.com>
Source record: 139664

Hi
Has anyone had any experience of the GAP Titam or Titan antenna.
Also is there a manufacture web site.
Regards
Tony

123. CAM?? What is your 3:1 SWR Bandwidth??

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-02 17:43:52 UTC
From: StarGazer <pti@capnet.com>
Message-ID: <3D21E657.E43DAC5E@capnet.com>
Source record: 139667

What is the Bandwidth on 80 and 40 that doesn't go above 3:1
SWR. (That can be auto-tuned with your 756pro) ??

124. Re: BACK TO BASICS - EM waves, E and H fields, in phase orinquadr...

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-02 17:57:53 UTC
From: CAM <w5dxp@hotmail.com>
Message-ID: <3D21E9A1.F72318ED@hotmail.com>
Source record: 139665

Richard Harrison wrote:
>
> Tom, W8JI wrote:
> "The two mode are NOT related at all, and can have any impedance
> relationship."
>
> There he goes again!
>
> When changing the voltage across a transmission line changes the current
> the line conductors carry as if in paralllel, the differential-mode is
> related to the common-mode.

I think I understand Tom's strategy here. If he uses "related" enough times in his postings, he may get Webster's to add a new meaning to the word.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
------== Over 80,000 Newsgroups - 16 Different Servers! =-----

125. Re: Fractal Wire Antennas

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-02 18:02:46 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <hrl3iuglvbg66ab8jh5j8vccql1fjjftgr@4ax.com>
Source record: 139666

On Tue, 02 Jul 2002 14:13:21 GMT, "VE9SRB" <srbest@att.net> wrote:

>This is not intended to be a "debate", just a statement of opinion (or fact
>depending on your perspective). This is also very long - sorry. I won't
>post any other long statements on this subject.
>
>
Hi Steve, All,

I will trim to my own comments.

>
>If we are to conclude that antennas having fractal geometry behave in a
>manner differently or better than antennas with a non-fractal or some
>arbitrary geometry, then we must fix all of the antenna's other physical
>properties (size, total wire length and wire diameter) and compare the
>electromagnetic behavior and performance properties of the fractal antenna
>with those of antennas having different geometries. This is something that
>none of the proponents of fractal geometry have done in the open literature.
>Not one.

Steve makes a point that is fundamental to measurement. It is called
the reduction of variables. He has named several above, which, if
they were not fixed nor accounted for, would lead to serious
distortions in the outcomes and analysis of measurements.

>
>the electromagnetic behavior and relative performance properties of the
>Minkowski Island fractal loops are primarily a function of the loops'
>fractal geometry. It is significant to note that two physical parameters of
>the antenna change with increasing fractal iteration. One is the antenna's
>geometry and the other is the antenna's total wire length.
>

These are the two major and obvious considerations to base comparisons
on given that geometry relates to launch characteristics and wire
length relates to drivepoint characteristics (both being
generalizations, it should be obvious that they contribute to each
other as well).

Within the scope of my work, I have explicitly designed my models to
these benchmarks. In my work I refer to them as either being Constant
Height surveys or Constant Wire surveys.

>
>To scientifically validate his hypothesis, Cohen would have to compare the
>electromagnetic behavior and performance properties of the Minkowski Island

>fractal loop with those of other geometry loops having the same size, total
>wire length and wire diameter. He did not do this.

I have purposely avoided loops as a class as this was yet another
variable that offered very little new insight above and beyond study
of the humble monopole. This is not to say I abandoned the field as I
have a number of loops at my pages. I included them both for the sake
of comparison (limited albeit) and for novelty.

>When we compare the
>Minkowski Island loop with loops of differing geometries but otherwise
>having the same size, total wire length and wire diameter, it is evident
>that they exhibit very similar electromagnetic behavior and performance
>properties.

I can say that by and large this is true, however there is a continuum
of variation that is driven by one variable: the discontinuity
presented to the element by a kink to enforce an arbitrary shape.

>when the total wire length of the arbitrarily
>shaped loops is adjusted such that their resonant frequency matches that of
>the Minkowski Island fractal loop, they have virtually identical radiation
>resistance and bandwidth.

When the physical dimension of the overall antenna is much less than a
wavelength (the stated application for fractals), differences are
minuscule. This goes beyond the exclusive statement above to include
the entire class of fractals compared to themselves or standard
structures.

>The resonant behavior of these loops is primarily
>a function of the loop size with respect to the resonant wavelength and the
>resonant properties of these loops are essentially the same independent of
>the differences in loops' geometry and total wire length.
>

I would note that fractal loops and fractal dipoles are very different
beasts in that closing the ends presents the user with fewer
resonances. When we do get into variation in the number of resonances
in comparison to other structures, it is clear that a fractal
compresses more into its design. This is not a characteristic unique
to the fractal however and neither does the fractal present itself as
the optimum form.

>
>when compared to a Euclidean (straight)
>monopole of the same height, the Koch fractal monopoles exhibit lower
>resonant frequency and increased radiation resistance in some regions of low
>frequency.
>

This reveals the poverty of the "belief circle" scientists where I
have five times the work (on just one page) revealed for side-by-side

comparison. I would offer that nearly everyone here is unaware that there is a Quadratic form of the Koch and a Triadic form - they are quite different. I would also note that the fractal "belief circle" seems to exist on very, very few models outside of the Koch (and begs the question why they insist on the generic term fractal antenna when attention rarely swerves from koch antennas).

One good answer to that last rhetorical question would be that fractal forms abound in very poor examples. Our "belief circle" scientists would be forced to confront contradictions to their carefully crafted insights into a new form of fractal electromagnetics. As Scientific American notes about these charlatans:

>>
>>5. Has anyone gone out of the way to disprove the claim, or has only
>>supportive evidence been sought?
>>This is the confirmation bias, or the tendency to seek confirmatory
>>evidence and to reject or ignore disconfirmatory evidence.
>>

>Again, it is
>significant to note that Puente did not bother to compare the performance of
>the Koch fractal monopole with another monopole of different geometry but
>otherwise having the same physical properties (height, total wire length and
>wire diameter).
>

This statement attends the poor quality of science practiced. To me, it underlines an utter disregard and contempt for their audience.

>
>If the discussion turns to the concept that all bent wire geometries are
>"fractal" then the discussion gets even more ridiculous - we have assigned a
>new term to bent wire geometries but have learned nothing new about the
>fundamental behavior of antennas.
>
>
>Steve VE9SRB
>

Hi Steve,

The joke of this is that four or five years ago I found that any fractal advantage was a mis-credit to deflect attention away from the simple matter of putting a kink in a wire. Steve, your random bent wires that won the Fractal Challenge some years back supported this observation.

As to the culture of the fractal "belief circle." That group steadfastly moves around the periphery of their goal so as to not attain its mediocre pay-off. As long as the goal remains "elusive," the magicians can mumble oaths and insist that the stars be in alignment before the next test (the Italian Gambit).

My studies have cut to the heart of the matter and the data reveals that as a class, fractals, by the nature of the variation of their geometry, presents a continuum of characteristics that can be ordered rationally against simple correlatives. There is not much advantage to be gained by this except a certain intellectual satisfaction. However, this does not sell patent medicine, and knowing the ingredients of doctor hokum's fractal-elixir does not reveal a cure.

73's
Richard Clark, KB7QHC

126. Re: BACK TO BASICS - EM waves, E and H fields, in phase orinquadr...

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-02 18:47:52 UTC
From: richardharrison@webtv.net
Message-ID: <1447-3D21F558-472@storefull-2393.public.lawson.webtv.net>
Source record: 139569

CAM wrote:
"If he uses "related" enough times in his postings, he may get Webster`s to add a new meaning to the word."

That`s a knee slapper!

I am as skeptical as Tom of the EH antenna. I hope the promoters have a new scientific discovery despite my doubt. I think Tom hopes they don`t. I don`t mind revising my decisions on right, wrong, and the way things work, to fit new information.

Just as the promoters can`t prove anything with baloney, it won`t be disproved with baloney either.

Best regards, Richard Harrison, KB5WZI

127. Re: G5RV

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-02 19:03:27 UTC
From: 'Doc <w5lz@icok.net>
Message-ID: <3D21F8E5.A3CDCFDB@icok.net>
Source record: 139668

Dave,
I think what the man is trying to say is that
while the G5RV is a nice 20 meter antenna, it isn't
the 'miracle', all-band, antenna it's tauted to be.
Like most 'stories', it's abilities tend to get
bigger the more often the 'story' is told. This is
a fairly common advertising ploy (ploy = lie). I
also think he may have been saying "TANSTAAFL"...
'Doc

PS - "TANSTAAFL" means, "There ain't no such thing as
a free lunch", which is true for everything from
radio to rat traps.

128. Re: limited space antennas...any ideas

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-02 19:23:23 UTC
From: 'Doc <w5lz@icok.net>
Message-ID: <3D21FD8D.D3A77EAC@icok.net>
Source record: 139570

AD9E,
In effect, yes. It can be used on any frequency.
If the length of the wire has some meaningful relation
to the frequency used (1/4, 1/2, 1/? wave), your signal
will be 'better'. As to the power it can take, it can
handle any power level the 'cantenna' can stand, for
the same length of time.
Will this make a 'good' antenna? No. But it will
work in that it presents a 'good' match to your transmitter
allowing full power output. Some may rememeber a device
sold in the early '80's(?), by a company called "K-Comm",
"Maxx-Com" (can't remember the name, rats). It was a
'potted' device said to provide a good match to almost
any length wire. When X-rayed, it was only a 50 ohm
resistor with a connection for a wire. It worked very
well for some people, and they were happy with it...
'Doc

129. Re: MFJ-270 surge protector

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-02 19:23:41 UTC
From: Uncle Peter <radioconnectionNO@cox.netSPAM>
Message-ID: <15nU8.16708$DB.232870@news1.east.cox.net>
Source record: 139571

"Ken" <cprstn54zz@att.net> wrote in message
news:3d1f7644.32177031@news-server.optonline.net...
> On Sun, 30 Jun 2002 20:03:15 +0100, Julian
> <Julian@velnospamodog.demon.co.uk> wrote:
> >This surge protector's terminals are marked In and Out, would I be
> >correct in assuming that the In terminal should be Rx side and the Out
> >antenna side?
>
> No way to figure it out! On RX it goes one way and on TX the other
> way.
>
> I have one of their switches with built-in lightning arrestor -- and
> for that item it doesn't matter which PL-259 you connect to what
> SO-239. Inasmuch as the thing grounds your sheathing, and then
> directs harmful surges from the center conductor to ground, it
> probably doesn't matter for yours either.
>
> Ken KC2JDY
>
>
It does matter on some designs, where a series cap is used before the
gas discharge tube. PolyPhasors are clearly marked "antenna"
and "equipment". I'd drop MFJ service a line and ask it makes a
difference on the MFJ270 device.

Pete
>
>
>
> Ken
> (to reply via email
> remove "zz" from address)

130. Re: G5RV

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-02 19:24:58 UTC
From: Dave Clemence <*******davesradio@alltel.net**********>
Message-ID: <afsngb$4m4$1@iac5.navix.net>
Source record: 139663

so what are you trying to say????

K5DRC

"Reg Edwards" <g4fgq.regp@btinternet.com> wrote in message
news:afqr51$e6$1@venus.btinternet.com...
> Year after year, I am tired of hearing and reading about the G5RV.
>
> Insofar as G5RV's with their half or double-sized versions are concerned,
it
> is recommended you make your minds a blank.
>
> The Guru's, old wives and plagiarists interminably continue to propagate
its
> special magical Marzipan properties to bolster their ego's and imagined
> reputations.
>
> Most of these cranks are fully aware the G5RV has no better performance
than
> any other multi-band, crudely omni-directional dipole, of random
end-to-end
> length, fed with a random length balanced line of no specified impedance.
>
> In fact it has a sub-standard performance if that attention-attracting
> length of coax is insisted upon just to retain the name.
>
> I'm quite sure G5RV would agree if he was still around. It was others who
> have made a few bucks and are still attempting to make a few bucks out of
> suckers from his description of a simple basic, rather obvious dipole
which
> had been around for years before his first relatively unimportant article
on
> a one-band antenna.
>
> It does at least work very well compared with the much-later cross-field
and
> related inventions.
>
> Its history has been turned into bunk by salesmen, magazine editors,
authors
> and the antenna newsgroup establishment. Now let it rest in peace.
>
> That's my unimportant two-penny-worth contribution anyway.
> ---
> Reg, G4FGQ

>
>
>

131. Re: BACK TO BASICS - EM waves, E and H fields, in phaseorinquadr...

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-02 19:50:03 UTC
From: CAM <w5dxp@hotmail.com>
Message-ID: <3D2203EB.DAE60EC2@hotmail.com>
Source record: 139572

Richard Harrison wrote:
>
> CAM wrote:
> "If he uses "related" enough times in his postings, he may get Webster`s
> to add a new meaning to the word."
>
> That`s a knee slapper!
>
> I am as skeptical as Tom of the EH antenna.

This certainly isn't a defense of EH antennas. Note that Tom's statement doesn't apply only to the EH antennas but to antennas in general. What I wonder is how he can predict and cure common mode problems if they are "NOT related" to differential mode conditions? Wouldn't being "NOT related" to differential mode conditions make them completely unpredictable and beyond the reach of human knowledge?
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
------== Over 80,000 Newsgroups - 16 Different Servers! =-----

132. Re: G5RV

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-02 19:51:44 UTC
From: CAM <w5dxp@hotmail.com>
Message-ID: <3D220450.321D1252@hotmail.com>
Source record: 139573

'Doc wrote:
>
> Dave,
> I think what the man is trying to say is that
> while the G5RV is a nice 20 meter antenna, it isn't
> the 'miracle', all-band, antenna it's tauted to be.
> Like most 'stories', it's abilities tend to get
> bigger the more often the 'story' is told.

Some people seem to think that antenna gurus should be allowed
to engage in hyperbole.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

133. Re: CAM?? What is your 3:1 SWR Bandwidth??

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-02 19:59:46 UTC
From: CAM <w5dxp@hotmail.com>
Message-ID: <3D220632.1873C6CD@hotmail.com>
Source record: 139574

StarGazer wrote:
> What is the Bandwidth on 80 and 40 that doesn't go above 3:1
> SWR. (That can be auto-tuned with your 756pro) ??

The 3:1 SWR bandwidth on 80m is about 160 kHz and about 290 kHz
on 40m, i.e. virtually the entire band on 40m. The 'Q' of the
antenna appears to be about 40. 'Q' = BW/f
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

134. Re: BACK TO BASICS - EM waves, E and H fields, in phaseorinquadr...

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-02 20:23:00 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <u524ius9rjajfe0046fhstfvdc1p2uucpm@4ax.com>
Source record: 139575

On Tue, 02 Jul 2002 14:50:03 -0500, CAM <w5dxp@hotmail.com> wrote:

>Richard Harrison wrote:
>>
>> CAM wrote:
>> "If he uses "related" enough times in his postings, he may get Webster`s
>> to add a new meaning to the word."
>>
>> That`s a knee slapper!
>>
>> I am as skeptical as Tom of the EH antenna.
>
>This certainly isn't a defense of EH antennas. Note that Tom's statement
>doesn't apply only to the EH antennas but to antennas in general. What I
>wonder is how he can predict and cure common mode problems if they are
>"NOT related" to differential mode conditions? Wouldn't being "NOT related"
>to differential mode conditions make them completely unpredictable and
>beyond the reach of human knowledge?

Hi Cecil,

This has gone on much too long for me to have followed to the matter
of punctuation and fly-specs, but it seems to me that what is being
argued is not so much relations of causes as relations of effects.
This group has always presented a problem of being able to separate
dependent variables from independent variables.

73's
Richard Clark, KB7QHC

135. Re: ? about CATV Hardline

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-02 20:40:35 UTC
From: "KC9JS, John" <KC9JS@charter.net>
Message-ID: <ui43ug3r44cbc8@corp.supernews.com>
Source record: 139576

Note, CATV Hardline is 75 ohm cable. I have heard of it's use in amateur
radio but you must compensate for the impedance difference.
--
73 de John/KC9JS
Twin Lakes, WI
****
"W.G Ewald" <wgewald@att.net> wrote in message
news:lf8shukrl0heuhb68565scko7bl85gi9oq@4ax.com...
> On Fri, 28 Jun 2002 16:19:35 GMT, <w4mjr@comcast.net> wrote:
>
> >I have almost a full roll of CATV Hardline. I was thinking of replacing
my
> >old coax with this if it can be used. This is the info thats on the roll.
> >Times Fiber Communication,Inc
> >Reel No. C86
> >Type: T650
> >Footage: 2000
> >
> >It looks to be 3/4 in dia. and the outer jacket is aluminum with
copper-clad
> >aluminum inner conductor .
> >I hate not to us this if it can be put to good Amateur use. Have any of
you
> >used this stuff before ?
> >
>
>
> After Hurricane Floyd there was plenty available. Charles Davis AD4XT
> was selling connectors at the hamfests at the time.
>
>

136. Re: GAP Titan/Titam

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-02 20:46:47 UTC
From: "KC9JS, John" <KC9JS@charter.net>
Message-ID: <ui44a6b6cah946@corp.supernews.com>
Source record: 139577

I have a GAP Titian vert and it works good on 10 & 15 meters. It doesn't work so good on the rest of the ham bands. One plus is that it also works on 2 meters with a decent SWR.
--
73 de John/KC9JS
Twin Lakes, WI
****
"Biggles" <hamsat@totalise.co.uk> wrote in message news:o4k3iu87irt02cq5muejrob5bs01rm20tq@4ax.com...
> Hi
> Has anyone had any experience of the GAP Titam or Titan antenna.
> Also is there a manufacture web site.
> Regards
> Tony

137. Re: Pneumatic antenna mast

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-02 21:04:22 UTC
From: elwoodair@aol.com
Message-ID: <20020702170422.17092.00002343@mb-fs.aol.com>
Source record: 139578

I Have A Clark Pheumatic Mast Type PT54 With Locking Collars Extended Height
6.7M Recently Overhauled 15Kg Headload
Cost ï¿½1973.00 Sell ï¿½1000.00 ONO
email elwoodair@aol.com

138. Re: Pneumatic antenna mast

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-02 21:05:12 UTC
From: elwoodair@aol.com
Message-ID: <20020702170512.17092.00002344@mb-fs.aol.com>
Source record: 139579

Check your Newsgroup Posting

139. Re: CAM?? What is your 3:1 SWR Bandwidth??

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-02 21:24:13 UTC
From: richardharrison@webtv.net
Message-ID: <22871-3D2219FD-455@storefull-2391.public.lawson.webtv.net>
Source record: 139580

StarGazer wrote:
"What is the Bandwidth on 80 and 40 that doesn`t go above 3:1 SWR---?"

A complete formula for antenna Q appears on page 2-5 of the 19th edition of the ARRL Antenna Book:
Q = fo (deltaX) / 2Ro (delta freq.)

Notice that Q is proportional to the operating frequency divided by the bandwidth.

Best regards, Richard Harrison, KB5WZI

140. Re: Auto tuner + MA5V = Full HF band TX?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-02 21:50:51 UTC
From: k1bqt@aol.com
Message-ID: <20020702175051.26818.00000935@mb-cv.aol.com>
Source record: 139581

> I hooked two of the 'nuts 40M radials to and old balun in an inverted V config. Works Europe on 20 & 40 better than the 'nut!! Go figure ...<

Not much to figure. A horizontal dipole typically outperforms an equal-sized vertical dipole over real ground by several dB (see ARRL Antenna Book, chapter on the effects of ground).

Rick K1BQT

141. Re: Building the Henf Antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-02 21:59:00 UTC
From: k1bqt@aol.com
Message-ID: <20020702175900.26818.00000936@mb-cv.aol.com>
Source record: 139582

>(Sevick claimed high efficiency for his antenna, too.)<

Sevick had justification. As I recall, he built a loaded monopole with a very good radial field under it.

Rick K1BQT

142. Re: WTB: S-Band (13 cm) RHCP Hemispherical Omni Antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-02 22:01:25 UTC
From: "M.C. Maguire" <nomcmaguirespam@hotmail.com>
Message-ID: <3D2222B2.F988EB9B@hotmail.com>
Source record: 139584
Cross-posted to: sci.electronics.equipment,rec.radio.amateur.space,rec.radio.amateur.equipment,rec.radio.amateur.antenna,sci.electronics.design,sci.engr.radar+sonar

Thanks all. I found a real "commercial" conical spiral that covers
1.7-2.7 GHz with nominal axial ratio of 3 dB in the right price range.

QFH are way too narrowband when operating at S-Band.

mm

"M.C. Maguire" wrote:
>
> I am looking for a commercial supplier of an S-band (2300-2400 MHz)
> right hand circularly polarized antenna that has a broad hemispherical
> pattern (-3 dB at +-60 deg or more from boresite). Pattern is more
> important than gain. Must be suited for outdoor and low temperature
> use.
>
> Here is ideal antenna:
>
> http://www.condorsys.com/pdf_files/as48915.pdf
>
> Three problems: it costs 53 dB$ (~13 dB too much), it's space qualified
> (overkill on environmentals) and takes 150 days to get an order filled
> (need in 30 days).
>
> Thanks.
>
> mm
>
> mcnospammaguire@earthlink.net

143. Diamond CP5 help please

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-02 22:03:08 UTC
From: Bads <pete@g0wxj.freeserve.co.uk>
Message-ID: <aft7pubpr1@news8.svr.pol.co.uk>
Source record: 139583

Hi Chaps,
I have a CP5 vertical that has been out of commission for some time now. Upon shoving some RF up it, it was apparent there was a fault with it, high SWR and not wanting to resonate anywhere.

I suspect it is one of the 2 feed capacitors that have gone, can't see anything written on them though. Anyone have any ideas what values they are or if you have had the same problem. This antenna is so simple in construction that I am sure it's the caps.

All help appreciated

Pete

G0WXJ

144. Re: ? about CATV Hardline

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-02 22:21:20 UTC
From: David Robbins <k1ttt@arrl.net>
Message-ID: <aft9120sa3@enews2.newsguy.com>
Source record: 139585

you only have to compensate if you are doing something very critical, and mostly only at vhf/uhf frequencies. at hf the loss is so low that the small mismatch created by a 50 to 75 ohm transition can be ignored.

"KC9JS, John" <KC9JS@charter.net> wrote in message news:ui43ug3r44cbc8@corp.supernews.com...
> Note, CATV Hardline is 75 ohm cable. I have heard of it's use in amateur
> radio but you must compensate for the impedance difference.
> --
> 73 de John/KC9JS
> Twin Lakes, WI
> **********
> "W.G Ewald" <wgewald@att.net> wrote in message
> news:lf8shukrl0heuhb68565scko7bl85gi9oq@4ax.com...
> > On Fri, 28 Jun 2002 16:19:35 GMT, <w4mjr@comcast.net> wrote:
> >
> > >I have almost a full roll of CATV Hardline. I was thinking of replacing
> my
> > >old coax with this if it can be used. This is the info thats on the roll.
> > >Times Fiber Communication,Inc
> > >Reel No. C86
> > >Type: T650
> > >Footage: 2000
> > >
> > >It looks to be 3/4 in dia. and the outer jacket is aluminum with
> copper-clad
> > >aluminum inner conductor .
> > >I hate not to us this if it can be put to good Amateur use. Have any of
> you
> > >used this stuff before ?
> > >
> >
> >
> > After Hurricane Floyd there was plenty available. Charles Davis AD4XT
> > was selling connectors at the hamfests at the time.
> >
> >
>
>

145. Re: BACK TO BASICS - EM waves, E and H fields, in phaseorinquadr...

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-02 23:20:56 UTC
From: CAM <w5dxp@hotmail.com>
Message-ID: <3D223558.C4B7738E@hotmail.com>
Source record: 139586

Richard Clark wrote:
> This has gone on much too long for me to have followed to the matter
> of punctuation and fly-specs, but it seems to me that what is being
> argued is not so much relations of causes as relations of effects.

"Not related" means no relations of causes and no relations of effects.
Unknown relations or unpredictable relations would be reasonably accurate.
"Not related" is just downright false. I can read Morse code by watching
my common mode meter during the transmission of CW. How can that be
"NOT related"?
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

146. Re: CAM?? What is your 3:1 SWR Bandwidth??

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-02 23:23:48 UTC
From: CAM <w5dxp@hotmail.com>
Message-ID: <3D223604.7E41F579@hotmail.com>
Source record: 139587

CAM wrote:
>
> StarGazer wrote:
> > What is the Bandwidth on 80 and 40 that doesn't go above 3:1
> > SWR. (That can be auto-tuned with your 756pro) ??
>
> The 3:1 SWR bandwidth on 80m is about 160 kHz and about 290 kHz
> on 40m, i.e. virtually the entire band on 40m. The 'Q' of the
> antenna appears to be about 40. 'Q' = BW/f

Oops, make that f/BW, or a 'Q' about 25. Sorry
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
------== Over 80,000 Newsgroups - 16 Different Servers! =-----

147. FOR SALE - ROHN 45G TOWER SECTIONS

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-02 23:50:53 UTC
From: wrhood@exis.net
Message-ID: <3d223c05.1954436@news.exis.net>
Source record: 139589

Ninety feet of Rohn 45G tower sections (9 each 10 foot straight
sections) ready for pickup or delivery within 100 miles of Chesapeake,
Virginia. The galvanized coating has some rusting on only about
15-20% of surface; a gallon of "Rust-Stop" and a gallon of paint and
the sections would be like new. New value of $1,469.70 plus freight;
available for less than 25% of new, Pickup priced at $350.00 in
southeast Virginia, Chesapeake. Presently in trailer ready for
delivery and will haul up to 100 miles for $400.00. (Might consider
$.50 a mile after 100 miles if within reason), Cash deal, if payment
by check, check must clear bank before delivery.
Call (757)487-0357 or e-mail <wrhood@exis.net>

148. Re: Fractal Wire Antennas

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-03 00:38:41 UTC
From: "W.G Ewald" <wgewald@att.net>
Message-ID: <oph4iucolajf9a2456n21as1r21so82lmc@4ax.com>
Source record: 139590

On Tue, 02 Jul 2002 14:13:21 GMT, "VE9SRB" <srbest@att.net> wrote:

>This is not intended to be a "debate", just a statement of opinion (or fact
>depending on your perspective).

The mail brought March/April QEX and I've been through your article
a couple of times. Did your non-selfsimilar bent wire antennas have to
be symmetrical in order for there to be a valid comparison with the
fractal antenna?

149. Re: Want CQ mag article.

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-03 01:00:03 UTC
From: Oldtime Radio <nospam@aol.com>
Message-ID: <l1j4iu41num79juctiokq5nf25do4f4ujr@4ax.com>
Source record: 139591

I've sent it in pdf format
73
otr
On Tue, 02 Jul 2002 19:48:58 -0700, Eskay <Nospamve3jua@rac.ca> wrote:

> Hi..In the July issue of CQ mag there is an article by VE3ERP on a
>two band shortened wire dipole..Could someone please scan this and send
>it to me?
> Thanks a bunch de Sieb,,,ve3jua@rac.ca

150. Re: Fractal Antenna Information

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-03 01:06:37 UTC
From: klocko@toad.net
Message-ID: <224d9cd4.0207021706.469597aa@posting.google.com>
Source record: 139592

Richard Clark <kb7qhc@attbi.com> wrote in message
news:<nv8vhuoh9obkus5kv6beb3qh60o159vl9r@4ax.com>...
> Um, Bill,
>
> It was most obvious to the rest of us that though you fit the
> definition, the definition (like the claims of the EH or CFA) did not
> fit reality. You have independently proven that the author of the
> posting responding to you from an insecure terminal at this aol
> address is NOT who he claims to be (and is a masquerader wholly
> unfamiliar with the topic in spite of spoofed claims to the contrary).
>
> By-the-by, check the last button down the left at:
> http://home.attbi.com/~kb7qhc/
> for the download you want, let me know if that works.
>
> 73's
> Richard Clark, KB7QHC

Hi Richard,
Sorry it took so long to respond - sometimes work gets in the way.

Gee, I hope another nail in the coffin doesn't hurt (sorry about the
illusion to death). I did want to state the obvious in pointing out
that the degenerate bow tie violates the following claim made during
yet another challenge several years ago:

> I am stating, without any sense of ambiguity or doubt, that frequency
> independent antennas are necessarily both self similar and origin symmetric
> (in a planar projection).

> Every single one.

> Self similarity and origin symmetry are the necessary and sufficient
> conditions for frequency indepndence.

Anyone interested in this previous challenge can find the thread by
doing a Google search on "fractal indepndence ambiguity"
Thanks for re-posting that PDF. vy 73,
Bill N3WK

151. Re: BACK TO BASICS - EM waves, E and H fields, in phase or inquadr...

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-03 01:19:28 UTC
From: 2w8ji@contesting.com
Message-ID: <3d224e48.1784178@news.akorn.net>
Source record: 139593

On Tue, 2 Jul 2002 09:30:36 -0500 (CDT), richardharrison@webtv.net (Richard Harrison) wrote:

>Tom, W8JI wrote:
>"The two mode are NOT related at all, and can have any impedance
>relationship."
>
>There he goes again!

>Tom just does know what he is talking about.
>
>Best regards, Richard Harrison, KB5WZI

Richard,

Current is related to voltage and resistance by formula. Capacitive reactance is related to frequency by formula, as is inductance.

All of these things have well-defined rules or laws, and the people who helped define them like Faraday or Ohm or Henry are honored.

Please give me the formula that shows the direct relationship between common mode and differential mode impedances that universally works in all systems ...so we can call it Harrison's Law.

You should be able to prove they are related if YOU know what you are talking about by giving a formula that always shows the relationship between them.

If you do that, then I will retract my statement and agree that I am the one who does not know what he is talking about.

If you can not do that, then I assume you are all hot air and insults without any real knowledge except bafflegab.

73 Tom

152. Re: BACK TO BASICS - EM waves, E and H fields, in phase orinquadr...

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-03 01:24:34 UTC
From: 2w8ji@contesting.com
Message-ID: <3d2251eb.2715664@news.akorn.net>
Source record: 139594

On Tue, 2 Jul 2002 13:47:52 -0500 (CDT), richardharrison@webtv.net
(Richard Harrison) wrote:

>
>Just as the promoters can`t prove anything with baloney, it won`t be
>disproved with baloney either.
>
>Best regards, Richard Harrison, KB5WZI

Which is all we get from you.

Please supply the formula that shows the relationshipe between common
mode and differential mode impedances, oh mighty one.

Maybe you can find it in Baileys TV antenna book.

153. PVC coax conduit to tower

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-03 01:30:31 UTC
From: David <phochief@nonspamhotmail.com>
Message-ID: <%osU8.20777$wj4.1934413@e3500-atl2.usenetserver.com>
Source record: 139595

Getting ready to dig the concrete base for my new tower and plan to run a 1 1/2 inch PVC pipe from my shack to my tower about 30' away and up through the concrete base. This pipe is big enough to carry several coax lines plus the rotor cable, so is there any reason I would want to run a separate pipe for anything else? I've never had a problem running the coax and rotor cable next to each other. The reason I ask is because I see photos of a tower installation on the texas towers website with two PVC conduits coming up through the concrete base.

David

154. Re: BACK TO BASICS - EM waves, E and H fields, in phaseorinquadr...

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-03 01:34:06 UTC
From: 2w8ji@contesting.com
Message-ID: <3d225284.2868318@news.akorn.net>
Source record: 139597

On Tue, 02 Jul 2002 18:20:56 -0500, CAM <w5dxp@hotmail.com> wrote:

>Richard Clark wrote:
>> This has gone on much too long for me to have followed to the matter
>> of punctuation and fly-specs, but it seems to me that what is being
>> argued is not so much relations of causes as relations of effects.
>
>"Not related" means no relations of causes and no relations of effects.
>Unknown relations or unpredictable relations would be reasonably accurate.
>"Not related" is just downright false. I can read Morse code by watching
>my common mode meter during the transmission of CW. How can that be
>"NOT related"?

Frankly Cecil, that does not prove anything.

They come from the same source power source, so naturally when that
source is removed they both disappear. But factually, the common mode
impedance can be anything compared to the differential mode impedance,
they have no fixed ratio or relationship that universilly relates them

While you might not like HOW I say that, you and Harrison (who makes
many large gaffs of his own) going out of you way to follow me around
and insult me does not help anyone learn anything.

It is childish (or more correctly Chippish) to spend all of your time
trying to get revenge because you failed to understand that moving a
balun in a floating network does nothing to relieve common mode stress
on the balun, or to improve system balance.

Let it go Cecil, and move on!

Let me give you an example, and tell me what flaw you see in this.

The rate I breath is not related to the rate you breath.

73 Tom

155. Coax conduit to tower

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-03 01:34:20 UTC
From: David <phochief@nonspamhotmail.com>
Message-ID: <AssU8.20787$wj4.1935375@e3500-atl2.usenetserver.com>
Source record: 139596

Getting ready to dig the concrete base for my new tower and plan to run a 1 1/2 inch PVC pipe from my shack to my tower about 30' away and up through the concrete base. This pipe is big enough to carry several coax lines plus the rotor cable, so is there any reason I would want to run a separate pipe for anything else? I've never had a problem running the coax and rotor cable next to each other. The reason I ask is because I see photos of a tower installation on the texas towers website with two PVC conduits coming up through the concrete base.

David

156. Re: BACK TO BASICS - EM waves, E and H fields, in phase or inquadr...

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-03 01:51:12 UTC
From: CAM <w5dxp@hotmail.com>
Message-ID: <3D225890.4A01ABDD@hotmail.com>
Source record: 139598

Tom W8JI wrote:
> Please give me the formula that shows the direct relationship between
> common mode and differential mode impedances that universally works in
> all systems ...so we can call it Harrison's Law.

Just because the relationship is unknown or difficult to determine
doesn't mean that no relationship exists. Out of the following
possibilities, (B) seems to be the obvious answer.

A. Not related
B. Related but unpredictable
C. Related by a rigid formula

You are saying because (C) is not the answer then (A) must be the
answer. That's simply not true. The relationship obviously exists.
Nobody said it is a formula relationship. I don't know about your
system but with mine, the common mode current meter reading seems to
be very related to my Morse code during a CW QSO. Key down = common
mode. Key up = no common mode. That's pretty related, Tom.

> You should be able to prove they are related if YOU know what you are
> talking about by giving a formula that always shows the relationship
> between them.

They are phase locked, Tom, and you can see it on a dual trace scope.
That proves they are related and that your statement is false. In any
particular antenna system, the differential current can be measured and
the common mode current can be measured at a point. The magnitude/phase
relationship between them at that point will not drift willy nilly all
over the place as you seem to be suggesting.

Your concept that unpredictable and unmeasured things must necessarily
be unrelated is a very strange one.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

157. Re: BACK TO BASICS - EM waves, E and H fields, in phase orinquadr...

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-03 02:02:09 UTC
From: CAM <w5dxp@hotmail.com>
Message-ID: <3D225B21.3990CAFB@hotmail.com>
Source record: 139599

Tom W8JI wrote:
> Please supply the formula that shows the relationshipe between common
> mode and differential mode impedances, oh mighty one.

Please supply the argument that the lack of a formula proves they are
NOT related, oh omniscient one. :-) Between "NOT related" and "formula
related", there is a very large middle ground that you are completely
missing - related but unpredictable, related but not measured ...

When you say they are "NOT related" you are saying that they are NOT
"connected by reason of an established or discoverable relation."
I submit your statement is false and anyone who wants to discover
the relation between their differential conditions and common mode
conditions has only to measure them like I did.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
------== Over 80,000 Newsgroups - 16 Different Servers! =-----

158. Re: BACK TO BASICS - EM waves, E and H fields, in phaseorinquadr...

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-03 02:21:16 UTC
From: CAM <w5dxp@hotmail.com>
Message-ID: <3D225F9C.88FC70E@hotmail.com>
Source record: 139600

Tom W8JI wrote:
>
> CAM <w5dxp@hotmail.com> wrote:
> >"Not related" means no relations of causes and no relations of effects.
> >Unknown relations or unpredictable relations would be reasonably accurate.
> >"Not related" is just downright false. I can read Morse code by watching
> >my common mode meter during the transmission of CW. How can that be
> >"NOT related"?
>
> Frankly Cecil, that does not prove anything.

Decoding Morse code by watching the common mode current meter doesn't prove a relationship between common mode and differential mode??????
Tom, the differential power meter and the common mode current meter are perfectly synchronized.

> They come from the same source power source, so naturally when that
> source is removed they both disappear.

You have just admitted that they are related because they come from the same power source. They are so closely related that they are phase locked. Face it, Tom, the statement that you are defending is blatantly false.

> But factually, the common mode
> impedance can be anything compared to the differential mode impedance,
> they have no fixed ratio or relationship that universilly relates them

They are what they are and can't be anything else unless something is changed. Anyone who wants to can measure the relationship between them and they will retain that relationship as long as nothing is changed. Nobody says they have a fixed ratio. What is it about related but unpredictable or related but unmeasured that you don't understand?

> While you might not like HOW I say that, you and Harrison (who makes
> many large gaffs of his own) going out of you way to follow me around
> and insult me does not help anyone learn anything.

You are making false statements, Tom. You could easily be misleading a newcomer. Why should you get a waiver for your false statements? Stop making false statements and Richard and I will stop following you around. Deal?

> It is childish (or more correctly Chippish) to spend all of your time
> trying to get revenge because you failed to understand that moving a
> balun in a floating network does nothing to relieve common mode stress
> on the balun, or to improve system balance.

Can't win this argument so you revert back to one you already won?

I admitted my mistake like a man and apologized. What is childish is to get caught in a falsehood and then try to weasel your way out of it by calling other people names. Fess up, Tom, you are wrong! How in the world can phase-locked signals supplied from a common power source be "NOT related"? To maintain such in the face of reality is extremely childish.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
------== Over 80,000 Newsgroups - 16 Different Servers! =-----

159. Re: BACK TO BASICS - EM waves, E and H fields, in phase or inquadr...

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-03 02:32:59 UTC
From: " J. Harvey" <JM002.Harvey_TRIMTHIS_@Sympatico.ca>
Message-ID: <vntU8.2311$P53.944972@news20.bellglobal.com>
Source record: 139601

*** When good threads go bad... :-) ***

"CAM"
> *They* [the currents] are phase locked...

"Tom W8JI"
> *They* [the currents] come from the same
> source power source, so naturally when that
> source is removed they both disappear.
> [dangerously close to agreement ?]

> But factually, the common mode impedance can
> be anything compared to the differential mode
> impedance, *they* [the impedances] have no
> fixed ratio or relationship that universilly relates
> them. [disagreement !]

I notice that when you both use the same meaning for the word "they", then you tend towards agreement. When you use the word differently, then you have a disagreement. This is not really surprising. Please review the following item:

[Previously posted - 9 months ago....sigh...]

From: J. Harvey
Subject: Re: Common-Mode Currents VS Loads
Newsgroups: rec.radio.amateur.antenna
Date: 2001-10-06 [06 Oct 2001] 15:58:56 PST
...
Has anyone double-checked to ensure that this isn't all just a simple misunderstanding ? Cecil restated his hypothesis fairly clearly the other day. I thought that I detected a glimmer of sunshine getting through between the two seemingly opposite positions... It seemed that Cecil was stating "A" was true, and everyone else was saying that "B" wasn't true (or was it vice versa?). The words "impedance" and "currents" were getting all mixed-up in the shouting. This sort of question shouldn't require any experimentation in the year 2001. It simply requires careful listening and understanding of the opposite argument and then a single well-aimed shot will deflate the whole thing. It really smells like a misunderstanding.

Best wishes.
de VE1BLL /VE3

:-)

160. Re: Fractal Wire Antennas

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-03 02:38:56 UTC
From: Fred Hambrecht <w4jle@charter.net>
Message-ID: <ui4otgimjp61d3@corp.supernews.com>
Source record: 139602

Thank you Dr. Best for a lucid post on fractal antennas. Your statements bear out the experiments conducted by myself about 2 years ago during the "fractal $1000.00 challenge.

The pseudo science and "patents" issued lend nothing to the state of the art.

It is this writers opinion that the thing that the EH, fractal, and CFA antennas have in common is the aggrandizement of the individual associated with them and little to do with the efficient radiation of RF.

Warmest regards
Fred W4JLE
"VE9SRB" <srbest@att.net> wrote in message
news:5yiU8.288$Iu6.16963@bgtnsc04-news.ops.worldnet.att.net...
> This is not intended to be a "debate", just a statement of opinion (or
fact
> depending on your perspective). This is also very long - sorry. I won't
> post any other long statements on this subject.
>
>
>

161. Re: Building the Henf Antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-03 02:42:22 UTC
From: tdonaly@aol.com
Message-ID: <20020702224222.23415.00002330@mb-fy.aol.com>
Source record: 139603

>
>>(Sevick claimed high efficiency for his antenna, too.)<
>
>Sevick had justification. As I recall, he built a loaded monopole with a very
>good radial field under it.
>
>Rick K1BQT
>

He recommended 60 radials, each at least
.2 wavelengths long. He fed it using a
transformer and a pi network. What I'd like
to know is how Henf feeds
his super-capacitor, and, as an aside, how
he expects anyone to fall for the ridiculous
verbiage associated with this antenna.

Tom Donaly KA6RUH

(P.S. What's to stop me from putting a
a bronze bust of Mozart on a pole over a
short radial field, calling it a revolutionary
genius antenna and getting a U.S. patent?)

162. Want CQ mag article.

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-03 02:48:58 UTC
From: Eskay <Nospamve3jua@rac.ca>
Message-ID: <3D22661A.C4E29BE5@rac.ca>
Source record: 139588

Hi..In the July issue of CQ mag there is an article by VE3ERP on a
two band shortened wire dipole..Could someone please scan this and send
it to me?
Thanks a bunch de Sieb,,,ve3jua@rac.ca

163. Re: Apartment HF antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-03 02:49:56 UTC
From: W4WNT <w4wnt@carolina.rr.com>
Message-ID: <oDtU8.2907$ul3.74874@twister.southeast.rr.com>
Source record: 139604

I'd suggest a SuperAntenna MP-1. Vertical with base loaded coils that runs from 80 to (reportedly) 440. I tested one on 20m recently (see my review in e-ham.net) It looks like the answer for apartments, condos, quick setup and take down operations. (Note I have no stock in the company!)

Bill, W4WNT

cskesler <ckesler@chartermi.net> wrote in message news:uht7u3c34to787@corp.supernews.com...
> Hello,
>
> I'm a new ham. I passed my technician and general written tests two weeks
> ago. I passed my code and extra tests yesterday morning. I am curious if
> anyone knows of a good HF antenna (20 or 40 meter band) that can be put up
> and taken down quickly. I live in an apartment complex with a really
> uptight landlord. Right now all I have is a dipole strung diagonally from
> one corner of my apartment to another. Because my apartment isn't that
big,
> the dipole is tacked up along a couple of walls. The funny thing is, I
> actually can receive quite a few signals with it. Of course I can't
> transmit with it though... For one thing, it's inside, and another thing,
I
> don't want to deal with the RF dangers/problems. I do have a balcony, and
I
> have thought about different options using that. But because I am new to
> amateur radio, I would like to have a few different viewpoints. If anyone
> could provide any ideas I would greatly appreciate it.
>
> Thanks,
>
> Kes
>
> KC8UIE
>
>

164. Re: Bad TV reception near transmission tower

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-03 03:23:49 UTC
From: olaf_sc_news@yahoo.com
Message-ID: <7e794338.0207021923.c69e0a@posting.google.com>
Source record: 139605
Cross-posted to: sci.electronics.repair,rec.radio.amateur.antenna,rec.video

Hello

This is what I actually think is the problem. Why, well when I lined the antenna 90 deg off the actually bearing to the tower it is facing a larger mountain. What I pickup is what I think is a bank shot from the main tower, this will also explain why there is such a big difference in reception quality (different channels bounce differently).

I have not yet tried to dampen the signal as the other messages suggested. Been buried in work so I have to postspone that to the 4:th July.

Cheers Olaf

"Bob in TX" <trebor4258@yahoo.com> wrote in message news:<bXhT8.8124$ry2.7309@nwrddc02.gnilink.net>...
> I agree that trying a cheap attenuator is a good first step. If that
> doesn't help, what you may be running into is that the antenna is
> overshooting you. An antenna with gain doesn't propagate its energy as a
> sphere. It's more like a flattened out doughnut and if you're too close to
> the base of the tower the signal may be shooting over your head (and your
> house).
>
> Rather than trying to align your outside antenna directly at the tower, see
> if there is a building or something in the area that you can align to and
> try to receive a "bank shot" from the antenna.
>
> Again, the "overdriven" theory is a good one and the attenuator is well
> worth the try, I just offer this as a 2nd idea if that one doesn't pan out.
>
> Bob in TX
> trebor4258-at-yahoo.com
>

165. Re: BACK TO BASICS - EM waves, E and H fields, in phase or inquadr...

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-03 03:25:49 UTC
From: richardharrison@webtv.net
Message-ID: <10144-3D226EBD-484@storefull-2398.public.lawson.webtv.net>
Source record: 139606

Tom wrote:
"You should be able to prove they are related if YOU know what you are talking about."

R = E / I

Mutual impedance has magnitude and phase angle as we are considering voltage induced in one conductor produced by current in another, and the cobductors are separated in space. But, a complex quantity is the general case for any impedance.

Mutual impedance is defined as the ratio of induced voltage in conductor 2 to the current in conductor 1. (It`s reciprocal and works in either direction)

This ratio conforms to Ohm`s law. Double the current in conductor 1, and the voltage induced in conductor 2 also doubles because the physical and electrical characteristics in the situation of the conductors is assumed to be fixed, at least at a particular instant, and the ratio is constant. Something may be shaking the wires, so mutual impedance like any other impedance can change.

Mutual impedance is another name for coupling between antennas, wires, or other circuits. Mutual impedance is the word we usually assign numbers to.

In antennas and transmission lines, we are more likely to measure mutual impedance than compute it, but mutual impedance can be calculated using conventional network theory and analysis. Terman says in his antenna chapter:
"The actual details of the calculation are too involved to be presented here but can be found in the literature, together with formulas for many practical cases." Terman lists some references in the footnotes. The names are familiar to me for they are the texts I used when I studied such things a half century ago.

Mutual impedance between wires in space is just as valid as the mutual inductance between the primary and secondary of a transformer. Mutual impedance between wires has about the same purpose as the transformer`s mutual inductance. These are the names we assign numbers to to quantify the coupling.

Tom says I should prove common-mode is related to differential-mode.

OK. I just turned-off my differential-mode and my common-mode went away. It is repeatable every time and everyone else has the same experience. QED!

Best regards, Richard Harrison, KB5WZI

166. Re: BACK TO BASICS - EM waves, E and H fields, in phase or inquadr...

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-03 04:27:46 UTC
From: richardharrison@webtv.net
Message-ID: <12413-3D227D42-48@storefull-2392.public.lawson.webtv.net>
Source record: 139607

Tom, W8JI wrote:
"Please give me the formula that shows the direct relationship between commen mode and differential mode that universally works."

It is exactly the same as any impedance ratio. Say for example in a familiar situation, you have 9V rms across a loudspeaker and 1.11 amps through the load. By Ohm`s law the impedance is 8 ohms. You find 158V rms across the output transformer primary and 63 ma through the primary. The primary impedance is 2500 ohms. The impedance ratio of the transformer is 313.
The turns ratio, extraneous to our discussion, is 17.6 just as a matter of interest to some.

Same thing can be done with Differential-mode and common-mode signals. Measure their impedances by the voltmeter-ammeter method, then divide the common-mode impedance by the differential-mode impedance, if that is the way you would like ratio expressed. It works every time. I`ve done such measurements hanging sampling loops from wires etc. It works. The ratios obtained this way are just as good as any of similar circumstances.

Best regards, Richard Harrison, KB5WZI

167. Re: BACK TO BASICS - EM waves, E and H fields, in phase or inquadr...

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-03 05:50:42 UTC
From: richardharrison@webtv.net
Message-ID: <28758-3D2290B2-615@storefull-2395.public.lawson.webtv.net>
Source record: 139609

Tom, W8JI wrote:
"Please give me the formula---."

Mutual impedances can be measured and calculated. It takes more than an Ohmmeter.

The mutual impedance in a broadcast directional array is measured with an r-f bridge. B. Whitfield Griffith, Jr. gives an example in "Radio-Electronic Fundamentals". He gives 4 steps to measure mutual impedance between towers A and B.

1. Measure the impedance seen at the base of tower B with tower A open-circuited.
Call this ZB = RB + jXB
2. Measure the impedance seen at the base of tower A with tower B open-circuited.
Call this ZA = RA + jXA
3. Measure the impedance seen at the base of tower A with tower B connected to ground through a reactance equal to -XB, that is with tower B series resonated,
Call this ZC = RC + jXC
4. The mutual impedance between tower A and tower B may be referred to as ZAB and will be given by the following:
ZAB = sq. rt. RB(ZA-ZC)

Mutual impedance is the coupling between the towers and is a measure of the volts that appear in one tower as a result of current in the other. The ratio of volts to amps is complex in the general case but is expressed in Ohms. So, we are likely to have a current on an angle with the voltage with this impedance.

Best regards, Richard Harrison, KB5WZI

168. Re: BACK TO BASICS - EM waves, E and H fields, in phase or inquadr...

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-03 06:02:24 UTC
From: richardharrison@webtv.net
Message-ID: <28758-3D229370-616@storefull-2395.public.lawson.webtv.net>
Source record: 139608

I wrote:
"I`ve done such measurements hanging sampling loops from wires."

Before someone notes that complex quantities are involved, let me assure you that I was also accounting for the phase differences, using an RCA WM-30A Phase Monitor. Yes we used them with shortwaves the same as with mediumwaves.

Best regards, Richard Harrison, KB5WZI

169. Re: BACK TO BASICS - EM waves, E and H fields, in phaseorinquadr...

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-03 06:22:10 UTC
From: richardharrison@webtv.net
Message-ID: <28761-3D229812-18@storefull-2395.public.lawson.webtv.net>
Source record: 139610

Tom, W8JI wrote:
"---Harrison (who makes many large gaffs of his own)---"

Sure do! Made a huge gaff a week or so ago. Gave the value of "c" as 186,000,000 miles per second. That`s off 100,000%. Difference is, I sent a correction as soon as I saw my posting, but alas, it was too late. Others had seen it too and gleefully let me know about my mistake.

Best regards, Richard Harrison, KB5WZI

170. WTB: CUSHCRAFT D3

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-03 06:24:15 UTC
From: zeca <peixoto@ispwest.com>
Message-ID: <3D22988F.4F5ADFB9@ispwest.com>
Source record: 139611

Looking for an cushcraft D3 (10-15-20)

CMP

171. Re: Fractal Wire Antennas

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-03 08:18:22 UTC
From: Technomage <technomage-hawke@cox.net>
Message-ID: <pan.2002.07.03.01.18.26.487.25465@cox.net>
Source record: 139612

you know something,
this has to be the first real logically thought out rebuttle of the
"fractal antenna" hype that I have ever whitnessed.

In following up and reading additional sources (some of which were
provided herein), I've found that "fractal antenna" research is still
theoretical at best. Any so-called fractal antennas in real life are
either by absolute luck that they work, or are resonant elsewhere and the
only reason they would work on the band they were supposedly designed for
is a result of "multiple resonent points" within the antenna structure.

still, it is nice to see a reasonably thought out conclusion based on
real science, not snake oil!

Technomage

In article <5yiU8.288$Iu6.16963@bgtnsc04-news.ops.worldnet.att.net>,
"VE9SRB" <srbest@att.net> wrote:

> This is not intended to be a "debate", just a statement of opinion (or
> fact depending on your perspective). This is also very long - sorry. I
> won't post any other long statements on this subject.
>
>
>
> The electromagnetic behavior and performance properties of a wire
> antenna are a function of the antenna's physical properties. These
> physical properties include the antenna's size (height, area, occupied
> volume, etc.), total wire length, geometry and wire diameter. If we
> conclude that the electromagnetic behavior and/or performance properties
> of an antenna are uniquely or primarily a function of one of these
> physical properties, we must also conclude that significantly modifying
> this one physical property will significantly modify the antenna's
> electromagnetic behavior and/or performance properties.
>
the rest snipped to save bandwidth

--
I will not be pushed, filed, stamped, indexed, briefed, debriefed, or numbered!
My life is my own - No. 6

172. Re: Coax conduit to tower

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-03 08:44:14 UTC
From: 'Doc <w5lz@icok.net>
Message-ID: <3D22B943.E1E54C1@icok.net>
Source record: 139614

David,
It's sort of like having closet space, what you
have to start with is never enough later. The size
pipe you stated may 'do' you for a long time, but
why not a size or two larger? Makes for easier coax
pulling, and it's nice to have 'extra' just in case.
'Doc

173. Re: Building the Henf Antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-03 08:48:44 UTC
From: 'Doc <w5lz@icok.net>
Message-ID: <3D22BA52.23BA8971@icok.net>
Source record: 139613

Tdonaly,
-------clipped-------
> (P.S. What's to stop me from putting a
> a bronze bust of Mozart on a pole over a
> short radial field, calling it a revolutionary
> genius antenna and getting a U.S. patent?)

Nothing. The 'trick' is to get someone to
buy it!
'Doc

174. Re: BACK TO BASICS - EM waves, E and H fields, in phase or inquadr...

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-03 09:31:45 UTC
From: 2w8ji@contesting.com
Message-ID: <3d22c01f.30931874@news.akorn.net>
Source record: 139615

On Tue, 02 Jul 2002 20:51:12 -0500, CAM <w5dxp@hotmail.com> wrote:

>Tom W8JI wrote:
>> Please give me the formula that shows the direct relationship between
>> common mode and differential mode impedances that universally works in
>> all systems ...so we can call it Harrison's Law.
>
>Just because the relationship is unknown or difficult to determine
>doesn't mean that no relationship exists. Out of the following
>possibilities, (B) seems to be the obvious answer.
>
>A. Not related
>B. Related but unpredictable
>C. Related by a rigid formula

Oh I see. They are related, it's just that you can NOT describe HOW
they are related since they are related in "an unpredictable manner".

So it isn't like the sun and moon and star's orbit are related in time
or position, and not at all like how current is related to voltage
through an inductor, capacitor, or resistor.

It's like the relationship Jennifer Lopez is having with you right now
as we speak, or like the well-documented relationship between the
position of stars when we are born to our personalities.

As in those examples, common mode and differetial mode impedances are
related in a random way where they can have any relationship at all to
each other, but according to you and Harrison it IS a relationship
because there might through random circumstance be a case where two
things happen at the same time, like stepping on a crack and breaking
moma's back.

Sort of like the relationship we have seen demonstrated between
showing common sense and giving an answer, isn't it?

I can't wait for Harrion's baffelgab on this topic, since I am the one
who doesn't know anything according to him.

73 Tom

175. Re: BACK TO BASICS - EM waves, E and H fields, in phase or inquadr...

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-03 09:44:50 UTC
From: 2w8ji@contesting.com
Message-ID: <3d22c579.32302505@news.akorn.net>
Source record: 139616

On Tue, 2 Jul 2002 22:25:49 -0500 (CDT), richardharrison@webtv.net
(Richard Harrison) wrote:

>Tom wrote:
>"You should be able to prove they are related if YOU know what you are
>talking about."
>
> R = E / I

Ahh, so that is the Harrison bafflegab.

>Mutual impedance has magnitude and phase angle as we are considering
>voltage induced in one conductor produced by current in another, and the
>cobductors are separated in space. But, a complex quantity is the
>general case for any impedance.

So you are saying Ohm's law is the formula for determining mutual
coupling between common mode and differential mode impedances.

Amazing answer. I would have picked E=MC^2, if I wanted to snow people
with yellow snow.

>Mutual impedance is defined as the ratio of induced voltage in conductor
>2 to the current in conductor 1. (It`s reciprocal and works in either
>direction)

Where can I find that definition?

>This ratio conforms to Ohm`s law. Double the current in conductor 1, and
>the voltage induced in conductor 2 also doubles because the physical and
>electrical characteristics in the situation of the conductors is assumed
>to be fixed, at least at a particular instant, and the ratio is
>constant. Something may be shaking the wires, so mutual impedance like
>any other impedance can change.

Ahh, so it a relationship like Cecils where the relationship can
randomly change to anything but you consider it a relationship because
each part of the system follows Ohms law, which is the law of mutual
coupling.

VERY interesting perspective, I'd bet we won't find that in any books!

>OK. I just turned-off my differential-mode and my common-mode went away.
>It is repeatable every time and everyone else has the same experience.
>QED!

I just read your post, and chuckled. That proves the relationship
between your thinking and my laughing. So far it is repeatable, and

the formula for mutal coupling is R=E/I.

73 Tom

176. Re: BACK TO BASICS - EM waves, E and H fields, in phaseorinquadr...

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-03 11:23:13 UTC
From: k1bqt@aol.com
Message-ID: <20020703072313.26843.00000835@mb-cv.aol.com>
Source record: 139617

For months, Congress haggled about whether or not a relationship existed between the President (term applied loosley) and Ms. Lewinski. Then came the infamous spot on the blue dress (so to speak).

I'm not saying there isn't one, but where's the spot? Where's the DNA that inexorably links one to the other (other than the fact that both pehnomena share a generator in common). Do we start there? When it comes to science, circumstatial evidence isn't enough to convict.

Rick K1BQT

177. Re: Building the Henf Antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-03 11:55:11 UTC
From: k1bqt@aol.com
Message-ID: <20020703075511.26748.00001188@mb-cv.aol.com>
Source record: 139618

The patent shows an off-center feed with no common-mode choke. Can't see what would prevent the feedline from radiating a lot. If 10 Ohms was measured at the feedpoint of an antenna that models around 2, one is left to ponder where the other 8 Ohms came from? One is also left to ponder how that adds up to nearly 100-percent effriciency? Little comparrison between Jerry's experiments and this design.

Rick K1BQT

178. Re: Auto tuner + MA5V = Full HF band TX?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-03 12:18:24 UTC
From: Vito <vito@crosslink.net>
Message-ID: <3D22EB90.7BA61749@crosslink.net>
Source record: 139469

Rick Littlefield wrote:
>
> > I hooked two of the 'nuts 40M radials to and old balun in an inverted V
> config. Works Europe on 20 & 40 better than the 'nut!! Go figure ...<
>
> Not much to figure. A horizontal dipole typically outperforms an equal-sized
> vertical dipole over real ground by several dB (see ARRL Antenna Book, chapter
> on the effects of ground).

That being the case, and CAM said the same, how are several mfgr's
selling $300+ verticals that need more wire in the sky for radials than
a good dipole on each band? (Retorical question, no answer needed :o)
BTW, I traded the 'nut for a 1988 (15th) edition of The ARRL Antenna
Book. The 'nut would'a been satisfactory if I'd ground mounted it so I
could've shaken the water out after a rain but it wasn't welcome after
it smoked XYL's amp right in the middle of a DX QSO she'd fought thru a
pileup to get. Put me in the doghouse too ...
73, K3DWW

179. Re: BACK TO BASICS - EM waves, E and H fields, in phase or inquadr...

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-03 12:21:30 UTC
From: CAM <w5dxp@hotmail.com>
Message-ID: <3D22EC4A.F3A61144@hotmail.com>
Source record: 139470

Tom W8JI wrote:
>
> CAM <w5dxp@hotmail.com> wrote:
> >Just because the relationship is unknown or difficult to determine
> >doesn't mean that no relationship exists. Out of the following
> >possibilities, (B) seems to be the obvious answer.
> >
> >A. Not related
> >B. Related but unpredictable
> >C. Related by a rigid formula
>
> Oh I see. They are related, it's just that you can NOT describe HOW
> they are related since they are related in "an unpredictable manner".

I can measure how they are related. Just because I am ignorant of how they are related doesn't mean that they are "NOT related". Your and my ignorance doesn't dictate reality. You obviously believe in primacy of consciousness rather than primacy of existence. Therefore, your knowledge is in control of the universe. That is a common mistake that prima donnas make.

Is the relationship between common mode current and differential mode current unknowable? Of course not! It can be measured and will keep that relationship as long as nothing is changed. Your assertion that two phase locked signals that share a common power source are "NOT related" is not only false but silly in the extreme and getting sillier by the day as you defend such a mistaken assertion.

> So it isn't like the sun and moon and star's orbit are related in time
> or position, and not at all like how current is related to voltage
> through an inductor, capacitor, or resistor.

Yes, it is exactly like the sun and moon and star's orbit are related in time or position. All those things were unpredictable. We didn't know how they were related until we *measured* them. There is no predictable reason why the earth is related to the sun in the way it is so we *measured* it to find out. Do you really think man has always known that the solar year is 365.25 days? Nope, we only knew that after *measuring* it. There is no formula for predicting the rotation of the earth in advance. It is what it is.

The same thing holds true for the relationship between differential conditions and common mode conditions. They are what they are. We can always measure those relationships and like the sun, moon, and earth, once they are known, they will remain the same in magnitude and phase until something is changed. Just like the earth and the sun, we can *measure* how differential conditions are related to common mode conditions. Your ignorance of exactly how they are related

does not change reality. You say they are "NOT related" before you measure
them but somehow they become magically related after you measure them? Get real!

> It's like the relationship Jennifer Lopez is having with you right now
> as we speak, or like the well-documented relationship between the
> position of stars when we are born to our personalities.

OK Tom, exactly what is the relationship of the second planet of Alpha
Centauri Prime to its star? You would say there is no relationship
because you don't know what the relationship is. Does that make
you feel omnipotent or what? The second planet of Alpha Centauri Prime
is unrelated to its star just because you don't know what the
relationship is? Sounds like megalomania to me.

> As in those examples, common mode and differetial mode impedances are
> related in a random way where they can have any relationship at all to
> each other, but according to you and Harrison it IS a relationship
> because there might through random circumstance be a case where two
> things happen at the same time, like stepping on a crack and breaking
> moma's back.

Does the second planet of Alpha Centauri have a random relationship with
its star? With your lack of knowledge, you may experience it that way
but your ignorance does not control the universe. The relationship is
what it is and someday we may be able to measure that relationship.
Just because a relationship is unknown to you doesn't mean the
relationship is random. All it means is that you may be surprised
when you choose to alleviate your ignorance and measure it.

I just flipped a coin and you are ignorant of the outcome. Does
your ignorance of the outcome of my coin flip mean that it still
has an equal chance of being heads or tails? Nope, the result of
the coin flip is fixed in time. Your ignorance cannot change
history, reality, or the relationships existing in universe.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

180. Re: BACK TO BASICS - EM waves, E and H fields, in phase or inquadr...

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-03 12:26:31 UTC
From: CAM <w5dxp@hotmail.com>
Message-ID: <3D22ED77.5B7D1336@hotmail.com>
Source record: 139471

Tom W8JI wrote:
> Ahh, so it a relationship like Cecils where the relationship can
> randomly change to anything ...

The relationship is not changing randomly second to second, Tom.
If nothing changes, the relationship doesn't change. The conditions
are measurable, knowable, phase-locked and stable as long as nothing
changes just like the relationship between the sun, moon, and earth.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

181. Re: BACK TO BASICS - EM waves, E and H fields, in phaseorinquadr...

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-03 12:29:53 UTC
From: CAM <w5dxp@hotmail.com>
Message-ID: <3D22EE41.35766903@hotmail.com>
Source record: 139472

Rick Littlefield wrote:
>
> For months, Congress haggled about whether or not a relationship existed
> between the President (term applied loosley) and Ms. Lewinski. Then came the
> infamous spot on the blue dress (so to speak).
>
> I'm not saying there isn't one, but where's the spot? Where's the DNA that
> inexorably links one to the other (other than the fact that both pehnomena
> share a generator in common).

That's all you need to prove they are related, Rick, sharing a generator in common. But on top of that, they are phase-locked. And on top of that, the relationship is measurable and knowable and will remain stable if nothing is changed. Tom knows that but is simply too stubborn to admit that he can make a mistake.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

182. Re: Auto tuner + MA5V = Full HF band TX?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-03 12:41:13 UTC
From: CAM <w5dxp@hotmail.com>
Message-ID: <3D22F0E9.AC6904B@hotmail.com>
Source record: 139473

Vito wrote:
> That being the case, and CAM said the same, how are several mfgr's
> selling $300+ verticals that need more wire in the sky for radials than
> a good dipole on each band? (Retorical question, no answer needed :o)

Because some hams have more money than brains? :-)
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
------== Over 80,000 Newsgroups - 16 Different Servers! =-----

183. Re: GAP Titan/Titam

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-03 13:09:13 UTC
From: K4IA <K4ia@novacoxmail.com>
Message-ID: <ZHCU8.26768$DB.392542@news1.east.cox.net>
Source record: 139474

It is a decent vertical - but pretty useless on 80 mtrs. Not as good as my top fed inverted L - 51 feet on a side fed with ladder line to a 1:1 balun to a short peice of coax to a tuner. The L works 160-10 and cost a lot less but you do need a couple 60 foot tall trees to get the top section up.

You can check out the GAP reviews at www.eham.net . Of course, most people who just spent close to $400 for an antenna have nothing but good things to say. The website is referenced there also. Be sure to wear your hipboots. The hype is pretty deep.
--
Radio K4IA
Craig "Buck"
Fredericksburg, Virginia USA

FISTS 6702 CC 788 Diamond 64
K1♯ 470 K2♯ 2460

"Biggles" <hamsat@totalise.co.uk> wrote in message
news:o4k3iu87irt02cq5muejrob5bs01rm20tq@4ax.com...
> Hi
> Has anyone had any experience of the GAP Titam or Titan antenna.
> Also is there a manufacture web site.
> Regards
> Tony

184. Re: GAP Titan/Titam

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-03 13:17:42 UTC
From: ardujenski@aol.com
Message-ID: <20020703091742.25398.00001517@mb-cp.aol.com>
Source record: 139476

>Hi
>Has anyone had any experience of the GAP Titam or Titan antenna.
>Also is there a manufacture web site.
>Regards
>Tony

Tony I have used the GAP TITAN for several years and very pleased with its performance on 80-10m. I have it tuned for 1-to-1 SWR in cw portion of bands on 40, 20, 17,15, 12 and 10m. 30m I have to settle for about 1.8-to-1.

Let me start by saying that I have just worked Ireland from near Seattle on 900 milliwatts with a 569 report.

All antennas are some sort of compromise. Most folks that speak badly of the GAP TITAN have little or no concept of LOBE PATTERNS. Being basically a vertical dipole it has low angle lobe patterns and does not do well for close in stations which require higher angles of radiation for more of a vertical bounce.

Many folks having problems generally can be traced to poor coax, poor coax fittings, or never set up the GAP properly initially.

My GAP is located in a cluster of tall pine trees, and ground mounted on the side of a hill. It performs very well on both QRP and QRO. I use NEW BUY-IT coax for a 100ft cable run

As an added feature it does tune up well on 6m and 2m although it is not advertised for these bands.

Take a look at
http://www.njqrp.org/data/gap.html
and
www.mellinger.com/wa0sxv/titandx.html

You do need to supplement this antenna with one with high angle lobe such as a low dipole or loop or even an inverted-L. By the way a 11m by 11m Inverted-L with 12--5m radials gives you both high and low angle lobe patterns and I have used it VERY successfully on 160-10m. It has compared favorably with the GAP and strongly recommend it also.

Go to www.gapantenna.com for mfgr info. Hope this helps

Alan KB7MBI
Woodinville, WA

185. Re: Coax conduit to tower

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-03 13:18:23 UTC
From: David <phochief@nonspamhotmail.com>
Message-ID: <IECU8.38481$N8.39963074@e3500-atl1.usenetserver.com>
Source record: 139475

Doc....thanks for the reply.....I guess what I'm really wanting to know is whether I need to run a separate conduit for the rotor cable or anything else that might need to be separated from the feedlines? Is there a problem running everything together in one pipe?

David

"'Doc" <w5lz@icok.net> wrote in message news:3D22B943.E1E54C1@icok.net...
>
>
> David,
> It's sort of like having closet space, what you
> have to start with is never enough later. The size
> pipe you stated may 'do' you for a long time, but
> why not a size or two larger? Makes for easier coax
> pulling, and it's nice to have 'extra' just in case.
> 'Doc

186. Re: G5RV

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-03 13:19:04 UTC
From: K4IA <K4ia@novacoxmail.com>
Message-ID: <cRCU8.26798$DB.393198@news1.east.cox.net>
Source record: 139477

I was pretty disappointed in mine so I yanked off the feed line and ran
ladder line all the way back to the shack (the classic G5RV configuration)
to a 1:1 current balun to a short piece of coax to a tuner. I hung what was
left (102 feet of wire) in an inverted L fed at the top. Now I can tune
160-10 mtrs and the antenna works much better.

No doubt, the hype surrounding the commercialization of this simple antenna
would make old Louis spin in his grave.
--
Radio K4IA
Craig "Buck"
Fredericksburg, Virginia USA

FISTS 6702 CC 788 Diamond 64
K1# 470 K2# 2460

"Reg Edwards" <g4fgq.regp@btinternet.com> wrote in message
news:afqr51$e6$1@venus.btinternet.com...
> Year after year, I am tired of hearing and reading about the G5RV.
>

187. Re: BACK TO BASICS - EM waves, E and H fields, in phase or inquadr...

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-03 13:22:44 UTC
From: 2w8ji@contesting.com
Message-ID: <3d22f388.44095048@news.akorn.net>
Source record: 139478

On Tue, 2 Jul 2002 22:32:59 -0400, " J. Harvey"
<JM002.Harvey_TRIMTHIS_@Sympatico.ca> wrote:

>I notice that when you both use the same meaning for the word "they", then
>you tend towards agreement. When you use the word differently, then you
>have a disagreement.

Hi Harv,

The problem is really that this is like convincing a Numerologist
there are not lucky numbers or bad numbers that control our lives.
For every 10,000 examples you can give that they are unrelated, the
Numerologist will find an example that seems to have worked.

Let me ask a series of questions:

1.) If common mode impedance increases, does differential mode
impedance either increase or decrease?

2.) If differential mode voltage increases, does common mode current
ior voltage increase or decrease?

3.) Is common mode voltage or current always phased locked to
differential mode voltage or current?

4.) Do any of the three above always occur in systems able to support
both modes?

If the answer to any of the above is ever given as a simple yes, it
would be an incorrect answer.

Now comes the final question...

Can anyone define any type of relationship or interaction between
common mode and differential mode impedances in systems that always
occurs, and follows a rule or interaction between the two that always
occurrs?

The answer to that would be no, they can not.

With that in mind, why would anyone in his right mind object to saying
the two conditions are unrelated?

I think the answer relates to an earlier thread. Harrison and Cecil
told me I was "stupid" when I said moving a choke balun from the
output of a floating network tuner to the input was useless for
improving balance or reducing balun impedance requirements. In a few
dozen exchanges were proven wrong.

I think the REAL answer has nothing to do with common mode, but it has
a lot to do with common sense.

73 Tom

188. Re: PVC coax conduit to tower

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-03 13:23:40 UTC
From: David <phochief@nonspamhotmail.com>
Message-ID: <kJCU8.38517$N8.39996998@e3500-atl1.usenetserver.com>
Source record: 139479

Dick...thanks for the reply....I used the underground gray electrical type
of PVC so I think I'm in good shape. I just don't know if I should use
another pipe to carry the rotor cable separate from the feedlines?

73,
David, K4ZZR

"Dick Hughes" <rhughes33@cableone.net> wrote in message
news:oeq4iu8uca7ukv1naqfm4tpqegp0an36ng@4ax.com...
> I would make it 2" and use electrical PVC, the gray type. Something I
> do is make two "U's" (out of two 90 degree elbows) for each end that I
> don't use cement on. Keeps the rain out, and is still easy to remove
> when pulling coax. Of course this assumes you have upward 90's at
> each end. Be sure and pull a strong rope/cord through the pipe as you
> assemble it. And leave it in after you pull your wires in case you
> need something else later. I have an RG-213, RG-9913 and an 8-wire
> rotator cable in mine. It's about to get another RG-9913.
>
> Dick - W6CCD
>
> On Tue, 2 Jul 2002 21:30:31 -0400, "David"
> <phochief@nonspamhotmail.com> wrote:
>
> >Getting ready to dig the concrete base for my new tower and plan to run a
1
> >1/2 inch PVC pipe from my shack to my tower about 30' away and up through
> >the concrete base. This pipe is big enough to carry several coax lines
plus
> >the rotor cable, so is there any reason I would want to run a separate
pipe
> >for anything else? I've never had a problem running the coax and rotor
> >cable next to each other. The reason I ask is because I see photos of a
> >tower installation on the texas towers website with two PVC conduits
coming
> >up through the concrete base.
> >
> >David
> >
> >
>

189. Re: ? about CATV Hardline

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-03 13:39:52 UTC
From: Phil Bradway <kb2hq@nycap.rr.com>
Message-ID: <I8DU8.100156$GY.33914447@twister.nyroc.rr.com>
Source record: 139480

I've successfully ignored the mismatch on 3/4" Trilogy fused disk 75 ohm CATV hard line all the way up to 5 GHZ. If you are a real purist, coaxial transformers are available for specific frequencies (I tried them on 1296) but the difference between them and my home brew, copper fitting, connectors was negligible. You could also tune the antennas for lowest SWR with the 75 ohm cable in the tested system.

Basically, I agree with Dave....don't sweat it.

Phil

"David Robbins" <k1ttt@arrl.net> wrote in message
news:aft9120sa3@enews2.newsguy.com...
> you only have to compensate if you are doing something very critical, and
> mostly only at vhf/uhf frequencies. at hf the loss is so low that the
small
> mismatch created by a 50 to 75 ohm transition can be ignored.
>
> "KC9JS, John" <KC9JS@charter.net> wrote in message
> news:ui43ug3r44cbc8@corp.supernews.com...
> > Note, CATV Hardline is 75 ohm cable. I have heard of it's use in amateur
> > radio but you must compensate for the impedance difference.
> > --
> > 73 de John/KC9JS
> > Twin Lakes, WI
> > **********
> > "W.G Ewald" <wgewald@att.net> wrote in message
> > news:lf8shukrl0heuhb68565scko7bl85gi9oq@4ax.com...
> > > On Fri, 28 Jun 2002 16:19:35 GMT, <w4mjr@comcast.net> wrote:
> > >
> > > >I have almost a full roll of CATV Hardline. I was thinking of
> replacing
> > my
> > > > >old coax with this if it can be used. This is the info thats on the
> roll.
> > > > >Times Fiber Communication,Inc
> > > > >Reel No. C86
> > > > >Type: T650
> > > > >Footage: 2000
> > > > >
> > > > >It looks to be 3/4 in dia. and the outer jacket is aluminum with
> > copper-clad
> > > > >aluminum inner conductor .
> > > > >I hate not to us this if it can be put to good Amateur use. Have any
of

> > you
> > > >used this stuff before ?
> > > >
> > >
> > >
> > > After Hurricane Floyd there was plenty available. Charles Davis AD4XT
> > > was selling connectors at the hamfests at the time.
> > >
> > >
> >
> >
>
>

190. Re: BACK TO BASICS - EM waves, E and H fields, in phase or inquadr...

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-03 13:40:22 UTC
From: 2w8ji@contesting.com
Message-ID: <3d22faed.45988420@news.akorn.net>
Source record: 139481

On Wed, 03 Jul 2002 07:21:30 -0500, CAM <w5dxp@hotmail.com> wrote:

>Tom W8JI wrote:
>>
>> CAM <w5dxp@hotmail.com> wrote:
>> >Just because the relationship is unknown or difficult to determine
>> >doesn't mean that no relationship exists. Out of the following
>> >possibilities, (B) seems to be the obvious answer.
>> >
>> >A. Not related
>> >B. Related but unpredictable
>> >C. Related by a rigid formula
>>
>> Oh I see. They are related, it's just that you can NOT describe HOW
>> they are related since they are related in "an unpredictable manner".
>
>I can measure how they are related. Just because I am ignorant of how they
>are related doesn't mean that they are "NOT related".

Let me see if I understand this. You state above:

1.) You can not tell me how they are related, but you measure what
appears to be a relationship in at least one system.

2.) The reason you can not give me an answer as to how they relate in
all systems is you are ignorant about how or why they are related.

3.) You say they are related, but in an "unpredictable manner".

Is that about it?

73 Tom

191. 6 meter dipole off 80m problem

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-03 14:16:36 UTC
From: "R. Scott" <washingtonham@yahoo.com>
Message-ID: <3D230744.40861A48@yahoo.com>
Source record: 139484

Hello all (especially Cam)

I have an 75m dipole that I couldnt get to prune to 6 meters (14th harmonic) so I dropped a 6 meter dipole on it at 90 degree angles. Problem is I can only get it down to 2 to 1 swr at 52.500 and its very steep skirts jacks it way up at the band edges. I wonder what could be the problem (there is a metal mast in between the dipoles is that causing it and how would I cure it)

Thanks

Rick KF7QZ

192. Re: Coax conduit to tower

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-03 14:36:54 UTC
From: Bill Ogden <ogden@us.ibm.com>
Message-ID: <3D230C06.183F441D@us.ibm.com>
Source record: 139483

I did exactly the same thing, at about the same distance. In retrospect, I strongly recommend using a larger PVC pipe. After you have a few cables (coax or other) in the 1.5 inch pipe, you will find it very difficult to pull another cable through it. (Of course, you will include a pull-cord in the pipe. (?)) The larger pipe is a little more hassle to bury, but it will be *much* better in the long run. I have had no problem with coax, rotor, and relay control cables in the same conduit.

Bill Ogden
W2WO

David wrote:

> Getting ready to dig the concrete base for my new tower and plan to run a 1
> 1/2 inch PVC pipe from my shack to my tower about 30' away and up through
> the concrete base. This pipe is big enough to carry several coax lines plus
> the rotor cable, so is there any reason I would want to run a separate pipe
> for anything else? I've never had a problem running the coax and rotor
> cable next to each other. The reason I ask is because I see photos of a
> tower installation on the texas towers website with two PVC conduits coming
> up through the concrete base.
>
> David

193. Re: Fractal Wire Antennas

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-03 15:12:27 UTC
From: VE9SRB <srbest@att.net>
Message-ID: <vvEU8.2704$lu6.143596@bgtnsc04-news.ops.worldnet.att.net>
Source record: 139485

"W.G Ewald" <wgewald@att.net> wrote in message
news:oph4iucolajf9a2456n21as1r21so82lmc@4ax.com...
> On Tue, 02 Jul 2002 14:13:21 GMT, "VE9SRB" <srbest@att.net> wrote:
>
> >This is not intended to be a "debate", just a statement of opinion (or
fact
> >depending on your perspective).
>
> The mail brought March/April QEX and I've been through your article
> a couple of times. Did your non-selfsimilar bent wire antennas have to
> be symmetrical in order for there to be a valid comparison with the
> fractal antenna?
>

Hi Bill:

In order to maintain a fair or valid comparison, I needed to eliminate as many variables as possible. In addition to the size, total wire length and wire diameter, it was necessary to keep the feedpoint in approximately the same location relative to the outside dimensions of the antenna. Beyond that I only considered the antenna symmetry about the feedpoint as a matter of convenience for creating the NEC (EZNEC) file. As I stated in the paper, the symmetry will affect the radiation patterns, especially at the upper series resonance where the antenna becomes larger with respect to the operating wavelength and where geometry becomes more of a factor in determining the relative behavior of these antennas. In terms of radiation resistance and bandwidth at the lower resonance, I don't think that antenna symmetry, in and of itself (all other things being equal - especially feedpoint location), is remarkably significant. I would have to check to validate this opinion.

That said, however, it is significant to note that moving the antenna feedpoint along the antenna structure and thus creating an asymmetric antenna or a different symmetric antenna, will change the antenna's resonant frequency and resonant properties.

What is evident is that the electromagnetic properties of an antenna are determined by so many physical factors that isolating fractal geometry, in and of itself, as a special or unique subset in terms of determining antenna behavior or performance is naive.

Steve VE9SRB

194. Re: GAP Titan/Titam

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-03 15:16:50 UTC
From: David Cook <nospam.davepc2@oz.net>
Message-ID: <CzEU8.72773$Uu2.12358@sccrnsc03>
Source record: 139486

Allen, KB7MBI, summed it up pretty well, but here's a couple of additional comments.

Yes, the GAP Titan is a decent all-band antenna. I didn't buy it expecting it would be a miracle antenna, just wanted something convenient without having to buy a tuner. If you don't have excessive perfomrance expectations, you'll really appreciate this antenna. I got everything I expected and wanted.

If you do get one, be sure to guy it as recommended in the instructions. A number of people have gripped about how flimsy it is. Well, yes it is, that's why it's so lightweight and easy to put up. But if you just attach a few nylon ropes, the thing will be very stable.

Lastly, it's fairly easy and fun to assemble. The instruction book does leave a bit to be desired, but the information is indeed there. I managed to overlook the step where I was supposed to add the extender tube to the 12 meter resonator. After checking the SWR and having this extra tube on my hands, I went back to the instructions and found my mistake, but I feel the instructions could have be a bit more clear.

I hope this helps. 73,
-- Dave, WA0TTN

"Biggles" <hamsat@totalise.co.uk> wrote in message
news:o4k3iu87irt02cq5muejrob5bs01rm20tq@4ax.com...
> Hi
> Has anyone had any experience of the GAP Titam or Titan antenna.
> Also is there a manufacture web site.
> Regards
> Tony

195. Re: Auto tuner + MA5V = Full HF band TX?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-03 15:19:32 UTC
From: Alan Beagley <abeagley@optonline.net>
Message-ID: <3D231604.3000407@optonline.net>
Source record: 139487

Where do I find a design for an omni-directional horizontal dipole?

-=-
Alan, AB2OS

CAM wrote:
> Vito wrote:
>
>>That being the case, and CAM said the same, how are several mfgr's
>>selling $300+ verticals that need more wire in the sky for radials than
>>a good dipole on each band? (Retorical question, no answer needed :o)
>
>
> Because some hams have more money than brains? :-)

196. Re: BACK TO BASICS - EM waves, E and H fields, in phase or inquadr...

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-03 15:44:27 UTC
From: CAM <w5dxp@hotmail.com>
Message-ID: <3D231BDB.50985FA5@hotmail.com>
Source record: 139488

Tom W8JI wrote:
> 4.) Do any of the three above always occur in systems able to support
> both modes?

There's that "always" catch word again. Are all solar systems always exactly like ours? Of course not. Do all solar systems obey the laws of physics? Antenna systems are just as varied as solar systems and like solar systems, they all obey the laws of physics. Measurements can be taken to ascertain the relationships among the components existing in the system. You can plot differential current Vs common-mode current for any measured antenna system. The plot will remain valid until something is changed.

> If the answer to any of the above is ever given as a simple yes, it
> would be an incorrect answer.

Doesn't prove that they are "NOT related". All you have proved is that they are related but unpredictable. You have already admitted they are related when you said they have the same power source. You simply cannot have it both ways. If they have the same power source, they are related.

> Can anyone define any type of relationship or interaction between
> common mode and differential mode impedances in systems that always
> occurs, and follows a rule or interaction between the two that always
> occurrs?

Your example of a solar system is the best analogy I can thing of. Can anyone define any type of relationship that will exactly predict how many planets a solar system will have or exactly where they will be located at a certain time or exactly what their rotation is? The answer is NO but all of that can be measured. The fact that you are ignorant of the orbit of the second planet in the Alpha Centauri Prime system doesn't mean it cannot be measured.

This concept that if you don't know something, it doesn't exist is extremely troubling, Tom. Just because you don't know the relationship between the second planet and its star, Alpha Centauri Prime, doesn't mean that a relationship doesn't exist. Or do you believe that existence is defined by what is in your mind?
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

197. Re: Auto tuner + MA5V = Full HF band TX?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-03 15:49:53 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <6a76iukva4u34lfepdu0an0dqru01c4ijq@4ax.com>
Source record: 139489

On Wed, 03 Jul 2002 11:19:32 -0400, Alan Beagley
<abeagley@optonline.net> wrote:

>Where do I find a design for an omni-directional horizontal dipole?
>
>-=-
>Alan, AB2OS
>

Hi Alan,

Take a standard dipole and form it into an open loop in the horizontal
plane (bend the ends around in a box shape so that the tips come
together, but do not connect).

73's
Richard Clark, KB7QHC

198. Re: BACK TO BASICS - EM waves, E and H fields, in phase or inquadr...

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-03 15:57:05 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <3g76iusch9h0csds29t6au73jne3orm8k2@4ax.com>
Source record: 139490

On Tue, 02 Jul 2002 20:51:12 -0500, CAM <w5dxp@hotmail.com> wrote:

>Just because the relationship is unknown or difficult to determine
>doesn't mean that no relationship exists.

Hi Cecil,

This is one problem of the ongoing debate, you have first presumed a relationship to then prove that lack of evidence does not deny the relationship. It begs the question, if you have no way of determination, how is that you can make an assertion in the first place? Faith based arguments don't go very far.

73's
Richard Clark, KB7QHC

199. Re: BACK TO BASICS - EM waves, E and H fields, in phase or inquadr...

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-03 16:05:27 UTC
From: CAM <w5dxp@hotmail.com>
Message-ID: <3D2320C7.53980B8@hotmail.com>
Source record: 139491

Tom W8JI wrote:
> Let me see if I understand this. You state above:
>
> 1.) You can not tell me how they are related, but you measure what
> appears to be a relationship in at least one system.

Yes, we have measured the relationships of the planets to the star in at least one solar system. I cannot tell you how the planets are related to the star in any other solar system because it has not been measured. Because other solar systems have not been measured, do you assert that their planets and stars are "NOT related"? Ridiculous in the extreme!!! Antenna systems are like solar systems, Tom, they are all different. That doesn't make their components "NOT related".

> 2.) The reason you can not give me an answer as to how they relate in
> all systems is you are ignorant about how or why they are related.

Yes, just as I am ignorant of most other solar systems. Can you tell me how many planets orbit Alpha Centauri Prime, what is the diameter of their orbits, and what is the duration of their rotations? If not, does that mean that Alpha Centauri Prime's planets are "NOT related" to their star? Again, ridiculous to the extreme!!! Oh, by the way, thanks for the solar system analogy. It is perfect. Planets, orbits, and rotations are certainly related to their stars but are definitely unpredictable based on our present knowledge.

> 3.) You say they are related, but in an "unpredictable manner".

Yes, just as planets and stars are in other solar systems. Just because you cannot predict the relationships doesn't mean they are "NOT related".

> Is that about it?

Let me see if I understand this about the Alpha Centauri Prime solar system.

1. You cannot tell me how the planets are related to the star. Therefore, those planets are "NOT related" to their star?????????? Do you realize what utter nonsense that is?

2. The reason you cannot give me an answer to my questions about the Alpha Centauri Prime solar system is that you are ignorant of it just as I am ignorant of antenna conditions until I measure them?

3. You say the planets and star in the Alpha Centauri Prime solar system are "NOT related" because you are ignorant of their relationship? If you were not ignorant of their relationship, would they magically

become related? Does your omniscient power really extend all the way
to Alpha Centauri?
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

200. Re: BACK TO BASICS - EM waves, E and H fields, in phase or inquadr...

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-03 16:18:32 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <du76iuc4fsc7qqg0752pp19gr9hq1nq1cn@4ax.com>
Source record: 139492

On Wed, 03 Jul 2002 13:22:44 GMT, 2w8ji@contesting.com (Tom W8JI)
wrote:

>Let me ask a series of questions:
>
>1.) If common mode impedance increases, does differential mode
>impedance either increase or decrease?

It may insofar as the two are already part of the same circuit and
where their dependant variables (typically the frequency of
excitation) are affected.

>
>2.) If differential mode voltage increases, does common mode current
>ior voltage increase or decrease?

It may if the source of the Common Mode current is the Differential
Mode potential (not a general statement, but certainly an ordinary
occurrence).

>
>3.) Is common mode voltage or current always phased locked to
>differential mode voltage or current?

NOTHING is always. Aside from the metaphysics of this question, it is
an ordinary occurrence. Aside from the ordinary occurrence, Common
Mode is not strictly a product of the Differential Circuit but is
heavily influenced by it (they both share the same circuit paths and
correlation is inescapable). Strictly speaking, Common Mode artifacts
can exist in the total absence of Differential Mode excitation (the
opposite situation also exists).

>
>4.) Do any of the three above always occur in systems able to support
>both modes?

op. cit.

>
>If the answer to any of the above is ever given as a simple yes, it
>would be an incorrect answer.

This adds nothing more than the answer to: what is the sound of one
hand clapping?

>
>Now comes the final question...
>

>Can anyone define any type of relationship or interaction between
>common mode and differential mode impedances in systems that always
>occurs, and follows a rule or interaction between the two that always
>occurrs?

R1 / R2 = R3 / R4

The simultaneous consideration of both Common Mode and Differential Mode circuits (the are only separate circuits in their consideration for solution by means of mesh or nodal analysis - an artificial construct used to perform superposition) is nothing other than a bridge. A bridge imbalance anywhere is an imbalance everywhere.

>
>The answer to that would be no, they can not.
>

73's
Richard Clark, KB7QHC

201. Re: BACK TO BASICS - EM waves, E and H fields, in phase or inquadr...

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-03 16:21:38 UTC
From: richardharrison@webtv.net
Message-ID: <25852-3D232492-66@storefull-2396.public.lawson.webtv.net>
Source record: 139496

Tom, W8JI insists common-mode is unrelated to differential-mode.

My reply is: Changing differential-mode voltage inevitably produces a common-mode voltage change. Thus, they are related.

Tom replies, common-mode impedance can be changed without changing differential-mode impedance.

This may seem plausible. Maybe we can coil up a few turns of coax in our feedline and increase common-mode impedance, and surely the internal differential-mode impedance of our coax is unaffected.

Where the feedline meets the antenna, impedance ia volts over amps. Changing the amps taken by the common-mode changes the impedance at this point, so it affects the differential mode volts and amps too. The formula which is inviolable is Ohm`s law.

Similarly, changing the differential-mode impedance affects the common-mode volts and amps.

Tom doggedly argues, unrelated!

Never mind the network principle that current in one conductor producing a voltage across another is proof of a "mutual impedance".
Mutual means involved together (related).

Tom`s contention is absurd.

Simple analogy of this dispute (Analogies are always imperfect but sometimes get a point across.) is I might say when I change the voltage across a voltage divider, the volts between a tap and either end change too. Therefore the volts at the tap are related to the volts across the whole divider.

Tom, it seems to me, argues: I can move the tap as I please, therefore there is no relationship.

Best regards, Richard Harrison, KB5WZI

202. Re: BACK TO BASICS - EM waves, E and H fields, in phase or inquadr...

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-03 16:27:35 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <h496iuctlb1n7a19o6gagp2np2vl8iamqp@4ax.com>
Source record: 139493

On Wed, 03 Jul 2002 07:21:30 -0500, CAM <w5dxp@hotmail.com> wrote:

>Your and my ignorance
>doesn't dictate reality.

And the two of you could stand to review simpler examples - and perhaps draw the complete circuit showing just where you have decreed the reference of the Common Mode to be. This has been a constant complaint of mine for years now and it remains an elusive problem for those who argue Common anything to be able to coherently describe just what makes it Common.

Hint: Common has been, for centuries, ground - and yet no one has come close to this as an answer much less what they have in mind if (for their exquisite circumstance) it is not.

You fellows argue like the answer must be stated without using vowels.

73's
Richard Clark, KB7QHC

203. Re: BACK TO BASICS - EM waves, E and H fields, in phase or inquadr...

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-03 16:38:35 UTC
From: richardharrison@webtv.net
Message-ID: <25852-3D23288B-70@storefull-2396.public.lawson.webtv.net>
Source record: 139495

Richard Clark wrote:
"Faith based arguments don`t go very far."

Don`t you believe in mutual impedance? How would you ever receive a radio signal if current in the radiator didn`t produce voltage across your receiving antenna?

Mutual impedance means the ratio of volts across one wire produced by current in another.

Best regards, Richard Harrison, KB5WZI

204. Re: BACK TO BASICS - EM waves, E and H fields, in phase or inquadr...

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-03 16:41:15 UTC
From: tdonaly@aol.com
Message-ID: <20020703124115.23382.00002592@mb-fy.aol.com>
Source record: 139494

Richard wrote,
>
>On Tue, 02 Jul 2002 20:51:12 -0500, CAM <w5dxp@hotmail.com> wrote:
>
>>Just because the relationship is unknown or difficult to determine
>>doesn't mean that no relationship exists.
>
>Hi Cecil,
>
>This is one problem of the ongoing debate, you have first presumed a
>relationship to then prove that lack of evidence does not deny the
>relationship. It begs the question, if you have no way of
>determination, how is that you can make an assertion in the first
>place? Faith based arguments don't go very far.
>
>73's
>Richard Clark, KB7QHC
>
>
Hi Richard,
evidently, Cecil wants to win
this debate at any cost: using the logic
you pointed out, arguing current while Tom
argues impedance, using improper analogies (planetary systems), telling Tom
what Tom is supposed to be saying, etc.
This is a pretty interesting display of ego-
clash, but it doesn't do much to advance
the understanding of those of us who
want to learn about antennas.

Tom Donaly KA6RUH

205. Re: BACK TO BASICS - EM waves, E and H fields, in phase or inquadr...

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-03 16:45:28 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <al96iuovn4h7fl5271diensqcl6nnmspsp@4ax.com>
Source record: 139497

On Tue, 2 Jul 2002 22:25:49 -0500 (CDT), richardharrison@webtv.net
(Richard Harrison) wrote:

>Tom wrote:
>"You should be able to prove they are related if YOU know what you are
>talking about."
>
> R = E / I
>
>Mutual impedance has magnitude and phase angle as we are considering
>voltage induced in one conductor produced by current in another, and the
>cobductors are separated in space. But, a complex quantity is the
>general case for any impedance.

Hi Richard,

This is more than complex by a tenth and states only a general
observation tacked onto the argument without consideration for simpler
explanation (much less a more satisfying one).

Delving into phasors and the complexity of impedance is wholly
unnecessary and going on into mutuality is beyond the pale. The
discussion of the relation of Common Mode to Differential Mode is far
simpler and requires no appeal beyond simple ratios (much like Ohm's
law that you subsequently painted up like a tart).

The entirety of this discussion is subject material of EE101, Basic
Networks, employing Kirchoff's laws with mesh or nodal analysis.
Given the proliferation of discussion and the total abandonment of
this simple treatment, I suspect all debaters prefer arguing with
their own monsters of invention. This, like asking for the reference
implied by the usage of the term Common, appears to be a strain for
all to conduct through completion.

73's
Richard Clark, KB7QHC

206. Re: Want CQ mag article.

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-03 16:45:49 UTC
From: Eskay <Nospamve3jua@rac.ca>
Message-ID: <3D232A3D.460C59B6@rac.ca>
Source record: 139482

Thanks but it is not in my mail box..Something gone wrong?
Had a request to pass it along to another VE Ham..
De Sieb VE3JUA,,,,sieb@uraxis.com

URAXIS.COM the affordable internet provider in Canada..

Oldtime Radio wrote:

> I've sent it in pdf format
> 73
> otr
> On Tue, 02 Jul 2002 19:48:58 -0700, Eskay <Nospamve3jua@rac.ca> wrote:
>
> > Hi..In the July issue of CQ mag there is an article by VE3ERP on a
> >two band shortened wire dipole..Could someone please scan this and send
> >it to me?
> > Thanks a bunch de Sieb,,,ve3jua@rac.ca

207. Re: BACK TO BASICS - EM waves, E and H fields, in phase or inquadr...

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-03 16:52:55 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <jpa6iukpud13v7jf097lnt7g8tag347psa@4ax.com>
Source record: 139498

On Tue, 2 Jul 2002 23:27:46 -0500 (CDT), richardharrison@webtv.net
(Richard Harrison) wrote:

>Same thing can be done with Differential-mode and common-mode signals.
>Measure their impedances by the voltmeter-ammeter method, then divide
>the common-mode impedance by the differential-mode impedance, if that is
>the way you would like ratio expressed. It works every time.

Hi Richard,

This in some way resurrects your earlier embellishments (but then you
post two follow-ups that tend to negate this gain).

Ratios are the ONLY meaningful discussion in light of the complete
circuit being laid out before us and such ratios would answer all
questions, even the complex ones with artificial constraints.

This is all far, far simpler than any of the mental gymnastics and
finely honed wording that has gone before this.

73's
Richard Clark, KB7QHC

208. Re: BACK TO BASICS - EM waves, E and H fields, in phase or inquadr...

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-03 17:01:04 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <59b6iu8kj4t3anghe3v65hmfjcog2b4jn0@4ax.com>
Source record: 139499

On Wed, 3 Jul 2002 11:38:35 -0500 (CDT), richardharrison@webtv.net
(Richard Harrison) wrote:

>Richard Clark wrote:
>"Faith based arguments don`t go very far."
>
>Don`t you believe in mutual impedance? How would you ever receive a
>radio signal if current in the radiator didn`t produce voltage across
>your receiving antenna?
>
>Mutual impedance means the ratio of volts across one wire produced by
>current in another.
>
>Best regards, Richard Harrison, KB5WZI

Hi Richard,

Do I believe? On the face of it, a faith based question the answer to
which does not attend any of my observations.

73's
Richard Clark, KB7QHC

209. Re: Auto tuner + MA5V = Full HF band TX?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-03 17:10:49 UTC
From: CAM <w5dxp@hotmail.com>
Message-ID: <3D233019.AE270A0@hotmail.com>
Source record: 139500

Alan Beagley wrote:
> Where do I find a design for an omni-directional horizontal dipole?

Why would anyone want an antenna that radiates equally poorly
in all directions? :-)
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

210. Re: BACK TO BASICS - EM waves, E and H fields, in phase or inquadr...

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-03 17:14:33 UTC
From: CAM <w5dxp@hotmail.com>
Message-ID: <3D2330F9.9266A801@hotmail.com>
Source record: 139501

Richard Clark wrote:
> This is one problem of the ongoing debate, you have first presumed a
> relationship to then prove that lack of evidence does not deny the
> relationship. It begs the question, if you have no way of
> determination, how is that you can make an assertion in the first
> place? Faith based arguments don't go very far.

Being phase-locked and having a common power source is a faith
based argument??????? Are you willing to go on record as asserting
that common mode conditions are "NOT related" to differential mode
conditions?
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

211. Re: BACK TO BASICS - EM waves, E and H fields, in phase or inquadr...

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-03 17:23:33 UTC
From: CAM <w5dxp@hotmail.com>
Message-ID: <3D233315.3FD4C845@hotmail.com>
Source record: 139503

Tdonaly wrote:
> evidently, Cecil wants to win
> this debate at any cost: using the logic
> you pointed out, arguing current while Tom
> argues impedance, using improper analogies (planetary systems), telling Tom
> what Tom is supposed to be saying, etc.
> This is a pretty interesting display of ego-
> clash, but it doesn't do much to advance
> the understanding of those of us who
> want to learn about antennas.

The only thing being discussed here is whether the following statement is
true or false:

Common mode conditions are NOT related to differential mode conditions.

The statement is proven false by the observation that when the differential
mode currents go away at key up, the common mode currents also go away.
Therefore, they are related.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

212. Re: BACK TO BASICS - EM waves, E and H fields, in phase or inquadr...

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-03 17:24:35 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <ujb6iugkvnuk4sfglk1dv50u1cd6df06d5@4ax.com>
Source record: 139502

On Wed, 3 Jul 2002 11:21:38 -0500 (CDT), richardharrison@webtv.net
(Richard Harrison) wrote:

>Tom, W8JI insists common-mode is unrelated to differential-mode.
>

Hi Richard,

I won't argue for Tom, but Common Mode paths are separable from
Differential Mode paths in analysis. In that sense, yes they are
unrelated. The Differential Mode may be entirely free of Common Mode
issues until someone upsets the apple cart with a real circuit
addition or through a change of symmetry (both products of an outside
agent and as such identifiable and separable at the time of
commission). However, as a circuit (and both Modes are confined to a
single, over-encompassing circuit) all effects are wholly related.

The resolution is that these circuits are in a bridge configuration
and yes, each element of the bridge is independent of the other, and
yet if any element were to change, all the remaining elements would be
affected through the actions of currents and potentials redistributed
through the action of the imbalance brought to it.

As I said earlier, cause and effect are being intermingled
indiscriminately through the absence of discussion of the entire
circuit which reveals the reference of the Common. As none here have
attended this basic consideration, a resolution for them is impossible
to obtain.

The real problem of these discussions is that none here will back away
from their myopic perspective to describe the entirety - each wanting
to describe an elephant, close up, in his own blind way.

73's
Richard Clark, KB7QHC

213. Re: 6 meter dipole off 80m problem

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-03 17:35:23 UTC
From: Tony Angerame <tangeram@lucent.com>
Message-ID: <afvc7u$neq@nntpb.cb.lucent.com>
Source record: 139504

Let me venture a guess before the experts weigh in. I think a 75 meter dipole has a 13 to 1 ratio if it is tuned to 3850 i.e 3850 *13 = 50.050 so the 75 meter dipole should actually work by itself on 50 mhz but I think it needs to be closer to 4 mhz to reach resonoance at 52 mhz 13 * 4 = 52. So by the time you prune enough wire to reach 52 you're out of the 75 meter band or close to it. I am not sure which portion of the 6 meter band you want to operate on but I think that the 75 meter dipole in parrellel with the 6 meter dipole will interact since their resonant lengths are at least close to each other. So I think that you have a 6 meter dipole that is fairly close to resonance in parrellel with a 13/2 wavelength dipole that is somewhat lower in frequency than what you desire. Multiwire dipoles work because the dirfferent dipoles are far apart as to resonant frequency. As to a solution hmmm..... perhaps I should leave that to the experts. I'm sure you've already discarded the idea of seperate feedlines.

Tony WA6LZH

214. Re: Auto tuner + MA5V = Full HF band TX?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-03 17:37:54 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <5ld6iusk09ao9ikq9e0o2ibp55qmnfcchr@4ax.com>
Source record: 139505

On Wed, 03 Jul 2002 12:10:49 -0500, CAM <w5dxp@hotmail.com> wrote:

>Alan Beagley wrote:
>> Where do I find a design for an omni-directional horizontal dipole?
>
>Why would anyone want an antenna that radiates equally poorly
>in all directions? :-)

Hi Cecil,

In regard to my own suggestion to Alan, you appear to offer the
prospect of an antenna that radiates equally poorly in only two
directions? ;-)

73's
Richard Clark, KB7QHC

215. Re: Fractal Wire Antennas

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-03 17:39:42 UTC
From: VE9SRB <srbest@att.net>
Message-ID: <yFGU8.74868$UT.5154979@bgtnsc05-news.ops.worldnet.att.net>
Source record: 139506

"Technomage" <technomage-hawke@cox.net> wrote in message
news:pan.2002.07.03.01.18.26.487.25465@cox.net...
>
> still, it is nice to see a reasonably thought out conclusion based on
> real science, not snake oil!
>

Thanks for the comments and feedback.

Steve VE9SRB

216. Re: Fractal Wire Antennas

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-03 17:40:20 UTC
From: VE9SRB <srbest@att.net>
Message-ID: <8GGU8.74869$UT.5153426@bgtnsc05-news.ops.worldnet.att.net>
Source record: 139507

"Fred Hambrecht" <w4jle@charter.net> wrote in message
news:ui4otgimjp61d3@corp.supernews.com...

>
> Warmest regards
> Fred W4JLE

Fred:

Thanks for the comments.

Steve

217. Re: Fractal Wire Antennas

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-03 17:54:16 UTC
From: VE9SRB <srbest@att.net>
Message-ID: <cTGU8.74889$UT.5156014@bgtnsc05-news.ops.worldnet.att.net>
Source record: 139508

"Richard Clark" <kb7qhc@attbi.com> wrote in message
news:hrl3iuglvbg66ab8jh5j8vccql1fjjftgr@4ax.com...

Hi Richard,

> Hi Steve,
>
> The joke of this is that four or five years ago I found that any
> fractal advantage was a mis-credit to deflect attention away from the
> simple matter of putting a kink in a wire. Steve, your random bent
> wires that won the Fractal Challenge some years back supported this
> observation.
>

As appropriately pointed out in a different thread, I did not "officically"
enter the contest. I lost my entry form.

> As to the culture of the fractal "belief circle." That group
> steadfastly moves around the periphery of their goal so as to not
> attain its mediocre pay-off. As long as the goal remains "elusive,"
> the magicians can mumble oaths and insist that the stars be in
> alignment before the next test (the Italian Gambit).
>
> My studies have cut to the heart of the matter and the data reveals
> that as a class, fractals, by the nature of the variation of their
> geometry, presents a continuum of characteristics that can be ordered
> rationally against simple correlatives. There is not much advantage
> to be gained by this except a certain intellectual satisfaction.
> However, this does not sell patent medicine, and knowing the
> ingredients of doctor hokum's fractal-elixir does not reveal a cure.
>
> 73's
> Richard Clark, KB7QHC

Good work on the web pages as usual.

As an aside, I'm enjoying the "related - NOT related" discussion in the Back
to Basics thread. Good to see someone keeping things interesting.

Steve

218. Re: 6 meter dipole off 80m problem

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-03 18:12:53 UTC
From: "R. Scott" <washingtonham@yahoo.com>
Message-ID: <3D233EA5.2BC6D6B5@yahoo.com>
Source record: 139511

> I'm sure
> you've already discarded the idea of seperate feedlines.
>
> Tony WA6LZH

Yes due to several factors Im trying to get 6 on the same as my Dipole.
My Beam is on another feed and I dont have the room for more coax
through the feed hole in my house.

Thanks
Rick KF7QZ

219. Re: BACK TO BASICS - EM waves, E and H fields, in phase or inquadr...

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-03 18:17:08 UTC
From: richardharrison@webtv.net
Message-ID: <25854-3D233FA4-5@storefull-2396.public.lawson.webtv.net>
Source record: 139513

Tom, W8JI wrote:
"So you are saying Ohm`s law is the formula for determining mutual coupling between common mode and differential mode impedances.

If the differential-mode energy doesn`t exist, neither does the common-mode. The only way common mode comes into existance is coupling between the circuits where the modes prevail. This coupling has a name which is used for its quantification, "mutual impedance".

The mutual impedance formula is found in many texts and is simply an extension of Ohm`s law. This is from a WW-2 era Terman`s "Radio Engineers` Handbook" page 278:

Mutual impedance = Z12 = -E2 / I1

That`s Z = E/I , or Ohm`s law, where we have voltage in one wire and current in another ratioed.

Best regards, Richard Harrison, KB5WZI

220. Re: Fractal Wire Antennas

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-03 18:29:41 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <9pg6iu4dv8bkfagsi91iathlq1o91203q2@4ax.com>
Source record: 139509

On Wed, 03 Jul 2002 17:54:16 GMT, "VE9SRB" <srbest@att.net> wrote:

>> Steve, your random bent
>> wires that won the Fractal Challenge some years back supported this
>> observation.
>>
>
>As appropriately pointed out in a different thread, I did not "officically"
>enter the contest. I lost my entry form.

Hi Steve,

I was speaking of our group's participation in our own judged challenge, not the un-registered lottery which may (and in all likelihood) contravene a number of laws. I have notice a similar effort being proposed that is simply the pimping of amateurs for commercial prospects - in short, hi-grading others' antenna work to leverage a new product. Worse is that no boon will fall to the individual whose work is stolen.

73's
Richard Clark, KB7QHC

221. FS: 2.5 GHz yagi

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-03 18:32:55 UTC
From: wd4aks@hotmail.com
Message-ID: <cffc65f9.0207031032.337677b@posting.google.com>
Source record: 139510

Cushcraft PC2415N yagi. 2.4-2.5 GHz,16 element enclosed,13.9 db gain.
N female connector. New in box.
$25 includes shipping CONUS. Postal Money order please.
Howard WD4AKS
wd4aks@hotmail.com

222. Re: need CQ mag article.

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-03 18:44:32 UTC
From: Phil Kirchmeier <Ckirch@execpc.com>
Message-ID: <3d234473$0$1431$272ea4a1@news.execpc.com>
Source record: 139512

Hi
I just read the post about the short antenna for 2 bands....in CQ
magazine...
I'm a retired ham trying to get back on the air...I need a short antenna for
limited space and fussy neighbors....I wonder if you would send me the same
PDF file..
Cant wait to work some CW agn..
I can sure use the help....Thank you for the help...
Best of 73s
Phil K WB9KZI Qth Wisconsin

chirch@execpc.com

Oldtime Radio wrote:

> I've sent it in pdf format
> 73
> otr
> On Tue, 02 Jul 2002 19:48:58 -0700, Eskay <Nospamve3jua@rac.ca> wrote:
>
> > Hi..In the July issue of CQ mag there is an article by VE3ERP on a
> >two band shortened wire dipole..Could someone please scan this and send
> >it to me?
> > Thanks a bunch de Sieb,,,ve3jua@rac.ca

223. Re: BACK TO BASICS - EM waves, E and H fields, in phase or inquadr...

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-03 19:31:31 UTC
From: richardharrison@webtv.net
Message-ID: <13516-3D235113-23@storefull-2398.public.lawson.webtv.net>
Source record: 139514

This is repetition from my Tue,Jul 2, 2002, 9:30am posting.

"The common-mode signal using the center-taps of the transformers does not mix with the wire-to-wire differential-mode signal because there is no "mutual impedance" shared by the signals. Without a mutual impedance, one signal does not become a "function" of the other signal.

Unbalance the system, and the signals mix. One becomes a function of the other. When you change the differential-mode voltage it affects the common-mode voltage.

This is the same cause and effect we have been discussing with transmission-line imbalance or antenna imbalance---."

For newcomers who question the existance of signals between center-taps, it`s an ancient practice. Phone companies have turned two voice circuits into three by using center-taps in one phone line to create one side of the "phantom circuit", and the center-taps in the second phone line to create the other side of the "phantom circuit". A connection to earth is not required for creation of a phantom circuit.

Use of the earth return has been used for signaling, supervision and voice, however. A ringing current signal is effective over a longer distance when it is using both wires of a pair in parallel against ground.

The phantom circuit is extraneous to the point I have to make. For all I know, Tom, W8JI, has balanced lines and antennas in mind. This would be a trivial case where no coupling exists as there is no common-mode.

My argument has been concerning a substantive case concerning imbalance and a common-mode.

Best regards, Richard Harrison, KB5WZI

224. Re: MFJ-270 surge protector

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-03 20:18:27 UTC
From: Julian <Julian@vnospamelodog.demon.co.uk>
Message-ID: <dQ6gd7CTw1I9EwfE@velodog.demon.co.uk>
Source record: 139515

In article <15nU8.16708$DB.232870@news1.east.cox.net>, Uncle Peter
<radioconnectionNO@cox.netSPAM> writes
>
>"Ken" <cprstn54zz@att.net> wrote in message
>news:3d1f7644.32177031@news-server.optonline.net...
>> On Sun, 30 Jun 2002 20:03:15 +0100, Julian
>> <Julian@velnospamodog.demon.co.uk> wrote:
>> >This surge protector's terminals are marked In and Out, would I be
>> >correct in assuming that the In terminal should be Rx side and the Out
>> >antenna side?
>>
>> No way to figure it out! On RX it goes one way and on TX the other
>> way.
>>
>It does matter on some designs, where a series cap is used before the
>gas discharge tube. PolyPhasors are clearly marked "antenna"
>and "equipment". I'd drop MFJ service a line and ask it makes a
>difference on the MFJ270 device.
>
>Pete
>>
>>
>>
>> Ken
>> (to reply via email
>> remove "zz" from address)
>
>
Thanks guys, just had another look at the package and spotted the MFJ
website (doh), I'll look there.

Cheers
--
Julian

225. Re: BACK TO BASICS - EM waves, E and H fields, in phase or inquadr...

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-03 20:25:43 UTC
From: richardharrison@webtv.net
Message-ID: <24468-3D235DC7-83@storefull-2397.public.lawson.webtv.net>
Source record: 139517

In a previous posting I gave an example of a balanced transmission line with center-tapped transformer windings at its ends. I wanted to illustrate the difference between balance and imbalance, differential-mode and common-mode.

I said the two center-tapped transformer windings were connected to create a balanced bridge until something is done to produce imbalance.

Common-mode (unbalanced means not balanced to ground as Richard Clark noted) signals could use the center-taps to inject/extract signals without offending the differential-mode signal, and vice versa, so long as balance is maintained.

Richard Clark mentioned the bridge in his posting. He may have the key that makes mutual impedance apparent or at least it may show how imbalance sends a signal through a common mode circuit if it is identified with the bridge circuit. Thanks.

Without imbalance, there is no common mode on our transmission line unless we put it there.

Best regards, Richard Harrison, KB5WZI

226. Re: BACK TO BASICS - EM waves, E and H fields, in phase or inquadr...

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-03 20:32:16 UTC
From: Gary - KJ6Q <davison7@gte.net>
Message-ID: <kbJU8.1241$_b2.1167@nwrddc03.gnilink.net>
Source record: 139516

CAM sez:

"Planets, orbits,
and rotations are certainly related to their stars but are definitely
unpredictable based on our present knowledge."

HMMMmm and just when I *thought* we had pretty well determined the orbits of the sun, moon, planets
like venus and mars, etc... AS well as MANY similar planets in other systems....

(SIGH) Guess NASA has it's work cut out for them.... 8^)

--
Gary - KJ6Q
****
Two things we'll never see:
1. Perpetual motion...
2. A liberal Democrat complaining
about "Too much government"

227. GAMMA MATCH, build your own, Reduce SWR to 1:1

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-03 21:01:11 UTC
From: oriontc@racsa.co.cr
Message-ID: <f54967d9.0207031301.f9812b8@posting.google.com>
Source record: 139518

Why buy expensive tuners to achieve antenna match. Build a GAMMA MATCH. Complete instructions $7.00. See www.tiller.net

228. Re: BACK TO BASICS - EM waves, E and H fields, in phase or inquadr...

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-03 21:05:04 UTC
From: richardharrison@webtv.net
Message-ID: <4719-3D236700-2@storefull-2393.public.lawson.webtv.net>
Source record: 139519

Richard Clark wrote:
"Differential Mode may be entirely free of Common Mode issues until
someone upsets the apple cart---."

Exactly, but the argument is not about a system devoid of common-mode.
There has to be common-mode to argue: Is it related to
differential-mode, or is it unrelated to the differential-mode?

Cecil has it right. You can`t key common-mode on and off by turning the
differential-mode on and off if the two are unrelated. That`s a complete
violation of both art and science. It may even be a violation of
humanity.

Best regards, Richard Harrison, KB5WZI

229. Re: BACK TO BASICS - EM waves, E and H fields, in phase orinquadr...

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-03 21:29:46 UTC
From: CAM <w5dxp@hotmail.com>
Message-ID: <3D236CCA.481FA531@hotmail.com>
Source record: 139520

Richard Harrison wrote:
> Without imbalance, there is no common mode on our transmission line
> unless we put it there.

That's essentially the physical experiment that I ran. I have gone
to great lengths to keep my dipole balanced going so far as to measure
the amplitude and phase of common mode currents on my ladder-line. When
I configured my well balanced dipole as an off-center-fed dipole, the
common mode current increased by a magnitude. Doesn't that prove that
common mode conditions are related to differential conditions?

If common mode conditions are "NOT related" to differential mode conditions,
how does one ever become an expert on common mode conditions? Prayer?
ESP? Omniscience?
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
------== Over 80,000 Newsgroups - 16 Different Servers! =-----

230. Re: BACK TO BASICS - EM waves, E and H fields, in phase or inquadr...

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-03 21:37:20 UTC
From: CAM <w5dxp@hotmail.com>
Message-ID: <3D236E90.EFBB611C@hotmail.com>
Source record: 139522

Gary - KJ6Q wrote:
>
> CAM sez:
> "Planets, orbits,
> and rotations are certainly related to their stars but are definitely
> unpredictable based on our present knowledge."
>
> HMMMmm and just when I *thought* we had pretty well determined the orbits of the sun, moon, planets
> like venus and mars, etc... AS well as MANY similar planets in other systems....

Gary, you missed the point. If you didn't know anything about our solar system and were trying to predict the existence of planets and their orbits and rotations, you would be up that proverbial creek without a paddle. The entire point was that we had to make measurements before we knew what was going on. There were no first principle formulas that would predict the number of planets along with their orbits and rotations just as there are no first principle formulas that will predict the magnitude and phase of common mode currents. If we want to gain knowledge of them, we have to measure them, just like the planets. Not knowing the number of planets/ orbits/rotations in the Alpha Centauri Prime system does not mean that the planets are "NOT related" to their star.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

231. Re: GAMMA MATCH, build your own, Reduce SWR to 1:1

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-03 21:52:10 UTC
From: jgboyles@aol.com
Message-ID: <20020703175210.17696.00001832@mb-mm.aol.com>
Source record: 139523

>Why buy expensive tuners to achieve antenna match. Build a GAMMA
>MATCH. Complete instructions $7.00. See www.tiller.net

Hi Chris, Let me be the first to say "are you serious"? Why would anyone send you $7.00 for instructions that are in numerous books, web sites, magazines ect.? My homebrew 1kw tuner cost about $125.00, and yes "why buy" when it is very easy to build. I can work 160-10m with a ladder line fed dipole, the loss in the tuner is small. Your GAMMA MATCH antenna will work one band and the match is at the antenna.
Why would it take you up to 3 weeks to get this well know info out? If anybody wants to send me $3.50 (half price) I can supply info on gamma, beta, tee, hairpin and other well known matching techniques;-). Good luck Chris
73 Gary N4AST

232. Re: BACK TO BASICS - EM waves, E and H fields, in phase or inquadr...

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-03 21:56:59 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <s6s6iuolrvam8qlcn1ij03fgqr3d1460lp@4ax.com>
Source record: 139524

On Wed, 3 Jul 2002 16:05:04 -0500 (CDT), richardharrison@webtv.net
(Richard Harrison) wrote:

>Richard Clark wrote:
>"Differential Mode may be entirely free of Common Mode issues until
>someone upsets the apple cart---."
>
>Exactly, but the argument is not about a system devoid of common-mode.
>There has to be common-mode to argue: Is it related to
>differential-mode, or is it unrelated to the differential-mode?
>
>Cecil has it right. You can`t key common-mode on and off by turning the
>differential-mode on and off if the two are unrelated. That`s a complete
>violation of both art and science. It may even be a violation of
>humanity.
>
>Best regards, Richard Harrison, KB5WZI

Hi Richard,

Yes, the discussion in hand is with Common Mode artifacts, and yet
they can exist in total isolation to the Differential Mode as clearly
described by your hybrid telephone circuit.

The two MAY BE related, but that is not a fundamental property of
Common and Differential Modes but rather in their topology. Both
circuits exist everywhere and yet only become a problem (or become
evident) through issues of balance (topology). It may be an ordinary
circumstance of Amateur applications, but that circumstance is quite
rare as a specie of general note.

What Cecil notes and measures is not a general condition defining the
situation, except for his/our limited experience. This discovery of
his relates to the adage: if all you have is a hammer, all problems
look like nails.

73's
Richard Clark, KB7QHC

233. Re: BACK TO BASICS - EM waves, E and H fields, in phase orinquadr...

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-03 22:01:19 UTC
From: " J. Harvey" <JM002.Harvey_TRIMTHIS_@Sympatico.ca>
Message-ID: <DuKU8.8515$MP.1372519@news20.bellglobal.com>
Source record: 139526

"CAM"
> If common mode conditions are "NOT related"
> to differential mode conditions, how does one
> ever become an expert on common mode
> conditions? Prayer? ESP? Omniscience?

<***JUMPING UP AND DOWN WAVING ARMS***>

Have you guys yet agreed on what you're discussing ? Currents or impedances
?

Obviously the current are "related" by any reasonable definition (phase
locked, key up versus key down, and all that common sense obviousness). One
point to Cecil.

What about the impedances (differential mode versus common mode) ? It would
seem reasonable that the impedances could be (in the general case)
"unrelated". It might be very difficult to vary each independantly of the
other, but it should be possible to set *any* combination of the two values.
One point to Tom.

These are *not* contradictory. Different subjects.

Cecil, I notice that you've slipped in the newly-invented phrase
"common/differential mode conditions". This doesn't help.

--

The best debater that I ever met is a guy named Bob. He would simply listen
without saying a word except to ask a few clarification questions and he
would ensure that he understood your position fully. Then he would say a
single word that would force you to change you mind.

He and I were once debating the benefits of 'virtual reality'. His single
word that carried the day was 'pterodactyl'. Men-of-few-words world
champion. Amazing.

234. Re: Want CQ mag article.

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-03 22:01:59 UTC
From: Irv Finkleman <finkirv@shaw.ca>
Message-ID: <3D2373B9.7C0DF957@shaw.ca>
Source record: 139525

Eskay wrote:
>
> As soon as I get the article I will pass it on to those who asked..
> 73 de Sieb VE3JUA...
>
Seib,
Please pass it on to me as well. Thanks in advance
Irv VE6BP

--
Diagnosed Type II Diabetes March 5 2001
Beating it with diet and exercise!
297/215/210 (to be revised lower)
58"/43"(!)/44" (already lower too!)

Visit my FINALLY UPDATED website at
http://members.shaw.ca/finkirv/

Irv Finkleman,
Grampa/Ex-Navy/Old Fart/Ham Radio VE6BP
Calgary, Alberta, Canada

235. Re: GAMMA MATCH, build your own, Reduce SWR to 1:1

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-03 23:38:03 UTC
From: Reg Edwards <g4fgq.regp@btinternet.com>
Message-ID: <ag01sq$r00$1@venus.btinternet.com>
Source record: 139527

Chris Tiller wrote -

> Why buy expensive tuners to achieve antenna match. Build a GAMMA
> MATCH. Complete instructions $7.00.

==========

Dear Chris,

Please don't be offended at this interruption. You are going about things the wrong way. You will never become a billionaire with Plan A.

You are undervaluing the value of your no-doubt considerable contributions to radio engineering.

Over here $7.00 will buy a packet of 20 cigarettes. You won't get many takers on THIS side of the pond. It's not worth the risk and trouble of a credit card transaction.

It is suggested you adopt Plan B. Up the price to $70,000. G5RV and prospective CFA manufacturers, marketing departments and salesmen will then begin to take you seriously and consider switching.

It is time the old junk was cleared off the shelves. Just think of the royalties waiting to be collected from the ill-educated suckers, Ph.D's even.

Blaze your way into the 21st Century with the GAMMA MATCH !

By the way, have you considered following up with the Delta Match ?

Regards, Reg, G4FGQ. ;o)

==========
Free Radio Modelling Software
Go to http://www.g4fgq.com
==========

236. Re: BACK TO BASICS - EM waves, E and H fields, in phase or inquadr...

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-03 23:44:06 UTC
From: CAM <w5dxp@hotmail.com>
Message-ID: <3D238C46.3E2993@hotmail.com>
Source record: 139528

Richard Clark wrote:
> What Cecil notes and measures is not a general condition defining the
> situation, except for his/our limited experience.

What astronomers note and measure about our solar system is not a general condition defining the situation with all solar systems. Every solar system is unique. Every antenna is unique. That doesn't mean that planets are "NOT related" to their stars or that common mode conditions are not related to differential mode conditions during transmit with an amateur radio antenna.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

237. Re: BACK TO BASICS - EM waves, E and H fields, in phase orinquadr...

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-03 23:48:07 UTC
From: CAM <w5dxp@hotmail.com>
Message-ID: <3D238D37.B0763665@hotmail.com>
Source record: 139529

" J. Harvey" wrote:
> Have you guys yet agreed on what you're discussing ? Currents or impedances

We are discussing conditions.

> Obviously the current are "related" by any reasonable definition (phase
> locked, key up versus key down, and all that common sense obviousness).

Try to get Tom to admit that the two currents are related.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
------== Over 80,000 Newsgroups - 16 Different Servers! =-----

238. Re: PVC coax conduit to tower

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-04 00:00:41 UTC
From: Ken Wolfe <k3qv@hotmail.com>
Message-ID: <ui741i5li788ca@corp.supernews.com>
Source record: 139530

David,
I have a coax cable, two 120vac circuits, and a Cat5 cable running thru a 3/4 inch PVC pipe. It's a tight fit but I get no crossover, RFI or crosstalk.
I took the precaution of installing Ferrites on Everything on both ends (except the Cat5 because I didn't want to ruin the internal twist.)
I would have used a bigger pipe (hindsite), but it works.

Ken

"David" <phochief@nonspamhotmail.com> wrote in message news:kJCU8.38517$N8.39996998@e3500-atl1.usenetserver.com...
> Dick...thanks for the reply....I used the underground gray electrical type
> of PVC so I think I'm in good shape. I just don't know if I should use
> another pipe to carry the rotor cable separate from the feedlines?
>
> 73,
> David, K4ZZR
>
>
> "Dick Hughes" <rhughes33@cableone.net> wrote in message
> news:oeq4iu8uca7ukv1naqfm4tpqegp0an36ng@4ax.com...
> > I would make it 2" and use electrical PVC, the gray type. Something I
> > do is make two "U's" (out of two 90 degree elbows) for each end that I
> > don't use cement on. Keeps the rain out, and is still easy to remove
> > when pulling coax. Of course this assumes you have upward 90's at
> > each end. Be sure and pull a strong rope/cord through the pipe as you
> > assemble it. And leave it in after you pull your wires in case you
> > need something else later. I have an RG-213, RG-9913 and an 8-wire
> > rotator cable in mine. It's about to get another RG-9913.
> >
> > Dick - W6CCD
> >
> > On Tue, 2 Jul 2002 21:30:31 -0400, "David"
> > <phochief@nonspamhotmail.com> wrote:
> >
> > >Getting ready to dig the concrete base for my new tower and plan to run
a
> 1
> > >1/2 inch PVC pipe from my shack to my tower about 30' away and up
through
> > >the concrete base. This pipe is big enough to carry several coax lines
> plus
> > >the rotor cable, so is there any reason I would want to run a separate
> pipe

> > >for anything else? I've never had a problem running the coax and
rotor
> > >cable next to each other. The reason I ask is because I see photos of
a
> > >tower installation on the texas towers website with two PVC conduits
> coming
> > >up through the concrete base.
> > >
> > >David
> > >
> > >
> >
>
>
>

239. Re: 6 meter dipole off 80m problem

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-04 00:08:11 UTC
From: 'Doc <w5lz@icok.net>
Message-ID: <3D2391E8.9D17DCA9@icok.net>
Source record: 139531

Rick,
I very much doubt if it's the metal pole. I
would think that the 'problem' is the interaction
between the 80 meter and 6 meter dipoles. The
80 meter dipole shouldn't be affected to any great
extent, but the 6 meter dipole certainly will be!
The 6 meter dipole's impedance is lowered well
below 50 ohms.
'Doc

240. Re: Coax conduit to tower

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-04 00:12:23 UTC
From: 'Doc <w5lz@icok.net>
Message-ID: <3D2392E4.8CB21C47@icok.net>
Source record: 139535

David,
There ~shouldn't~ be any problem running it all
in one conduit, anymore than running the cables
'bundled', up the tower. As always, there is the
possibility of problems, but it shouldn't be a 'biggy'.
'Doc

241. Re: need CQ mag article.

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-04 00:19:54 UTC
From: Oldtime Radio <nospam@aol.com>
Message-ID: <l157iusblj78abrmbcjurke8e1mbiao7ed@4ax.com>
Source record: 139532

I wonder if you would send me the same
>PDF file..
done,
OTR

242. Re: Want CQ mag article.

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-04 00:20:05 UTC
From: Oldtime Radio <nospam@aol.com>
Message-ID: <m257iu4mfqqsigg79mqgjqvfk3ea7di16b@4ax.com>
Source record: 139533

On Wed, 03 Jul 2002 09:45:49 -0700, Eskay <Nospamve3jua@rac.ca> wrote:

> Thanks but it is not in my mail box..Something gone wrong?
> Had a request to pass it along to another VE Ham..
> De Sieb VE3JUA,,,,sieb@uraxis.com
I'll try again
OTR

243. Re: Apartment HF antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-04 00:20:59 UTC
From: 'Doc <w5lz@icok.net>
Message-ID: <3D2394E8.31274C83@icok.net>
Source record: 139534

Gary,
You're not the first to be disappointed by the
inconsistencies of the ARRL, and unfortunately,
you won't be the last. They're equally disappointing
with RFI problems. They lost my $$ too.
'Doc

244. Re: 6 meter dipole off 80m problem

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-04 00:33:27 UTC
From: Dick Carroll <dixie@townsqr.com>
Message-ID: <ag054n$h9f$0@208.206.142.68>
Source record: 139536

'Doc wrote:
>
> Rick,
> I very much doubt if it's the metal pole. I
> would think that the 'problem' is the interaction
> between the 80 meter and 6 meter dipoles. The
> 80 meter dipole shouldn't be affected to any great
> extent, but the 6 meter dipole certainly will be!
> The 6 meter dipole's impedance is lowered well
> below 50 ohms.
>

The 80 mtr dipole adds lots of capacitance that wouldn't be there
without it.

245. Re: Want CQ mag article.

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-04 00:36:42 UTC
From: Eskay <Nospamve3jua@rac.ca>
Message-ID: <3D23989A.7E05BD8D@rac.ca>
Source record: 139521

As soon as I get the article I will pass it on to those who asked..
73 de Sieb VE3JUA...

Oldtime Radio wrote:

> I've sent it in pdf format
> 73
> otr
> On Tue, 02 Jul 2002 19:48:58 -0700, Eskay <Nospamve3jua@rac.ca> wrote:
>
> > Hi..In the July issue of CQ mag there is an article by VE3ERP on a
> >two band shortened wire dipole..Could someone please scan this and send
> >it to me?
> > Thanks a bunch de Sieb,,,ve3jua@rac.ca

246. Re: PVC coax conduit to tower

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-04 00:42:32 UTC
From: gaschafer@attbi.com
Message-ID: <3d233215.3715839@netnews.attbi.com>
Source record: 139537

I would second the idea of using larger pipe. I have a very long run
under ground and used 2"
pipe. It filled up quick. I don't think I could ever pull another line
in it now. Be sure to use the
"long sweep" elbows. Much easier to pull wire through. Or even two 45
degree bends
together. I would bring the pipe up along side the concrete rather
than inside it. Makes for
easier digging if you do have to get at it for some reason.
All lines run up the tower together so there shouldn't be any problem
with them together in the
ground. It may actually help as far as lightning currents go with the
mutual coupling to each
other.

73
Gary K4FMX

On Wed, 3 Jul 2002 09:23:40 -0400, "David"
<phochief@nonspamhotmail.com> wrote:

>Dick...thanks for the reply....I used the underground gray electrical type
>of PVC so I think I'm in good shape. I just don't know if I should use
>another pipe to carry the rotor cable separate from the feedlines?
>
>73,
>David, K4ZZR
>
>
>"Dick Hughes" <rhughes33@cableone.net> wrote in message
>news:oeq4iu8uca7ukv1naqfm4tpqegp0an36ng@4ax.com...
>> I would make it 2" and use electrical PVC, the gray type. Something I
>> do is make two "U's" (out of two 90 degree elbows) for each end that I
>> don't use cement on. Keeps the rain out, and is still easy to remove
>> when pulling coax. Of course this assumes you have upward 90's at
>> each end. Be sure and pull a strong rope/cord through the pipe as you
>> assemble it. And leave it in after you pull your wires in case you
>> need something else later. I have an RG-213, RG-9913 and an 8-wire
>> rotator cable in mine. It's about to get another RG-9913.
>>
>> Dick - W6CCD
>>
>> On Tue, 2 Jul 2002 21:30:31 -0400, "David"
>> <phochief@nonspamhotmail.com> wrote:
>>

>> >Getting ready to dig the concrete base for my new tower and plan to run a
>1
>> >1/2 inch PVC pipe from my shack to my tower about 30' away and up through
>> >the concrete base. This pipe is big enough to carry several coax lines
>plus
>> >the rotor cable, so is there any reason I would want to run a separate
>pipe
>> >for anything else? I've never had a problem running the coax and rotor
>> >cable next to each other. The reason I ask is because I see photos of a
>> >tower installation on the texas towers website with two PVC conduits
>coming
>> >up through the concrete base.
>> >
>> >David
>> >
>> >
>>
>
>
>

247. Re: BACK TO BASICS - EM waves, E and H fields, in phase orinquadr...

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-04 00:44:29 UTC
From: " J. Harvey" <JM002.Harvey_TRIMTHIS_@Sympatico.ca>
Message-ID: <BTMU8.8605$MP.1433702@news20.bellglobal.com>
Source record: 139538

" J. Harvey" wrote:
> Have you guys yet agreed on what you're discussing ?
> Currents or impedances ?

"CAM" [isn't helping... ...sigh.]
> We are discussing conditions.

What's a "condition" ? When did you make this new phrase up ? Maybe about two minutes after my posting where I reiterated my 9-month old opinion (...what we have here is a failure to communcate...) ?

Is a "condition" a current, like you've been measuring ? Or is a "condition" an impedance, onto which Tom has been holding steadfast ? Or are you trying to muddle the waters by brushing off this 'minor distinction' ? You're being very naughty if you're intentionally trying prolong the argument by introducing the word 'condition' - a word that brushes off my several attempts to point out the 'disconnect' (currents as opposed to impedances) between you and Tom et al.

It is blatently obvious that the currents are related. That's 'dough-head' obvious - almost not worth mentioning. Pull the main household circuit breaker to confirm. Duh... Tom has agreed with this already.

It is also fairly obvious that the impedances (differential 'versus' common mode) might be related, might not be, might be inversely related, might be vaugely proportional or not even close - all depending upon which of the zillions of real world antenna (and ground) parameters you might care to vary, in what combination and over what range. They're both a function of everything. I would call that more-or-less unrelated; you may call it 'Betty' if you wish.

The above two paragraphs are fairly self-evident.

[I'm patiently awaiting the long-overdue death of this hijacked thread so that I might be able to introduce another (hopefully very interesting) "BACK TO BASICS - ..." discussion on the topic of vertical antennas.]

248. FA: Hi-Q STEALTH II-3/80 Screwdriver Antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-04 00:51:16 UTC
From: Ed Juge/NM <ed@juge.org>
Message-ID: <3d239bda.0@oracle.zianet.com>
Source record: 139539
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.swap

http://cgi.ebay.com/ws/eBayISAPI.dll?ViewItem&item=1364515915&ssPageName=ADM
E:B:LC:US:1

Only selling because I'm upgrading to the 4-inch diameter model. This 3"
model is a year old, almost like new and in perfect operating condition.
Though rated
for 1Kw, I have never run more than 100 watts into it.

From: ------------------------------------
Ed Juge, W5EJ
Ruidoso, New Mexico
email: ed@juge.org
======================

249. Re: BACK TO BASICS - EM waves, E and H fields, in phase or inquadr...

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-04 00:54:24 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <f377iu0g914k163oenh8gj6svriuboeuvq@4ax.com>
Source record: 139540

On Wed, 03 Jul 2002 18:44:06 -0500, CAM <w5dxp@hotmail.com> wrote:

>Richard Clark wrote:
>> What Cecil notes and measures is not a general condition defining the
>> situation, except for his/our limited experience.
>
>What astronomers note and measure about our solar system is not a general
>condition defining the situation with all solar systems. Every solar
>system is unique. Every antenna is unique.

Every? Where is the iconoclast of absolutisms? The inclusion of the
solar system makes as much sense as the White House middle east
policy.

73's
Richard Clark, KB7QHC

250. Re: BACK TO BASICS - EM waves, E and H fields, in phase or inquadr...

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-04 01:26:57 UTC
From: 2w8ji@contesting.com
Message-ID: <3d239fd8.88213282@news.akorn.net>
Source record: 139541

On Wed, 03 Jul 2002 16:18:32 GMT, Richard Clark <kb7qhc@attbi.com>
wrote:

>NOTHING is always. Aside from the metaphysics of this question, it is
>an ordinary occurrence. Aside from the ordinary occurrence, Common
>Mode is not strictly a product of the Differential Circuit but is
>heavily influenced by it (they both share the same circuit paths and
>correlation is inescapable). Strictly speaking, Common Mode artifacts
*>can exist in the total absence of Differential Mode excitation (the
>opposite situation also exists).

That's right, they are totally different things. My point exactly, and
something we should never forget!

The thing I was trying to point out, and the thing that trips people
up when they are analyzing systems, is ASSUMING they are related and
that a low differential impedance means a low easily cured common mode
impedance.

The EH people and people trying to help them design a good test make
the same mistake Cecil and Harrison made with the tuner, assuming
throwing a few beads at a 50-ohm differential mode impedance can
change the common mode system signifcantly.

Moving beyond the silly useless argument or diversion Cecil and
Harrison interjected, look carefully at the feed system for the EH
antenna. You will see that in that system, the shield of the cable is
driven by the full force of the power used to drive the antenna
element if it is indeed phased as they claim. Adding common mode
impedance to the system is futile, unless the common mode impedance
added is extremely high, becuase they designed almost a perfect system
for backfeeding the shield of the cable.

As a matter of fact, if you eliminate the shield path it becomes
totally impossible to feed the antenna elements with any amount of
phase shift different than a normal dipole.

Have you looked at that system? Anyone who has, and who understands
simple differential and common mode circuits, would understand there
is no way to feed the antenna as claimed UNLESS the shield received
just as much current as the elements!!!

Since radiation is directly tied to ampere-feet of spatial conductor
length, the longer feed line shield...even if it is only twice as long
as a two-foot element...would have significanly more radiation than
the EH antenna itself if the antenna is phased as they claim.

Most interesting os the fact that the phase shift they specify coincides nearly with maximum feedline current on the outside of the shield, and if that current did not exist the phase would also disappear.

Look at the circuit on the EH antenna page, described in the section on phasing the antenna.

73 Tom

251. Re: Auto tuner + MA5V = Full HF band TX?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-04 01:32:58 UTC
From: 2w8ji@contesting.com
Message-ID: <3d23a4cc.89481715@news.akorn.net>
Source record: 139542

On Wed, 03 Jul 2002 11:19:32 -0400, Alan Beagley
<abeagley@optonline.net> wrote:

>Where do I find a design for an omni-directional horizontal dipole?
>
>-=-
>Alan, AB2OS

Beside Richard's suggestion, there are also turnstile antennas.

That would be two dipoles crossed at the centers in an X.

You feed one dipole with 90 degree lead or lag from the other.

The resulting pattern is nearly perfectly omnidirectional. You give up only three dB to pick up 20 dB or more in the dipole's normal null areas.

It is a wise and common solution when people want to communicate in all directions without using a vertical.

73 Tom

252. Re: BACK TO BASICS - EM waves, E and H fields, in phase or inquadr...

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-04 01:35:20 UTC
From: tdonaly@aol.com
Message-ID: <20020703213520.23387.00002635@mb-fy.aol.com>
Source record: 139543

Richard Clark wrote,
>
>On Wed, 03 Jul 2002 18:44:06 -0500, CAM <w5dxp@hotmail.com> wrote:
>
>>Richard Clark wrote:
>>> What Cecil notes and measures is not a general condition defining the
>>> situation, except for his/our limited experience.
>>
>>What astronomers note and measure about our solar system is not a general
>>condition defining the situation with all solar systems. Every solar
>>system is unique. Every antenna is unique.
>
>Every? Where is the iconoclast of absolutisms? The inclusion of the
>solar system makes as much sense as the White House middle east
>policy.
>
>73's
>Richard Clark, KB7QHC
>

Besides, celestial mechanics is a mature
science, as is electromagnetics. If common mode impedance (and I mean
only impedance) and differential mode
impedance are related, somehow, Cecil,
with his fine engineering education should
be able to define and explain the relationship much more clearly than he has
heretofore.

Tom Donaly KA6RUH

253. Re: PVC coax conduit to tower

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-04 01:40:02 UTC
From: 2w8ji@contesting.com
Message-ID: <3d23a625.89827218@news.akorn.net>
Source record: 139544

On Wed, 3 Jul 2002 09:23:40 -0400, "David"
<phochief@nonspamhotmail.com> wrote:

>Dick...thanks for the reply....I used the underground gray electrical type
>of PVC so I think I'm in good shape. I just don't know if I should use
>another pipe to carry the rotor cable separate from the feedlines?
>
>73,
>David, K4ZZR

There is no reason to seperate the control cable from signal cables.

They will be fine together, and it is even better for lightning to
keep them all in a bundle.

I would, however use larger conduit. I would also use cables suitable
for direct burial cables if there is any chance at all water will lay
in the conduit. I would NEVER use air core cables in a horizontal span
and especially if they are run underground, unless you pressurize
them. So don't use that fancy but troublesome Belden air insulated
coaxial cable.

73 Tom

254. Re: 80 m dipole question??

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-04 01:49:23 UTC
From: Dick Carroll <dixie@townsqr.com>
Message-ID: <ag09j3rcs0@208.206.142.68>
Source record: 139545

CAM wrote:
>
> Dick Carroll wrote:
> >
> > StarGazer wrote:
> > > If a 80 m dipole was cut for 3.75 MHz and fed with coax
> > > would it resonate at the same frequency if it were fed
> > > with ladder line?
> >
> > Probably not exactly (disclaimer for the purists among us) but close.
> > Not enough difference to worry about.
>
> Dick, is a 1/2WL dipole with a center insulator which is not shorted
> and no transmission line, a resonant antenna?

Yep.

You can achieve that
> condition with certain lengths of ladder-line that act similar to stubs.

Yep again. There are many ways of tuning antennas. I think you've
proved yours to work well. Since he didn't specify a feed line length
one assumes it to be random whether coax or ladder line.

Dick

255. Re: Ham Band Use for Direct TV Dish and LNA?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-04 01:51:55 UTC
From: Dick Carroll <dixie@townsqr.com>
Message-ID: <ag09nrrcs1@208.206.142.68>
Source record: 139546

Dick Carroll wrote:
>
> "Christopher A. Bowne" wrote:
> >
> > A discarded (for reasons unknown) DirecTV dish and LNA followed me home from
> > the freebie shed at our local town dum..err. solid waste recycling facility.
> > Other than mounting it on the house to fool the neighbors into thinking we
> > have satellite TV, does it have any practical UHF ham band application?
> >
>
> It'd make a good "dummy'. Mount it high and run RG58 to it-but don't
> hook the dish end of the coax to anything, just let it float. Load the
> coax shield as a random wire antenna vertically polarized. You won't
> even have to worry about antenna insulators. Lay a 30-40 foot wire on
> the ground in a flower bed etc. for the counterpoise.
>
> I use a "spare" dish mounted on a discarded floor model electric fan
> stand (which breaks down for compact storage) for portable satellite TV
> when we travel.
>
> Dick

With a little imagination you can invent your own name for it.
Something like cross attitude field or XZY H.....

256. Re: My 85' dipole is actually 94'!! Another ??

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-04 01:57:01 UTC
From: klocko@toad.net
Message-ID: <224d9cd4.0207031757.6871c8bf@posting.google.com>
Source record: 139547

StarGazer <pti@capnet.com> wrote in message news:<3D1B5D9F.1DB7E03C@capnet.com>...
> I bet you have a lot of loss on your line.

Hi S.G.,
You know, I really don't know if I have a lot of loss on my line. I've never bothered to do any measurements, and I'm suspicious of the whopping losses predicted by TL or TLA.

Why don't I bother looking at the losses? I believe I've tried to minimize whatever losses may be in the system. True, there is a loss in the tuner. But in using ladder line, I've minimized any additional line loss under high-SWR conditions. In using a choke balun, I've minimized any loss that may occur if I try to use another type of balun at a frequency it was not designed for. When I replaced the dipole and feedline with a similar setup in April, I noticed that the ladder line was corroding badly after being up for 4 years. There's another loss to consider.

Why don't I bother looking at the losses? Because I know the system works, and works under tough contesting conditions. I've worked the west coast from Maryland using 5 watts, and I've worked Europe and South America using 50 watts. The big boys with their Yagis usually hear me the first time.

My first antenna was a coax-fed dipole for 40 meters. Later I added a second dipole for 80 meters at the same feed point. A good friend down the street helped me put up a loop skywire. I wanted to fuss about the length and about the feed point. He said don't worry about it and put up the largest loop possible in my yard. He then proceeded to tie knots in the wire at the feed point. It worked great, and even better when I changed the coax for ladder line.

What's the bottom line here? You've got the right approach in asking questions up front. But put up something, try it, and see how it works. Try experimenting with different types. Change it around when it needs improvement.

73,
Bill N3WK

257. Re: G5RV

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-04 02:06:55 UTC
From: Dick Carroll <dixie@townsqr.com>
Message-ID: <ag0ajv$t4h$0@208.206.142.68>
Source record: 139548

CAM wrote:
>
> 'Doc wrote:
> >
> > Dave,
> > I think what the man is trying to say is that
> > while the G5RV is a nice 20 meter antenna, it isn't
> > the 'miracle', all-band, antenna it's tauted to be.
> > Like most 'stories', it's abilities tend to get
> > bigger the more often the 'story' is told.
>
> Some people seem to think that antenna gurus should be allowed
> to engage in hyperbole.

And some do so whether or not they are allowed.

258. Re: 6 meter dipole off 80m problem

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-04 03:10:58 UTC
From: nm5k@wt.net
Message-ID: <25eb70d7.0207031910.416128b@posting.google.com>
Source record: 139549

"R. Scott" <washingtonham@yahoo.com> wrote in message
news:<3D230744.40861A48@yahoo.com>...
> Hello all (especially Cam)
>
> I have an 75m dipole that I couldnt get to prune to 6 meters (14th
> harmonic) so I dropped a 6 meter dipole on it at 90 degree angles.
> Problem is I can only get it down to 2 to 1 swr at 52.500 and its very
> steep skirts jacks it way up at the band edges. I wonder what could be
> the problem (there is a metal mast in between the dipoles is that
> causing it and how would I cure it)
>
>
> Thanks
>
> Rick KF7QZ

Try slightly offsetting the feedpoint of the 6m legs. IE: take a
little off only one side or the other to get the best match. Maybe
even take what you took off one side and add it to the other. You will
need to try each side to see which works the best. You "should" be
able to get a near perfect match with a little tweaking. The
offsetting of the feed acts as a gamma match of sorts. MK

259. Re: PVC coax conduit to tower

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-04 03:21:04 UTC
From: tmgroatatpeakpeakdotcom
Message-ID: <3d23bdb9.17351703@news.peakpeak.com>
Source record: 139550

On Wed, 3 Jul 2002 20:00:41 -0400, "Ken Wolfe" <k3qv@hotmail.com>
wrote:

>David,
> I have a coax cable, two 120vac circuits, and a Cat5 cable running thru a
>3/4 inch PVC pipe.

The 120VAC circuits may need their own conduit. This isn't for noise
reasons, but to keep things legal per the electric code. Check with
your local building department or a licensed electrician before mixing
different types of circuits in the same conduit.

--KR0U

-- Tim Groat

To reply by e-mail, change the quoted words to
the corresponding punctuation marks.

260. Re: GAP Titan/Titam

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-04 03:24:22 UTC
From: nm5k@wt.net
Message-ID: <25eb70d7.0207031924.3066fb59@posting.google.com>
Source record: 139551

Biggles <hamsat@totalise.co.uk> wrote in message
news:<o4k3iu87irt02cq5muejrob5bs01rm20tq@4ax.com>...
> Hi
> Has anyone had any experience of the GAP Titam or Titan antenna.
> Also is there a manufacture web site.
> Regards
> Tony

I'd rather have a butternut if I were to buy a store bought "all band"
vertical. It has lower loss on the lower bands. And almost certainly
lower loss on the high bands as well, although the difference will be
less drastic on the higher bands. You will need radials for a
butternut to live up to it's potential. MK

261. Re: CAM?? Some Questions

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-04 03:33:15 UTC
From: Janice and Ed <eseniors@earthlink.net>
Message-ID: <%IPU8.408$1J.39921@newsread2.prod.itd.earthlink.net>
Source record: 139552

Hi Cam -

Some questions, if you please:
1. Is the antenna you're talking about here the 130 foot, ladder-line fed dipole
that you mentioned in an earlier thread?
2. I assume the 3:1 SWR bandwidth refers to a constant setting of the tuner.
Is that correct?
3. Are these bandwidths centered around the 3.993 and 7.216 frequencies
mentioned in the earlier thread?
4. Why is the 80m resonance set so high (half the BW out-of-band)?
Is it because the 80m and 40m resonances are interactive, and you
like the 40m resonance where it is?

Tnx es 73, Ed

"CAM" <w5dxp@hotmail.com> wrote in message
news:3D220632.1873C6CD@hotmail.com...
> StarGazer wrote:
> > What is the Bandwidth on 80 and 40 that doesn't go above 3:1
> > SWR. (That can be auto-tuned with your 756pro) ??
>
> The 3:1 SWR bandwidth on 80m is about 160 kHz and about 290 kHz
> on 40m, i.e. virtually the entire band on 40m. The 'Q' of the
> antenna appears to be about 40. 'Q' = BW/f
> --
> cheers, CAM http://www.qsl.net/w5dxp
>
>
> -----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
> http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
> -----== Over 80,000 Newsgroups - 16 Different Servers! =-----
>

262. Re: Building the Henf Antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-04 03:40:11 UTC
From: nm5k@wt.net
Message-ID: <25eb70d7.0207031940.25901682@posting.google.com>
Source record: 139553

k1bqt@aol.com (Rick Littlefield) wrote in message
news:<20020703075511.26748.00001188@mb-cv.aol.com>...
> The patent shows an off-center feed with no common-mode choke. Can't see what
> would prevent the feedline from radiating a lot. If 10 Ohms was measured at the
> feedpoint of an antenna that models around 2, one is left to ponder where the
> other 8 Ohms came from? One is also left to ponder how that adds up to nearly
> 100-percent effriciency? Little comparrison between Jerry's experiments and
> this design.
>
> Rick K1BQT

There is no free lunch with small antennas. :/ MK

263. Re: GAP Titan/Titam

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-04 03:53:39 UTC
From: ardujenski@aol.com
Message-ID: <20020703235339.20857.00002964@mb-mj.aol.com>
Source record: 139554

>
>Biggles <hamsat@totalise.co.uk> wrote in message
>news:<o4k3iu87irt02cq5muejrob5bs01rm20tq@4ax.com>...
>> Hi
>> Has anyone had any experience of the GAP Titam or Titan antenna.
>> Also is there a manufacture web site.
>> Regards
>> Tony
>
>I'd rather have a butternut if I were to buy a store bought "all band"
>vertical. It has lower loss on the lower bands. And almost certainly
>lower loss on the high bands as well, although the difference will be
>less drastic on the higher bands.

I have not been able to get comparison figures ANYWHERE so VERY INTERESTED in where you got loss (efficiency) figures especially showing a 1/4wl vertical Butternut being more efficient than a vertical dipole (GAP).

Alan KB7MBI

264. Re: Fractal Wire Antennas

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-04 04:19:50 UTC
From: "Peter O. Brackett" <ab4bc@ix.netcom.com>
Message-ID: <ag0ijq$a8i$1@slb5.atl.mindspring.net>
Source record: 139555

Steve:

"Touche!"

Best,

--Peter K1PO

"VE9SRB" <srbest@att.net> wrote in message
news:5yiU8.288$Iu6.16963@bgtnsc04-news.ops.worldnet.att.net...
> This is not intended to be a "debate", just a statement of opinion (or
fact
> depending on your perspective). This is also very long - sorry. I won't
> post any other long statements on this subject.
>
>
>
> The electromagnetic behavior and performance properties of a wire antenna
> are a function of the antenna's physical properties. These physical
> properties include the antenna's size (height, area, occupied volume,
etc.),
> total wire length, geometry and wire diameter. If we conclude that the
> electromagnetic behavior and/or performance properties of an antenna are
> uniquely or primarily a function of one of these physical properties, we
> must also conclude that significantly modifying this one physical property
> will significantly modify the antenna's electromagnetic behavior and/or
> performance properties.
>
>
>
> If we are to conclude that antennas having fractal geometry behave in a
> manner differently or better than antennas with a non-fractal or some
> arbitrary geometry, then we must fix all of the antenna's other physical
> properties (size, total wire length and wire diameter) and compare the
> electromagnetic behavior and performance properties of the fractal antenna
> with those of antennas having different geometries. This is something
that
> none of the proponents of fractal geometry have done in the open
literature.
> Not one. Let's consider this further.
>
>
>
> 1) Cohen, in a series of Communications Quarterly articles, published the
> performance properties of the Minkowski Island fractal loop antenna. He

> demonstrated that with increasing fractal iteration these antennas exhibit
a
> lower resonant frequency than a Euclidean (square or rectangular) loop of
> the same size (occupied area). He also demonstrated that in some regions
of
> low frequency, the Minkowski Island fractal loops exhibit a higher
radiation
> resistance than the Euclidean loop of the same size. Cohen concluded that
> the electromagnetic behavior and relative performance properties of the
> Minkowski Island fractal loops are primarily a function of the loops'
> fractal geometry. It is significant to note that two physical parameters
of
> the antenna change with increasing fractal iteration. One is the
antenna's
> geometry and the other is the antenna's total wire length. While the
> performance data presented by Cohen is mostly accurate, his conclusion is
> scientifically flawed because he is varying two of the antenna's physical
> properties but concludes that the antenna's electromagnetic behavior is
> primarily a function of only one of these physical property - its fractal
> geometry.
>
>
>
> To scientifically validate his hypothesis, Cohen would have to compare the
> electromagnetic behavior and performance properties of the Minkowski
Island
> fractal loop with those of other geometry loops having the same size,
total
> wire length and wire diameter. He did not do this. When we compare the
> Minkowski Island loop with loops of differing geometries but otherwise
> having the same size, total wire length and wire diameter, it is evident
> that they exhibit very similar electromagnetic behavior and performance
> properties. In some cases, the arbitrarily shaped loops behave better
than
> the fractal loop and in some cases, the fractal loop behaves better than
the
> arbitrarily shaped loop. In all of this however, the most significant
fact
> to note is the following: when the total wire length of the arbitrarily
> shaped loops is adjusted such that their resonant frequency matches that
of
> the Minkowski Island fractal loop, they have virtually identical radiation
> resistance and bandwidth. The resonant behavior of these loops is
primarily
> a function of the loop size with respect to the resonant wavelength and
the
> resonant properties of these loops are essentially the same independent of
> the differences in loops' geometry and total wire length.
>
>

>
> 2) Puente's work on the Koch fractal monopole suffers from the same
> scientific flaws as Cohen's work on the Minkowski Island loops. Puente
> describes the behavior and performance properties of the Koch fractal
> monopole as a function of increasing fractal iteration (increasing total
> wire length) and demonstrates that, when compared to a Euclidean
(straight)
> monopole of the same height, the Koch fractal monopoles exhibit lower
> resonant frequency and increased radiation resistance in some regions of
low
> frequency. Puente even goes as far as claiming that the complex shape of
> the Koch fractal curve enhances its radiation properties. Again, it is
> significant to note that Puente did not bother to compare the performance
of
> the Koch fractal monopole with another monopole of different geometry but
> otherwise having the same physical properties (height, total wire length
and
> wire diameter). For example, if we compare the Koch fractal monopole with
a
> simple meander line monopole and normal mode helix of the same height and
> total wire length, we see that these simple geometries exhibit
significantly
> lower resonant frequency and higher radiation resistance at low
frequencies.
> As a function of height and total wire length, these simple structures are
> more effective radiators. Two points are even more significant: a) when
the
> wire length of the meander line and normal mode helix antennas is
shortened
> (while maintaining the same height) such that their resonant frequency
> matches that of the Koch fractal, they exhibit virtually identical
radiation
> resistance and bandwidth. The resonant behavior of these monopole
> structures is primarily a function of their height with respect to the
> resonant wavelength and is essentially the same independent of the
> differences in geometry and total wire length. b) below the small antenna
> limit (ka < 0.5, k = 2pi/WL and a is the radius of a sphere encompassing
the
> maximum dimension of the antenna), the radiation resistance of all these
> antennas converges to that of a Euclidean monopole of the same height.
>
>
>
> 3) One of the most profound and yet totally unsubstantiated conclusions
> regarding fractal antennas is that stated by Vinoy et al in an article
> titled "Hilbert Curve Fractal Antenna: A Small Resonant Antenna for
VHF/UHF
> Applications" published in Microwave and Optical Technology Letters. In
this
> article the authors claim "A fourth iterated fractal Hilbert curve

geometry
> inscribed in a square of 7 cm is shown to result in a resonant frequency
of
> 267 MHz, which is much lower than any other resonant antenna of similar
> size." How many other resonant antennas of the same size did they compare
> with the Hilbert curve antenna? - zero, no even one. I fabricated a
simple
> meander line antenna of the same size and total wire length as the Hilbert
> curve and it had a resonant frequency of 154 MHz.
>
>
>
> The trend in the study of fractal wire antennas is to compare the fractal
> antenna with a simple Euclidean antenna and jump to a range of conclusions
> that are, for the most part, unsubstantiated. Comparing the fractal
> antennas with other geometry antennas of the same size, wire length and
wire
> diameter provides clear evidence of this. It should be inherently obvious
> that increasing the wire length in a fixed size antenna lowers its
resonant
> frequency and increases its radiation resistance over some range of low
> frequencies as compared to a straight Euclidean antenna. This behavior is
> simply not unique to antennas with fractal geometry. There is no inherent
> or unique benefit to a fractal geometry antenna compared to an antenna
with
> virtually any other geometry. Fractal wire antennas do not behave in a
> unique manner nor do they behave in a manner significantly different than
> antennas with other geometries. This is especially true when the antennas

> are made to be resonant at the same frequency. It is interesting to note
> however, that in most cases, a self-similar fractal geometry is generally
> the least effective geometry in terms of lowering resonant frequency as a
> function of total wire length.
>
>
>
> If the discussion turns to the concept that all bent wire geometries are
> "fractal" then the discussion gets even more ridiculous - we have assigned
a
> new term to bent wire geometries but have learned nothing new about the
> fundamental behavior of antennas.
>
>
>
> Steve VE9SRB
>
>
>

265. Re: Auto tuner + MA5V = Full HF band TX?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-04 06:15:46 UTC
From: "R.Wilhelm" <nhbiwilh@rrzn-user.uni-hannover.de>
Message-ID: <Pine.GSO.4.44.0207040801450.15136-100000@unics>
Source record: 139556

On Wed, 3 Jul 2002, Alan Beagley wrote:

> Where do I find a design for an omni-directional horizontal dipole?
>
> -=-
> Alan, AB2OS
>
Hi Alan,

the german standard ham antenna 'bible' proposes a 90 degree bent full wave
dipole as an omnidirectional antenna. According to a short NEC run it is
omnidirectional (3 db difference between min and max field) in the
horizontal plane. Disadvantage is that it is slightly stronger straight up
than it is in the horizontal plane. Maybe that Roy's EZNEC demo can model
this.

The matching can possibly done by using a quarter wave section of 450 ohms
twin lead.

73

Ralf

==========
Ralf Wilhelm
DL 6 OAP

==========
Hannover, Germany, where mankind's first motorized flight took place:
Karl Jatho, August 18th 1903, 4 months before the Wright Bros.
(When will history notice this ?)
==========

266. Re: Line Transformers vs LC Tuners.

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-04 10:29:24 UTC
From: Reg Edwards <g4fgq.regp@btinternet.com>
Message-ID: <ag1823$h82$1@knossos.btinternet.com>
Source record: 139557

> Hi Reg, I assume you wish to point out that a tuner has about the same or
less
> loss than a series transmission line transformer. How about my Cigar box
tuner
> with the coil wound on a toilet tissue form, tapped with an alligator
clip. The
> Cap was a 365mmf. cap from an old 5 tube ac/dc superhet. How would it
stack
> up? I actually used one 37 years ago. Worked well. Thanks for the great
> programs.
>
==========
Hi Gary, for the sort of equipment and lines used by us amateurs the break-even point is about 21 MHz. Above that freq the variable-length transmission line transformer has the lower loss. But I would never discourage use of such a simple device even on 160m. What's a dB anyway? CAM's method is clearly the economic option.

From where I sit at this keyboard I can see on the inside window ledge of the shack a 4-by-75pF tuning capacitor. There is a plastic tube which was once a high blood pressure pill container. There are also 6 alligator clips and one crocodile clip. I have dispensed with the cigar box. I gave up smoking 5 years ago. An antenna wire comes through a 3/8" hole in the wooden window frame. I have never used a commercial tuner and I'm proud of it. I've only seen pictures in the magazines.

Regards, Reg, G4FGQ

267. Re: Building the Henf Antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-04 10:37:35 UTC
From: 2w8ji@contesting.com
Message-ID: <3d2422ad.121711864@news.akorn.net>
Source record: 139558

On 03 Jul 2002 02:42:22 GMT, tdonaly@aol.com (Tdonaly) wrote:

>>
>his super-capacitor, and, as an aside, how
>he expects anyone to fall for the ridiculous
>verbiage associated with this antenna.
>
>Tom Donaly KA6RUH

He hands out an IEEE paper that shows measurements of a 1/2 wl tall BC band vertical. When the fed that same antenna as an elevated feed groundplane with eight 1/4 wl radials mounted 1/4 wl above ground, it was only slightly weaker than the ground-mounted counterpart with 120 radials.

The interesting thing is he trys to use that paper to show his GAP vertical is more efficient than other verticals, when the paper shows nothuing of the sort. It simply shows a groundplane antenna with eight radials mounted 1/4 wl above earth is only slightly weaker than a 1/2 wl vertical with 120 radials on the ground.

Big deal.

73 Tom

268. Re: GAP Titan/Titam

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-04 10:49:27 UTC
From: 2w8ji@contesting.com
Message-ID: <3d242576.122425003@news.akorn.net>
Source record: 139559

On 04 Jul 2002 03:53:39 GMT, ardujenski@aol.com (ARDUJENSKI) wrote:

>>
>>Biggles <hamsat@totalise.co.uk> wrote in message
>>news:<o4k3iu87irt02cq5muejrob5bs01rm20tq@4ax.com>...
>>> Hi
>>> Has anyone had any experience of the GAP Titam or Titan antenna.
>>> Also is there a manufacture web site.
>>> Regards
>>> Tony
>>
>>I'd rather have a butternut if I were to buy a store bought "all band"
>>vertical. It has lower loss on the lower bands. And almost certainly
>>lower loss on the high bands as well, although the difference will be
>>less drastic on the higher bands.
>
>I have not been able to get comparison figures ANYWHERE so VERY INTERESTED in
>where you got loss (efficiency) figures especially showing a 1/4wl vertical
>Butternut being more efficient than a vertical dipole (GAP).
>
>Alan KB7MBI

Alan,
I agree with him, and so do many other sources.

First I directly compared a Gap to a Butternut in the early 90's as
part of a contract job for an antenna manufacturer. In my
measurements, there was a significant difference between the gap and a
Butternut on 80 meters, almost 15dB as I recall. There was less
difference on 40, but still significant. My 10-foot mobile antenna
actually beat the Gap on 80 meters by a good margin!

Second, QST reviewed a Gap many years ago and found almost identical
results. It had a few good bands where it compared well to other
antennas, but they were all higher bands. They showed a smaller trap
vertical mounted on the ground beating the Gap on lower bands.

Third, there is a book published with independent measurements of
antennas. It is published by Champion Radio Products (they do not
manufacture antennas, they only install them) and shows FS comparisons
which prove the Gap is very inefficient on lower bands. It ranks at
or near the bottom of group tested, except on higher bands. It is
actually significantly worse than the much smaller MFJ no-radial
vertical on some low bands.

It would be worth getting the Champion Radio book on vertical comparisons before making a decision.

73 Tom

269. Re: BACK TO BASICS - EM waves, E and H fields, in phase orinquadr...

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-04 10:57:51 UTC
From: 2w8ji@contesting.com
Message-ID: <3d24283e.123137165@news.akorn.net>
Source record: 139560

On Wed, 3 Jul 2002 18:01:19 -0400, " J. Harvey"
<JM002.Harvey_TRIMTHIS_@Sympatico.ca> wrote:

>Obviously the current are "related" by any reasonable definition (phase
>locked, key up versus key down, and all that common sense obviousness). One
>point to Cecil.

That's silly.

In his one particular example the sources come from one source, but
they don't have to do that! As a matter of fact, in real life, there
are probably multiple sources driving the system if you want to pick
nits.

What I am saying is one has nothing to do with the other as an overall
statement or concept of how the system works. While they CAN be meshed
at some point in the system, they do not have to be. And no matter
what the situation, we HAVE TO consider them separately and
independently. If we lump common mode characteristics with
differential mode, we will reach wrong conclusions about system
behavior unless through sheer dumb luck they happen to behave
similarly.

Cecil and Harrison gave some of the best examples of problems it
causes when you lump them together. Cecil did that, and argued that
moving a choke balun from the output to input of a floating tuner
improved the system balance or balun effectiveness, Harrison agreed.

I'm amazed they cling to this idea, after it got them in trouble in a
VERY simple easy-to-understand system.

73 Tom

270. Re: Auto tuner + MA5V = Full HF band TX?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-04 11:30:40 UTC
From: 'Doc <w5lz@icok.net>
Message-ID: <3D2431D4.885459C8@icok.net>
Source record: 139561

Alan,
How about two dipoles, 90 degrees from each other,
and phased. Or, a regular dipole only a 1/4 wave high.
Or, a 'real' inverted 'V' dipole. All kinds of ideas.
'Doc

271. Re: 6 meter dipole off 80m problem

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-04 11:33:52 UTC
From: 'Doc <w5lz@icok.net>
Message-ID: <3D24329A.F66F95F7@icok.net>
Source record: 139562

Rick,
You've answered your own question. The 80 meter
antenna will lower the input impedance of the 6 meter
antenna (14th harmonic). The 6 meter antenna shouldn't
affect the 80 meter much, if any.
'Doc

272. Re: BACK TO BASICS - EM waves, E and H fields, in phase orinquadr...

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-04 11:39:24 UTC
From: " J. Harvey" <JM002.Harvey_TRIMTHIS_@Sympatico.ca>
Message-ID: <ytWU8.5554$aJ4.1417089@news20.bellglobal.com>
Source record: 139564

" J. Harvey"
> Obviously the current are "related" by any reasonable
> definition (phase locked, key up versus key down, and
> all that common sense obviousness).

"Tom W8JI"
> That's silly. In his one particular example the sources
> come from one source, but they don't have to do that!
> As a matter of fact, in real life, there are probably
> multiple sources driving the system if you want to
> pick nits. <snip>

I see your point. It is a very common mental trap to get hung-up on only the transmit mode (I'm feeling guilty). What we need here is a single clear 'counter-example'. Allow me to see if I can create one that might be agreeable to you and everyone.

Example: Imperfect dipole in receive mode with some common mode currents. The normal differential mode (dipole) would perhaps slightly prefer horizontally polarized signals, while the common mode (coaxial cable shield) might prefer vertically polarized signals. Obviously they probably even resonate at different frequencies.

Given this situation (receive mode), the currents could be entirely unrelated (one being primarily a ham signal, the other being primarily the local 'Conntry & Western' AM broadcast station).

Your point seems to be perfectly valid. Thanks.

273. EH antenna Feed System

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-04 11:58:28 UTC
From: 2w8ji@contesting.com
Message-ID: <3d243471.126259905@news.akorn.net>
Source record: 139565

After all the distractions, I'd like to get some other opinions about the EH feed system.

I see some very serious flaws with the theory and the feed system.

First, they assume a "T" network shifts phase 90-degrees but have no way to measure it. They simply tune for maximum FS, and hope SWR is low.

Second, they assume that phase shift is between TWO terminals and NO third terminal is involved. They use a high-pass L driving an inductor in series with an element as the +45 shift side, and a lowpass L driving an inductor as the -45 side.

Since the networks float and drive a two-terminal load, the phase shift at the load has to be 180 degrees, if we consider direction of flow into and out of those two terminals. So the current in the elements, viewed from a distance looking back at the elements, is in phase in each half...just like a dipole.

Obviously the inventors call themselves liars, because if the system DID only radiate from the antenna, it is impossible to have the 90 degree shift they say the syetem requires. It is only possible to have the 90-degree shift while the coax is radiating more signal than the antenna, assuming the coax feeding the antenna is at least as long as the antenna is long!!!!!

With a two foot antenna, a four foot feedline would radiate more than the antenna no matter how you treated the feedline IF the phase shift was 90 degrees as they claim it needs. If the feedline did not radiate that amount, you could not get the phasse shift they say the system needs.

With something so simple and easy to see, why are people arguing the EM theory?? The inventors are calling themselves liars just by the basic circuit theory they use.

73 Tom

274. Re: Auto tuner + MA5V = Full HF band TX?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-04 12:12:04 UTC
From: Alan Beagley <abeagley@optonline.net>
Message-ID: <3D243B94.7010707@optonline.net>
Source record: 139567

My original question was tongue-in-cheek, based on the assumption that people buy trapped multi-band verticals of less-than-stellar efficiency because they are (a) multiband, and (b) omnidirectional.

Your answer, and others', does at least answer the "omnidirectional" aspect. Yet it seems to me that even a single such bent dipole will be far more difficult to erect in a small space than a vertical. And the thought of putting up a multi-band version with its necessary supports is almost overwhelming.

In my present situation, with a 10m x 10m yard, a multiband vertical seems far more practical.

73 de Alan, AB2OS

R.Wilhelm wrote:
> On Wed, 3 Jul 2002, Alan Beagley wrote:
>
>
>>Where do I find a design for an omni-directional horizontal dipole?
>>
>>-=-
>>Alan, AB2OS
>>
>
> Hi Alan,
>
> the german standard ham antenna 'bible' proposes a 90 degree bent full
> wave
> dipole as an omnidirectional antenna. According to a short NEC run it is
> omnidirectional (3 db difference between min and max field) in the
> horizontal plane. Disadvantage is that it is slightly stronger straight up
> than it is in the horizontal plane. Maybe that Roy's EZNEC demo can model
> this.
>
> The matching can possibly done by using a quarter wave section of 450 ohms
> twin lead.
>

275. Re: BACK TO BASICS - EM waves, E and H fields, in phase orinquadr...

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-04 12:18:37 UTC
From: CAM <w5dxp@hotmail.com>
Message-ID: <3D243D1D.4A062B80@hotmail.com>
Source record: 139568

```
" J. Harvey" wrote:
>
> " J. Harvey" wrote:
> > Have you guys yet agreed on what you're discussing ?
> > Currents or impedances ?
>
> "CAM" [isn't helping... ...sigh.]
> > We are discussing conditions.
>
> What's a "condition" ? When did you make this new phrase up ? Maybe about
> two minutes after my posting where I reiterated my 9-month old opinion
> (...what we have here is a failure to communcate...) ?

Nope, I have been saying that from the beginning. "Conditions" covers
everything about common mode Vs differential mode.

> Is a "condition" a current, like you've been measuring ? Or is a
> "condition" an impedance, onto which Tom has been holding steadfast ?

Both, it covers everything.

> It is blatently obvious that the currents are related.

Hey, that's my argument and is what Tom is arguing against.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----
```

276. Re: BACK TO BASICS - EM waves, E and H fields, in phase or inquadr...

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-04 12:21:37 UTC
From: CAM <w5dxp@hotmail.com>
Message-ID: <3D243DD1.4FB39B84@hotmail.com>
Source record: 139566

Richard Clark wrote:
>
> CAM <w5dxp@hotmail.com> wrote:
> >What astronomers note and measure about our solar system is not a general
> >condition defining the situation with all solar systems. Every solar
> >system is unique. Every antenna is unique.
>
> Every? Where is the iconoclast of absolutisms? The inclusion of the
> solar system makes as much sense as the White House middle east
> policy.

Tom introduced the analogy of solar systems, Richard. I merely responded.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

277. Re: BACK TO BASICS - EM waves, E and H fields, in phase or inquadr...

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-04 12:27:05 UTC
From: CAM <w5dxp@hotmail.com>
Message-ID: <3D243F19.5F261980@hotmail.com>
Source record: 139419

Tom W8JI wrote:
>
> On Wed, 03 Jul 2002 16:18:32 GMT, Richard Clark <kb7qhc@attbi.com>
> wrote:
>
> >NOTHING is always. Aside from the metaphysics of this question, it is
> >an ordinary occurrence. Aside from the ordinary occurrence, Common
> >Mode is not strictly a product of the Differential Circuit but is
> >heavily influenced by it (they both share the same circuit paths and
> >correlation is inescapable). Strictly speaking, Common Mode artifacts
> *>can exist in the total absence of Differential Mode excitation (the
> >opposite situation also exists).
>
> That's right, they are totally different things. My point exactly, and
> something we should never forget!

Then why can I read Morse code when I hook my common mode current
detector up to my code practice oscillator?

> The thing I was trying to point out, and the thing that trips people
> up when they are analyzing systems, is ASSUMING they are related and
> that a low differential impedance means a low easily cured common mode
> impedance.

The transmitter energy starts out 100% differential. Some of the differential
energy is converted into common mode energy. How you can deny that is
beyond belief.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
------== Over 80,000 Newsgroups - 16 Different Servers! =-----

278. Re: BACK TO BASICS - EM waves, E and H fields, in phase or inquadr...

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-04 12:28:57 UTC
From: CAM <w5dxp@hotmail.com>
Message-ID: <3D243F89.A09F5AF4@hotmail.com>
Source record: 139420

Tdonaly wrote:
> Besides, celestial mechanics is a mature
> science, as is electromagnetics. If common mode impedance (and I mean
> only impedance) and differential mode
> impedance are related, somehow, Cecil,
> with his fine engineering education should
> be able to define and explain the relationship much more clearly than he has
> heretofore.

What can be more clear than hooking up a code practice oscillator to the
common mode current detector and being able to read the Morse code?
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
------== Over 80,000 Newsgroups - 16 Different Servers! =-----

279. Re: 80 m dipole question??

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-04 12:32:54 UTC
From: CAM <w5dxp@hotmail.com>
Message-ID: <3D244076.2CB30807@hotmail.com>
Source record: 139421

Dick Carroll wrote:
> > Dick, is a 1/2WL dipole with a center insulator which is not shorted
> > and no transmission line, a resonant antenna?
>
> Yep.

At what frequency, Dick?
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

280. Re: GAP Titan/Titam

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-04 12:47:16 UTC
From: ardujenski@aol.com
Message-ID: <20020704084716.04299.00008554@mb-bh.aol.com>
Source record: 139422

Tom and Mike
Thanks for the feedback. I want to say I am not defending the GAP but rather not finding good comparable data. Basically, only guessing at what the lobe patterns are for the various antennas well it just makes it difficult to make good comparisons.

Mike made a good point that for the money you can homebrew as good or better antenna than any of the commercial ones. I know my 33 by 33 inverted-L does a good job. Not as good as some but better than others.

This gets back to my earlier note about all antennas are a COMPROMISE of some sort but knowing what that compromise is is difficult especially with some of the commercial ones.

Tom, I have heard of the report you mentioned but had fallen into the category of taking some comments at face value that the report was flawed and the results not of any real value. I need to get a copy to see for myself.

Thanks for taking the time to share some good information

Alan KB7MBI

281. Re: CAM?? Some Questions

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-04 12:48:18 UTC
From: CAM <w5dxp@hotmail.com>
Message-ID: <3D244412.C4334174@hotmail.com>
Source record: 139423

Janice and Ed wrote:
> Some questions, if you please:
> 1. Is the antenna you're talking about here the 130 foot, ladder-line fed
> dipole that you mentioned in an earlier thread?

Yes, I have it installed at my QTH.

> 2. I assume the 3:1 SWR bandwidth refers to a constant setting of the
> tuner. Is that correct?

No tuner. I don't use a tuner. It refers to a constant setting of ladder-line length at 88 ft.

> 3. Are these bandwidths centered around the 3.993 and 7.216 frequencies
> mentioned in the earlier thread?

Nope, that's just the frequencies where 88 ft of ladder-line causes 75m and 40m ham band resonances to overlap.

> 4. Why is the 80m resonance set so high (half the BW out-of-band)?
> Is it because the 80m and 40m resonances are interactive, and you
> like the 40m resonance where it is?

By varying the length of the ladder-line, I can set the resonance to any HF ham frequency. 88 ft of ladder-line is interesting because that length causes resonance on both 80m and 40m within the ham bands. For someone who didn't want to vary the length of the ladder-line, 88 ft would be a logical choice for feedline length on 80m and 40m.

The minimum length of my ladder-line is 86 ft and occurs when I set my ladder-line length selector to zero ft. At that length, resonance on 80m is a little above 4 MHz and resonance on 40m is a little above 7.3 MHz so when I add length to my ladder-line, I can cover the entire 80m and 40m bands. With 86 ft plus 23 ft, I can cover down to 3.6 MHz on 80m. With 86 ft plus 3 ft, I can cover down to 7.0 MHz on 40m.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
------== Over 80,000 Newsgroups - 16 Different Servers! =-----

282. Re: Auto tuner + MA5V = Full HF band TX?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-04 13:09:36 UTC
From: k1bqt@aol.com
Message-ID: <20020704090936.16422.00002812@mb-fz.aol.com>
Source record: 139424

>That would be two dipoles crossed at the centers in an X. ....You give up only three dB to pick up 20 dB or more in the dipole's normal null areas.<

Lose three and gain six over the vertical through ground reinforcement. Not a bad solution!

Rick

283. Re: Ham Band Use for Direct TV Dish and LNA?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-04 13:15:10 UTC
From: Phil Bradway <kb2hq@nycap.rr.com>
Message-ID: <yTXU8.90132$uk2.35198149@twister.nyroc.rr.com>
Source record: 139425

For information on feeding off-set feed dishes, check out
http://www.w1ghz.org/ (click on his antenna book on line). Paul has had
great success on 10G and a friend of mine has one set up on 5G.

Phil

"Dick Carroll" <dixie@townsqr.com> wrote in message
news:ag09nrrcs1@208.206.142.68...
>
>
> Dick Carroll wrote:
> >
> > "Christopher A. Bowne" wrote:
> > >
> > > A discarded (for reasons unknown) DirecTV dish and LNA followed me
home from
> > > the freebie shed at our local town dum..err. solid waste recycling
facility.
> > > Other than mounting it on the house to fool the neighbors into
thinking we
> > > have satellite TV, does it have any practical UHF ham band
application?
> > >
> >
> > It'd make a good "dummy'. Mount it high and run RG58 to it-but don't
> > hook the dish end of the coax to anything, just let it float. Load the
> > coax shield as a random wire antenna vertically polarized. You won't
> > even have to worry about antenna insulators. Lay a 30-40 foot wire on
> > the ground in a flower bed etc. for the counterpoise.
> >
> > I use a "spare" dish mounted on a discarded floor model electric fan
> > stand (which breaks down for compact storage) for portable satellite TV
> > when we travel.
> >
> > Dick
>
>
> With a little imagination you can invent your own name for it.
> Something like cross attitude field or XZY H.....

284. Re: BACK TO BASICS - EM waves, E and H fields, in phase orinquadr...

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-04 13:22:18 UTC
From: CAM <w5dxp@hotmail.com>
Message-ID: <3D244C0A.A09B4654@hotmail.com>
Source record: 139426

Tom W8JI wrote:
>
> On Wed, 3 Jul 2002 18:01:19 -0400, " J. Harvey"
> <JM002.Harvey_TRIMTHIS_@Sympatico.ca> wrote:
>
> >Obviously the current are "related" by any reasonable definition (phase
> >locked, key up versus key down, and all that common sense obviousness). One
> >point to Cecil.
>
> That's silly.

It is obvious to everyone who lives in the real world, Tom.

> In his one particular example the sources come from one source, but
> they don't have to do that!

Are you saying that typical ham radio installations have more than one transmitter active on the same frequency at the same time? Get real, Tom, and stop blowing smoke. Your argument is getting more bizarre all the time. We are discussing single transmitter systems where virtually all the energy originates as differential mode energy.

Please answer the following questions, true or false, Tom, and we can settle this entire argument.

1. Common mode currents and differential mode currents are "NOT related". _______

2. Common mode currents and differential mode currents are related. ________

One is true and the other is false, Tom. Which is which? If you refuse to answer, we will know that you are just throwing up a smoke screen hoping the argument will go away and people will forget that you were ever so blatantly wrong as to assert that two energies that share a common power source are "NOT related" and that typical ham radio systems have more than one transmitter operating on the same frequency at the same time.

If common mode currents are "NOT related" to differential mode currents, why can I hook up a code practice oscillator to my common mode current meter and copy the Morse code?

> Cecil and Harrison gave some of the best examples of problems it
> causes when you lump them together. Cecil did that, and argued that
> moving a choke balun from the output to input of a floating tuner
> improved the system balance or balun effectiveness, Harrison agreed.

The present argument has absolutely nothing to do with a tuner or balun, Tom. And moving the balun from the output of my tuner to the input

of my tuner actually *did* reduce the measured common mode current by 27%.
Your model assumes "zero resistance" when there is no such thing. Your
model assumes "zero wavelength" when there is no such thing. Your model
assumes "no tuner leaks to ground" when there is no such thing. Your
model simply does not match reality, Tom.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

285. Re: BACK TO BASICS - EM waves, E and H fields, in phase orinquadr...

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-04 13:25:29 UTC
From: CAM <w5dxp@hotmail.com>
Message-ID: <3D244CC9.91B0E8A@hotmail.com>
Source record: 139427

```
" J. Harvey" wrote:
>
> " J. Harvey"
> > Obviously the current are "related" by any reasonable
> > definition (phase locked, key up versus key down, and
> > all that common sense obviousness).
>
> "Tom W8JI"
> > That's silly. In his one particular example the sources
> > come from one source, but they don't have to do that!
> > As a matter of fact, in real life, there are probably
> > multiple sources driving the system if you want to
> > pick nits. <snip>
>
> I see your point. It is a very common mental trap to get hung-up on only
> the transmit mode (I'm feeling guilty).

You are going to buy into Tom's smoke screen? The context has obviously
always been a single transmitter transmitting into a single antenna system
and considering all other signal sources to be negligible. Tom is just trying
to mealy mouth his way out of the corner into which he has painted himself.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----
```

286. Re: GAMMA MATCH, build your own, Reduce SWR to 1:1

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-04 13:32:39 UTC
From: Bob Miller <bamiller@texas.net>
Message-ID: <2UwkPVar0UGFk6klOqGt8mGeMzQo@4ax.com>
Source record: 139428

"Reg Edwards" <g4fgq.regp@btinternet.com> wrote:

>Chris Tiller wrote -
>
>> Why buy expensive tuners to achieve antenna match. Build a GAMMA
>> MATCH. Complete instructions $7.00.
>
>==========
>
>Dear Chris,
>

>
>Blaze your way into the 21st Century with the GAMMA MATCH !
>
>By the way, have you considered following up with the Delta Match ?
>
>Regards, Reg, G4FGQ. ;o)

Reg, you're totally missing the point. If you go to his web site, he can also
line you up with a month-long vacation in sunny Florida for only $832 US.

Or, if you really need the gamma match, well, he needs a stamped self-addressed
envelope, and three weeks for delivery :-O

Bob
k5qwg
>----
>==========
>Free Radio Modelling Software
>Go to http://www.g4fgq.com
>==========
>
>
>

287. Re: BACK TO BASICS - EM waves, E and H fields, in phase orinquadr...

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-04 13:52:26 UTC
From: richardharrison@webtv.net
Message-ID: <7720-3D24531A-132@storefull-2394.public.lawson.webtv.net>
Source record: 139429

Tom, W8JI wrote:
"In his one example the (signal) sources come from one source, but they don`t have to do that!"

True, and useful I thought to illustrate how balance can prevent coupling between modes. But this argument has been about one transmitter, and only one transmitter, supplying energy on more than one path.

Tom also wrote:
"What I am sayimg is one (mode) has nothing to do with the other as an overall statement or concept of how the system works."

When the system is unbalanced, common-mode results. Imbalance produces it. Common-mode isn`t cut-loose and sent into the world on its own. It is part of a continuous-flow process. Cease the differential-mode energy, and the common-mode energy ceases too.

Tom also wrote:
"While they CAN be meshed at some point in the system, they don`t have to be."

This discussion has not concerned unmeshed, state-converted, stored and forwarded, or any such decoupling. "Unmeshed" is simply a diversionary tactic.

Tom also wrote: "---we Have To consider them separately and independently."

Once a system is set, we can determine the magnitude and phase at any point in the system. If we don`t change the system or the frequency, the magnitude of one mode is the same percentage of the other.

Tom also wrote:
"---and argued that moving a choke balun from the output to the input of a floating tuner improved the system balance, or system effectiveness."

Context is everything here.
Core saturation is a function of volts across a coil.
Current takes a fork in its path according to relative ease in its paths.
Impedance of a conductor depends on distance in wavelengths from a discontinuity.

Tom claimed victory for his claim that it makes no difference where the choke goes. That is settled in the context chosen then.

Tom still claims that killing two birds with one stone doesn`t prove their deaths were related.

Best regards, Richard Harrison, KB5WZI

288. Re: GAMMA MATCH, build your own, Reduce SWR to 1:1

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-04 14:17:00 UTC
From: CAM <w5dxp@hotmail.com>
Message-ID: <3D2458DC.2E044742@hotmail.com>
Source record: 139430

Bob Miller wrote:
> Or, if you really need the gamma match, well, he needs a stamped self-addressed
> envelope, and three weeks for delivery :-O

Of course, the delivery time equals the development time.
That's not a new idea. :-)
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
------== Over 80,000 Newsgroups - 16 Different Servers! =-----

289. Re: GAP Titan/Titam

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-04 14:24:43 UTC
From: Dan Richardson <k6mhe@mendolink.com>
Message-ID: <lgm8iuc2e3rn0oefqsqb38pd5rqol61flk@4ax.com>
Source record: 139432

On 04 Jul 2002 12:47:16 GMT, ardujenski@aol.com (ARDUJENSKI) wrote:

> I have heard of the report you mentioned but had fallen into the category
>of taking some comments at face value that the report was flawed and the
>results not of any real value. I need to get a copy to see for myself.

Have read the report, it is very well documented and explain -
including any short comings. It is quite thorough and apears not to be
biased.

I do suggest you obtain a copy.

73
Danny, K6MHE

290. Re: BACK TO BASICS - EM waves, E and H fields, in phase or inquadr...

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-04 14:25:50 UTC
From: richardharrison@webtv.net
Message-ID: <24468-3D245AEE-221@storefull-2397.public.lawson.webtv.net>
Source record: 139431

Tdonaly wrote:
"Besides, celestial mechanics is a mature science as is
electromagnetics."

We know all there is to know?

Sherlock Holmes and Watson are camping.
Holmes asks Watson what is to be deduced from the sight of all those
luminous bodies overhead?

Watson replies, "The universe is strange and enormous indeed!"

No! you dunce, says Holmes. It means our tent has been taken!

Best regards, Richard Harrison, KB5WZI

291. Re: Want CQ mag article.

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-04 14:38:49 UTC
From: Eskay <Nospamve3jua@rac.ca>
Message-ID: <3D245DF9.9F65FABE@rac.ca>
Source record: 139563

Did anyone get the article? I don't know if anything is wrong with my
set-up here but I have not received it...Sieb VE3JUA..sieb@uraxis.com

Eskay wrote:

> Hi..In the July issue of CQ mag there is an article by VE3ERP on a
> two band shortened wire dipole..Could someone please scan this and send
> it to me?
> Thanks a bunch de Sieb,,,ve3jua@rac.ca

292. Re: BACK TO BASICS - EM waves, E and H fields, in phase or inquadr...

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-04 16:27:05 UTC
From: UnTale <io@io.it>
Message-ID: <tH_U8.107524$j65.2591281@twister1.libero.it>
Source record: 139433

>.............
> One question, I may have missed seeing it, but did you apply a W2DU
> style balun to the feed point of your EH? Did you examine the
> feedline for current?
>.............
> 73's
> Richard Clark, KB7QHC

Hi Richard,
I've used what I've found on my shack:
at first two big toroids (back the TX) with no change in EH performance,
then a YOKE core (as a friend calls it) directly on the feed point
with a lot of coax turns...
that's all!
--

73 de iz7ath, Talino

Homebrew, RF projects and digital tecniques on
http://www.qsl.net/iz7ath
IZ7ATH Talino +39 338 5029196

293. Re: Want CQ mag article.

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-04 17:06:29 UTC
From: Oldtime Radio <nospam@aol.com>
Message-ID: <f109iu4b2sr5oufn0195plhmnbaah386c5@4ax.com>
Source record: 139434

I sent the article to this address (ve3jua@rac.ca) and it did not
bounce. I don't know why you did not get it.
otr

On Thu, 04 Jul 2002 07:38:49 -0700, Eskay <Nospamve3jua@rac.ca> wrote:

>Did anyone get the article? I don't know if anything is wrong with my
>set-up here but I have not received it...Sieb VE3JUA..sieb@uraxis.com
>
>Eskay wrote:

294. CAM??

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-04 17:24:02 UTC
From: StarGazer <pti@capnet.com>
Message-ID: <3D2484B2.6CF5A0DC@capnet.com>
Source record: 139439

What are you using to "Select Ladder Line Length" ?

295. Re: BACK TO BASICS - EM waves, E and H fields, in phase orinquadr...

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-04 17:25:38 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <pfu8ius6mn7qdu82u58ave6993avdkd2mt@4ax.com>
Source record: 139436

On Thu, 4 Jul 2002 07:39:24 -0400, " J. Harvey"
<JM002.Harvey_TRIMTHIS_@Sympatico.ca> wrote:

>
>Example: Imperfect dipole in receive mode with some common mode currents.
>The normal differential mode (dipole) would perhaps slightly prefer
>horizontally polarized signals, while the common mode (coaxial cable shield)
>might prefer vertically polarized signals. Obviously they probably even
>resonate at different frequencies.
>
>Given this situation (receive mode), the currents could be entirely
>unrelated (one being primarily a ham signal, the other being primarily the
>local 'Conntry & Western' AM broadcast station).
>

Hi Jeff,

Your example and analysis are good as far as they go. However, there
is nothing to preclude the same Common Mode current flowing during
transmit. The difference would be in the transmitter exciting the
Common Mode far above and beyond those original Common Mode currents
derived from other sources.

Your description of the receive state is equally applicable to the
transmit state (and versa vice) because it is the topology (the
imbalance) which gives rise to the effects noted, not the impedances
(except, insofar as to insure magnitudes that are measurable). This
is found in the answer to the query for a simple equation showing
relationships:
R1 / R2 = R3 / R4
which, sad to note, goes without recognition. The original query
appears to have been a rhetorical device only.

However, Common Mode can remain a considerable problem even if the
topology is apparently benign. Through the combination of impedances
and a path to ground (balanced albeit), electronic equipment
potentials can be raised to the point of interference or catastrophic
failure. This is a specification that goes by CMRR (Common Mode
Rejection Ratio) for the interference, compliance for outputs, and
input potentials exceeding supply rails (a very common failure mode
that takes most by surprise when they short-cut their ground
coverage).

What this says is that even in balanced configurations, considerable
Common Mode current can be injected into the system (possibly
invisible to Cecil's method of detection, it being applicable to a

small subset of the range of possibilities). This fact is lost on most who, as I have complained, are all too ignorant of the complete circuit description and where the reference, Common, is located.

Richard Harrison provided a compelling example found in the Hybrid telephone circuit where the control and supervisory path is shared by the subscriber, and yet the subscriber is wholly immune from that traffic. The supervisor activity takes place entirely in the Common Mode domain and the traffic passes through the Differential Mode connections without the subscriber's notice. Here the Common Mode current is nearly on par with subscriber's Differential Mode current (a ratio that far exceeds even the characteristics described in these threads). A threat to the subscriber comes when that same supervisory circuit is struck by lightning (or fallen power line, or...) and raises the Common Mode potential seen at the subscriber's telephone set. Sure, by the nature of balanced Common Mode, the anal argument would offer you infinite protection, reality has born out evidence to the contrary on one or more occasions.

The restriction of discussion to limited experience yields a dangerous mind-set (the presumed isolation from Common events). People are killed due to their ignorance of where the Common of Common Mode resides.

73's
Richard Clark, KB7QHC

296. Re: EH antenna Feed System

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-04 17:49:54 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <au19iu8q110ghjdm7l6i6h9qt91nq5ufhf@4ax.com>
Source record: 139437

On Thu, 04 Jul 2002 11:58:28 GMT, 2w8ji@contesting.com (Tom W8JI)
wrote:

>
>With something so simple and easy to see, why are people arguing the
>EM theory?? The inventors are calling themselves liars just by the
>basic circuit theory they use.
>
>73 Tom

Hi Tom,

Why? I wouldn't count on them understanding their own theories, much less established science. The EH design (as well as a multitude of others) contains no more than a handful of components, and yet they offer only a special few ("belief circles" again) can cope with the complexity to achieve (unverified) success.

This techno-anderthal crew, when faced with the comparative engineering miracles of their own transmitters undoubtedly believe only aliens who visited us when Atlantis was great could have the technology to build them. (Is the EH technology derived from the infamous alien anal probe? This and other mysteries will be explored following our commercial break for Stefano's Area 51 special matching device.)

73's
Richard Clark, KB7QHC

297. Re: BACK TO BASICS - EM waves, E and H fields, in phase or inquadr...

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-04 17:53:06 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <ms29iukrrlamktiev4njvhr1vm5tej5a5q@4ax.com>
Source record: 139438

On Thu, 04 Jul 2002 16:27:05 GMT, "UnTale" <io@io.it> wrote:

>>.............
>> One question, I may have missed seeing it, but did you apply a W2DU
>> style balun to the feed point of your EH? Did you examine the
>> feedline for current?
>>.............
>> 73's
>> Richard Clark, KB7QHC
>
>
>
>Hi Richard,
>I've used what I've found on my shack:
>at first two big toroids (back the TX) with no change in EH performance,
>then a YOKE core (as a friend calls it) directly on the feed point
>with a lot of coax turns...
>that's all!
>--
>
>73 de iz7ath, Talino
>
>Homebrew, RF projects and digital tecniques on
>http://www.qsl.net/iz7ath
>IZ7ATH Talino +39 338 5029196
>
>

Hi Talino,

Thanks for your response. Tom raises the issue of just how effective
your chokes may (and possibly may not) have been. You might want to
consider his discussion in other threads.

73's
Richard Clark, KB7QHC

298. Re: GAMMA MATCH, build your own, Reduce SWR to 1:1

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-04 18:31:57 UTC
From: 'Doc <w5lz@icok.net>
Message-ID: <3D249498.675FD4B1@icok.net>
Source record: 139440

Wait a minute! Is a standard #10 S.A.S.E. big
enough, or should I make it an 8 x 10?
'Doc

299. Re: EH antenna Feed System

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-04 18:31:57 UTC
From: STARPOINT <starpoint@arnoelettronica.com>
Message-ID: <ag24u2bvb1@lacerta.tiscalinet.it>
Source record: 139441

:-)))

Marco IZ5EEP

"Richard Clark" <kb7qhc@attbi.com> ha scritto nel messaggio
news:au19iu8q110ghjdm7l6i6h9qt91nq5ufhf@4ax.com...
> On Thu, 04 Jul 2002 11:58:28 GMT, 2w8ji@contesting.com (Tom W8JI)
> wrote:
>
> >
> >With something so simple and easy to see, why are people arguing the
> >EM theory?? The inventors are calling themselves liars just by the
> >basic circuit theory they use.
> >
> >73 Tom
>
> Hi Tom,
>
> Why? I wouldn't count on them understanding their own theories, much
> less established science. The EH design (as well as a multitude of
> others) contains no more than a handful of components, and yet they
> offer only a special few ("belief circles" again) can cope with the
> complexity to achieve (unverified) success.
>
> This techno-anderthal crew, when faced with the comparative
> engineering miracles of their own transmitters undoubtedly believe
> only aliens who visited us when Atlantis was great could have the
> technology to build them. (Is the EH technology derived from the
> infamous alien anal probe? This and other mysteries will be explored
> following our commercial break for Stefano's Area 51 special matching
> device.)
>
> 73's
> Richard Clark, KB7QHC

300. Re: CAM??

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-04 18:43:46 UTC
From: CAM <w5dxp@hotmail.com>
Message-ID: <3D249762.81A88831@hotmail.com>
Source record: 139442

StarGazer wrote:
> What are you using to "Select Ladder Line Length" ?

Presently knife switches, previously relays. It's all explained on
my web page under, "No Tuner All-HF-Band Antenna".
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

301. Re: BACK TO BASICS - EM waves, E and H fields, in phase orinquadr...

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-04 18:48:29 UTC
From: CAM <w5dxp@hotmail.com>
Message-ID: <3D24987D.825BF4F8@hotmail.com>
Source record: 139445

Richard Clark wrote:
> The restriction of discussion to limited experience yields a dangerous
> mind-set.

Richard, the context was (and is) a single ham transmitter feeding an antenna system mounted above earth ground. Why is it dangerous to discuss something when the context is fully known? Seems to me the only danger is that Tom might be proven not to be omniscient.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

302. Re: GAP Titan/Titam

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-04 18:48:37 UTC
From: 2w8ji@contesting.com
Message-ID: <3d249631.151287703@news.akorn.net>
Source record: 139443

On 04 Jul 2002 12:47:16 GMT, ardujenski@aol.com (ARDUJENSKI) wrote:

>
>Tom, I have heard of the report you mentioned but had fallen into the category
>of taking some comments at face value that the report was flawed and the
>results not of any real value. I need to get a copy to see for myself.
>

I didn't see anything that was questionable in the vertical measurements, other than we have to make some allowances for instument errors. They tend to ignore the fact instruments and methods are less than perfect.

When someone directly compares multiple verticals on groundwave and one is 10 or 15dB weaker than a few others, you can bet the thing is a dog. This is especially true when sky wave data taken over time in two other reviews or tests almost perfectly agrees with the groundwave data.

If someone told you the Vertical Comparison report is flawed, I'd sure like to read why.

Now I do question the tribander data they took, because they measured tribanders over a 1 mile groundwave path. It is never a good idea to measure horizonatl antennas over a long groundwave path, especially when the antennas are directional and the path is cluttered with things that can scatter the signal.

Omni-verticals are an entirely different matter.

There is no technical reason the Gap should be a good antenna on lower bands, and many reasons why it should not. When you add that in to the measurements, they make sense. Nothing raises a red flag.

73 Tom

303. High Dipole vs. Low Beam

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-04 18:50:40 UTC
From: Greg Knapp <gknapp@freshrain.org>
Message-ID: <4O0V8.22081$A%3.262783@ord-read.news.verio.net>
Source record: 139444

Which is better for pure gain (signal delivered at the receiving site-which could be domestic or DX-in other words, for general use): an A3 up about 30 feet or multi-band dipoles (to be used on 10, 15, and 20) up at about 60 feet (at the center)?

I figure the added height on the dipoles over the beam is good for at least an S-unit or more, which would more than compensate for gain of the beam, due to the angle of takeoff--am I wrong on this? The dipoles (which are now at only 30 feet at the center and much lower at the ends, currently work 160 through 10 including WARC bands) would be lifted to 60 feet on a large push-up mast. If I put the beam up, I'd leave the dipoles where they are.

Raising the dipoles to 60 feet would a lot less hassle (unbelievable neighbors and CC&RS--yet they allow TV antennas--so may put a TV antenna on top and disguise the dipoles as guy wires) and money than getting the beam up to 30. I am not concerned with FB or directivity, just the delivered signal on 10, 15, and 20. I do not currently have the option of putting the beam any higher.

Which would you put up and why?

Thanks for your thoughts,

73,
Greg, N6GK

304. Re: BACK TO BASICS - EM waves, E and H fields, in phase orinquadr...

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-04 18:58:06 UTC
From: 2w8ji@contesting.com
Message-ID: <3d249898.151902803@news.akorn.net>
Source record: 139446

On Thu, 4 Jul 2002 07:39:24 -0400, " J. Harvey"
<JM002.Harvey_TRIMTHIS_@Sympatico.ca> wrote:

>I see your point. It is a very common mental trap to get hung-up on only
>the transmit mode (I'm feeling guilty). What we need here is a single clear
>'counter-example'. Allow me to see if I can create one that might be
>agreeable to you and everyone.

There are dozens of examples. One of the best is the fact that
commercial landline services can simultaneously send different signal
in the same frequency range through the same system, one via common
mode and one via differential, and not have interference.

>Example: Imperfect dipole in receive mode with some common mode currents.
>The normal differential mode (dipole) would perhaps slightly prefer
>horizontally polarized signals, while the common mode (coaxial cable shield)
>might prefer vertically polarized signals. Obviously they probably even
>resonate at different frequencies.

Of course they can. The two modes are unrelated to each other.

>Given this situation (receive mode), the currents could be entirely
>unrelated (one being primarily a ham signal, the other being primarily the
>local 'Conntry & Western' AM broadcast station).

Sure. There is nothing that says the behaviour of one mode influences
the other in any way.

The impedances can change at a different rate along the line, and they
almost always do. The currents can change phase relationship along the
line, even if from the same source and usually do. It's like comparing
two different systems that might or might not be driven with the same
generator, and because in one case we find a cicumstance where
something is related we then go off into na na land saying the two
independent modes are "related".

They aren't related, that is why they can be different and usually
are.

73 Tom

305. Re: Want copyrighted mag article.

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-04 19:01:58 UTC
From: "W.G Ewald" <wgewald@att.net>
Message-ID: <q179ius0pa8bot67v14g19q4365ei82uu8@4ax.com>
Source record: 139447

On Thu, 04 Jul 2002 07:38:49 -0700, Eskay <Nospamve3jua@rac.ca> wrote:

>Did anyone get the article? I don't know if anything is wrong with my
>set-up here but I have not received it...Sieb VE3JUA..sieb@uraxis.com
>
>Eskay wrote:
>
>> Hi..In the July issue of CQ mag there is an article by VE3ERP on a
>> two band shortened wire dipole..Could someone please scan this and send
>> it to me?
>> Thanks a bunch de Sieb,,,ve3jua@rac.ca

I've heard that the NSA monitors email for copyrighted material, and
automatically deletes it.

306. Re: BACK TO BASICS - EM waves, E and H fields, in phase orinquadr...

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-04 19:11:14 UTC
From: CAM <w5dxp@hotmail.com>
Message-ID: <3D249DD2.258A8660@hotmail.com>
Source record: 139449

Tom W8JI wrote:
> There are dozens of examples. One of the best is the fact that
> commercial landline services can simultaneously send different signal
> in the same frequency range through the same system, one via common
> mode and one via differential, and not have interference.

Nice attempt at a diversion, Tom. The context was (and is) a single ham transmitter feeding a typical ham antenna system over earth ground. Your response is typical of someone who just cannot stand to admit that he is wrong. "Oh, that's not what I was talking about. I was talking about something entirely different".

> Of course they can. The two modes are unrelated to each other.

There you go again. In a typical single ham transmitter driving a typical ham antenna over typical earth ground, the common mode signals and the differential mode signals share a common power source and are phased locked to such an extent that the common mode current detector can be tied to an audio oscillator and the Morse code can be copied perfectly.

> Sure. There is nothing that says the behaviour of one mode influences
> the other in any way.

So you are saying that everything in Roy's (W7EL) article about "Baluns: What They Do And How They Do It" is wrong. Have you talked to Roy about your assertion?

> The impedances can change at a different rate along the line, and they
> almost always do.

That doesn't keep them from being related. All you have to do is measure them and report the results. The relationship is stable unless something changes.

> The currents can change phase relationship along the
> line, even if from the same source and usually do.

Not unless conditions change (like rain). Please describe a single ham transmitter system operating into a typical ham antenna above earth ground where the common mode currents are constantly changing at random in magnitude and phase when compared to the differential currents.

> They aren't related, that is why they can be different and usually
> are.

Your argument is getting so far out it is beginning to become "not of this universe". Are you really willing to take a flight into supernatural fantasy just to avoid being found out to be wrong? Why not just declare yourself to be God and be done with it?

--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
------== Over 80,000 Newsgroups - 16 Different Servers! =-----

307. Re: BACK TO BASICS - EM waves, E and H fields, in phase orinquadr...

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-04 19:12:23 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <bu69iuomu1b9h96q294468r8v5snms8lqv@4ax.com>
Source record: 139448

On Thu, 04 Jul 2002 13:48:29 -0500, CAM <w5dxp@hotmail.com> wrote:

>Why is it dangerous to discuss
>something when the context is fully known?

Hi Cecil,

This presumes the knowing of the full context, clearly a false presumption. What you mean by "context" is actually the restriction of discussion through artificial constraints that match the limited experience of amateur radio operators. Such restrictions do not remove danger from illusions drawn from such limited examples.

As I mentioned before:
>People are killed due to their ignorance of where the
>Common of Common Mode resides.
and Richard Harrison is the only one to attempt to describe the Common of Common Mode - obviously there are many who cannot.

73's
Richard Clark, KB7QHC

308. Re: BACK TO BASICS - EM waves, E and H fields, in phase orinquadr...

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-04 19:18:46 UTC
From: CAM <w5dxp@hotmail.com>
Message-ID: <3D249F96.FBD755B3@hotmail.com>
Source record: 139450

Richard Clark wrote:
> This presumes the knowing of the full context, clearly a false
> presumption. What you mean by "context" is actually the restriction
> of discussion through artificial constraints that match the limited
> experience of amateur radio operators. Such restrictions do not
> remove danger from illusions drawn from such limited examples.

Here is the context, published by myself many days ago.

XMTR---x---coax-----choke---1/2WL ladder-line---well balanced 1/2WL dipole

Common mode measured at 'x'. Are you willing to go on record and join Tom
is asserting that the common mode current measured at 'x' is "NOT related"
to the differential current?
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

309. Re: BACK TO BASICS - EM waves, E and H fields, in phase orinquadr...

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-04 19:35:20 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <el89iu0d6f6h2s657v7fg1752gobo1pcve@4ax.com>
Source record: 139451

On Thu, 04 Jul 2002 14:18:46 -0500, CAM <w5dxp@hotmail.com> wrote:

>Here is the context, published by myself many days ago.
>
>XMTR---x---coax-----choke---1/2WL ladder-line---well balanced 1/2WL dipole
>

Hi Cecil,

The context changes by the day? I recall some discussion of an off center fed example for the same discussion. Is there more than one context? How about the "full" context mentioned earlier today? Are there contexts of varying degree?

Rather, what you present are constraints which yield contradictions to generalities offered as absolute statements (does the position of the choke matter? It did/didn't a couple of days ago). The reason these contradictions arose was through the neglect of a general treatment that included just what the reference was that constitutes the Common of Common Mode - a strangely elusive parameter in this discussion.

73's
Richard Clark, KB7QHC

310. Re: BACK TO BASICS - EM waves, E and H fields, in phase orinquadr...

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-04 19:46:28 UTC
From: Reg Edwards <g4fgq.regp@btinternet.com>
Message-ID: <ag28mj$4ar$1@knossos.btinternet.com>
Source record: 139452

If the transmitter is short circuited then both common and differential
modes diasappear together.

311. Re: GAP Titan/Titam

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-04 20:23:39 UTC
From: Mark Keith <nm5k@wt.net>
Message-ID: <3D24AECB.5E49@wt.net>
Source record: 139453

On 04 Jul 2002 12:47:16 GMT, ardujenski@aol.com (ARDUJENSKI) wrote:
..
>Basically, only guessing at what the lobe
>patterns are for the various antennas well it just makes it difficult to make
>good comparisons.

Thats easily modeled though. With a shorter than 1/4 wave radiator, the pattern between all the different verticals of the same appx height will be nearly identical. So thats not really an issue on those bands. What has a much greater effect on the lobe angle is the quality of the ground system. That can have a large effect.
As a test, download the eznec demo, and then open vert1.ez "40m" and use no radials. First, run the ff plot and note the angle. Then view the antenna and note the current distribution. Max current will be at the base, and the plot will show a maximum gain angle of 26 degrees with a gain of -.03 dbi. Note the SRC data that shows a feed impedance of about 36 ohms. Next, go into the source menu and place the source at 50% . "halfway up the antenna" Rerun the FF plot. Note that the gain is nearly the same. "-.06 dbi", and at the same exact angle. "26 degrees" Then view the antenna and note the current distribution. The source is now halfway up the vertical, but max current is still at the base. Why? Because the antenna is still a 1/4 wave in physical height, not a 1/2 wave. Note the SRC data. It will now show a higher impedance. This is about the only thing that has really changed much. The only way you are going to lower the takeoff angle is by adding radials under the antenna. The more radials, the lower the angle up until you start to saturate. And to do that, you would need a solid plate as a radial system. But 120 radials get you close enough for gov work. The point is, the place of feed makes little difference in current distribution, or takeoff angle on these antennas. So really all you have to do to compare, is note efficiency. As a further test, make an elevated 1/2 wave vertical. Try it base fed, and try it fed in the center. The maximum current is still in the middle of the antenna either way. And the takeoff angle is still the same. You may notice a slight difference in gain, but this would be so small to be unnoticable in the real world. From the results on the 1/4 wave, you can see why I think neglecting radials on a 1/4 wave tall, "or shorter" antenna with an elevated feed is a huge mistake. Also , you can see the only way the butternut can be superior with all other things equal is though more efficient loading. Butternuts lower loss coil is the main reason it's the best on the lower bands. Hope this makes some kind of sense...MK

--
http://web.wt.net/~nm5k

312. Re: Want CQ mag article.

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-04 20:24:44 UTC
From: Eskay <Nospamve3jua@rac.ca>
Message-ID: <3D24AF0C.46BDDB41@rac.ca>
Source record: 139435

Try my real address please..I tested this morning with several messages to myself and it seemed to work,,I don't know why it is not working either.. (sieb@uraxis.com)

Oldtime Radio wrote:

> I sent the article to this address (ve3jua@rac.ca) and it did not
> bounce. I don't know why you did not get it.
> otr
>
> On Thu, 04 Jul 2002 07:38:49 -0700, Eskay <Nospamve3jua@rac.ca> wrote:
>
> >Did anyone get the article? I don't know if anything is wrong with my
> >set-up here but I have not received it...Sieb VE3JUA..sieb@uraxis.com
> >
> >Eskay wrote:

313. Re: CAM?? Comments and More Questions

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-04 20:31:49 UTC
From: Janice and Ed <eseniors@earthlink.net>
Message-ID: <Vg2V8.1391$Dh3.111936@newsread2.prod.itd.earthlink.net>
Source record: 139454

Hi again, CAM -

Thank you for taking the time to answer my questions... very helpful!

If you have the time for a few more comments and questions, they are
interleaved below.

73, Ed

"CAM" <w5dxp@hotmail.com> wrote in message
news:3D244412.C4334174@hotmail.com...
> Janice and Ed wrote:
> > Some questions, if you please:
> > 1. Is the antenna you're talking about here the 130 foot, ladder-line
> > fed dipole that you mentioned in an earlier thread?
>
> Yes, I have it installed at my QTH.
>
> > 2. I assume the 3:1 SWR bandwidth refers to a constant setting of the
> > tuner. Is that correct?
>
> No tuner. I don't use a tuner. It refers to a constant setting of ladder-
> line length at 88 ft.
>
My primary interest in this question had to do with "constant setting"
(or lack thereof), not the type of adjusting device used. So for my
purposes, this one is a "yes."

BTW, some folks might call an adjustment device used to change the
apparent system resonance at the input of a transmission line a "tuner"--
regardless of whether said device is implemented with lumped-constant
elements or distributed elements. But hey, it's your machine, so you get
to name it.

I see you refer to it below as a "ladder line length selector."
Is that your preferred name?

> > 3. Are these bandwidths centered around the 3.993 and 7.216 frequencies
> > mentioned in the earlier thread?
>
> Nope, that's just the frequencies where 88 ft of ladder-line causes 75m
> and 40m ham band resonances to overlap.
>
OK. But this sounds like a "yep," not a "nope," for the specific adjustment
setting in question (88 ft).

> > 4. Why is the 80m resonance set so high (half the BW out-of-band)?
> > Is it because the 80m and 40m resonances are interactive, and you
> > like the 40m resonance where it is?
>
> By varying the length of the ladder-line, I can set the resonance to any
> HF ham frequency. 88 ft of ladder-line is interesting because that length
> causes resonance on both 80m and 40m within the ham bands. For someone
> who didn't want to vary the length of the ladder-line, 88 ft would be
> a logical choice for feedline length on 80m and 40m.
>
It sounds like the setting is fully interactive, in the sense that both the
80m and the 40m "resonances" move (fast) when the line length is adjusted.

Do both "resonances" move in the same direction as tuning length is adjusted
(e.g., more length moves frequency down)?

I agree that the 88 ft length has interesting properties.

> The minimum length of my ladder-line is 86 ft and occurs when I set my
> ladder-line length selector to zero ft. At that length, resonance on
> 80m is a little above 4 MHz and resonance on 40m is a little above 7.3
> MHz so when I add length to my ladder-line, I can cover the entire 80m
> and 40m bands. With 86 ft plus 23 ft, I can cover down to 3.6 MHz on
> 80m. With 86 ft plus 3 ft, I can cover down to 7.0 MHz on 40m.

This sounds like a pretty slick setup.

How many different length/tuning settings do you have available?
How fine are these adjustments, in length/frequency?
How are the selections implemented mechanically (e.g., knife switches)?
How do you stow the tuning line (e.g., spiral coils in insulating box)?
How much space/volume does your LLLS occupy?

> --
> cheers, CAM http://www.qsl.net/w5dxp
>
>
> -----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
> http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
> -----== Over 80,000 Newsgroups - 16 Different Servers! =-----
>

314. Re: GAP Titan/Titam

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-04 21:04:00 UTC
From: ardujenski@aol.com
Message-ID: <20020704170400.22581.00002277@mb-cl.aol.com>
Source record: 139455

Mike
Thanks good info. I got my quota of education today--have a happy 4th
Alan KB7MBI

315. Rotatable Dipole

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-04 21:18:10 UTC
From: rh3x@erols.com
Message-ID: <jne9iug85urd04vdphjuhlc0pkdckvedtt@4ax.com>
Source record: 139456

Looking for a multiband rotatable dipole. Any company make such an antenna?

de Richard/N2JR

316. Re: BACK TO BASICS - EM waves, E and H fields, in phase orinquadr...

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-04 21:37:37 UTC
From: richardharrison@webtv.net
Message-ID: <14172-3D24C021-259@storefull-2392.public.lawson.webtv.net>
Source record: 139457

Richard Clark wrote:
"---(the imbalance) which gives rise to the effects noted, ---This is found in the answer to the query for a simple equation showing relationships:
R1 / R2 = R3 / R4"

This is the condition at balance of four resistors in a bridge configuration. One of the resistors may be the unknown and another made variable to balance the bridge.

A favorite author of mine was Rufus P. Turner. He wrote many magazine articles and his stuff worked. He also wrote many popular books, and among them is "Bridges and other Null Devices". On page 12 is diagrammed the "evolution of bridge" (not the game) which numbers the resistors 1 through 4 and gives:
"Thus at null the unknown r2 = (r4 / r3) r1."
This is Richard Clark`s formula rearranged.

Best regards, Richard Harrison, KB5WZI

317. Re: BACK TO BASICS - EM waves, E and H fields, in phase orinquadr...

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-04 21:51:30 UTC
From: richardharrison@webtv.net
Message-ID: <14172-3D24C362-268@storefull-2392.public.lawson.webtv.net>
Source record: 139458

Reg, G4FGQ wrote:
"If the transmitter is short-circuited then both common and differential modes dissappear together."

Then both modes are related to the transmitter. It is likely that they are also related to each other. It`s like a mother with two daughters. In our configuration, it`s more like mother, daughter, and granddaughter.

The fertility story goes:
If your parents didn`t have any children, chances are, you won`t either.

Best regards, Richard Harrison, KB5WZI

318. EH antenna feed system

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-04 22:17:29 UTC
From: jgboyles@aol.com
Message-ID: <20020704181729.14706.00001423@mb-de.aol.com>
Source record: 139459

"Second, they assume that phase shift is between TWO terminals and NO
third terminal is involved. They use a high-pass L driving an inductor
in series with an element as the +45 shift side, and a lowpass L
driving an inductor as the -45 side.

Since the networks float and drive a two-terminal load, the phase
shift at the load has to be 180 degrees, if we consider direction of
flow into and out of those two terminals. So the current in the
elements, viewed from a distance looking back at the elements, is in
phase in each half...just like a dipole."

Hi Tom. If you look at fig. 4 in" phasing an EH antenna", it is a matching
network for a dipole using both the high pass and low pass L networks. The EH
cylinders are modeled as a series rlc circuit connected to the junctions of L1,
C1 and L2, C2. The shield of the coax is connected to the junction of C1 and
L2, GND? With this model the voltage on the two dipole sections, with respect
to GND are 90 degrees out. But the current in both halves of the dipole would
be in phase.
If you break up the series rlc model of the cylinders into 2 symmetrical
circuits and center tap to GND. (add a third terminal), then the voltages on
the two cylinders are 180 degrees out, as are the currents, just like a regular
dipole. I thought the whole idea was to make the current in the cylinders 90
out. I still don't see how the network presented will produce this.
I promised a friend I would spend a few hours trying out the 40m version
described on the EH Antenna page. Maybe this weekend.

73 Gary N4AST

319. Re: Rotatable Dipole

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-04 22:27:33 UTC
From: J Tabor <denews@taborsoft.com>
Message-ID: <ui9iurhrkqdv51@corp.supernews.com>
Source record: 139460

Howdy,

I've been leisurely looking at those also. The Force 12 model looks good.
Whoops, don't know if they have a multi-band.

Fairly sure Cushcraft does, but, BTDT. :)

Would be interested in what you find.

Regards,
Jim - KU5S

320. Re: Rotatable Dipole

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-04 22:28:19 UTC
From: Reg Edwards <g4fgq.regp@btinternet.com>
Message-ID: <ag2i62gfc1@paris.btinternet.com>
Source record: 139461

> Looking for a multiband rotatable dipole. Any company make such an
> antenna?
==========
What bands do you have in mind?

321. Re: BACK TO BASICS - EM waves, E and H fields, in phase orinquadr...

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-04 22:32:24 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <mti9iukkdb4vc2hq3kngmu89qfv8ubp6rt@4ax.com>
Source record: 139462

On Thu, 4 Jul 2002 16:51:30 -0500 (CDT), richardharrison@webtv.net
(Richard Harrison) wrote:

>Reg, G4FGQ wrote:
>"If the transmitter is short-circuited then both common and differential
>modes dissappear together."
>
>Then both modes are related to the transmitter. It is likely that they
>are also related to each other. It`s like a mother with two daughters.
>In our configuration, it`s more like mother, daughter, and
>granddaughter.
>
>The fertility story goes:
>If your parents didn`t have any children, chances are, you won`t either.
>
>Best regards, Richard Harrison, KB5WZI

Hi Richard,

That may well be, but the description does not attend the nature of
Common Mode, merely an instance of it. If you were to short the
transmitter of the subscriber's (Differential Mode) circuit, the
Hybrid telephone circuit would still sustain the supervisory (Common
Mode) circuit. Without attention to the detail of the Common of
Common Mode, the statement you quote above is simply the propagation
of a minor example into the myth.

One counter example shows how shallow such errant generalities become.

73's
Richard Clark, KB7QHC

322. Re: BACK TO BASICS - EM waves, E and H fields, in phase orinquadr...

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-04 22:39:22 UTC
From: CAM <w5dxp@hotmail.com>
Message-ID: <3D24CE9A.CD68F861@hotmail.com>
Source record: 139464

Richard Clark wrote:
> The context changes by the day? I recall some discussion of an off
> center fed example for the same discussion. Is there more than one
> context? How about the "full" context mentioned earlier today? Are
> there contexts of varying degree?

The center fed and off center fed responded in the same way, i.e. common mode current was measurable with the differential current was flowing and not measurable (using my method) when the differential current was not flowing. The same holds true for my rotatable dipole. Perhaps it is time for someone to present a ham antenna system being driven by an active ham transmitter for which the common mode current flows when the differential current is not flowing or vice versa. We are all awaiting with abated breath for one of you to describe such a system.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
------== Over 80,000 Newsgroups - 16 Different Servers! =-----

323. Re: CAM??

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-04 22:41:06 UTC
From: marvin rosen <raghead@worldnet.att.net>
Message-ID: <6a4V8.4864$lu6.312405@bgtnsc04-news.ops.worldnet.att.net>
Source record: 139463

Can the same system be used to make an end fed 80-10 ant?
"CAM" <w5dxp@hotmail.com> wrote in message
news:3D249762.81A88831@hotmail.com...
> StarGazer wrote:
> > What are you using to "Select Ladder Line Length" ?
>
> Presently knife switches, previously relays. It's all explained on
> my web page under, "No Tuner All-HF-Band Antenna".
> --
> cheers, CAM http://www.qsl.net/w5dxp
>
>
> -----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
> http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
> -----== Over 80,000 Newsgroups - 16 Different Servers! =-----

---
Outgoing mail is certified Virus Free.
Checked by AVG anti-virus system (http://www.grisoft.com).
Version: 6.0.372 / Virus Database: 207 - Release Date: 6/20/02

324. Re: CAM?? Comments and More Questions

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-04 22:49:08 UTC
From: CAM <w5dxp@hotmail.com>
Message-ID: <3D24D0E4.E0EE38C2@hotmail.com>
Source record: 139465

Janice and Ed wrote:
> BTW, some folks might call an adjustment device used to change the
> apparent system resonance at the input of a transmission line a "tuner"--
> regardless of whether said device is implemented with lumped-constant
> elements or distributed elements.

Yes, some might, but it wouldn't satisfy the definition of an antenna
tuner (transmatch) in the ARRL Handbook.

> I see you refer to it below as a "ladder line length selector."
> Is that your preferred name?

LLLS for short.

> It sounds like the setting is fully interactive, in the sense that both the
> 80m and the 40m "resonances" move (fast) when the line length is adjusted.

The resonant frequency changes every time the length is adjusted.

> Do both "resonances" move in the same direction as tuning length is adjusted
> (e.g., more length moves frequency down)?

Yes, assuming we are talking about the current maximum points (which I am).

> How many different length/tuning settings do you have available?

I have five sets of knife switches so the answer is 32 (0-31 binary).

> How fine are these adjustments, in length/frequency?

It is adjustable in one foot lengths. That's a little course for 10m but
works OK. On 80m, I use six foot increments.

> How are the selections implemented mechanically (e.g., knife switches)?

I have two DPDT knife switches ganged per loop. The lengths of the loops
are 1, 2, 4, 8, 16 ft. I think there's a picture of it on my web page.

> How do you stow the tuning line (e.g., spiral coils in insulating box)?

The knife switches are located on a plexiglas plate mounted in the window.
The knife switch banks are about 8 inches apart. The loops are on the
outside of the window, vertical, 8 inches apart. No part of any loop
comes closer than 8 inches to any part of any other loop.

> How much space/volume does your LLLS occupy?

A window full on the inside. The loops extend out about three feet on
the outside and are tied up to the eave of my house.

--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
------== Over 80,000 Newsgroups - 16 Different Servers! =-----

325. Re: BACK TO BASICS - EM waves, E and H fields, in phase orinquadr...

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-04 22:49:54 UTC
From: " J. Harvey" <JM002.Harvey_TRIMTHIS_@Sympatico.ca>
Message-ID: <mi4V8.12761$P53.1596369@news20.bellglobal.com>
Source record: 139467

"CAM"
> Perhaps it is time for someone to present
> a ham antenna system being driven by an
> active ham transmitter for which the common
> mode current flows when the differential
> current is not flowing...

Dipole antenna installed under a major power line (xmitter firmly grounded)
?

(Common mode will be 60Hz.)

326. Re: Rotatable Dipole

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-04 22:50:57 UTC
From: CAM <w5dxp@hotmail.com>
Message-ID: <3D24D151.B5E8E9C0@hotmail.com>
Source record: 139466

rh3x@erols.com wrote:
> Looking for a multiband rotatable dipole. Any company make such an
> antenna?

I've got one for 20m-10m. Make it out of aluminum tubing available from
Texas Towers and feed it with ladder-line. It works so well I don't
even need a tuner.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

327. Re: High Dipole vs. Low Beam

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-04 22:56:41 UTC
From: CJ <difficult@times.com>
Message-ID: <ui9kldckiuooe2@corp.supernews.com>
Source record: 139468

Hello Greg

Never had an HF beam. However my 5-band W9INN HF dipole (10-15-20-40-80m) is up at 54ft and my qth is at 5412 ft above sea level. With that combo I have done remarkably well with 311 DXCC countries since 1995. Now I am determined to make "Honor Roll on a Dipole" and do not want a beam. N6KZ (my DX mentor) has repeatedly offered me a free beam and installation but I feel making honor roll with a dipole is very do-able now at this point and will be more rewarding and satisfying to me then with 1500w / 200 ft tower / and stacked mono-banders / on a hilltop. A dipole up high can "work the world"!!

But to address your question I would suggest you run some antenna modeling software and plug in those two antennas and compare.

--

73 / DX de AB7SL- Charles
AB7SL - Ham Radio Pages
Prescott, AZ - USA
www.ab7sl.com

"Greg Knapp" <gknapp@freshrain.org> wrote in message news:4O0V8.22081$A%3.262783@ord-read.news.verio.net...
> Which is better for pure gain (signal delivered at the receiving site-which
> could be domestic or DX-in other words, for general use): an A3 up about 30
> feet or multi-band dipoles (to be used on 10, 15, and 20) up at about 60
> feet (at the center)?
>
> I figure the added height on the dipoles over the beam is good for at least
> an S-unit or more, which would more than compensate for gain of the beam,
> due to the angle of takeoff--am I wrong on this? The dipoles (which are now
> at only 30 feet at the center and much lower at the ends, currently work 160
> through 10 including WARC bands) would be lifted to 60 feet on a large
> push-up mast. If I put the beam up, I'd leave the dipoles where they are.
>
> Raising the dipoles to 60 feet would a lot less hassle (unbelievable

> neighbors and CC&RS--yet they allow TV antennas--so may put a TV
antenna on
> top and disguise the dipoles as guy wires) and money than getting the
beam
> up to 30. I am not concerned with FB or directivity, just the
delivered
> signal on 10, 15, and 20. I do not currently have the option of
putting the
> beam any higher.
>
> Which would you put up and why?
>
> Thanks for your thoughts,
>
> 73,
> Greg, N6GK
>
>

328. Re: BACK TO BASICS - EM waves, E and H fields, in phase orinquadr...

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-04 23:01:01 UTC
From: CAM <w5dxp@hotmail.com>
Message-ID: <3D24D3AD.8943A5CC@hotmail.com>
Source record: 139371

Richard Clark wrote:
> One counter example shows how shallow such errant generalities become.

Well, there you have it, Richard. All you have to do is describe an antenna system with an active single transmitter in which the common mode currents are "NOT related" to the differential mode currents. According to Tom, that is all of the antenna systems in the world so it shouldn't be hard to describe just one. Your obvious diversionary smoke screens are not helping so how about an example instead? I'm holding my breath.

However, given the statement, "The differential mode currents and the common mode currents are NOT related", the capitalization of the word "NOT" would seem to indicate that they are *never* related. In all three of my antenna systems, common mode currents are related to differential mode currents while transmitting. Thus, the statement is proven false by only one example which violates the statement. The argument has already been settled. All that is left is clowning around and posturing to avoid admitting a mistake.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

329. Re: Rotatable Dipole

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-04 23:01:28 UTC
From: rh3x@erols.com
Message-ID: <dsk9iugnn86m04clm57vet48bagfjhc5rg@4ax.com>
Source record: 139369

Checked your website, but don't see the design specs for your
mulitband rotatable dipole.

de Richard/N2JR

On Thu, 04 Jul 2002 17:50:57 -0500, CAM <w5dxp@hotmail.com> wrote:

>rh3x@erols.com wrote:
>> Looking for a multiband rotatable dipole. Any company make such an
>> antenna?
>
>I've got one for 20m-10m. Make it out of aluminum tubing available from
>Texas Towers and feed it with ladder-line. It works so well I don't
>even need a tuner.

330. Re: Rotatable Dipole

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-04 23:02:54 UTC
From: rh3x@erols.com
Message-ID: <0vk9iug3tii2ck8qo5fth1lde3kkankgjl@4ax.com>
Source record: 139370

Will do a web search for Force 12 (not familiar with that company).
Also, I'll check Cushcraft. thanks for the leads.
RH/N2JR

On Thu, 4 Jul 2002 17:27:33 -0500, "J Tabor" <denews@taborsoft.com>
wrote:

>Howdy,
>
>I've been leisurely looking at those also. The Force 12 model looks good.
>Whoops, don't know if they have a multi-band.
>
>Fairly sure Cushcraft does, but, BTDT. :)
>
>Would be interested in what you find.
>
>Regards,
>Jim - KU5S
>

331. Re: CAM??

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-04 23:12:39 UTC
From: CAM <w5dxp@hotmail.com>
Message-ID: <3D24D667.D1DF5E1E@hotmail.com>
Source record: 139372

marvin rosen wrote:
> Can the same system be used to make an end fed 80-10 ant?

I can't think of a reason the differential impedance cannot be handled
the same way. Hopefully, the common mode problems could be solved.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

332. Re: BACK TO BASICS - EM waves, E and H fields, in phase orinquadr...

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-04 23:15:17 UTC
From: CAM <w5dxp@hotmail.com>
Message-ID: <3D24D705.A48AE74C@hotmail.com>
Source record: 139374

```
" J. Harvey" wrote:
>
> "CAM"
> > Perhaps it is time for someone to present
> > a ham antenna system being driven by an
> > active ham transmitter for which the common
> > mode current flows when the differential
> > current is not flowing...
>
> Dipole antenna installed under a major power line (xmitter firmly grounded)

Cute, but we are talking about common mode introduced by the transmitter not
by external sources.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----
```

333. Re: BACK TO BASICS - EM waves, E and H fields, in phase orinquadr...

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-04 23:15:46 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <kck9iukaf0fl1jtqiki6913e4e8d3dsjqj@4ax.com>
Source record: 139373

On Thu, 04 Jul 2002 17:39:22 -0500, CAM <w5dxp@hotmail.com> wrote:

>Richard Clark wrote:
>> The context changes by the day? I recall some discussion of an off
>> center fed example for the same discussion. Is there more than one
>> context? How about the "full" context mentioned earlier today? Are
>> there contexts of varying degree?
>
>The center fed and off center fed responded in the same way, i.e. common
>mode current was measurable with the differential current was flowing
>and not measurable (using my method) when the differential current was
>not flowing. The same holds true for my rotatable dipole. Perhaps it
>is time for someone to present a ham antenna system being driven by an
>active ham transmitter for which the common mode current flows when the
>differential current is not flowing or vice versa. We are all awaiting
>with abated breath for one of you to describe such a system.

Hi Cecil,

Why would I confine the argument when there are already common,
general examples available? Certainly the one offered by Richard
Harrison provides a competent one.

I see that there are now two contexts (or more) and yet nary any
revelation of where the Common of the Common Mode resides - an unusual
omission in light of the discussion.

You pine for subscription to the theory of your observation, you
maintain that all has been revealed and yet when I ask for a simple
circuit description none is forthcoming. I have even provided the
basis for that simple circuit (all that is required is the
identification (not evaluation) of the four impedances and Common).
If this is Common Mode current as you insist, a simple test (nearly
identical if not literally so to the one you've performed) at the
Common would easily sustain your argument in its generality and remove
it from the specter of it being of the classification of yet another
UFO sighting.

This is not to say that your measurements, or your thesis, are in
error; but testimonials do not force a proof. You have admitted to
being in error on one iteration of a former "context"; you could well
be right now; however, you have added nothing to the "context" to
raise it out of the prospects of being yet another ordinary mistake.
In fact you have a tendancy to elaborate (as found in the quote above)
where simplification will do. Given you have no response to where the
Common of the Common Mode resides, I must stand aside to withhold

committing to your thesis until the revelation of this simple and
(dare I say it?) common consideration.

73's
Richard Clark, KB7QHC

334. Re: Rotatable Dipole

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-04 23:17:51 UTC
From: CAM <w5dxp@hotmail.com>
Message-ID: <3D24D79F.D2E059D9@hotmail.com>
Source record: 139375

rh3x@erols.com wrote:
> Checked your website, but don't see the design specs for your
> mulitband rotatable dipole.

Besides it being 33 ft long, what do you need to know?
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

335. Re: BACK TO BASICS - EM waves, E and H fields, in phase orinquadr...

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-05 00:25:40 UTC
From: "George, W5YR" <w5yr@att.net>
Message-ID: <3D24E70E.F31D87F1@att.net>
Source record: 139376

The sun shines on you and it shines on me - common power source. I do certain things as a consequence. You do certain things. These certain things may or may not be the same, totally different, partially alike in some manner, etc. etc. Are they related?

If the sun went out - the power source vanished - would we both be affected? Of course. But absent that event, it seems to me that my sphere of activities while possibly similar in some respects to yours - we both eat, sleep, etc. - are hardly related in a scientific sense. Certainly, there does not exist a set of closed-form equations which rigorously defines the relationship between your activities and mine, all being driven by a common stimulus: the Sun.

In the simple transmitting case, coax feed to a wire dipole antenna, it seems clear to me that the presence of common-mode current on the outer braid of a coax line must arise either from the division of current at the coax braid connection to the antenna in the absence of a balun or from its presence in the induction field of the radiator, or from both.

In either event, the comparative impedances of the system elements involved play a central role in establishing the magnitude of the effects. Whether or not these impedances are known or can be known quantitatively is another matter. But clearly they exist, even if some may be zero and others semi-infinite.

The stronger the differential-mode power component, the more excitation is available for the ultimate production of common-mode current. Thus, any changes in the system which alter differential-mode operation and performance is likely to have some effect on the common-mode current as well.

Since the antenna load impedance, operating frequency, the transmission line Zo, and its electrical length and loss are the prime factors in differential-mode operation, it would seem that any changes in these would affect the power transfer from the source to the load (antenna).

As operating frequency is changed from that of resonance, the input Z of the antenna will change and thus the reflection coefficient of the system will change. Unless compensated by appropriate impedance transformations to account for the load Z change, less of the source available power will be transferred to the load and thereby less excitation becomes available to generate common-mode current.

While there is doublessly an analytical solution to determine the resulting change in common-mode current, it seems to me that a knowledge of the entire antenna system and its environment is quite unlikely to exist in

sufficient detail to support such an analysis.

Thus, my conclusions are

1. Differential-mode operation and common-mode operation are related in some manner highly dependent upon system configuration.

2. They are both manifestations of the overall operation of the entire antenna system, not just the transmission line.

3. An analytical solution to determine the relationship is probably neither feasible nor, in practical terms, even possible.

4. Experimental observations, unless firmly grounded on a complete understanding and definition of the entire system, are highly unlikely to provide much more than additional confusing anecdotal "evidence" that some form and degree of relationship exists.

5. It is entirely possible that Change A in differential-mode operation may have an Effect B upon the common-mode operation within the system. It is also entirely possible that Change A may produce zero observable effect. The existence of either outcome neither proves nor disproves anyone's contention that the two are or are not "related."

73/72/oo, George W5YR - the Yellow Rose of Texas
Fairview, TX 30 mi NE of Dallas in Collin county EM13qe
Amateur Radio W5YR, in the 56th year and it just keeps getting better!
QRP-L 1373 NETXQRP 6 SOC 262 COG 8 FPQRP 404 TEN-X 11771 I-LINK 11735
Icom IC-756PRO #02121 Kachina 505 DSP #91900556 Icom IC-765 #02437

336. Re: EH antenna Feed System

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-05 00:32:02 UTC
From: Mike Coslo <mcoslo@adelphia.net>
Message-ID: <3D251324.4090508@adelphia.net>
Source record: 139377

Richard Clark wrote:

> technology to build them. (Is the EH technology derived from the
> infamous alien anal probe?

Yes! The proof was on an episode of South Park.

- Mike KB3EIA -

337. Re: BACK TO BASICS - EM waves, E and H fields, in phase orinquadr...

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-05 00:34:54 UTC
From: "George, W5YR" <w5yr@att.net>
Message-ID: <3D24E920.5F776061@att.net>
Source record: 139378

If that is the case, Cecil, breath is about the only thing being "abated"
in this discussion. <:}

73/72/oo, George W5YR - the Yellow Rose of Texas
Fairview, TX 30 mi NE of Dallas in Collin county EM13qe
Amateur Radio W5YR, in the 56th year and it just keeps getting better!
QRP-L 1373 NETXQRP 6 SOC 262 COG 8 FPQRP 404 TEN-X 11771 I-LINK 11735
Icom IC-756PRO #02121 Kachina 505 DSP #91900556 Icom IC-765 #02437

CAM wrote:
We are all awaiting
> with abated breath for one of you to describe such a system.

338. Re: Rotatable Dipole

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-05 00:36:13 UTC
From: Bob Miller <bamiller@texas.net>
Message-ID: <8egkPfXKg+uG6O+faVuFTWUeyARL@4ax.com>
Source record: 139379

rh3x@erols.com wrote:

>Looking for a multiband rotatable dipole. Any company make such an
>antenna?
>
>de Richard/N2JR

If you go to http://www.cebik.com/radio.html and look at the article, "Suppose I could have only one wire antenna," that article, in spite of its name, actually tells you how to construct a rotatable multi-band dipole.

Bob
k5qwg

339. Re: BACK TO BASICS - EM waves, E and H fields, in phase orinquadr...

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-05 00:49:37 UTC
From: CAM <w5dxp@hotmail.com>
Message-ID: <3D24ED21.FF91DD08@hotmail.com>
Source record: 139380

Richard Clark wrote:
> Why would I confine the argument when there are already common,
> general examples available? Certainly the one offered by Richard
> Harrison provides a competent one.

Richard's system was not a typical ham system, which is what is being discussed. Please present an amateur transmitter and antenna system where all sources of common mode are negligible except for the amateur radio transmitter, and the common mode is "NOT related" to the differential mode. You know and I know that Tom was not talking about external sources of common mode when he made his statement.

If there is even one antenna system that doesn't agree with Tom's statement, then his statement is wrong. I have three such antenna systems. "Common mode currents are NOT related to differential mode currents" applies to ALL antenna systems. It is not true for at least one antenna system. Therefore, it is false.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

340. Re: BACK TO BASICS - EM waves, E and H fields, in phase orinquadr...

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-05 00:52:32 UTC
From: CAM <w5dxp@hotmail.com>
Message-ID: <3D24EDD0.66D520B3@hotmail.com>
Source record: 139381

"George, W5YR" wrote:
> In the simple transmitting case, coax feed to a wire dipole antenna, it
> seems clear to me that the presence of common-mode current on the outer
> braid of a coax line must arise either from the division of current at the
> coax braid connection to the antenna in the absence of a balun or from its
> presence in the induction field of the radiator, or from both.

You are obviously not up on the latest theory, George. Don't you realize
that a butterfly flapping its wings in China can cause common mode
currents in Nebraska?
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

341. Re: BACK TO BASICS - EM waves, E and H fields, in phase orinquadr...

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-05 01:31:12 UTC
From: " J. Harvey" <JM002.Harvey_TRIMTHIS_@Sympatico.ca>
Message-ID: <zF6V8.12832$P53.1657346@news20.bellglobal.com>
Source record: 139382

"CAM"
> Cute, but we are talking about common mode [current]
> introduced by the transmitter not by external sources.

Thanks for the "cute" - I'm glad that you noticed... :-)

I see your point - like I said before, it is obvious.

But, what about viewing this situation over a longer period of time. It would seem that the magnitude of the common mode current might well vary due to external factors such as ground moisture, rain, water table level, seasonal fluctuations, and so forth. One might imagine a case where everything of a 'technical nature' (xmitter power, antenna geometry, etc) was being held constant and the only parameters that were changing were related to the weather. Imagine that the magnitude of the common mode current varied due to these external uncontrollable factors. Seems plausible. One might be forgiven for claiming that the **relative magnitude of the phase-locked** currents were "unrelated".

Or... Hang your antenna over the Bay of Fundy with its 50 foot tides. To make it perfectly clear, arrange things so that the common mode current just happens to drop to exactly zero when the tide is out (this is intended to eliminate your 'Morse Code' argument for at least a few hours a day). If Tom dropped by during low tide, and dropped by again during high tide, then your two measurements would tend to support his contention that the currents are "unrelated" (except in the almost not worth mentioning sense, half the time).

342. Re: What is input Z of a resonant 80 m dipole? Resonant 40 m dipole?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-05 01:40:54 UTC
From: Chris Boone <Cboone@earthlink.net>
Message-ID: <3D24F9E8.1EAB14D3@earthlink.net>
Source record: 139383

The input Z of ANY resonant 1/2wl dipole is around 70 ohms....BUT it
can vary down to 40 or up to 80 depending on height above ground..
(but 70 is the accepted "norm").....since the freqs involved
are HF and not VHF, loss in the coax will be VERY small.....and
additional loss due to any SWR mismatch will be even smaller...

SO dont fret.....put it up and warm up the ether! :)

Chris
WB5ITT

StarGazer wrote:
>
> Can I feed it them with 100 + feet of RG-8 and not have too much loss?

343. Re: ALL BAND ANT EXPERIMENT?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-05 01:46:11 UTC
From: Chris Boone <Cboone@earthlink.net>
Message-ID: <3D24FB25.AB2FF8F5@earthlink.net>
Source record: 139384

Close......IF you use it as a Off Center Fed Dipole (also called a
Windom in most cases) and put "anti resonant" dipole cut for around
11 MHz or so at 45 degrees to the main wires, you can get 9 band
operation (using a 6:1 current balun)...it was in QST some time
ago....I can send you the files if you like..
and NO tuner required for most US amateur freqs...

Chris

marvin rosen wrote:
>
> My idea for a 80-10 mtr antenna:
> An 80 mtr antenna with a 9:1 balun in the middle fed with coax & a manual
> ant tuner in the shack.
> Is the above idea feasable?

344. Re: Rotatable Dipole

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-05 01:59:16 UTC
From: rh3x@erols.com
Message-ID: <cav9iu00d7o7i26hp1vscrs9563rbnstrg@4ax.com>
Source record: 139385

Thanks for that very informative article Bob.

Regards -- de Richard/N2JR

On Fri, 05 Jul 2002 00:36:13 GMT, Bob Miller <bamiller@texas.net>
wrote:

>rh3x@erols.com wrote:
>
>>Looking for a multiband rotatable dipole. Any company make such an
>>antenna?
>>
>>de Richard/N2JR
>
>If you go to http://www.cebik.com/radio.html and look at the article, "Suppose I
>could have only one wire antenna," that article, in spite of its name, actually
>tells you how to construct a rotatable multi-band dipole.
>
>Bob
>k5qwg

345. Re: What is input Z of a resonant 80 m dipole? Resonant 40 m dipole?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-05 02:27:05 UTC
From: Dan Richardson <k6mhe@mendolink.com>
Message-ID: <2h0aiuorocpbtuiu7f966cgb630sdt8aad@4ax.com>
Source record: 139386

On Thu, 27 Jun 2002 12:19:06 -0700, StarGazer <pti@capnet.com> wrote:

>Can I feed it them with 100 + feet of RG-8 and not have too much loss?

Modeling a dipole in free space that is resonate at 3.7 MHz would have
the feed point impedance at 7.2 Mhz of R 3184 +J2961.

Which means at 7.2 MHz a 100 feet of RG-213 (RG-8 type cable) would
have the additional loss of about 8.4 dB due to SWR.

I would call that substantial.

Danny, K6MHE

346. Re: BACK TO BASICS - EM waves, E and H fields, in phase orinquadr...

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-05 03:23:06 UTC
From: CAM <w5dxp@hotmail.com>
Message-ID: <3D25111A.7A0E0346@hotmail.com>
Source record: 139387

```
" J. Harvey" wrote:
> But, what about viewing this situation over a longer period of time. It
> would seem that the magnitude of the common mode current might well vary due
> to external factors such as ground moisture, rain, water table level,
> seasonal fluctuations, and so forth.

Will the above conditions cause the common mode to exist without the differential
power source? If not, Tom's statement continues to be wrong.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----
```

347. Re: BACK TO BASICS - EM waves, E and H fields, in phase orinquadr...

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-05 03:46:12 UTC
From: " J. Harvey" <JM002.Harvey_TRIMTHIS_@Sympatico.ca>
Message-ID: <WD8V8.9713$MP.1914464@news20.bellglobal.com>
Source record: 139388

"CAM" previously...
> ...we are talking about common mode introduced
> by the transmitter not by external sources.

"CAM"
> Will the above conditions [the weather] cause the
> common mode to exist without the differential
> power source? If not, Tom's statement continues
> to be wrong.

So, to sum up...

Assuming that there is only one source, then we must inevitably conclude that there is - in fact - only one source. I'd have to agree with that logic....it almost goes without saying.

:-)

348. Re: BACK TO BASICS - EM waves, E and H fields, in phase orinquadr...

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-05 03:51:53 UTC
From: CAM <w5dxp@hotmail.com>
Message-ID: <3D2517D9.693E118@hotmail.com>
Source record: 139389

```
" J. Harvey" wrote:
> Assuming that there is only one source, then we must inevitably conclude
> that there is - in fact - only one source. I'd have to agree with that
> logic....it almost goes without saying.

I wish that fact would soak in for everyone.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
------== Over 80,000 Newsgroups - 16 Different Servers! =-----
```

349. A whole new 'back to basics' topic - Monopole fundamentals

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-05 04:20:43 UTC
From: " J. Harvey" <JM002.Harvey_TRIMTHIS_@Sympatico.ca>
Message-ID: <i89V8.9725$MP.1932703@news20.bellglobal.com>
Source record: 139390

I found an interesting report available online (.pdf format) entitled "Dipole and Monopole Antenna Gain and Effective Area for Communication Formulas". It is authored by JC Logan and JW Rockway (a couple of famous 'EM guys').

The thing that I found most surprising was that fact that this paper was written as recently as September 1997 (the topic seems so early 1950s-ish).

Link to report:
www.spawar.navy.mil/sti/publications/pubs/tr/1756/tr1756.pdf

[If you need the free .pdf file reader, go to
http://www.adobe.com/products/acrobat/readstep.html]

Here are the main conclusions of the report in point format:

1) The gain of a monopole (over a perfect infinite ground plane) is twice that of a dipole in free space. 2.16~2.17 versus 5.16~5.17 dB. [Nitpick - shouldn't that be 5.17~5.18 dB since 'times two' is actually +3.01dB not +3.00dB ?]

2) The effective area of a receive monopole is one-fourth that of a dipole.

3) If the monopole and dipole are in identical fields, then the dipole will deliver to a matched load four times the power.

My only important question - is this really 'new' (1997) news ?

350. Re: C-3SS Driver as a Rotatable Dipole

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-05 04:29:39 UTC
From: w9gb <gregory.beat@attbi.com>
Message-ID: <Tg9V8.89213$Uu2.14883@sccrnsc03>
Source record: 139391

Richard -

You could also consider the driven element section from the Force 12 C-3SS antenna
http://force12inc.com/c3ssinfo.htm

W5OE uses this small footprint antenna. Here is what Force 12 told me last fall 2001

> Greg,
>
> We can certainly provide a stand alone driver section of a C3SS for you.
> The set of 3 drivers would be $194.00 plus shipping.
>
> Please direct your order call to Allison at 800 248 1985.
>
>
> 73
>
> Natan W6XR
> Force 12 East
> Ithaca, NY

<rh3x@erols.com> wrote in message news:jne9iug85urd04vdphjuhlc0pkdckvedtt@4ax.com...
> Looking for a multiband rotatable dipole. Any company make such an
> antenna?
>
> de Richard/N2JR
>

351. Re: BACK TO BASICS - EM waves, E and H fields, in phase orinquadr...

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-05 04:30:36 UTC
From: " J. Harvey" <JM002.Harvey_TRIMTHIS_@Sympatico.ca>
Message-ID: <zh9V8.9730$MP.1937415@news20.bellglobal.com>
Source record: 139392

" J. Harvey" wrote:
> Assuming that there is only one source,
> then we must inevitably conclude that
> there is - in fact - only one source.
> I'd have to agree with that logic....it
> almost goes without saying.

"CAM"
> I wish that fact would soak in for everyone.

It's a very useful debating technique; you can use it anywhere. For example: Assuming that there is....a penguin colony living on the far side of the Moon, then we must inevitably conclude that there is - in fact - ...a penguin colony living on the far side of the Moon.

:-)

352. Re: Fractal antenna information

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-05 04:42:48 UTC
From: Dick Carroll <dixie@townsqr.com>
Message-ID: <ag3848$72h$8@208.206.142.92>
Source record: 139393

Mark Keith wrote:
>

> You must be a
> figment of our imaginations.
>

Actually he's a figment of his own imagination.

353. Re: Coax conduit to tower

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-05 04:52:48 UTC
From: "Ed G." <Spectrumhog@_REMOVE_StarBand.net>
Message-ID: <Xns9241DECDFEF95Frog207Junocom@148.78.248.76>
Source record: 139394

Yes, recommend 2 or even better, 3" conduit... and for gawd's sake,
don't forget to use sweeps!

Ed

354. Re: Ka band antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-05 05:04:37 UTC
From: user <erich@ridgenet.net>
Message-ID: <MPG.178ec8bba0c57f71989680@news.direcpc.com>
Source record: 139395

In article <afegi5$dbmg4$1@ID-71199.news.dfncis.de>, LEVAMIioybin@Itin.it says...
> I'm looking for informations about Ka antennas charateristics, but I've
> found tons of useless webpages.
> Can someone help me, please?
> Especially for shape, roughness, feed horn geometry and so on.
> Thanx
> Pietro
>
>
>
WR-35 waveguide is a pretty good match to free space without any other antenna material. What is your application?

355. Re: BACK TO BASICS - EM waves, E and H fields, in phase orinquadr...

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-05 05:29:25 UTC
From: richardharrison@webtv.net
Message-ID: <14172-3D252EB5-321@storefull-2392.public.lawson.webtv.net>
Source record: 139397

Richard Clark wrote:
"If you were to short the subscriber`s (Differential Mode) circuit, the Hybrid telephone circuit would still sustain the supervisory (Common Mode) circuit."

That is certain. The common-mode is using the differential-mode wires ((the pair) in parallel anyway and the short-circuit has little effect on the common-mode because there is little common-mode voltage between the wires. No current flows between points of equal voltage, so the short has no effect when it occurs. You know all this from your balanced bridge example

All the common-mode voltage is between the pair and ground, or between the first pair and a second pair depending on the chosen application.

The principal cause of independence between modes in phone pairs, after balance has been established, is that every pair and every mode is supplied signal from a separate generator.

Such independence does not exist in our ham radio example. One and only one transmitter is supplying all the signals being considered, both the differential-mode and the common-mode signals.

This single source locks the signals together.

Best regards, Richard Harrison, KB5WZI

356. Re: EH antenna Feed System

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-05 05:35:20 UTC
From: nm5k@wt.net
Message-ID: <25eb70d7.0207042135.4579301e@posting.google.com>
Source record: 139396

Mike Coslo <mcoslo@adelphia.net> wrote in message news:<3D251324.4090508@adelphia.net>...
> Richard Clark wrote:
>
>
> > > technology to build them. (Is the EH technology derived from the
> > > infamous alien anal probe?
>
>
> > Yes! The proof was on an episode of South Park.
>
> > - Mike KB3EIA -

I think I saw that episode. "Kenny" was administered the alien anal probe during a school "show and tell", and promptly rolled over and died. :(MK

http://web.wt.net/~nm5k/

357. Re: 6 meter dipole off 80m problem

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-05 05:53:55 UTC
From: captbrian <captbrian@ukonline.co.uk>
Message-ID: <3d255e45$0$24394$afc38c87@news.ukonline.co.uk>
Source record: 139399

Wind the wire of the big dipole into a coil of a few turns of about 3" diameter at about 2 feet each side from the centre. (to keep the 50 megs out of the long one)

G3GVB

R. Scott <washingtonham@yahoo.com> wrote in message news:3D230744.40861A48@yahoo.com...
> Hello all (especially Cam)
>
> I have an 75m dipole that I couldnt get to prune to 6 meters (14th
> harmonic) so I dropped a 6 meter dipole on it at 90 degree angles.
> Problem is I can only get it down to 2 to 1 swr at 52.500 and its very
> steep skirts jacks it way up at the band edges. I wonder what could be
> the problem (there is a metal mast in between the dipoles is that
> causing it and how would I cure it)
>
>
> Thanks
>
> Rick KF7QZ

358. IM I TOO OLD TO COME BACK? Is this still fun???????????

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-05 06:33:57 UTC
From: tk <iatb@flash.net>
Message-ID: <3D253D1B.4E88FDEA@flash.net>
Source record: 139398

I am 37 and got my General at 13yrs. of age "Wd5GBJ". I have not had a
QSL since I was 17. Is this still fun???????????

359. Re: IM I TOO OLD TO COME BACK? Is this still fun???????????

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-05 09:26:22 UTC
From: me@nowwhere.com
Message-ID: <3D25663E.C7F3778E@swbell.net>
Source record: 139400

tk wrote:

> I am 37 and got my General at 13yrs. of age "Wd5GBJ". I have not had a
> QSL since I was 17. Is this still fun???????????

you definately are not to old!!!!! i was well over 50 before i got my
first
ticket. the state of the art has advanced tremendously in the past
decade,
radios that are relatively inexpensive offer features that were only
dreamed
of 20 years ago or were available on rigs that cost tens of thousands of
dollars.
there are new modes to have fun with as well. i see that you are in the
dallas/ftw
metro area, so am i. there are clubs here that cater to virtually any
interest
you may have in ham radio. go to the arrl site, http://www.arrl.org/ and
do a
bit of reading to catch up on what has been going on the past 15 - 20
years.

i can't speak for the rest of the ham community but speaking for myself,
HAM RADIO is a BLAST!!!

73 de

larry
kd5foy

360. 1 -2 GHz SWR meter

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-05 10:36:08 UTC
From: samsvl@nlr.nl
Message-ID: <Xns9242803228samsvlnlrnl@137.17.96.14>
Source record: 139401

I am looking for a diy design,
any pointers?

Sam

361. Re: A whole new 'back to basics' topic - Monopole fundamentals

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-05 12:02:27 UTC
From: CAM <w5dxp@hotmail.com>
Message-ID: <3D258AD3.138799E9@hotmail.com>
Source record: 139403

" J. Harvey" wrote:
> 1) The gain of a monopole (over a perfect infinite ground plane) is twice
> that of a dipole in free space.

Here's another quote from Schaum's Outline Series on "Electromagnetics":

"As the monopole radiates power only in the region above the conducting
plane, the total radiated power is one-half that of the corresponding
dipole."
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
------== Over 80,000 Newsgroups - 16 Different Servers! =-----

362. Re: High Dipole vs. Low Beam

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-05 12:07:03 UTC
From: Alan White <alannc44@ix.netcom.com>
Message-ID: <HZfV8.4080$At1.354757@twister.southeast.rr.com>
Source record: 139402

I have both...an A-3 and dipoles. If I am more successful with the dipoles
it is usually because I hear someone off the side or from an odd angle.
Listening for DX is so important. Often I'll hear someone on the dipole,
then switch to the beam after I figure out the direction.

If I had to choose I'd go with the dipoles. The bandwidth also provides you
with a little more flexibility frequency-wise.

Alan
WN4HOG

--
Windsurfing Club: http://www.ibscc.org
Homepage: http://pw1.netcom.com/~alannc44/qsl.htm

"Greg Knapp" <gknapp@freshrain.org> wrote in message
news:4O0V8.22081$A%3.262783@ord-read.news.verio.net...
> Which is better for pure gain (signal delivered at the receiving
site-which
> could be domestic or DX-in other words, for general use): an A3 up about
30
> feet or multi-band dipoles (to be used on 10, 15, and 20) up at about 60
> feet (at the center)?
>
> I figure the added height on the dipoles over the beam is good for at
least
> an S-unit or more, which would more than compensate for gain of the beam,
> due to the angle of takeoff--am I wrong on this? The dipoles (which are
now
> at only 30 feet at the center and much lower at the ends, currently work
160
> through 10 including WARC bands) would be lifted to 60 feet on a large
> push-up mast. If I put the beam up, I'd leave the dipoles where they are.
>
> Raising the dipoles to 60 feet would a lot less hassle (unbelievable
> neighbors and CC&RS--yet they allow TV antennas--so may put a TV antenna
on
> top and disguise the dipoles as guy wires) and money than getting the beam
> up to 30. I am not concerned with FB or directivity, just the delivered
> signal on 10, 15, and 20. I do not currently have the option of putting
the
> beam any higher.
>
> Which would you put up and why?
>

> Thanks for your thoughts,
>
> 73,
> Greg, N6GK
>
>

363. Re: ALL BAND ANT EXPERIMENT?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-05 12:09:41 UTC
From: Don Niles <k2pmc@adelphia.net>
Message-ID: <90gV8.11546$071.2827752@news1.news.adelphia.net>
Source record: 139404

Marvin,

Forget the balun. On 80 meters, where your antenna is resonant, the balun will cause a mismatch. The impedance will vary widely, into the thousands of ohms on other bands, which will not be handled properly by the balun. All you will be doing is generating a lot of heat in the balun and still have a high SWR on your transmission line which will result in even greater loss.

Feed the antenna with a balanced transmission line to your tuner and it will work fine on all bands.

Don - K2PMC

"Chris Boone" <Cboone@earthlink.net> wrote in message news:3D24FB25.AB2FF8F5@earthlink.net...
> Close......IF you use it as a Off Center Fed Dipole (also called a
> Windom in most cases) and put "anti resonant" dipole cut for around
> 11 MHz or so at 45 degrees to the main wires, you can get 9 band
> operation (using a 6:1 current balun)...it was in QST some time
> ago....I can send you the files if you like..
> and NO tuner required for most US amateur freqs...
>
> Chris
>
> marvin rosen wrote:
> >
> > My idea for a 80-10 mtr antenna:
> > An 80 mtr antenna with a 9:1 balun in the middle fed with coax & a manual
> > ant tuner in the shack.
> > Is the above idea feasable?

364. Re: A whole new 'back to basics' topic - Monopole fundamentals

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-05 12:10:04 UTC
From: " J. Harvey" <JM002.Harvey_TRIMTHIS_@Sympatico.ca>
Message-ID: <j0gV8.10285$MP.2013517@news20.bellglobal.com>
Source record: 139405

```
" J. Harvey" wrote:
> 1) The gain of a monopole (over a perfect infinite ground plane)
> is twice that of a dipole in free space.

"CAM"
> Here's another quote from Schaum's Outline Series
> on "Electromagnetics":
> "As the monopole radiates power only in the region
> above the conducting plane, the total radiated power
> is one-half that of the corresponding dipole."

One would assume that the "gain" in the other half of the Universe (the half
found *below* that perfect, infinite ground plane) is effectively zero. On
average, it appears to all balance out.
```

365. Re: 6 meter dipole off 80m problem

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-05 12:16:21 UTC
From: CAM <w5dxp@hotmail.com>
Message-ID: <3D258E15.D9FD5736@hotmail.com>
Source record: 139406

"R. Scott" wrote:
> I have an 75m dipole that I couldnt get to prune to 6 meters (14th
> harmonic) ...

52/14 = 3.7+ MHz. But 14 is an *even* multiple of wavelengths so you
are feeding the dipole near a voltage maximum point (high impedance)
instead of near a current maximum point (low impedance). You would
need an odd multiple to get a low impedance. 52/13=4.000, 52/15=3.470
I can resonate my 80m dipole on 6m by varying the length of the
ladder-line.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

366. Re: EH antenna feed system

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-05 12:20:51 UTC
From: 2w8ji@contesting.com
Message-ID: <3d258dce.27576879@news.akorn.net>
Source record: 139407

On 04 Jul 2002 22:17:29 GMT, jgboyles@aol.com (JGBOYLES) wrote:

>Hi Tom. If you look at fig. 4 in" phasing an EH antenna", it is a matching
>network for a dipole using both the high pass and low pass L networks. The EH
>cylinders are modeled as a series rlc circuit connected to the junctions of L1,
>C1 and L2, C2. The shield of the coax is connected to the junction of C1 and
>L2, GND? With this model the voltage on the two dipole sections, with respect
>to GND are 90 degrees out. But the current in both halves of the dipole would
>be in phase.

Truthfully, I'd bet they have no idea what phase anything is.

This entire thing is clearly a technical hoax. Something someone just dreamed up and tried to snow people with technobabble using buzz phrases about Poynting.

They not only do not understand common mode and differential mode, they don't understand simple circuits like networks or baluns. With that in mind, we are supposed to believe they understand more complex things like radiation...or how to make measurements.

Have fun, but I'm afraid you are wasting your time taking advice from people who know less than most others do about what they invented.

73 Tom

367. Re: BACK TO BASICS - EM waves, E and H fields, in phase orinquadr...

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-05 12:55:33 UTC
From: 2w8ji@contesting.com
Message-ID: <3d2590f6.28385294@news.akorn.net>
Source record: 139408

On Fri, 05 Jul 2002 00:25:40 GMT, "George, W5YR" <w5yr@att.net> wrote:

>The sun shines on you and it shines on me - common power source. I do
>certain things as a consequence. You do certain things. These certain
>things may or may not be the same, totally different, partially alike in
>some manner, etc. etc. Are they related?

According to Cecil (and Harrison) they are.

>If the sun went out - the power source vanished - would we both be
>affected? Of course.

And that is the logic...except for this...

In a system common mode and differential mode excitation does not even
have to come from the same source. So in this case, a star other than
the sun might be at work.

A better analogy George would be if you are on Earth, and Cecil is in
another solar system are your actions related or not related?

>But absent that event, it seems to me that my sphere
>of activities while possibly similar in some respects to yours - we both
>eat, sleep, etc. - are hardly related in a scientific sense.

Cecil and Harrison seem to think they are related.

>In the simple transmitting case, coax feed to a wire dipole antenna, it
>seems clear to me that the presence of common-mode current on the outer
>braid of a coax line must arise either from the division of current at the
>coax braid connection to the antenna in the absence of a balun or from its
>presence in the induction field of the radiator, or from both.

There are other causes also. It could be a flaw in the transmission
line or connection to the generator, or another external source.

>In either event, the comparative impedances of the system elements involved
>play a central role in establishing the magnitude of the effects. Whether
>or not these impedances are known or can be known quantitatively is another
>matter. But clearly they exist, even if some may be zero and others
>semi-infinite.

Of course they exist, they just are not related. The common mode
impedance and even the velocity of propagation or phase differences
can be anything compared to differential mode.

I suspect the real truth is Cecil does not like that idea, because it
means his dipole scheme might not always result in low common mode

currents.I'm sure other than that he cares less what I think.

>The stronger the differential-mode power component, the more excitation is
>available for the ultimate production of common-mode current. Thus, any
>changes in the system which alter differential-mode operation and
>performance is likely to have some effect on the common-mode current as
>well.

If they come from a common source and you change the source. But I can
make changes in the system that INCREASE differential mode impedance
and they can reduce coupling to comon mode, increase coupling to
common mode, or not change it.

Call me a fool, but I think that shows they are unrelated effects as a
overall view of systems. Now we might find a particular system with an
effect that tracks between the two, but we can easily make it NOT
track with a small change.

The only thing common might be the generator, and even that does not
have to be so!

>1. Differential-mode operation and common-mode operation are related in
>some manner highly dependent upon system configuration.

Or they might be unrelated. You can not forget that possibility.

>2. They are both manifestations of the overall operation of the entire
>antenna system, not just the transmission line.

...and source. Don't forget that.

>3. An analytical solution to determine the relationship is probably neither
>feasible nor, in practical terms, even possible.
>
>4. Experimental observations, unless firmly grounded on a complete
>understanding and definition of the entire system, are highly unlikely to
>provide much more than additional confusing anecdotal "evidence" that some
>form and degree of relationship exists.
>
>5. It is entirely possible that Change A in differential-mode operation may
>have an Effect B upon the common-mode operation within the system. It is
>also entirely possible that Change A may produce zero observable effect.
>The existence of either outcome neither proves nor disproves anyone's
>contention that the two are or are not "related."

They may either track, not change at all, or move opposite directions.
They may change at different rates and directions throughout a given
system that range from one extreme to the other.

I guess that means they are related, eh?

The real problem with sideways thinking that they are related is that
people leap to incorrect conclusions. Cecil and Harrison did that with
the balun, as do most people. People like to think a balun works

better at a low impedance differential mode point, when that isn't true. They like to think a balun always changes, or worse yet always reduces, common mode current. THAT is not true either.

It is much better and much less troublesome if we just admit that common mode behavior and differetial mode behavior of a system are based on two unrelated systems, and those system can have any relationship or even no relationship at all to each other.

Hence sticking a W2DU balun, or any other balun, in a system can increase problems, decrease problems, or not change a thing we might notice. There are many cases where adding a balun will actually increase feedline radiation.

You have to know the system, but short of that it is best by far to assume the common mode and differential modes are unrelated. Unless you are trying to sell a certain idea out of a traveling wagon show.

73 Tom

368. Re: 6 meter dipole off 80m problem

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-05 12:56:01 UTC
From: CAM <w5dxp@hotmail.com>
Message-ID: <3D259761.16AB8F71@hotmail.com>
Source record: 139409

"R. Scott" wrote:
> I have an 75m dipole that I couldnt get to prune to 6 meters (14th
> harmonic) ...

Off center feeding your 75m dipole by 4-6 feet would have little
effect on 75m operation and would allow you to find a current
maximum point, i.e. resonance on 6m.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

369. Re: 1 -2 GHz SWR meter

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-05 12:56:06 UTC
From: ae517@FreeNet.Carleton.CA
Message-ID: <ag4516$6s6$1@freenet9.carleton.ca>
Source record: 139410

Sam Storm van Leeuwen (samsvl@nlr.nl) writes:
> I am looking for a diy design,
> any pointers?

Feb 1995 QEX article by Paul Wade.

--
73 de va3rr/aa8lu
http://www.qsl.net/va3rr

370. Re: BACK TO BASICS - EM waves, E and H fields, in phase orinquadr...

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-05 13:38:06 UTC
From: CAM <w5dxp@hotmail.com>
Message-ID: <3D25A13E.46007DB6@hotmail.com>
Source record: 139411

Tom W8JI wrote:
> In a system common mode and differential mode excitation does not even
> have to come from the same source.

But for your original statement to be true, common mode and differential mode excitation must ALWAYS come from different sources. You said that common mode conditions and differential mode conditions are "NOT related". They often come from the same source so your statement is false.

If common mode conditions and differential mode conditions are ever related in even one system, your original statement is false. Would you like to revise your original statement?

If you had said it is possible for common mode conditions and differential mode conditions to be unrelated, or that common mode conditions and differential mode conditions are not always related, then nobody would have objected. But your statement with the capitalized "NOT" says they are *never* related and that is simply false. I have proved that they are indeed related in my three antenna systems. How can you rag on others for spreading false statements when you are doing the same thing?

You said that common mode and differential mode conditions are "NOT related". Sometimes they are related. That makes your statement false even if they are sometimes not related. All the mealy mouthing in the world is not going to change that fact. Your assertion that you were right about 'A', therefore you are right about everything, is the wishful thinking of an extremely immature individual and is not going to wash.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
------== Over 80,000 Newsgroups - 16 Different Servers! =-----

371. Re: Shipping antennas

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-05 13:51:01 UTC
From: Marty <martymann@nospam.com>
Message-ID: <3D25A424.75E25D15@nospam.com>
Source record: 139412

Yes Wayne, the OS-1 rate is computed at 30 Lb default value.

I shipped many boat vfh/loran antenna from VA to WA for $ 21.00
at UPS office and for $ 17.00 from our in house mail dept.

Still not too expensive, the US Post Office was about $ 5.00 less expensive.

73 marty

Wayne wrote:

> I shipped an oversized vertical antenna a few months back by UPS. The oversize
> charge was not too bad, but they stick you with something I think they called a
> density charge. They have some sort of ratio of volume to weight. They figure
> that any given volume needs to have a certain amount of weight. If you have a
> light bulky item, you are taking up space they could be filling with more packages
> from other customers. Because of this, they charge you for the weight that would
> normally fill that space. I ended up having to pay for 30 pounds when the packaged
> antenna only weighed 10 pounds. Fortunately, I was only shipping it a couple of
> hundred miles.
>
> Wayne L. Faris, KEï¿½BZ
>
> Dan Richardson wrote:
>
> > I beleive UPS will, for an extra charge, accept some over weight and
> > size packages. Have you double checked it see if that is possible?
> >
> > Danny
> >
> > On 14 Jun 2002 21:04:20 GMT, hrbcrb@aol.com.goaway (KF6HHS) wrote:
> >
> > >I have to get an antenna shiped from Ohio to Southern California. The antenna
> > >will be packed in a 6 inch tube 10 foot long, estimated weight of 40 pounds.
> > >UPS has a limit of 9 feet/108", my tube is 10 feet/120". Called Consolidated
> > >Freight and they quote over $257.00 - anyone have a suggestion.
> > >
> > >How do they ship thoes 20 foot Station Masters!
> > >
> > >Thanks and regards, Hugh KF6HHS
> > >Retired, now life moves at my pace.
> > >please note spam filter

372. Re: BACK TO BASICS - EM waves, E and H fields, in phase orinquadr...

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-05 14:02:25 UTC
From: CAM <w5dxp@hotmail.com>
Message-ID: <3D25A6F1.561E26CF@hotmail.com>
Source record: 139413

Tom W8JI wrote:
> In a system common mode and differential mode excitation does not even
> have to come from the same source. So in this case, a star other than
> the sun might be at work.

Tom, you are trying to make 100 true statements to keep from admitting
that you made one false statement. Old trick, doesn't work. You can make
a million true statements but your false statement is still false. You
are trying to imply that you said the common mode conditions are not
necessarily related to the differential mode conditions. That's not what
you said. You said they are "NOT related" which, given the capitalization
of the word "NOT" for emphasis, means never related.

I said: The basic question is whether common mode conditions are related to
differential conditions (or not).

You said:
> Then the answer is no, they are not related.

You didn't say they are sometimes not related or not necessarily related. If
there exists even one antenna system where the common mode conditions are
related to the differential mode conditions, then your statement is false. It
is probably safe to say that the great majority of IN-34 detectable common mode
conditions existing in an antenna system when an amateur radio transmitter
is keyed are indeed related to the transmitter's differential output. It
is foolish in the extreme to argue that common mode conditions and differential
mode conditions generated by the same source are "NOT related" but that is
exactly what you are clinging to for dear life.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

373. Re: BACK TO BASICS - EM waves, E and H fields, in phase orinquadr...

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-05 14:27:46 UTC
From: k1bqt@aol.com
Message-ID: <20020705102746.26724.00001407@mb-cv.aol.com>
Source record: 139414

We can probably agee that common mode and differential mode currents share:

1. a generator
2. a wave period

While formulas describing the behavior of RF current seem to apply equally to both modes, I'm having a hard time envisioning how the variables within those formulas relate across modes so as to predict anything that might constitute a relationship (the exception being frequency).

For example, can anyone draw a mathematical relationship between differential and common-mode impedance on a transmission line? What is the relationship between velcoity factors? What is the phase relationship? Loss? Mutual coupling?

We know frequency is the same. We may even be safe in suggesting that amplitudes will track with proportionallity. But, what else can we predict with certainty every time?

Rick K1BQT

374. Re: A whole new 'back to basics' topic - Monopole fundamentals

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-05 14:36:58 UTC
From: klocko@toad.net
Message-ID: <224d9cd4.0207050636.154b3ec@posting.google.com>
Source record: 139415

" J. Harvey" <JM002.Harvey_TRIMTHIS_@Sympatico.ca> wrote in message
news:<i89V8.9725$MP.1932703@news20.bellglobal.com>...
> I found an interesting report available online (.pdf format) entitled
> "Dipole and Monopole Antenna Gain and Effective Area for Communication
> Formulas". It is authored by JC Logan and JW Rockway (a couple of famous
> 'EM guys').
>
> The thing that I found most surprising was that fact that this paper was
> written as recently as September 1997 (the topic seems so early 1950s-ish).
>
> Link to report:
> www.spawar.navy.mil/sti/publications/pubs/tr/1756/tr1756.pdf
>
> [If you need the free .pdf file reader, go to
> http://www.adobe.com/products/acrobat/readstep.html]
>
>
> Here are the main conclusions of the report in point format:
>
> 1) The gain of a monopole (over a perfect infinite ground plane) is twice
> that of a dipole in free space. 2.16~2.17 versus 5.16~5.17 dB. [Nitpick -
> shouldn't that be 5.17~5.18 dB since 'times two' is actually +3.01dB not
> +3.00dB ?]
>
> 2) The effective area of a receive monopole is one-fourth that of a dipole.
>
> 3) If the monopole and dipole are in identical fields, then the dipole will
> deliver to a matched load four times the power.
>
> My only important question - is this really 'new' (1997) news ?

Hi J.,
I've got another important question. If the gain of a monopole is
twice that of a free-space dipole, wouldn't the monopole's effective
area also be twice the dipole's? It may be new news if they are
arguing that the monopole violates reciprocity. Meanwhile, I'll have
to go back and look at the PDF. 73,

Bill N3WK

375. Chelcom HFV1 Vertical

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-05 14:38:05 UTC
From: Biggles <hamsat@totalise.co.uk>
Message-ID: <hkbbiuo326l9fktple3ctf9mb8ioa73lfj@4ax.com>
Source record: 139416

Hi
Would welcome any comments with regards
to the HFV1 80 Metre Vertical HF antenna and its suitability for multi
band use via an ATU
TIA

376. Re: A whole new 'back to basics' topic - Monopole fundamentals

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-05 14:40:36 UTC
From: k0bg@aol.com
Message-ID: <20020705104036.17319.00006345@mb-ct.aol.com>
Source record: 139418

You all must be reading some sort of alien physics literature. We have a lot of that here in Roswell!

May be you all should read Dr. Jerry Sevick's (W2FMI) treatus on verticals available from the ARRL download site.

Alan, Kï¿½BG

377. Re: Coax conduit to tower

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-05 14:40:43 UTC
From: n2ey@aol.com
Message-ID: <9f4bfe89.0207050640.3ff596b@posting.google.com>
Source record: 139417

"David" <phochief@nonspamhotmail.com> wrote in message
news:<AssU8.20787$wj4.1935375@e3500-atl2.usenetserver.com>...
> Getting ready to dig the concrete base for my new tower and plan to run a 1
> 1/2 inch PVC pipe from my shack to my tower about 30' away and up through
> the concrete base. This pipe is big enough to carry several coax lines plus
> the rotor cable, so is there any reason I would want to run a separate pipe
> for anything else? I've never had a problem running the coax and rotor
> cable next to each other. The reason I ask is because I see photos of a
> tower installation on the texas towers website with two PVC conduits coming
> up through the concrete base.
>
The main cost of putting in the conduit is the work of digging and
filling the trench. It's one of those jobs you only want to do once!

A few extra $$ spent on bigger pipe, and a second run, will be well
worth it if you ever have a problem or want to run more cables.
Although that 1-1/2" stuff may look plenty big, conduits fill up
faster than you think.

--

For the application described, I would prefer two smaller conduits to
a single large one, if cost or space didn't permit two large ones.
First reason is rendundancy in case of failure. Second reason is that
it's easier to pull cables in a conduit that has only a cable or two
in it.

73 de Jim, N2EY

378. Re: BACK TO BASICS - EM waves, E and H fields, in phase orinquadr...

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-05 14:40:51 UTC
From: CAM <w5dxp@hotmail.com>
Message-ID: <3D25AFF3.6D0A94BC@hotmail.com>
Source record: 139319

Rick Littlefield wrote:
>
> We can probably agee that common mode and differential mode currents share:
>
> 1. a generator
> 2. a wave period

And therefore are related in some manner, which disproves the assertion that they are "NOT related".

> While formulas describing the behavior of RF current seem to apply equally to
> both modes, I'm having a hard time envisioning how the variables within those
> formulas relate across modes so as to predict anything that might constitute a
> relationship (the exception being frequency).

I have already said they are unknown and unpredictable. That doesn't mean that they are "NOT related". Like the sun and planets, all one has to do is measure the relationships. Not knowing the relationship is not the same as being "NOT related" unless one believes that one's lack of knowledge controls the universe. Since when did lack of knowledge prove anything except lack of knowledge?

> For example, can anyone draw a mathematical relationship between differential
> and common-mode impedance on a transmission line? What is the relationship
> between velcoity factors? What is the phase relationship? Loss? Mutual
> coupling?

You have completely missed the crux of the argument, Rick. The only question is whether Tom's original statement is true or false. I can't locate the original statement but here is where he repeated it.
****
I said: The basic question is whether common mode conditions are related to differential conditions (or not). No tuner required. No movement required.

Tom said: Then the answer is no, they are not related.
****
He didn't say they don't have to be related or that they are sometimes unrelated. He made an absolute statement, "they are not related". If they are ever related in any way whatsoever in any system whatsoever, Tom's statement is false. He has thrown up a logical diversion in the past few days to try to make everyone believe that 100 true statements make up for one false statement. His ploy seems to have worked on some people.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!

------== Over 80,000 Newsgroups - 16 Different Servers! =-----

379. Re: ALL BAND ANT EXPERIMENT?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-05 14:44:05 UTC
From: k0bg@aol.com
Message-ID: <20020705104405.17319.00006346@mb-ct.aol.com>
Source record: 139320

Don is correct: Sans the balun!

There are two white papers, if you will, that every amateur should be aware of, in other words, requisite reading. They are:

Another Look at Reflections by Dr. Walt Maxwell, W2DU

Building and Using Baluns and Ununs by Dr. Jerry Sevick, W2FMI

380. Re: GAMMA MATCH, build your own, Reduce SWR to 1:1

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-05 14:56:06 UTC
From: n2ey@aol.com
Message-ID: <9f4bfe89.0207050656.11b7143f@posting.google.com>
Source record: 139321

oriontc@racsa.co.cr (Chris Tiller) wrote in message
news:<f54967d9.0207031301.f9812b8@posting.google.com>...
> Why buy expensive tuners to achieve antenna match.

Good question! I build mine for very little money. I spent less than $20 to build a complete "Ultimate Transmatch" that has served me very well. Roller coil from a BC-375, Cardwell splitstator cap, ARC-5 transmitter padder cap. Some rotary switches and a built-in Monimatch. All housed in a BC-375 tuning unit case. Reduction verniers on the caps, nice black wrinkle finish. Selects 2 coax and 1 long wire antennas and up to 4 rigs.

> Build a GAMMA MATCH. Complete instructions $7.00.

Same info is in my $2 hamfest-special ARRL Handbook.

> See www.tiller.net

I went there. What's interesting is that you don't mention the fact that the gamma match will only do its thing on one band. In some cases it will only work over part of the band.

Gammas are great for monoband Yagis or shunt-feeding a tower on 160 or 80. There are better solutions for other situations.

Transmatches are neither expensive nor difficult to build. Hams buy them because they prefer to spend money rather than time.

73 de Jim, N2EY

381. Re: IM I TOO OLD TO COME BACK? Is this still fun???????????

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-05 15:07:45 UTC
From: ZOOM <robert931@sympatico.ca>
Message-ID: <UCiV8.7485$aJ4.1833092@news20.bellglobal.com>
Source record: 139322

No no fun. We do it cause we like to inflict pain on ourselves.

HERE'S YOUR SIGN!

"tk" <iatb@flash.net> wrote in message news:3D253D1B.4E88FDEA@flash.net...
> I am 37 and got my General at 13yrs. of age "Wd5GBJ". I have not had a
> QSL since I was 17. Is this still fun???????????

382. Re: Coax conduit to tower

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-05 15:45:05 UTC
From: Dave <n0rq@nospamplease.swbell.net>
Message-ID: <5ajV8.1632$Di7.727548012@newssvr11.news.prodigy.com>
Source record: 139323

Agreed!! Make 2 runs of pipe, even if you leave one empty (for now). 2" or 3" would be best. For only 30', the cost will be minimal, and in the future, you'll probably be VERY glad you did.

"Ed G." <Spectrumhog@_REMOVE_StarBand.net> wrote in message news:Xns9241DECDFEF95Frog207Junocom@148.78.248.76...
>
> Yes, recommend 2 or even better, 3" conduit... and for gawd's sake,
> don't forget to use sweeps!
>
>
>
> Ed

383. Re: Coax conduit to tower

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-05 15:45:28 UTC
From: dan <danlx@execpc.com>
Message-ID: <3d25c04a$0$1431$272ea4a1@news.execpc.com>
Source record: 139324

On Fri, 05 Jul 2002 04:52:48 GMT, "Ed G."
<Spectrumhog@_REMOVE_StarBand.net> wrote:

>
> Yes, recommend 2 or even better, 3" conduit... and for gawd's sake,
>don't forget to use sweeps!
Ed, what are sweeps?

Dan

I've rambled enough, back to the rocking chair. ZZZZZZZZZ
Remove left x for a direct reply.

384. Re: BACK TO BASICS - EM waves, E and H fields, in phase orinquadr...

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-05 16:30:47 UTC
From: k1bqt@aol.com
Message-ID: <20020705123047.05882.00002666@mb-mf.aol.com>
Source record: 139325

>You have completely missed the crux of the argument, Rick.<

Wouldn't be the first time, Cecil!

>(Tom) ....made an absolute statement, "they are not related".<

So he did. Despite that, I presume you'd agree we don't need one in order to have the other--and that there's not much of value we can infer about one from observing the behavior of the other.

Take away the sex and what's left?

Rick K1BQT

385. Re: BACK TO BASICS - EM waves, E and H fields, in phase or inquadr...

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-05 16:47:48 UTC
From: richardharrison@webtv.net
Message-ID: <4717-3D25CDB4-308@storefull-2393.public.lawson.webtv.net>
Source record: 139328

Tom, W8JI has changed his story from NOT, and NEVER, to don`t have to be. He does not admit that NOT and NEVER were blatantly wrong.

In Tom`s June 28, 11:29am posting, the oldest in this thread displayed for me, Tom says:
"Far field is a DISTANCE problem, not a PHASE problem."

Were this "always" true, how would gain antennas work? It`s the distance and phase of signal contributions at a far-field point that determine the signal.

In the same posting, Tom says:
"Nonsense. The bulk of efficiency loss in any small antenna is almost always due to cancelling the reactance in the antenna."

Should have at least replaced "any" with "a".

Cancelling the reactance in the antenna does not cause inefficiency. Adding a coil`s resistance causes inefficiency.

Tom also ignored another class of small antennas in his false statement. The small loop has its reactance cancelled by a capacitor which can have low loss.

Some Tomisms are conceptually wrong, as is:
"Farfield---not a PHASE problem."

Some Tomisms are mistakes in expression, as:
"---loss in any small antenna is almost always due to cancelling the reactance in the antenna."
The idea was right, but the statement is false.

How is the newcomer to differentiate?

Best regards, Richard Harrison, KB5WZI

386. Re: BACK TO BASICS - EM waves, E and H fields, in phase orinquadr...

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-05 16:48:58 UTC
From: Gene Fuller <W4SZzzzzz@att.net>
Message-ID: <3D25CE2F.28C2B372@att.net>
Source record: 139326

CAM wrote (in part):

> You have completely missed the crux of the argument, Rick. The only question
> is whether Tom's original statement is true or false.

Hmmm, I have not seen any disagreement for about a week relating to anything technical. No issues about where the electrons go, no arguments about how waves behave, no real issues about balance, the effect of ground, the phase of the moon (Oops, strike that, we did see a discourse on celestial physics), or anything else technical.

This thread is now reduced to:

1. A subtle semantic issue over the exact meaning of "not", or perhaps "NOT!!!!"

2. Pride.

Is there anything left in this thread that relates to antennas?

73,
Gene
W4SZ

387. Re: IM I TOO OLD TO COME BACK? Is this still fun???????????

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-05 17:00:40 UTC
From: Irv Finkleman <finkirv@shaw.ca>
Message-ID: <3D25D015.C62DBF9E@shaw.ca>
Source record: 139327

tk wrote:
>
> I am 37 and got my General at 13yrs. of age "Wd5GBJ". I have not had a
> QSL since I was 17. Is this still fun???????????

I've been playing with radios since age 11 and am about to
turn 62.
Got my ticket at age 17 and have never lost my fascination
for
the hobby. If nothing else, it sure keeps us dirty old men
off
the streets at night. :-)

--
Diagnosed Type II Diabetes March 5 2001
Beating it with diet and exercise!
297/215/210 (to be revised lower)
58"/43"(!)/44" (already lower too!)

Visit my FINALLY UPDATED website at
http://members.shaw.ca/finkirv/

Irv Finkleman,
Grampa/Ex-Navy/Old Fart/Ham Radio VE6BP
Calgary, Alberta, Canada

388. Re: BACK TO BASICS - EM waves, E and H fields, in phase orinquadr...

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-05 17:14:16 UTC
From: CAM <w5dxp@hotmail.com>
Message-ID: <3D25D3E8.A67A520E@hotmail.com>
Source record: 139329

Rick Littlefield wrote:
>
> >You have completely missed the crux of the argument, Rick.<
>
> Wouldn't be the first time, Cecil!
>
> >(Tom) ....made an absolute statement, "they are not related".<
>
> So he did. Despite that, I presume you'd agree we don't need one in order to
> have the other--and that there's not much of value we can infer about one from
> observing the behavior of the other.

We can argue over how much common mode information can be obtained from
observing the imbalance of a physical antenna system, but Tom's statement
is still false. Why should someone who demands 100% technical accuracy from
others be given a waiver to spread false information?
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
------== Over 80,000 Newsgroups - 16 Different Servers! =-----

389. Re: BACK TO BASICS - EM waves, E and H fields, in phase orinquadr...

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-05 17:19:22 UTC
From: CAM <w5dxp@hotmail.com>
Message-ID: <3D25D51A.E7C3595B@hotmail.com>
Source record: 139330

Gene Fuller wrote:
> This thread is now reduced to:
> 1. A subtle semantic issue over the exact meaning of "not", or perhaps
> "NOT!!!!"

"NOT" is one of the few English words that has an exact meaning.
The issue is should someone who vehemently demands 100% technical
accuracy from others not be held to the same standards he demands
of others? You know, people in glass houses, ...
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

390. Re: BACK TO BASICS - EM waves, E and H fields, in phase orinquadr...

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-05 17:28:16 UTC
From: richardharrison@webtv.net
Message-ID: <25852-3D25D730-407@storefull-2396.public.lawson.webtv.net>
Source record: 139334

Rick, K1BQ wrote:
"But what else can we predict with certainty every time?"

Put a dipole in free space connected to a parallel-line transmission line. You don`t take the feedline away at 90 degress, so that you produce coupling in this particular case. What is the coupling between feedline and the antenna?

First, you need to know the angle between the feedline and antenna before beginning to calculate coupling.

More likely, in a real world antenna and feedline, you would measure the common-mode coupling after your antenna set-up.

Broadcast stations measure the coupling between antenna array elements (towers) as described in earlier postings. You can measure common-mode coupling the same way.

Broadcast stations have good estimates of anticipated coupling based upon massive experience but it must be measured as built.

Once finalized, the coupling between towers in a directional array does not normally change. The array works as designed and built year after year.

Best regards, Richard Harrison, KB5WZI

391. Re: IM I TOO OLD TO COME BACK? Is this still fun????????????

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-05 17:34:14 UTC
From: 'Doc <w5lz@icok.net>
Message-ID: <3D25D888.8B5B0B70@icok.net>
Source record: 139331

TK,
That just depends. What are you doing
instead?
'Doc

392. Info ref Hy-Gain AV-18VS

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-05 17:42:54 UTC
From: Biggles <hamsat@totalise.co.uk>
Message-ID: <l7mbiugo511p8tthamne96m745mrrkdpn4@4ax.com>
Source record: 139332

Hi
I would welcome any comments reference the hy-gain AV-18VS vertical HF antenna. Can it be mounted on a tower or does it have to be at ground level. Does it require ground radials. Also do you need to use an ATU even if it is designed as a 5 band antenna.
TIA

393. Re: A whole new 'back to basics' topic - Monopole fundamentals

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-05 17:43:11 UTC
From: 'Doc <w5lz@icok.net>
Message-ID: <3D25DAA6.65B37987@icok.net>
Source record: 139333

J. Harvey,
Actually, it sounds like someone didn't
do his homework very well. Assuming that the
monopole 1/2 the length of the dipole, and that
they both have the same diameter, At least two
of the 'conclusions' are not correct.
Is it 'new' information. No, it's the same
old information presented in a different way, and
incorrectly at times.
'Doc

394. Re: IM I TOO OLD TO COME BACK? Is this still fun???????????

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-05 17:47:59 UTC
From: cbhoelzel <n4bjx@naxs.com>
Message-ID: <3D25DBCF.555C57FD@naxs.com>
Source record: 139335

tk wrote:
>
> I am 37 and got my General at 13yrs. of age "Wd5GBJ". I have not had a
> QSL since I was 17. Is this still fun???????????

There are lots of fun things to do these days in amateur radio.
Whatever floats your boat, practically.

As to being too old, I was 13 when I got bit by the bug. Didn't know
anybody and neither did my folks. I was left hanging until I was nearly
40. Then found an Elmer who got me going and within a year or so I had
gotten my Extra Class ticket (including the 20 wpm test).

Nowadays the code is easy to pass, but I'm no longer sure I could pass
the written test.

Good luck and 73
Chuck
N4BJX

395. Is a Gap Titan bettan than R5 on 20 m - 10 m?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-05 18:20:51 UTC
From: StarGazer <pti@capnet.com>
Message-ID: <3D25E383.107F314D@capnet.com>
Source record: 139343

.

396. Re: BACK TO BASICS - EM waves, E and H fields, in phase orinquadr...

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-05 18:27:26 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <o0pbius55qjegkaevtimrujft9pv2s2no2@4ax.com>
Source record: 139336

On Thu, 04 Jul 2002 19:49:37 -0500, CAM <w5dxp@hotmail.com> wrote:

>Richard Clark wrote:
>> Why would I confine the argument when there are already common,
>> general examples available? Certainly the one offered by Richard
>> Harrison provides a competent one.
>
>Richard's system was not a typical ham system, which is what is being
>discussed. Please present an amateur transmitter and antenna system where
>all sources....

Hi Cecil,

On the one hand you insist that Richard's example is out of context,
so to speak, and then you insist that I provide another, that would
also run the risk of being out of context, so to speak. This is all a
patchwork quilt being unraveled as you reject each suggestion that
does not conform to your impression of what constitutes a proof of
your thesis.

I would suggest that you simply resolve the current context with a
simple rendering into the obvious bridge configuration that Richard
already responded to. None of this is so demanding nor technically
challenging is it?
>Given you have no response to where the
>Common of the Common Mode resides, I must stand aside to withhold
>committing to your thesis until the revelation of this simple and
>(dare I say it?) common consideration.

73's
Richard Clark, KB7QHC

397. Re: BACK TO BASICS - EM waves, E and H fields, in phase orinquadr...

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-05 18:31:07 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <nepbiuc5kjoqfe7o9tuiga09u5i9rai9q3@4ax.com>
Source record: 139337

On Thu, 4 Jul 2002 18:49:54 -0400, " J. Harvey"
<JM002.Harvey_TRIMTHIS_@Sympatico.ca> wrote:

>"CAM"
>> Perhaps it is time for someone to present
>> a ham antenna system being driven by an
>> active ham transmitter for which the common
>> mode current flows when the differential
>> current is not flowing...
>
>Dipole antenna installed under a major power line (xmitter firmly grounded)
>?
>
>(Common mode will be 60Hz.)
>
>

Hi Jeff,

Yet another common experience that offers a general solution that
would also support the special case being offered. You offer more
understanding of the issue than the myopic struggle so far.

73's
Richard Clark, KB7QHC

398. Re: 6 meter dipole off 80m problem

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-05 18:39:28 UTC
From: nm5k@wt.net
Message-ID: <25eb70d7.0207051039.508bd54b@posting.google.com>
Source record: 139338

CAM <w5dxp@hotmail.com> wrote in message news:<3D259761.16AB8F71@hotmail.com>...
> "R. Scott" wrote:
> > I have an 75m dipole that I couldnt get to prune to 6 meters (14th
> > harmonic) ...
>
> Off center feeding your 75m dipole by 4-6 feet would have little
> effect on 75m operation and would allow you to find a current
> maximum point, i.e. resonance on 6m.

Dunno, thats quite a change for 75m, if it's tuned already. I think
he's much better off only offsetting the feed on the 6m legs. I'd
leave the 75m legs alone. MK

399. Re: IM I TOO OLD TO COME BACK? Is this still fun???????????

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-05 18:48:47 UTC
From: nm5k@wt.net
Message-ID: <25eb70d7.0207051048.6948ad25@posting.google.com>
Source record: 139339

tk <iatb@flash.net> wrote in message news:<3D253D1B.4E88FDEA@flash.net>...
> I am 37 and got my General at 13yrs. of age "Wd5GBJ". I have not had a
> QSL since I was 17. Is this still fun???????????

Dunno...Thats up to you. I think I had more "fun" back when I first started. "as WD5CJL". I was pretty primitive back in those days with crappy receivers and a simple homebrew xmtr. Now that I'm all fancied out with good rigs, antennas, ad nausium, I actually find operating pretty boring now. No real challenge at all. It's like CB with a fancier name and gear. Well, let me take that back...I know some cb'ers with better gear than I have.. As far as having fun on the air, I still prefer CW over other modes. At least it gives me something more to do, rather than just yik yakking by voice or pecking at keys. And I get plenty enough key pecking here on the net. MK

400. Article from CQ magazine

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-05 18:55:28 UTC
From: Jack Poulter <jpoulter@islandnet.com>
Message-ID: <1025895264.481122@news.islandnet.com>
Source record: 139340

Old Time Radio has reported sending an article in to a
couple of addresses, but they say they have not been received.

Could he please send it to me to see if something is wrong with the
transmission, as I have been able to communicate ok with the two who
asked for the file but have not yet received it.

73,

Jack Poulter (VE7JCP)
On an Island in the Pacific
e-mail: jpoulter@islandnet.com

401. Re: BACK TO BASICS - EM waves, E and H fields, in phase orinquadr...

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-05 19:12:08 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <iqpbiuguujgg7fv2rmdee8als2o0f9sf8q@4ax.com>
Source record: 139341

On Fri, 5 Jul 2002 00:29:25 -0500 (CDT), richardharrison@webtv.net
(Richard Harrison) wrote:

>Such independence does not exist in our ham radio example. One and only
>one transmitter is supplying all the signals being considered, both the
>differential-mode and the common-mode signals.
>
>This single source locks the signals together.
>
>Best regards, Richard Harrison, KB5WZI

Hi Richard,

This is simply framing the question to match the answer. In fact
Common Mode on any system is stimulated by every nearby source of
radiation and this is a natural consequence of living in a real world.
As such there are more contributors to the Common Mode than the single
myopic focus that is straining to reject them. And further, those
currents and potentials are wholly unrelated except by arguers'
inflexibility or their introduction of divine intervention to support
a specific thesis as a generality. The correlations are (as Jeff
offers) obvious on the face of it; however, the arguments beyond that
are specious.

I am not interested in the folderol about applications of absolutisms
where the contrarians employ absolutisms in their offensive. Such
argument that has evolved from those conflicts is simple a battle of
egos. If I were to weigh in on the discussion with my own
observations of the corruption of language (having done so
tangentially in the sentence introducing this paragraph), few would
come away with less than tatters. There are none here that have any
argument but with language and to their embarrassment they dress it as
technical distinctions. That is outright baloney on both sides.

Richard, you have attended the technical distinction of the Common of
the Common Mode, as has Jeff by numerous examples. I am not impressed
with a thesis that ignores these (more than probable supporting)
examples out of fear of losing rhetorical leverage.

I have offered Cecil that he could be right if he but provide a simple
answer to his own "context" to resolve if any errors remain in his
thesis (and Tom has demonstrated errors to which Cecil has allowed).
Barring that, I have to respond to Cecil with:
>Given you have no response to where the
>Common of the Common Mode resides, I must stand aside to withhold
>committing to your thesis until the revelation of this simple and

>(dare I say it?) common consideration.

73's
Richard Clark, KB7QHC

402. Re: BACK TO BASICS - EM waves, E and H fields, in phase orinquadr...

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-05 19:15:26 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <t5sbiuclrosf7c0j7jhp3k3es9ntoa1k5c@4ax.com>
Source record: 139342

On Fri, 05 Jul 2002 00:25:40 GMT, "George, W5YR" <w5yr@att.net> wrote:

>Thus, my conclusions are
>
>1. Differential-mode operation and common-mode operation are related in
>some manner highly dependent upon system configuration.
>
>2. They are both manifestations of the overall operation of the entire
>antenna system, not just the transmission line.
>
>3. An analytical solution to determine the relationship is probably neither
>feasible nor, in practical terms, even possible.
>
>4. Experimental observations, unless firmly grounded on a complete
>understanding and definition of the entire system, are highly unlikely to
>provide much more than additional confusing anecdotal "evidence" that some
>form and degree of relationship exists.
>
>5. It is entirely possible that Change A in differential-mode operation may
>have an Effect B upon the common-mode operation within the system. It is
>also entirely possible that Change A may produce zero observable effect.
>The existence of either outcome neither proves nor disproves anyone's
>contention that the two are or are not "related."
>
>73/72/oo, George W5YR

Hi George,

A well balanced and thoughtful exposition.

73's
Richard Clark, KB7QHC

403. Re: BACK TO BASICS - EM waves, E and H fields, in phase orinquadr...

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-05 19:25:31 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <6asbiusut1fal0pjes5t3q5nio6t4ace5q@4ax.com>
Source record: 139344

On 05 Jul 2002 14:27:46 GMT, k1bqt@aol.com (Rick Littlefield) wrote:

>
>For example, can anyone draw a mathematical relationship between differential
>and common-mode impedance on a transmission line? What is the relationship
>between velcoity factors? What is the phase relationship? Loss? Mutual
>coupling?
>

Hi Rick,

You are asking for more than is necessary. One could endeavor to
answer the minutia, and in doing so come up with an absolute answer;
but it is not necessary to know the actual values of:
R1 / R2 = R3 / R4
to observe a relationship that is manifest in the equation.

Scrimmaging for the actual value of R1, its impressed phase (if
complex and hence appropriately called X1), its genesis (velocity
factor or such), the potential it sees or the current is supports is
all noise to the issue of "relationship." The only argument these
measures could resolve is the magnitude of relationship (the
relationship will persist in spite of the measure).

73's
Richard Clark, KB7QHC

404. Re: BACK TO BASICS - EM waves, E and H fields, in phase orinquadr...

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-05 19:41:23 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <rtsbiug762u06ai340pep24euf8umqv9ci@4ax.com>
Source record: 139345

On Fri, 05 Jul 2002 12:19:22 -0500, CAM <w5dxp@hotmail.com> wrote:

>"NOT" is one of the few English words that has an exact meaning.

Hi Cecil,

As I offered in other writing, the engagement in dialectic of language
is bound to lead to contradiction. There is nothing exact about
language, "not" even your statement above.

The Oxford English Dictionary has four (4) entries for this word of
which the first three offer:
"to clip or cut short (the hair or beard)"
"close cropped, short haired"
"of sheep or cattle, hornless"
and finally your (I presume) usage:
"the ordinary adverb of negation"

Relying on language as a critical element of proof is poor proof
indeed. Even if we dismiss the first three definitions, there is
always the colloquial usage which suggests that absolute application
is not always meant nor to be taken.

73's
Richard Clark, KB7QHC

405. Re: BACK TO BASICS - EM waves, E and H fields, in phase orinquadr...

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-05 19:44:59 UTC
From: richardharrison@webtv.net
Message-ID: <14173-3D25F73B-121@storefull-2392.public.lawson.webtv.net>
Source record: 139346

Tom, W8JI wrote:
"But I can make changes in the system that INCREASE differential mode impedance and they can reduce coupling to common mode, increase coupling to the common mode, or not change it."

Tom`s obfuscating again.

The relation, Z = E / I, is true and exists no matter if you change E&I to make its value large or small.

You can shift the ratio in a gear box, but that does not make wheel RPM independent of engine RPM.

The fact that flywheel rotation and RPM of the tires are changed with respect to each other does not make them unrelated.

Same with common-mode coupled to differential-mode. Changing the coupling does not make them unrelated.

Best regards, Richard Harrison, KB5WZI

406. Re: BACK TO BASICS - EM waves, E and H fields, in phase orinquadr...

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-05 20:40:47 UTC
From: richardharrison@webtv.net
Message-ID: <14173-3D26044F-123@storefull-2392.public.lawson.webtv.net>
Source record: 139347

Richard Clark wrote:
"I am not impressed with a thesis that ignores these (more than probable supporting) examples out of fear of losing rhetorical leverage."

No fear here. Try to keep the argument simple, but not too simple, that`s all.

At Richard Clark`s urging, I offer a new thought which includes his bridge idea and applies to modes for a single signal or multi-source signals.

Suppose we have a dipole and feedline under Jeff`s powerline. A measure of imbalance in this system may be the differential signal from the system at 50/60 Hz.

The wavelength of the power frequency is so long that the current and magnitude everywhere along the powerline near our antenna system is practically the same.

So, any powerline pickup on the antenna system is due to imbalance. This is hard to quantify, but may be not so hard to minimize by adjusting the balance.

This is extraneous to the argument of the differential-mode is related to the common mode, yes or no.

Bewst regards, Richard harrison, KB5WZI

407. Re: 80 m dipole question??

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-05 20:54:32 UTC
From: 'Doc <w5lz@icok.net>
Message-ID: <3D260779.1DCA7B99@icok.net>
Source record: 139348

Richard Harrison wrote:
>
> CAM, W5DXP wrote:
> "---is a 1/2WL dipole with a center insulator which is not shorted and
> no transmission line, a resonant antenna?"
>
> Break an antenna completely with a center insulator and it no longer is
> a single antenna. It`s two resonant antennas. Resonant frequency being a
> function of length, these halves of the longer length now resonate at
> about twice the frequency of the longer wire.

I didn't pay enough attention the first time
through, so took another look.
Are you really sure that the above is what you
meant to say??
'Doc

408. Re: BACK TO BASICS - EM waves, E and H fields, in phase orinquadr...

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-05 21:07:42 UTC
From: CAM <w5dxp@hotmail.com>
Message-ID: <3D260A9E.7FECD605@hotmail.com>
Source record: 139349

Richard Clark wrote:
> I would suggest that you simply resolve the current context with a
> simple rendering into the obvious bridge configuration that Richard
> already responded to. None of this is so demanding nor technically
> challenging is it?

None of this is technically challenging enough to require a bridge.
It only takes one example to prove that Tom's statement is wrong
and I have provided that example with my code practice oscillator
that allows Morse code to be read by detecting common mode currents.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

409. Re: BACK TO BASICS - EM waves, E and H fields, in phase orinquadr...

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-05 21:13:04 UTC
From: CAM <w5dxp@hotmail.com>
Message-ID: <3D260BE0.E532175C@hotmail.com>
Source record: 139350

Richard Clark wrote:
> I have offered Cecil that he could be right if he but provide a simple
> answer to his own "context" to resolve if any errors remain in his
> thesis (and Tom has demonstrated errors to which Cecil has allowed).

I have provided all the proof that is needed, Richard. I don't feel
link wasting my time on techno-bafflegab. All it takes is one example
where common mode conditions are related to differential mode
conditions to prove that Tom's statement is wrong. I have already
provided numerous examples. In particular, you can read my Morse
code from a Morse code oscillator triggered by my common mode
current detector. You may call that "NOT related" but you would
be wrong.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

410. Re: BACK TO BASICS - EM waves, E and H fields, in phase orinquadr...

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-05 21:15:14 UTC
From: CAM <w5dxp@hotmail.com>
Message-ID: <3D260C62.AA1C0020@hotmail.com>
Source record: 139351

Richard Clark wrote:
> Relying on language as a critical element of proof is poor proof
> indeed.

Well then, communications is impossible, isn't it, and nobody is
ever right or wrong? What the hell are we doing here?
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
------== Over 80,000 Newsgroups - 16 Different Servers! =-----

411. Re: BACK TO BASICS - EM waves, E and H fields, in phase orinquadr...

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-05 21:24:53 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <3q1ciu4e7ibdddn7e48f66u88sdbl5plsc@4ax.com>
Source record: 139352

On Fri, 5 Jul 2002 15:40:47 -0500 (CDT), richardharrison@webtv.net
(Richard Harrison) wrote:

>Richard Clark wrote:
>"I am not impressed with a thesis that ignores these (more than probable
>supporting) examples out of fear of losing rhetorical leverage."
>
>No fear here. Try to keep the argument simple, but not too simple,
>that`s all.
>
>At Richard Clark`s urging, I offer a new thought which includes his
>bridge idea and applies to modes for a single signal or multi-source
>signals.
>
>Suppose we have a dipole and feedline under Jeff`s powerline. A measure
>of imbalance in this system may be the differential signal from the
>system at 50/60 Hz.
>
>The wavelength of the power frequency is so long that the current and
>magnitude everywhere along the powerline near our antenna system is
>practically the same.
>
>So, any powerline pickup on the antenna system is due to imbalance. This
>is hard to quantify, but may be not so hard to minimize by adjusting the
>balance.
>
>This is extraneous to the argument of the differential-mode is related
>to the common mode, yes or no.
>
>Bewst regards, Richard harrison, KB5WZI

Hi Richard,

Your comments reveal the danger of myopic discussion. Common Mode
issues are not confined to those that give rise to an expected
problem. For example you go to describe Jeff's condition of the
overhead powerlines and unnecessarily embellish with
frequency/wavelength.

This external stimulus, while not obviously related to the frequency
of operation (and in fact off by many orders of magnitude) does not
diminish the danger posed to the system (and I am not speaking of a
wire falling to the antenna and roasting the operator). The danger of
this configuration is that the front end could conceivably become
overloaded even in the face of input filtering AND with perfect

balance maintained such that some would reject the notion of interference. This is due in large part to the fact that any balanced system eventually becomes unbalanced by design within the service equipment. The induction from overhead wires may be balanced at the antenna, and yet if there is ANY connection to ground (even capacitively), those same currents will combine at the most inopportune junction that was not designed with inordinate care. Common Mode problems of this nature are far more commonplace than the issue of self stimulated Common Mode problems. Even though this argument confines itself to reception, the induction of Common Mode effects into the transmitter follow similar paths.

One example found in commercial broadcasting (and I am sure you can offer many compelling tales) lies in nearby transmitters inducing currents that mix with the intended currents at poor joints and create transmission spurs (or worse, cascade back into the amplification path). This is just as threatening with a completely balanced system (naively presumed to be immune from Common Modality). There are limits to protection by system balance and are often spoke of in terms of compliance (not the legal term, but rather the ability of a design to provide enough current/voltage to overcome and balance interfering signals).

Common Mode rejection, especially at frequencies above 1 MHz are extremely difficult to control and are best battled at the source. This statement's most compelling application is with the W2DU current balun. Ignorance or rejection of consideration of where the Common of the Common Mode resides leads to such problems.

As for this discussion being "extraneous" to the topic, the topic was resolved long ago and the "arguments" have been ones of language and ego. I care not for the outcome of the "arguments" and only wish to impart the importance of the subject of Common Mode which is so frequently mis-understood and often mis-applied.

73's
Richard Clark, KB7QHC

412. Re: 80 m dipole question??

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-05 21:25:41 UTC
From: CAM <w5dxp@hotmail.com>
Message-ID: <3D260ED5.EA9F4E13@hotmail.com>
Source record: 139353

'Doc wrote:
>
> Richard Harrison wrote:
> >
> > CAM, W5DXP wrote:
> > "---is a 1/2WL dipole with a center insulator which is not shorted and
> > no transmission line, a resonant antenna?"
> >
> > Break an antenna completely with a center insulator and it no longer is
> > a single antenna. It`s two resonant antennas. Resonant frequency being a
> > function of length, these halves of the longer length now resonate at
> > about twice the frequency of the longer wire.
>
> I didn't pay enough attention the first time
> through, so took another look.
> Are you really sure that the above is what you
> meant to say??

Consider a single wire, 1/2WL long, with no transmission line. It is resonant on approximately 468/Length and relatively high currents will flow in the wire from signals picked out of the air on that frequency. Now install an insulator in the middle. It will no longer be resonant on that frequency. It instead has been converted to two 1/2WL wires resonant on approximately double the original frequency.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
------== Over 80,000 Newsgroups - 16 Different Servers! =-----

413. Re: BACK TO BASICS - EM waves, E and H fields, in phase orinquadr...

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-05 21:34:55 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <vu3ciugt37fabqrdq9tj27inauk493h3ck@4ax.com>
Source record: 139354

On Fri, 05 Jul 2002 16:13:04 -0500, CAM <w5dxp@hotmail.com> wrote:

>I have provided all the proof that is needed, Richard.

Hi Cecil,

I am not asking for proof.

>Given you have no response to where the
>Common of the Common Mode resides, I must stand aside to withhold
>committing to your thesis until the revelation of this simple and
>(dare I say it?) common consideration.

Is the Common of Common Mode now to be considered
>techno-bafflegab.
I would suggest that even at its worst in dictionary practices, that you consult the IEEE's definition of this and offer us just why it is such a scurrilous term. Unless, of course, that tome is the epitome of
>techno-bafflegab.
Then yes, you have made your point, but damned your thesis in the process. Again, using language to leverage proof is bound to contradictions.

73's
Richard Clark, KB7QHC

414. Re: A whole new 'back to basics' topic - Monopole fundamentals

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-05 21:44:40 UTC
From: " J. Harvey" <JM002.Harvey_TRIMTHIS_@Sympatico.ca>
Message-ID: <broV8.13223$P53.1947618@news20.bellglobal.com>
Source record: 139355

Hello Bill, Alan and 'Doc,

The authors of that paper are well known and (I think) very well respected.
I believe that one or both of them wrote the original NEC implementation.
It would be interesting if they are not correct, or if the results are true
and a new finding.

I await with baited breath further discussions on the contents of that
report.

415. Re: A whole new 'back to basics' topic - Monopole fundamentals

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-05 21:59:48 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <2m5ciu80dkcd252689fr1765fcpljnv7t3@4ax.com>
Source record: 139356

On Fri, 5 Jul 2002 17:44:40 -0400, " J. Harvey"
<JM002.Harvey_TRIMTHIS_@Sympatico.ca> wrote:

>
>I await with baited breath further discussions on the contents of that
>report.

Hi Jeff,

What are you using for bait? ;-)

from an old Homer 'n' Jethro routine:

"where ya goin' Jethro?"
"fishin'"
"ya got worms?"
"yeh, but I'm goin' anyway...."

73's
Richard Clark, KB7QHC

416. Re: A whole new 'back to basics' topic - Monopole fundamentals

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-05 22:14:23 UTC
From: " J. Harvey" <JM002.Harvey_TRIMTHIS_@Sympatico.ca>
Message-ID: <3ToV8.13236$P53.1955352@news20.bellglobal.com>
Source record: 139357

"Richard Clark"
> What are you using for bait? ;-)

I'm using a previously-mentioned .pdf file for bait.

My intentions are pure. If that report had been dated 1950 I wouldn't have given it a second glance. It seems like a rather fundamental topic to be brought forth in the late-1990's. Amazing (most likely).

417. Re: 1 -2 GHz SWR meter

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-05 22:38:53 UTC
From: Don Widders <widders@talkwithoutdifficulty.org>
Message-ID: <uic80895blul42@corp.supernews.com>
Source record: 139358

"Sam Storm van Leeuwen" <samsvl@nlr.nl> wrote in message
news:Xns9242803228samsvlnlrnl@137.17.96.14...
> I am looking for a diy design,
> any pointers?
>
> Sam
>
If you've done any 2.4 GHz printed circuit board work it'll be a piece of cake. Look at page 12 of this pdf file:
http://www.analog.com/productSelection/pdf/AD8314_a.pdf

Above the AD8314 is a Murata directional coupler. Connect your antenna connector via 50 ohm stripline to pin 4 and the radio connector the same way to pin 8. Use PIN diodes to switch the input of the AD8314 between pins 1 and 5 on the directional coupler (1 for forward power/calibration, 5 for reflected power/SWR.) Connect 50 ohm resistors between pin 7 and ground and pin 3 and ground.

For less than $20 in parts you can build a VERY fine instrument!

Don W.

418. Re: EH antenna Feed System

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-05 22:45:34 UTC
From: Mike Coslo <mcoslo@adelphia.net>
Message-ID: <3D264BAF.907@adelphia.net>
Source record: 139359

Mark Keith wrote:

> I think I saw that episode. "Kenny" was administered the alien anal
> probe during a school "show and tell", and promptly rolled over and
> died. :(MK

It was the one where Cartman was kidnapped by aliens who "probed" him, then released him the next morning. At school, he started farting, and flames were shooting out of his backside - he even caught his cat on fire. Then the kids were out trying to figure out how to get Kyle's brother back from the same aliens, and Cartman farted again, and a huge antenna pops out from his behind to call the aliens back to Earth.

Strange show indeed, but I thought it was appropriate to the thread! 8^)

- Mike KB3EIA -

419. Re: Coax conduit to tower

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-05 22:52:47 UTC
From: n2ey@aol.com
Message-ID: <20020705185247.09274.00000297@mb-cb.aol.com>
Source record: 139360

In article <3d25c04a$0$1431$272ea4a1@news.execpc.com>, dan <danlx@execpc.com>
writes:

>On Fri, 05 Jul 2002 04:52:48 GMT, "Ed G."
><Spectrumhog@_REMOVE_StarBand.net> wrote:
>
>>
>> Yes, recommend 2 or even better, 3" conduit... and for gawd's sake,
>>don't forget to use sweeps!
> Ed, what are sweeps?

Sweeps are like pipe "elbows", except that the radius of curvature is much
greater. They look like pieces of bent pipe. Much easier for the cables to make
a bend of large radius. Coax can be damaged if bent too sharply, or if pulled
over a sharp edge.

The availability of sweeps is one reason to bury conduit rather than
plumbing-type pipe.

73 de Jim, N2EY

420. Re: Article from CQ magazine

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-05 23:49:01 UTC
From: Bob Miller <bamiller@texas.net>
Message-ID: <BTAmPc=C8Jy3LZYLlWLCkQmtqZDJ@4ax.com>
Source record: 139361

"Jack Poulter" <jpoulter@islandnet.com> wrote:

>Old Time Radio has reported sending an article in to a
>couple of addresses, but they say they have not been received.

I believe that was a pdf file. Can pdf files be received via most email systems
and email programs? That might be the problem.

Bob
k5qwg
>
>Could he please send it to me to see if something is wrong with the
>transmission, as I have been able to communicate ok with the two who
>asked for the file but have not yet received it.
>
>73,
>
> Jack Poulter (VE7JCP)
> On an Island in the Pacific
>e-mail: jpoulter@islandnet.com
>
>

421. Re: BACK TO BASICS - EM waves, E and H fields, in phase orinquadr...

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-05 23:52:42 UTC
From: richardharrison@webtv.net
Message-ID: <25852-3D26314A-442@storefull-2396.public.lawson.webtv.net>
Source record: 139362

I am interrupting my reading of Richard Clark`s posting:
"For example you go to describe Jeff`s condition of the overhead
powerlines and unnecessarily embellish with frequency/ wavelength."

Postings in this thread reveal primative understanding indeed of some
electrical princiiples by some participants. So, I differ with Richard
Clark. In my opinion it`s no embellishment to point out that the 50/60
Hz magnitude and phase are a constant in the antenna`s environment.
Otherwise, you could not expect cancellation in a balanced antenna
system of the 50/60 Hz. You know it and I know it, but from what I`ve
seen Tom prtobably does not know it.

Best regards, Richard Harrison, KB5WZI

422. Re: limited space antennas...any ideas

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-06 01:13:31 UTC
From: ricknj10@hotmail.com
Message-ID: <3d26400c.34184680@news.optonline.net>
Source record: 139363

A different type of advice for AD9E -
Don't design an antenna and then try to find a place for it (how high do the ends of an inverted vee have to be?). Instead put your antenna wherever it is most convenient for YOU, in YOUR situation. It will work. Don't worry about optimizing things, you aren't going to have an optimum antenna situation. Remember this - "The toughest thing to do is to get an antenna to NOT radiate!"
I know a guy in a close neighborhood with 3 hf antennas, a dipole in the attic, a wire from the roof down to one of those screens over a swimming pool, and a vertical next to a tree. The interesting thing about his situation is that his neighbors (and I mean these houses are CLOSE together) do not know he has any antennas!

Rick K2XT

423. Re: BACK TO BASICS - EM waves, E and H fields, in phase orinquadr...

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-06 01:22:45 UTC
From: richardharrison@webtv.net
Message-ID: <13515-3D264665-411@storefull-2398.public.lawson.webtv.net>
Source record: 139364

I resumed reading Richard Clark`s posting and he wrote:
"---nearby transmitters inducing currents that mix with intended currents at poor joints and create transmission spurs---."

This is more likely a receiving antenna problem because there the relative strengths of the mixed signals is more competitive. It`s rare in a transmitting antenna because the received signal is very weak as compared with the transmitted signal.

I`ll repeat a story I told on this newsgroup some time ago. I weorked at a 790 KHz station located about 15 miles from a 740 KHz 50 KW station. Mornings when I fired up the 790 KHz station, I often could faintly hear the modulation of the 740 KHz station in the monitor speaker. Our antenna picked up the 740 KHz signal and our final amplifier dutifully mixed it with the 790 KHz carrier.

The 740 KHz audio was more than 50 db down and the r-f intermodulation products were also within limits, so we ignored the mixing.

Best regards, Richard Harrison, KB5WZI

424. Re: Coax conduit to tower

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-06 01:45:12 UTC
From: ricknj10@hotmail.com
Message-ID: <3d2649e4.36704874@news.optonline.net>
Source record: 139365

I have 3 in PVC and in it right now I have 4 RG8 cables and a rotor cable. It is extremely, and I mean extremely hard to pull the last cable through. 4 inch is the way to go. Why not? The cost is next to nothing, the labor is no more either.
Two 4 inch pipes would be ok. Once that concrete is poured you can't redo it.
When the guy said to use sweeps he meant your 90 degree turns should be done with pieces called "sweep" They have a more gentle turn.

Forget 1.5 inch pipe. Don't for a minute even consider it.

And before you pour the concrete also make sure you bring out a connection from the rebar for grounding.

Rick K2XT

425. Antenna phasing unit

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-06 01:55:34 UTC
From: Mad Dog <lgsast@strato.net>
Message-ID: <ag5iro$j8f51$1@ID-20128.news.dfncis.de>
Source record: 139366

Does anyone remember the old Antennex Phase shifter and
know where i can get one.
It had 3 positions: F,F/B,B along with 2 antenna connections
and a lead out to the radio.
What is the required distance between antennas and what is the gain factor
in F or B mode.
If i cant buy one i would like to know how to build this unit.
--
714 Sandpile,
The Mad Dog wavin' good bye

426. Re: BACK TO BASICS - EM waves, E and H fields, in phase orinquadr...

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-06 02:29:22 UTC
From: "George, W5YR" <w5yr@att.net>
Message-ID: <3D2655EF.C03BD43A@att.net>
Source record: 139367

Thank you very much, Richard.

Sadly, my effort seems to have had little or no impact upon the
"discussion."

73/72/oo, George W5YR - the Yellow Rose of Texas
Fairview, TX 30 mi NE of Dallas in Collin county EM13qe
Amateur Radio W5YR, in the 56th year and it just keeps getting better!
QRP-L 1373 NETXQRP 6 SOC 262 COG 8 FPQRP 404 TEN-X 11771 I-LINK 11735
Icom IC-756PRO #02121 Kachina 505 DSP #91900556 Icom IC-765 #02437

Richard Clark wrote:
>
> On Fri, 05 Jul 2002 00:25:40 GMT, "George, W5YR" <w5yr@att.net> wrote:
>
> >Thus, my conclusions are
> >
> >1. Differential-mode operation and common-mode operation are related in
> >some manner highly dependent upon system configuration.
> >
> >2. They are both manifestations of the overall operation of the entire
> >antenna system, not just the transmission line.
> >
> >3. An analytical solution to determine the relationship is probably neither
> >feasible nor, in practical terms, even possible.
> >
> >4. Experimental observations, unless firmly grounded on a complete
> >understanding and definition of the entire system, are highly unlikely to
> >provide much more than additional confusing anecdotal "evidence" that some
> >form and degree of relationship exists.
> >
> >5. It is entirely possible that Change A in differential-mode operation may
> >have an Effect B upon the common-mode operation within the system. It is
> >also entirely possible that Change A may produce zero observable effect.
> >The existence of either outcome neither proves nor disproves anyone's
> >contention that the two are or are not "related."
> >
> >73/72/oo, George W5YR
>
> Hi George,
>
> A well balanced and thoughtful exposition.
>
> 73's
> Richard Clark, KB7QHC

427. Re: IM I TOO OLD TO COME BACK? Is this still fun???????????

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-06 02:39:49 UTC
From: "George, W5YR" <w5yr@att.net>
Message-ID: <3D265862.574EC5C4@att.net>
Source record: 139368

Read my sig file and decide . . .

73/72/oo, George W5YR - the Yellow Rose of Texas
Fairview, TX 30 mi NE of Dallas in Collin county EM13qe
Amateur Radio W5YR, in the 56th year and it just keeps getting better!
QRP-L 1373 NETXQRP 6 SOC 262 COG 8 FPQRP 404 TEN-X 11771 I-LINK 11735
Icom IC-756PRO #02121 Kachina 505 DSP #91900556 Icom IC-765 #02437

tk wrote:
>
> I am 37 and got my General at 13yrs. of age "Wd5GBJ". I have not had a
> QSL since I was 17. Is this still fun???????????

428. Re: Antenna MADE for AO-40!!!!!!

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-06 02:51:05 UTC
From: 'Doc <w5lz@icok.net>
Message-ID: <3D265B0A.BD414E08@icok.net>
Source record: 139269

Glenn Rollins,
Which other antennas was it tested against?
'Doc

429. Re: IM I TOO OLD TO COME BACK? Is this still fun????????????

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-06 02:52:56 UTC
From: " J. Harvey" <JM002.Harvey_TRIMTHIS_@Sympatico.ca>
Message-ID: <bYsV8.13327$P53.2042815@news20.bellglobal.com>
Source record: 139270

"George, W5YR"
> Amateur Radio W5YR, in the 56th year

56 years in amateur radio ? Another couple of years or so, and you'll have been around radio for about half of the time since Hertz. You should have a party on that exact date.

I'm only up to about 21%...

430. Re: Coax conduit to tower

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-06 03:18:21 UTC
From: dan <danlx@execpc.com>
Message-ID: <3d2662b3$0$3578$272ea4a1@news.execpc.com>
Source record: 139271

On 05 Jul 2002 22:52:47 GMT, n2ey@aol.com (N2EY) wrote:

>In article <3d25c04a$0$1431$272ea4a1@news.execpc.com>, dan <danlx@execpc.com>
>writes:
>
>>On Fri, 05 Jul 2002 04:52:48 GMT, "Ed G."
>><Spectrumhog@_REMOVE_StarBand.net> wrote:
>>
>>>
>>> Yes, recommend 2 or even better, 3" conduit... and for gawd's sake,
>>>don't forget to use sweeps!
>> Ed, what are sweeps?
>
>Sweeps are like pipe "elbows", except that the radius of curvature is much
>greater. They look like pieces of bent pipe. Much easier for the cables to make
>a bend of large radius. Coax can be damaged if bent too sharply, or if pulled
>over a sharp edge.
>
>The availability of sweeps is one reason to bury conduit rather than
>plumbing-type pipe.
>
>73 de Jim, N2EY
Hi Jim,
Thanks, I did not know that. Wouldn't it be easier to use the gray
plastic pipe electricians heat to bend? You could avoid all sharp
bends and a lot of joints that way. I also saw a home made plug for a
pipe. It was made out of 1" hardwood cut to a circle that when cut
into fourths and fit back together fit into the end of the pipe.
Before cutting into fourths the guy drilled the holes he thought he
would need on the cutting lines so when he fit the pieces back
together over the coax, they fit snug. Extra holes were filled with
bottle corks for future use.

Dan

I've rambled enough, back to the rocking chair. ZZZZZZZZZ
Remove left x for a direct reply.

431. Horizontal Loop Question

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-06 05:02:46 UTC
From: ardujenski@aol.com
Message-ID: <20020706010246.15533.00002671@mb-fx.aol.com>
Source record: 139272

I have read various articles on horizontal loops and still have a few questions. First let me say that my interest was peaked by several notes i have read from field day groups exclaiming how pleased they were with the horizontal loop at ONLY 20FT.

I got a copy of EZNEC DEMO and played with various size loops and heights. I was surprised to see some noteable gain figures using an 80m loop at 20ft height on 20m and above but more significantly there were some nice lobe patterns which see like they would accomodate the NW operations.

Elevating or enlarging the loop then developed patterns with multi lobes at various takeoff angles and as you approached 15m and above with very large loops (800ft+)--patterns which look like avocadoes.

I am not too sure if my modeling was too crude to be of value. Have any of you used horizontal loops and what was you rexperiences. In particular any one use an 80m loop at about 20ft?

Alan KB7MBI

432. CAM?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-06 05:16:03 UTC
From: StarGazer <pti@capnet.com>
Message-ID: <3D267D13.E0F6C299@capnet.com>
Source record: 139274

If the input Z of a dipole is 75 ohms and you are feeding it with
50 ohm coax... Does that make the SWR 1.5:1?
75/50=1.5

433. Re: A whole new 'back to basics' topic - Monopole fundamentals

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-06 06:00:47 UTC
From: 'Doc <w5lz@icok.net>
Message-ID: <3D268783.B78677E5@icok.net>
Source record: 139273

```
" J. Harvey" wrote:
>
> Hello Bill, Alan and 'Doc,
>
> The authors of that paper are well known and (I think) very well respected.
> I believe that one or both of them wrote the original NEC implementation.
> It would be interesting if they are not correct, or if the results are true
> and a new finding.
>
> I await with baited breath further discussions on the contents of that
> report.

Don't hold your breath too long...
'Doc
```

434. Navy Training Manual: Antennas and Wave Propagation

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-06 06:38:57 UTC
From: Randy Hoops <RandyHoops@mchsi.com>
Message-ID: <rg3diuop0v67ie5gok69kj6i3f88lvdcm8@4ax.com>
Source record: 139275

An excellent U.S. Navy Electronics Technician training manual:

NAVEDTRA 14092 Antennas and Wave Propagation is available for
download from this URL:

It's in Adobe Acrobat Reader format (.pdf)

http://www.advancement.cnet.navy.mil/products/web-pdf/tramans/fullbook/14092.pdf

Many other manuals are available at this site, if you know the
NAVEDTRA number and substitute it in the above url.

You will get an idea of some pertinent NAVEDTRA numbers from this
table:

http://www.advancement.cnet.navy.mil/products/web-pdf/nrtcs_table.pdf

73, Randy Hoops - K0CM
Springfield, MO

Formerly an ET2 at Navcommsta Balboa, Canal Zone - Callsign NBA
a.k.a "Jitterbug" on Hicom

435. Re: Apartment HF antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-06 06:42:34 UTC
From: cskesler <ckesler@chartermi.net>
Message-ID: <uid48nqjfjuu50@corp.supernews.com>
Source record: 139276

Thanks to everyone who has posted, I think I'm gonna try a MFJ-1622. I know that MFJ isn't exactly known for having top quality equipment, but the design looks good. I don't have the time for building a homebrew antenna at the moment. If I do buy the MFJ-1622, I'll inform this newsgroup of the performance.

73
Kes
KC8UIE

"W4WNT" <w4wnt@carolina.rr.com> wrote in message
news:oDtU8.2907$ul3.74874@twister.southeast.rr.com...
> I'd suggest a SuperAntenna MP-1. Vertical with base loaded coils that
runs
> from 80 to (reportedly) 440. I tested one on 20m recently (see my review
in
> e-ham.net) It looks like the answer for apartments, condos, quick setup
and
> take down operations. (Note I have no stock in the company!)
>
> Bill, W4WNT
>
> cskesler <ckesler@chartermi.net> wrote in message
> news:uht7u3c34to787@corp.supernews.com...
> > Hello,
> >
> > I'm a new ham. I passed my technician and general written tests two
weeks
> > ago. I passed my code and extra tests yesterday morning. I am curious
if
> > anyone knows of a good HF antenna (20 or 40 meter band) that can be put
up
> > and taken down quickly. I live in an apartment complex with a really
> > uptight landlord. Right now all I have is a dipole strung diagonally
from
> > one corner of my apartment to another. Because my apartment isn't that
> big,
> > the dipole is tacked up along a couple of walls. The funny thing is, I
> > actually can receive quite a few signals with it. Of course I can't
> > transmit with it though... For one thing, it's inside, and another
thing,
> I
> > don't want to deal with the RF dangers/problems. I do have a balcony,
and
> I

> > have thought about different options using that. But because I am new
to
> > amateur radio, I would like to have a few different viewpoints. If
anyone
> > could provide any ideas I would greatly appreciate it.
> >
> > Thanks,
> >
> > Kes
> >
> > KC8UIE
> >
> >
>
>

436. Re: CAM?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-06 07:55:04 UTC
From: Bill Nelson <billn@spock.peak.org>
Message-ID: <ag67oo$1m9$11@quark.scn.rain.com>
Source record: 139277

StarGazer <pti@capnet.com> wrote:
> If the input Z of a dipole is 75 ohms and you are feeding it with
> 50 ohm coax... Does that make the SWR 1.5:1?
> 75/50=1.5

If both of the things you assume to be true are true.

--
Bill Nelson (billn@peak.org)

437. Re: CAM?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-06 09:27:42 UTC
From: captbrian <captbrian@ukonline.co.uk>
Message-ID: <3d26d546$0$24403$afc38c87@news.ukonline.co.uk>
Source record: 139279

Yes !

Bryan

StarGazer <pti@capnet.com> wrote in message
news:3D267D13.E0F6C299@capnet.com...
> If the input Z of a dipole is 75 ohms and you are feeding it with
> 50 ohm coax... Does that make the SWR 1.5:1?
> 75/50=1.5
>

438. Re: Horizontal Loop Question

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-06 10:46:31 UTC
From: 'Doc <w5lz@icok.net>
Message-ID: <3D26CA7A.3C9111A6@icok.net>
Source record: 139278

Alan,
I couldn't swear to my loop being at exactly 20 feet, but the majority of it is pretty close to that (if not a bit lower in spots). It's a 1 wave length 80 meter loop, very close to about 255-260 feet. In sort of a rectangular shape. On 80 meters it behaves much as a dipole does at the same height. Maybe a little quieter, but not a whole lot. On 40 meters, well, it's not the best in the world. on 20 meters and 17 meters, it isn't bad. Just depends on where the lobes fall, Europe seems to be in one of the lobes, as well as most of South America. Australia is also in one of the lobes, they are loud.
There are also directions/places that seem to have disappeared too, it isn't all milk and honey. It doesn't seem to like 15 or 10 meters all that much, at least I can't get a 1:1 SWR on either band. I can understand 15 meters not being the best, but I find not being able to get a good match on 10 meters a bit strange. Oh well, I don't hear much on 10 meters with two other 10 meter antennas either. Who knows.
I'm very happy with how my loop works. It isn't a 'miracle' antenna, but it works just about everything I care about listening to. Is that what you're looking for about loops?
'Doc

439. F/S Hustler 5BTV

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-06 12:03:29 UTC
From: Radio Haven <radiohaven@aol.com>
Message-ID: <l0BV8.109320$GY.37529686@twister.nyroc.rr.com>
Source record: 139281
Cross-posted to:
alt.ham-radio.hf,alt.ham-radio.marketplace,rec.ham-radio.swap,rec.radio.amateur.antenna,rec.radio.amateur.swap,rec.radio.swap

F/S
Hustler 5BTV Vertical 5 band 80-10 Meters in EXCELLENT condition, only up
for a few weeks, Complete ready to go, Manual Original Box.$110.00 Shipped
lower 48 via UPS

.

E mail if interested at: radiohaven@aol.com

440. Re: Coax conduit to tower

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-06 12:06:32 UTC
From: n2ey@aol.com
Message-ID: <20020706080632.22468.00000454@mb-fy.aol.com>
Source record: 139280

In article <3d2662b3$0$3578$272ea4a1@news.execpc.com>, dan <danlx@execpc.com>
writes:

(N2EY wrote)
>>Sweeps are like pipe "elbows", except that the radius of curvature is much
>>greater. They look like pieces of bent pipe. Much easier for the cables to
>make
>>a bend of large radius. Coax can be damaged if bent too sharply, or if
>pulled
>>over a sharp edge.
>>
>>The availability of sweeps is one reason to bury conduit rather than
>>plumbing-type pipe.
>>
>>73 de Jim, N2EY

>Thanks, I did not know that. Wouldn't it be easier to use the gray
>plastic pipe electricians heat to bend?

PVC electrical conduit is the gray stuff. If you can bend it without weakening
or kinking, go right ahead! The ready-made sweeps are not expensive.

>You could avoid all sharp
>bends and a lot of joints that way.

Joints aren't much of a probelm if they're smooth, but sharp bends are a
disaster.

>I also saw a home made plug for a
>pipe. It was made out of 1" hardwood cut to a circle that when cut
>into fourths and fit back together fit into the end of the pipe.
>Before cutting into fourths the guy drilled the holes he thought he
>would need on the cutting lines so when he fit the pieces back
>together over the coax, they fit snug. Extra holes were filled with
>bottle corks for future use.

Great idea!

Another way to do the job is to terminate the conduit in waterproof boxes.

--

One of the things I used to be involved in professionally was burying cables
that crossed roads. We used nothing but 4 inch galvanized threaded conduit,
which came in 10 foot lengths. Heavy stuff! We'd usually put in two pipes even
if the cables would fit in one, "just in case".

73 de Jim, N2EY

441. Re: CAM?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-06 12:17:37 UTC
From: CAM <w5dxp@hotmail.com>
Message-ID: <3D26DFE1.22109F14@hotmail.com>
Source record: 139282

StarGazer wrote:
> If the input Z of a dipole is 75 ohms and you are feeding it with
> 50 ohm coax... Does that make the SWR 1.5:1? 75/50=1.5

With those assumptions, the answer is yes, and 1.5:1 is a perfectly
acceptable SWR even without an antenna tuner.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

442. SOLD- ROHN 45G TOWER SECTIONS-SOLD

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-06 12:24:02 UTC
From: wrhood@exis.net
Message-ID: <3d26e0d5.2975629@news.exis.net>
Source record: 139283

9 Sections SOLD. Will get 35 ft of alum. tower sections ready for
later posting. Thanks for the interest. K4WYS

443. Re: BACK TO BASICS - EM waves, E and H fields, in phase orinquadr...

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-06 12:29:22 UTC
From: CAM <w5dxp@hotmail.com>
Message-ID: <3D26E2A2.A2EBD5E8@hotmail.com>
Source record: 139284

Richard Clark wrote:
> I am not asking for proof.

I have no idea what you are asking for even after reading what you
are asking for.

> I would suggest that even at its worst in dictionary practices, that
> you consult the IEEE's definition of this and offer us just why it is
> such a scurrilous term.

From the IEEE Dictionary: "common-mode voltage - The voltage common to
all conductors of a group as measured between that group at a given
location and an arbitrary reference (usually earth)."

So given the two ladder-line wires, common mode current is the current
that is in phase in the two wires. Differential mode current is the
current that is 180 degrees out of phase in the two wires.

Also one more proof that common mode is related to differential mode.
When I was in high school, I had a 66 ft dipole fed with about 50 ft
of coax used on 40m with no choke/balun. 50 ft of coax is near a
worst case length for common mode problems on 40m. My Globe Scout
was not grounded. I burned a hole in my lip from touching the metal
microphone. Does anyone not know whether that happened during receive
or during transmit?
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

444. F/S All-Band Ant Tuner

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-06 12:51:03 UTC
From: Jeff Hutchinson <jeff@hutchinson.org>
Message-ID: <XIBV8.168430$0g1.3004949@twister.tampabay.rr.com>
Source record: 139285

F/S: Tucker T-500 Ant Tuner, almost new. Bought to use aboard ship, then quit going to sea.
Specs:
1.8-30 mHz
150W Continuous, 300W pep, SSB
Lighted cross-needle Power/SWR meter
SO239 In/Out
3.6" x 7.25" x 8.75" 2.5 lbs.

$60, manual & shipping included, to contiguous U.S.A.
Overseas shipping at net cost.

Please reply by email or phone (321) 454-7306
Jeff Hutchinson, N4JT

445. Re: BACK TO BASICS - EM waves, E and H fields, in phase orinquadr...

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-06 13:16:52 UTC
From: k1bqt@aol.com
Message-ID: <20020706091652.19554.00002350@mb-dd.aol.com>
Source record: 139286

>Sadly, my effort seems to have had little or no impact upon the "discussion."<

Now there's a concept I can relate to--I know exactly what you mean!

Rick K1BQT

446. Re: newbie needs help for.antenna tuner and doesn`t know any otherhams.

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-06 13:37:48 UTC
From: k0bg@aol.com
Message-ID: <20020706093748.09227.00001739@mb-cb.aol.com>
Source record: 139288

http://www.mfjenterprises.com

Look here for the manual. If you can't find it, e-mail them. The on-line manuals DO NOT have schematics, but most all of MFJ's antenna tuners are "T" matches and rather easy to figure out.

And do as one reply suggested, invest in some good literature. I venture to say that 90% of the questions posted on this newsgroup could be answered by reading the ARRL Handbook and/or Antenna Book.

Alan, Kï¿½BG

447. Re: Hy Gain Boom To Mast Assy

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-06 13:39:38 UTC
From: k0bg@aol.com
Message-ID: <20020706093938.09227.00001740@mb-cb.aol.com>
Source record: 139289

You should be able to buy this from MFJ at

http://www.mfjenterprises.com

They now own Hy-Gain.

Alan, Kï¿½BG

448. Re: Horizontal Loop Question

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-06 14:36:23 UTC
From: Dan/W4NTI <w4nti@mindspringnospam.com>
Message-ID: <ag6v78erd1@slb7.atl.mindspring.net>
Source record: 139314

Alan

A few years ago I was in a situation where I had my station setup at the bottom of a 50 foot hill. I put up a loop from the top of the hill and tied it off wherever I could down below. Made a nice sloping loop towards the north.

Cant give any figures but it worked well.

Dan/W4NTI

"ARDUJENSKI" <ardujenski@aol.com> wrote in message news:20020706010246.15533.00002671@mb-fx.aol.com...

>
> I am not too sure if my modeling was too crude to be of value. Have any of you
> used horizontal loops and what was you rexperiences. In particular any one use
> an 80m loop at about 20ft?
>
> Alan KB7MBI

449. Rohn 25 (100 Mile Delivery)

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-06 15:08:13 UTC
From: n4jzh@knology.net
Message-ID: <3d2707c6.1546322@news.knology.net>
Source record: 139290

90 ft of Rohn 25, comes with burial stick and top section. pics upon
request. will travel within 100 miles of Charleston,S.C. to deliver.
$350.00 firm
n4jzh@knology.net

450. Re: Building the Henf Antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-06 15:37:46 UTC
From: fractenna@aol.com
Message-ID: <20020706113746.19873.00003608@mb-mg.aol.com>
Source record: 139291

>
>>OK; so you didn't measure gain. That's all I was wondering.<
>
>Not yet. It has a date with the 8510 first. I just couldn't tell enough about
>it from what the MFJ-259B was telling me to know what was happening with it.
>
>Rick
>

Sounds good.

73,
Chip N1IR

451. Re: My 85' dipole is actually 94'!! Another ??

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-06 16:05:12 UTC
From: Dick Carroll <dixie@townsqr.com>
Message-ID: <ag74fo$mn5$0@208.206.142.93>
Source record: 139292

> "StarGazer" wrote

> > Also, is there something that I can change it from ladder line
> > to coax right before it enters the house?
> > Or does this defeat the whole purpose of using ladder line?
>

You can transform the impedance at the junction by using varying lengths of coax, similar to Cecil transforming his feed impedance with varying lengths of ladder line for different bands. If it works with ladder line, it works with coax. A half wave length of transmission line reflects, at the far end, the impedance seen at the input end. Along its length the impedance varies from the input impedance to a maximum high value at the quarterwave point, then drops to the feedline input value at the far end.
You can find the value needed to match the ladderline with a bit of experimentation. You don't even have to know what the ladderline impedance is at the junction-that will depend on its 1ength and the frequency. Be aware that you can use LESS than 1/4 wave length since the impedance repeats in reverse past the quarterwave point. In other words it goes up till it gets to the quarterwave point then starts back down and is again at the same value as the input when you get to the 1/2 wave point. Think of it as half a sine wave.
It may take some serious cut and try, but you can do it. Don't bother to install coax connectors until you have found the right lengths for the bands of interest.... just cut and twist the ends to try it.
When I get to where I can use ladderline I plan to cut several pieces of RG58 to various lengths, from 5 feet to 50 feet, probably about 8 pieces total. That should allow for lots of matching possibilities, and coax stores much easier that ladderline, especially when in use, and it isn't affected in operation by external objects or fields. You can run it beside metal or whatever without problems.

You'll need to arrange a switch to change the coax to match the band or just change it manually.

Dick W0EX

452. Re: Horizontal Loop Question

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-06 16:08:46 UTC
From: J Tabor <denews@taborsoft.com>
Message-ID: <uie5gm89m7chbd@corp.supernews.com>
Source record: 139293

Have you looked at this web site and page:
http://www.cebik.com/gup/gup18.html

Regards,
Jim

453. Re: BACK TO BASICS - EM waves, E and H fields, in phase orinquadr...

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-06 16:20:46 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <n64eiu0fog0pasjbsk6idsvb2hha35p9an@4ax.com>
Source record: 139294

On Sat, 06 Jul 2002 07:29:22 -0500, CAM <w5dxp@hotmail.com> wrote:

>Richard Clark wrote:
>> I am not asking for proof.
>
>I have no idea what you are asking for even after reading what you
>are asking for.

That has been painfully obvious. What is embarrassing, is that you
have yet to ask for clarification and instead ignore it.

>
>> I would suggest that even at its worst in dictionary practices, that
>> you consult the IEEE's definition of this and offer us just why it is
>> such a scurrilous term.
>
>From the IEEE Dictionary: "common-mode voltage - The voltage common to
>all conductors of a group as measured between that group at a given
>location and an arbitrary reference (usually earth)."

This conforms to what I offered some weeks back, glad to see it
confirmed in some manner by the IEEE. In light of now knowing what
the term Common Mode means, the question is, and remains, is the
Common of your Common Mode artifact earth? If it is not, what is it?
Or does this simple question remain to cause you to
> have no idea what you are asking for

Anticipating that this one and only question is such a killer, I will
offer variants - unnecessarily elaborated, but that seems to be what
attracts attention and response. - sigh -

Let me boil it down even further. You measure a current a la
>Here is the context, published by myself many days ago.
>XMTR---x---coax-----choke---1/2WL ladder-line---well balanced 1/2WL dipole
>
>Common mode measured at 'x'.

I presume that given the less than full context, that what you mean by
the last statement is current (since Common Mode is an encompassing
term that covers both current and potential).

Your thesis is that XMTR is the source of Common Mode current, my
second question is:
Where is the current flowing toward at any point in its cycle
(choose your own point except at the zero crossing of course)?

Third question:
Taking that same point in its cycle, can you describe the
complete path of current flow? (answer must conform to
standard Kirchhoff laws, consult IEEE dictionary if necessary)

you may choose to skip that tough nut, and answer this fourth question
for partial credit:
Once the Common Mode current (at that same point in its cycle)
reaches either the XMTR or dipole, how does it return to its
source? (the answer to how, once again, requires the description
of the path - yes I am aware of the irony)

These are all trivial considerations taught in Basic Electricity and
Electronics Preparatory (BEEP School for vets in the audience)
training to technicians in the Navy BEFORE they can proceed to the
matter of transistors, tubes, amplifiers, radios and transmitters.

If you cannot describe the Common of Common Mode, it is likely because
you do not have a complete picture of the entire circuit. Making
appeals and generalizations to having shown its effect without being
able to describe the circuit is at best one of luck and offering it as
a "proof" is no proof at all.

There may be some in the readership that recoil in Angst at this and
offer the dog-ate-my-homework answer:
"It just goes back and forth in the same place because it is
AC and that is the way AC current flows."
I failed several many students for such obtuseness - such quality of
technician is dead weight at sea where there is no Radio Shack to pull
into to make the Radar work (or in the fashion of equipment operators,
to buy a replacement).

With tongue planted firmly in cheek, do I need to offer the fraudtenna
style of
$1000 COMMON MODE CHALLENGE
to get an answer to these questions? ;-)

73's
Richard Clark, KB7QHC

454. Re: 80 m dipole question??

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-06 16:33:02 UTC
From: Dick Carroll <dixie@townsqr.com>
Message-ID: <ag763upge0@208.206.142.93>
Source record: 139295

CAM wrote:
>
> 'Doc wrote:
> >
> > Are you really sure that the above is what you
> > meant to say??
>
> Consider a single wire, 1/2WL long, with no transmission line. It is resonant
> on approximately 468/Length and relatively high currents will flow in the
> wire from signals picked out of the air on that frequency. Now install an
> insulator in the middle. It will no longer be resonant on that frequency. It
> instead has been converted to two 1/2WL wires resonant on approximately double
> the original frequency.

That would be true if it was hooked to no external circuitry. When used
with a feedline and radio, not so.

455. Re: Article from CQ magazine

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-06 16:51:20 UTC
From: Jack Poulter <jpoulter@islandnet.com>
Message-ID: <1025976896.510821@news.islandnet.com>
Source record: 139300

"Bob Miller" <bamiller@texas.net> wrote in message:
> I believe that was a pdf file. Can pdf files be received via most
email systems
> and email programs? That might be the problem.
>
> Bob
> k5qwg

Most e-mail systems can receive almost any files sent as attachments. They need Acrobat Reader to be able to open and read pdf files. I have recently received two responses, one pdf and one in another format that I was able to read (and resize to fit my screen) using Irfanview -- an excellent (free) graphics viewer from Austria. http://www.irfanview.com

If anyone wishes copies I will forward in response to e-mail as four jpg files.

73,
--
Jack Poulter
VA7JCP

456. Re: ALL BAND ANT EXPERIMENT?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-06 16:57:11 UTC
From: Chris Boone <Cboone@earthlink.net>
Message-ID: <3D272147.E693DC06@earthlink.net>
Source record: 139296

You and Don should read the article by Dr. John(Jack) Belrose;
QST August 1990
Off-Center-Fed Dipole Revisited, The: A Broadband, Multiband Antenna
Article: http://www.arrl.org/members-only/tis/info/pdf/9008028.pdf

Note the antenna uses a current balun...and is 4:1 or 6:1..the Germans
have been using this antenna for over 15 years with success....
that article by one of the most respected men in antenna design (even
Jerry will bow to Jack!) is one I have used in antenna work...and
it works!! No tuner required for what I used it on...

Chris
WB5ITT

K0bg wrote:
>
> Don is correct: Sans the balun!
>
> There are two white papers, if you will, that every amateur should be aware of,
> in other words, requisite reading. They are:
>
> Another Look at Reflections by Dr. Walt Maxwell, W2DU
>
> Building and Using Baluns and Ununs by Dr. Jerry Sevick, W2FMI

457. Re: Info ref Hy-Gain AV-18VS

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-06 16:57:25 UTC
From: Ken Ashcroft <ken@g3msw.demon.co.uk>
Message-ID: <819CxIB1FyJ9EwBT@g3msw.demon.co.uk>
Source record: 139297

If that is an updated version of the 18-AVQ, it can be used with a good ground, mounted at ground level, or it needs wire radials if mounted above ground.

In article <l7mbiugo511p8tthamne96m745mrrkdpn4@4ax.com>, Biggles <hamsat@totalise.co.uk> writes

>Hi
>I would welcome any comments reference the hy-gain AV-18VS vertical HF
>antenna. Can it be mounted on a tower or does it have to be at ground
>level. Does it require ground radials. Also do you need to use an ATU
>even if it is designed as a 5 band antenna.
>TIA
>

--
Ken Ashcroft

458. Re: IM I TOO OLD TO COME BACK? Is this still fun????????????

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-06 17:18:32 UTC
From: Dick Carroll <dixie@townsqr.com>
Message-ID: <ag78p8lb0@208.206.142.93>
Source record: 139298

Only if you think so.

459. Re: BACK TO BASICS - EM waves, E and H fields, in phase orinquadr...

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-06 17:35:07 UTC
From: Reg Edwards <g4fgq.regp@btinternet.com>
Message-ID: <ag79ob$l0o$1@knossos.btinternet.com>
Source record: 139299

> A well balanced and thoughtful exposition.
> Richard Clark, KB7QHC
==========
Rich, I won't give an opinion. But are you qualified to judge ?

460. Re: CAM?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-06 17:40:42 UTC
From: Reg Edwards <g4fgq.regp@btinternet.com>
Message-ID: <ag7a2pfhg1@venus.btinternet.com>
Source record: 139301

```
> StarGazer wrote:
> > If the input Z of a dipole is 75 ohms and you are feeding it with
> > 50 ohm coax... Does that make the SWR 1.5:1? 75/50=1.5
>
> With those assumptions, the answer is yes, and 1.5:1 is a perfectly
> acceptable SWR even without an antenna tuner.
==============================
The question arises, how is the SWR to be determined? Guesswork?
```

461. Re: My 85' dipole is actually 94'!! Another ??

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-06 18:28:33 UTC
From: CAM <w5dxp@hotmail.com>
Message-ID: <3D2736D1.2C2F1C63@hotmail.com>
Source record: 139302

Dick Carroll wrote:
>
> > "StarGazer" wrote
> > > Also, is there something that I can change it from ladder line
> > > to coax right before it enters the house?
> > > Or does this defeat the whole purpose of using ladder line?
>
> You can transform the impedance at the junction by using varying
> lengths of coax, similar to Cecil transforming his feed impedance with
> varying lengths of ladder line for different bands. If it works with
> ladder line, it works with coax.

Well, as they say on the Hertz commercial, "Not exactly!" Here's why:

In order to perform impedance transformation using the transmission
line, we need an SWR higher than 1:1. Using 50 ohm coax, it is impossible
to transform an SWR higher than 1:1 to 50 ohms with a single series section
transformer. (Hint: That 50 ohm target is in the exact center of a 50 ohm
Smith Chart.) With an SWR of 1.5:1, you can use 75 ohm coax to transform
the resonant impedance to 50 ohms but it can only be done with a resistance
equal to 75*1.5 = 112.5 ohms. With an SWR of 1.84:1, you can use 92 ohm coax
to transform the resonant impedance to 50 ohms but it can only be done
with a resistance equal to 92*1.84 = 169 ohms. Both of these limits are too
low to be very useful with non-resonant length dipoles.

If the SWR on 50 ohm coax is 10:1, the transformed impedance at resonance
will be 50/10 = 5 ohms, a relatively lossy condition for the average
antenna tuner. It's an attractive idea but it doesn't work very well
in reality because it leaves you with an additional matching problem.

However, using 400 ohm ladder-line with an SWR of 8:1 can transform the
resonant feedline impedance to 40 ohms for which an antenna tuner is
not even needed. Using 600 ohm open-wire line with an SWR of 12:1, the
resonant feedline impedance can be transformed to a perfect 50 ohms.

Moral: The characteristic impedance of a series section transformer
needs to be different from the target impedance of 50 ohms.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

462. Re: BACK TO BASICS - EM waves, E and H fields, in phase orinquadr...

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-06 18:37:27 UTC
From: Fred Hambrecht <w4jle@charter.net>
Message-ID: <uiee6l6gkp1030@corp.supernews.com>
Source record: 139303

I normally try to stay out of these "how many angels can dance on the head of a pin" discussions...

The argument to date can be equated to "How does DC relate to AC"

Cam says "turn off the AC switch and the DC output goes away, ergo I am right".

Tom says "You have to measure the particular system and that relationship can not be applied to a different system, so no relationship exists if I change the DC output voltage regulator, ergo I win"

Cam gets out his copy of "Games People Play", turns to the chapter "Now I've got you - you son of a bitch" and proceeds to play.

Each has crafted his argument to a single situation and both are right for the conditions stated.

Does this add to the body of knowledge of anything? Nope! but it makes an interesting debate on what the meaning of IS is...

"CAM" <w5dxp@hotmail.com> wrote in message
news:3D26E2A2.A2EBD5E8@hotmail.com...
> was not grounded. I burned a hole in my lip from touching the metal
> microphone. Does anyone not know whether that happened during receive
> or during transmit?
> --
> cheers, CAM http://www.qsl.net/w5dxp
! =-----

463. Re: BACK TO BASICS - EM waves, E and H fields, in phase orinquadr...

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-06 19:11:55 UTC
From: CAM <w5dxp@hotmail.com>
Message-ID: <3D2740FB.8E707C9C@hotmail.com>
Source record: 139304

Richard Clark wrote:
>
> CAM <w5dxp@hotmail.com> wrote:
> >I have no idea what you are asking for even after reading what you
> >are asking for.
>
> That has been painfully obvious. What is embarrassing, is that you
> have yet to ask for clarification and instead ignore it.

Given that I don't understand Greek at all, I assumed clarification was
impossible. :-)

> This conforms to what I offered some weeks back, glad to see it
> confirmed in some manner by the IEEE. In light of now knowing what
> the term Common Mode means, the question is, and remains, is the
> Common of your Common Mode artifact earth? If it is not, what is it?

To keep from reinventing the wheel, please reference Fig. 1 - (Imbalance
caused by another path to ground from only one side of the dipole) and
Fig. 4 - (When the rig is connected to ground, a third conductor in parallel
with the right side of the feedline is introduced. This causes an imbalance
in both coaxial cable and twin lead feed lines) in Roy's article in the ARRL
Antenna Compendium Vol. 1, titled, "Baluns: What They Do And How They Do It".
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
------== Over 80,000 Newsgroups - 16 Different Servers! =-----

464. Re: 80 m dipole question??

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-06 19:13:54 UTC
From: CAM <w5dxp@hotmail.com>
Message-ID: <3D274172.464ED305@hotmail.com>
Source record: 139305

Dick Carroll wrote:
>
> CAM wrote:
> >
> > 'Doc wrote:
> > >
> > > Are you really sure that the above is what you
> > > meant to say??
> >
> > Consider a single wire, 1/2WL long, with no transmission line. It is resonant
> > on approximately 468/Length and relatively high currents will flow in the
> > wire from signals picked out of the air on that frequency. Now install an
> > insulator in the middle. It will no longer be resonant on that frequency. It
> > instead has been converted to two 1/2WL wires resonant on approximately double
> > the original frequency.
>
> That would be true if it was hooked to no external circuitry. When used
> with a feedline and radio, not so.

Uhhhhhh Dick, do you not comprehend what, "with no transmission line", above means?
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
------== Over 80,000 Newsgroups - 16 Different Servers! =-----

465. Re: ALL BAND ANT EXPERIMENT?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-06 19:22:34 UTC
From: CAM <w5dxp@hotmail.com>
Message-ID: <3D27437A.DBCFC070@hotmail.com>
Source record: 139306

Chris Boone wrote:
>
> You and Don should read the article by Dr. John(Jack) Belrose;
> QST August 1990
> Off-Center-Fed Dipole Revisited, The: A Broadband, Multiband Antenna
> Article: http://www.arrl.org/members-only/tis/info/pdf/9008028.pdf
>
> Note the antenna uses a current balun...and is 4:1 or 6:1..the Germans
> have been using this antenna for over 15 years with success....
> that article by one of the most respected men in antenna design (even
> Jerry will bow to Jack!) is one I have used in antenna work...and
> it works!! No tuner required for what I used it on...

This antenna was described in the 1955 ARRL Handbook and I used it in
1956 with a Heathkit air-core balun. It worked well on all HF
amateur bands existing at the time. If one draws out the current waves
and voltage waves for an off-center-fed dipole, why this approach works
will become readily apparent. The ratio of voltage to current at the
feedpoint is somewhat similar for all the harmonically related bands.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

466. Re: CAM?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-06 19:24:38 UTC
From: CAM <w5dxp@hotmail.com>
Message-ID: <3D2743F6.8F04DAFA@hotmail.com>
Source record: 139307

```
Reg Edwards wrote:
>
> > StarGazer wrote:
> > > If the input Z of a dipole is 75 ohms and you are feeding it with
> > > 50 ohm coax... Does that make the SWR 1.5:1? 75/50=1.5
> >
> > With those assumptions, the answer is yes, and 1.5:1 is a perfectly
> > acceptable SWR even without an antenna tuner.
> ==============================
> The question arises, how is the SWR to be determined? Guesswork?

According to some on this newsgroup, the SWR is "NOT related" and must
be measured to be known with any accuracy. (The Devil made me do it.)
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
------== Over 80,000 Newsgroups - 16 Different Servers! =-----
```

467. Re: Horizontal Loop Question

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-06 19:38:51 UTC
From: CAM <w5dxp@hotmail.com>
Message-ID: <3D27474B.430ABD2F@hotmail.com>
Source record: 139308

N4LQ wrote:
> One interesting thing I've noted about the 80m loop, it's the only one that
> has a feedpoint impedance of between 200 and 300 ohms on all bands 80-10m
> including warc.

That's an interesting assertion. Here's what EZNEC sez:

3.7 MHz 115 +j0 ohms
7.3 MHz 293 + j0 ohms
10.125 MHz 391 - j872 ohms
14.2 MHz 246 - j445 ohms
18.14 MHz 333 - j 136 ohms
21.3 MHz 501 - j428 ohms
24.95 MHz 376 - j464 ohms
28.3 MHz 479 - j668 ohms

What is the magic length and height of an 80m loop such as you describe?
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

468. Re: My 85' dipole is actually 94'!! Another ??

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-06 19:47:20 UTC
From: CAM <w5dxp@hotmail.com>
Message-ID: <3D274948.FAB6DC1D@hotmail.com>
Source record: 139309

CAM wrote:
> However, using 400 ohm ladder-line with an SWR of 8:1 can transform the
> resonant feedline impedance to 40 ohms for which an antenna tuner is
> not even needed.

*******Typo******** Should have been "50" ohms instead of "40" ohms.
(Why didn't my spell checker catch that? :-)
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

469. Re: BACK TO BASICS - EM waves, E and H fields, in phase orinquadr...

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-06 19:49:58 UTC
From: CAM <w5dxp@hotmail.com>
Message-ID: <3D2749E6.57215DAB@hotmail.com>
Source record: 139310

Fred Hambrecht wrote:
> Each has crafted his argument to a single situation and both are right for
> the conditions stated.

Are you really going to support the assertion that "common mode conditions
and differential mode conditions are NOT related", i.e. never related????
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
------== Over 80,000 Newsgroups - 16 Different Servers! =-----

470. WTB Diamond CP5 CP6

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-06 19:58:08 UTC
From: marieandpaul <marieandpaul@hotmail.com>
Message-ID: <ag7i4g$5h5$1@paris.btinternet.com>
Source record: 139311

Still looking to buy a CP5 CP6 or something similar (must have 80m). Newbie so not too expensive please. Will collect if required 100miles of Birmingham UK or pay postage.

Regards - Paul

471. Re: A whole new 'back to basics' topic - Monopole fundamentals

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-06 20:44:40 UTC
From: klocko@toad.net
Message-ID: <224d9cd4.0207061244.5e17ba28@posting.google.com>
Source record: 139312

" J. Harvey" <JM002.Harvey_TRIMTHIS_@Sympatico.ca> wrote in message
news:<broV8.13223$P53.1947618@news20.bellglobal.com>...
> Hello Bill, Alan and 'Doc,
>
> The authors of that paper are well known and (I think) very well respected.
> I believe that one or both of them wrote the original NEC implementation.
> It would be interesting if they are not correct, or if the results are true
> and a new finding.
>
> I await with baited breath further discussions on the contents of that
> report.

Hi J.,
Geez, you didn't have to bait your breath.

After looking at the actual report, I suspect the authors put it out
to cover some disputed results coming out of MiniNECPro.

The authors derive theoretical expressions for the coupling between 2
antennas given as the ratio of the transmit power to the received
power. These expressions are functions of the free space gain and the
gains of the transmit and receive antennas. They then use these
expressions to compute the coupling for 2 identical dipoles that are
very far apart. They proceed to use MiniNECPro to verify the theory
(?) and find that the 2 values agree.

Next, they use the expressions to compute the coupling for 2 monopoles
that are
very far apart. The basis for their analysis is a value of 5.16 dBi
for
the gain of a monopole on an infinite ground plane. They again use
MiniNECPro to
verify the expressions (?) and find that the theoretical coupling is 6
dB greater
than the MiniNECPro value. The authors apparently take the MiniNECPro
value as being the correct one.

Rather than conclude that there is a problem with MiniNECPro, or that
there might be a problem with a 5.1 dBi gain for a monopole, they
proceed to change the theory by re-defining the effective aperture for
the receiving monopole. Their claim is that the receiving monopole has
an effective aperture that is one-fourth that for a dipole. The usual
eqn for effective aperture is G(lambda^2/4pi), this would be for a
dipole. Their new "correct" eqn for a monopole is G(lambda^2/16pi).
Note the 4 fudge factor in the denominator.

Like I say, I suspect the authors put the report out in 1997 to gloss over some discrepancies between theory and MiniNECPro. Maybe the intent was to provide a method for which engineers computing received power would get results agreeing with the model's. If there was a discrepancy, I would think it'd be better to look at MiniNECPro as the source rather than theory. 73,
Bill N3WK

472. Re: Coax conduit to tower

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-06 20:53:40 UTC
From: dan <danlx@execpc.com>
Message-ID: <3d275a01$0$1429$272ea4a1@news.execpc.com>
Source record: 139313

On 06 Jul 2002 12:06:32 GMT, n2ey@aol.com (N2EY) wrote:

>In article <3d2662b3$0$3578$272ea4a1@news.execpc.com>, dan <danlx@execpc.com>
>writes:
>
>(N2EY wrote)
>>>Sweeps are like pipe "elbows", except that the radius of curvature is much
>>>greater. They look like pieces of bent pipe. Much easier for the cables to
>>make
>>>a bend of large radius. Coax can be damaged if bent too sharply, or if
>>pulled
>>>over a sharp edge.
>>>
>>>The availability of sweeps is one reason to bury conduit rather than
>>>plumbing-type pipe.
>>>
>>>73 de Jim, N2EY
>
>>Thanks, I did not know that. Wouldn't it be easier to use the gray
>>plastic pipe electricians heat to bend?
>
>PVC electrical conduit is the gray stuff. If you can bend it without weakening
>or kinking, go right ahead! The ready-made sweeps are not expensive.

The gray "plastic" pipe the electricians on the sites use is made to
be "bent" for curves and arcs. Never saw them bend it in a 90 though.
Here in WI that's mostly what I see them use, when they are laying it
out before pouring the concrete floors.
>
>>You could avoid all sharp
>>bends and a lot of joints that way.
>
>Joints aren't much of a probelm if they're smooth, but sharp bends are a
>disaster.
>
>>I also saw a home made plug for a
>>pipe. It was made out of 1" hardwood cut to a circle that when cut
>>into fourths and fit back together fit into the end of the pipe.
>>Before cutting into fourths the guy drilled the holes he thought he
>>would need on the cutting lines so when he fit the pieces back
>>together over the coax, they fit snug. Extra holes were filled with
>>bottle corks for future use.
>
>Great idea!
>

>Another way to do the job is to terminate the conduit in waterproof boxes.

Dan

I've rambled enough, back to the rocking chair. ZZZZZZZZZ
Remove left x for a direct reply.

473. Re: F/S Hustler 5BTV

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-06 21:05:12 UTC
From: Radio Haven <radiohaven@aol.com>
Message-ID: <cYIV8.99709$uk2.38616449@twister.nyroc.rr.com>
Source record: 139315
Cross-posted to:
alt.ham-radio.hf,alt.ham-radio.marketplace,rec.ham-radio.swap,rec.radio.amateur.antenna,rec.radio.amateur.swap,rec.radio.swap

```
sold TNX
"Radio Haven" <radiohaven@aol.com> wrote in message
news:l0BV8.109320$GY.37529686@twister.nyroc.rr.com...
> F/S
> Hustler 5BTV Vertical 5 band 80-10 Meters in EXCELLENT condition, only up
> for a few weeks, Complete ready to go, Manual Original Box.$110.00 Shipped
> lower 48 via UPS
>
>
> .
>
> E mail if interested at: radiohaven@aol.com
>
>
>
>
```

474. Multiple band dipole

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-06 21:37:41 UTC
From: NI4L <ni4l@charter.net>
Message-ID: <3D276325.7050408@charter.net>
Source record: 139316

http://www.angelfire.com/nb/ni4l/ni4ldipole.html
--
NI4L CUSTOM RESONANT DIPOLE
LEGAL LIMIT ++ CUSTOM MADE CENTER FED DIPOLE
Made with the same components used by our military forces today
Custom made to YOUR FREQUENCY of operation
Let me take the hassle out of making a RESONANT DIPOLE for you.
Click here for more info... http://www.angelfire.com/nb/ni4l/

475. Re: Chelcom HFV1 Vertical

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-06 21:46:49 UTC
From: John <my-callsign@qsl.net>
Message-ID: <dzJV8.1373$43.144031@news8-gui.server.ntli.net>
Source record: 139317

Given its height of 7.2 mtrs, its very much a compromise antenna. I don't know how much it is, but you might be better off with a Butternut HF2V. The latter covers 80 and 40 (very narrow on 80) and has optional add-on kits for 160 or 30mtrs.
Any elecrtically quarter wave vertical requires a good radial system.

John
G4IRN

"Biggles" <hamsat@totalise.co.uk> wrote in message
news:hkbbiuo326l9fktple3ctf9mb8ioa73lfj@4ax.com...
> Hi
> Would welcome any comments with regards
> to the HFV1 80 Metre Vertical HF antenna and its suitability for multi
> band use via an ATU
> TIA

476. Re: 80 m dipole question??

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-06 23:52:16 UTC
From: nm5k@wt.net
Message-ID: <25eb70d7.0207061552.45aeb041@posting.google.com>
Source record: 139318

CAM <w5dxp@hotmail.com> wrote in message news:<3D260ED5.EA9F4E13@hotmail.com>...

>
> Consider a single wire, 1/2WL long, with no transmission line. It is resonant
> on approximately 468/Length and relatively high currents will flow in the
> wire from signals picked out of the air on that frequency. Now install an
> insulator in the middle. It will no longer be resonant on that frequency. It
> instead has been converted to two 1/2WL wires resonant on approximately double
> the original frequency.

Slight nit....:/ Shouldn't that be..

>It instead has been converted to two 1/4WL wires resonant on
approximately double the original frequency.
> .

MK

477. Re: 80 m dipole question??

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-06 23:53:17 UTC
From: ":-) Bill" <therealexray@netscape.net>
Message-ID: <3D2782ED.B530CD24@netscape.net>
Source record: 139219

Mark Keith wrote:
>
> CAM <w5dxp@hotmail.com> wrote in message news:<3D260ED5.EA9F4E13@hotmail.com>...
>
> >
> > Consider a single wire, 1/2WL long, with no transmission line. It is resonant
> > on approximately 468/Length and relatively high currents will flow in the
> > wire from signals picked out of the air on that frequency. Now install an
> > insulator in the middle. It will no longer be resonant on that frequency. It
> > instead has been converted to two 1/2WL wires resonant on approximately double
> > the original frequency.
>
> Slight nit....:/ Shouldn't that be..
>
> >It instead has been converted to two 1/4WL wires resonant on
> approximately double the original frequency.
> > .
>
> MK

Doubling the freq = wires half the size

-BM

478. Re: A whole new 'back to basics' topic - Monopole fundamentals

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-06 23:56:59 UTC
From: " J. Harvey" <JM002.Harvey_TRIMTHIS_@Sympatico.ca>
Message-ID: <0tLV8.9472$aJ4.2301053@news20.bellglobal.com>
Source record: 139220

"Bill Klocko"
> Geez, you didn't have to bait your breath.

Should be "bated breath" - sorry. Funny error - I was raised in Nova Scotia, but don't much like seafood. My wife is from Asia (the real 'DX'-land !) and she would happily eat the last Chilean Sea Bass. Anyway...

> After looking at the actual report, I suspect the
> authors put it out to cover some disputed results
> coming out of MiniNECPro.
> ...
> Like I say, I suspect the authors put the report
> out in 1997 to gloss over some discrepancies
> between theory and MiniNECPro. Maybe the
> intent was to provide a method for which
> engineers computing received power would get
> results agreeing with the model's. If there was a
> discrepancy, I would think it'd be better to look
> at MiniNECPro as the source rather than theory.

I think it is a very important report either way. If there is such a fundamental discrepancy in 1997, that is big news. If the report is wrong, that is big news too. I'm hoping that some of the regulars here will dig in to the report and come to a consensus.

Choose one:
-Fundamental antenna theory was wrong until 1997.
-Mini-NEC is wrong even now.

Exciting. Shall we take a vote ? (joking)

479. Re: ALL BAND ANT EXPERIMENT?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-07 00:06:11 UTC
From: n2ey@aol.com
Message-ID: <20020706200611.05318.00000532@mb-mb.aol.com>
Source record: 139221

In article <3D27437A.DBCFC070@hotmail.com>, CAM <w5dxp@hotmail.com> writes:

>Chris Boone wrote:
>>
>> You and Don should read the article by Dr. John(Jack) Belrose;
>> QST August 1990
>> Off-Center-Fed Dipole Revisited, The: A Broadband, Multiband Antenna
>> Article: http://www.arrl.org/members-only/tis/info/pdf/9008028.pdf
>>
>> Note the antenna uses a current balun...and is 4:1 or 6:1..the Germans
>> have been using this antenna for over 15 years with success....
>> that article by one of the most respected men in antenna design (even
>> Jerry will bow to Jack!) is one I have used in antenna work...and
>> it works!! No tuner required for what I used it on...
>
>This antenna was described in the 1955 ARRL Handbook and I used it in
>1956 with a Heathkit air-core balun.

Not the same thing, Cecil.

The antenna you used was probably an OCF single dipole. The antennas described in the cq-DL articles and in the 1990 QST article are double-dipoles (four wires, each a different length). The double-dipole OCF antenna appears to have originated in Germany in the early 1980s (cq-DL articles from about 1983).

> It worked well on all HF
>amateur bands existing at the time.

Even 15 meters?

>If one draws out the current waves
>and voltage waves for an off-center-fed dipole, why this approach works
>will become readily apparent. The ratio of voltage to current at the
>feedpoint is somewhat similar for all the harmonically related bands.

The unbalanced nature of the antenna may result in common mode transmission line currents in some cases, too.

73 de Jim, N2EY

480. Re: BACK TO BASICS - EM waves, E and H fields, in phase orinquadr...

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-07 00:38:39 UTC
From: Fred Hambrecht <w4jle@charter.net>
Message-ID: <uif3gmce5oi372@corp.supernews.com>
Source record: 139222

I don't have a dog in this fight Cam, however I never say never...

"CAM" <w5dxp@hotmail.com> wrote in message
news:3D2749E6.57215DAB@hotmail.com...
> Fred Hambrecht wrote:
> > Each has crafted his argument to a single situation and both are right
for
> > the conditions stated.
>
> Are you really going to support the assertion that "common mode conditions
> and differential mode conditions are NOT related", i.e. never related????
> --
> cheers, CAM http://www.qsl.net/w5dxp
>
>
> -----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
> http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
> -----== Over 80,000 Newsgroups - 16 Different Servers! =-----

481. Re: My 85' dipole is actually 94'!! Another ??

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-07 00:42:50 UTC
From: Dick Carroll <dixie@townsqr.com>
Message-ID: <ag82qa$o63$0@208.206.142.103>
Source record: 139223

CAM wrote:
>
> Dick Carroll wrote:
> >
> > > "StarGazer" wrote
> > > > Also, is there something that I can change it from ladder line
> > > > to coax right before it enters the house?
> > > > Or does this defeat the whole purpose of using ladder line?
> >
> > You can transform the impedance at the junction by using varying
> > lengths of coax, similar to Cecil transforming his feed impedance with
> > varying lengths of ladder line for different bands. If it works with
> > ladder line, it works with coax.
>
> Well, as they say on the Hertz commercial, "Not exactly!" Here's why:
>
> In order to perform impedance transformation using the transmission
> line, we need an SWR higher than 1:1.

Why on earth would we be even thinking about matching it if not?

Using 50 ohm coax, it is impossible
> to transform an SWR higher than 1:1 to 50 ohms with a single series section
> transformer.

So you're saying that the well known properties of a halfwave line are
not what the authorititave sources and books say? These properties of a
halfwave transmission line are subject to all your analysis? I guess I
missed all that in the ARRL antenna manual.

(Hint: That 50 ohm target is in the exact center of a 50 ohm
> Smith Chart.) With an SWR of 1.5:1, you can use 75 ohm coax to transform
> the resonant impedance to 50 ohms but it can only be done with a resistance
> equal to 75*1.5 = 112.5 ohms. With an SWR of 1.84:1, you can use 92 ohm coax
> to transform the resonant impedance to 50 ohms but it can only be done
> with a resistance equal to 92*1.84 = 169 ohms. Both of these limits are too
> low to be very useful with non-resonant length dipoles.

You do as you wish, but I never would have a need to attempt a better
match than 1.5:1, even 2:1.

If there was no SWR involved, why would we be attempting to match
impedances to rid ourselves of most of it? I can see why it might
require one to cut the ladderline to a certain nonresonant length on any
of the bands in question.

Maybe you have all this figured out to the 5th decimal place, but for me, anything less than 2:1 is useable. I will probably try the plan I outlined on 20 meters before long. We'll see it it works. So far I'm not persuaded that it won't.

482. Re: BACK TO BASICS - EM waves, E and H fields, in phase orinquadr...

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-07 00:46:27 UTC
From: Fred Hambrecht <w4jle@charter.net>
Message-ID: <uif3qi9jctjk9f@corp.supernews.com>
Source record: 139224

Let me make one more observation between NOT and NEVER.

You and I are NOT related, however if you were to marry my sister we would be. Ergo, Not hardly means never.

"CAM" <w5dxp@hotmail.com> wrote in message news:3D2749E6.57215DAB@hotmail.com...
> Fred Hambrecht wrote:
> > Each has crafted his argument to a single situation and both are right for
> > the conditions stated.
>
> Are you really going to support the assertion that "common mode conditions
> and differential mode conditions are NOT related", i.e. never related????
> --
> cheers, CAM http://www.qsl.net/w5dxp
>
>
> -----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
> http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
> -----== Over 80,000 Newsgroups - 16 Different Servers! =-----

483. Re: 80 m dipole question??

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-07 00:53:36 UTC
From: Dick Carroll <dixie@townsqr.com>
Message-ID: <ag83eg$pf7$0@208.206.142.103>
Source record: 139225

CAM wrote:
>
> Dick Carroll wrote:
> >
> > CAM wrote:
> > >
> > > 'Doc wrote:
> > > >
> > > > Are you really sure that the above is what you
> > > > meant to say??
> > >
> > > Consider a single wire, 1/2WL long, with no transmission line. It is resonant
> > > on approximately 468/Length and relatively high currents will flow in the
> > > wire from signals picked out of the air on that frequency. Now install an
> > > insulator in the middle. It will no longer be resonant on that frequency. It
> > > instead has been converted to two 1/2WL wires resonant on approximately double
> > > the original frequency.
> >
> > That would be true if it was hooked to no external circuitry. When used
> > with a feedline and radio, not so.
>
> Uhhhhhh Dick, do you not comprehend what, "with no transmission line", above means?

Uhhhhhhh Cecil, how many ham radio stations did you ever see using an
antenna with no transmission line?

484. My photos of American Tower antenna in White City, Oregon

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-07 00:59:11 UTC
From: aldg@hotmail.com
Message-ID: <15ae50c5.0207061659.4a435143@posting.google.com>
Source record: 139226

Hi group:

I took some photos of a 150 foot American Tower antenna in White City, Oregon and put them on the Internet in an album titled, "Amer. Tower's White City Tower" at the URL:

http://groups.msn.com/AlsPhotographs/amertowerswhitecitytower.msnw

I'm curious. What type of antenna is this? I suspect it's for cellular telephone service but I'm not sure.

If you visit the American Tower website, they give some information about the tower at the URL:

http://www.americantower.com/OASISPublic/SitePublicPagesADO/SiteBrochure.asp?lngSiteID=11818&lngTowerID=-1&txtCaption=Brochure

I look forward to your comments and I hope that you enjoy my photos.

Regards,
Al Gershen
KC6PRJ (inactive and expired)
Grants Pass, OR
aldg@hotmail.com

(Submitted thru google.com on 7/6/02 at apx. 5:59 pm pdt)

485. Re: 80 m dipole question??

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-07 01:01:23 UTC
From: CAM <w5dxp@hotmail.com>
Message-ID: <3D2792E3.92A53F7D@hotmail.com>
Source record: 139227

Mark Keith wrote:
> Slight nit....:/ Shouldn't that be..
>
> It instead has been converted to two 1/4WL wires resonant on
> approximately double the original frequency.

The wires are 1/2WL on the new resonant frequency.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

486. Re: ALL BAND ANT EXPERIMENT?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-07 01:09:44 UTC
From: CAM <w5dxp@hotmail.com>
Message-ID: <3D2794D8.F6B2AD9@hotmail.com>
Source record: 139228

N2EY wrote:
>
> In article <3D27437A.DBCFC070@hotmail.com>, CAM <w5dxp@hotmail.com> writes:
>
> >Chris Boone wrote:
> >>
> >> You and Don should read the article by Dr. John(Jack) Belrose;
> >> QST August 1990
> >> Off-Center-Fed Dipole Revisited, The: A Broadband, Multiband Antenna
> >> Article: http://www.arrl.org/members-only/tis/info/pdf/9008028.pdf
> >>
> >> Note the antenna uses a current balun...and is 4:1 or 6:1..the Germans
> >> have been using this antenna for over 15 years with success....
> >> that article by one of the most respected men in antenna design (even
> >> Jerry will bow to Jack!) is one I have used in antenna work...and
> >> it works!! No tuner required for what I used it on...
> > >
> > >This antenna was described in the 1955 ARRL Handbook and I used it in
> > >1956 with a Heathkit air-core balun.
>
> Not the same thing, Cecil.

That's what I get for not reading the article. The antenna I used matched
the description above in this thread.

> > It worked well on all HF
> >amateur bands existing at the time.
>
> Even 15 meters?

You're right. I was only thinking about the WARC bands.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
------== Over 80,000 Newsgroups - 16 Different Servers! =-----

487. Re: BACK TO BASICS - EM waves, E and H fields, in phase orinquadr...

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-07 01:14:35 UTC
From: CAM <w5dxp@hotmail.com>
Message-ID: <3D2795FB.22CD2444@hotmail.com>
Source record: 139229

Fred Hambrecht wrote:
> I don't have a dog in this fight Cam, however I never say never...

That's wise, Fred. Absolute statements have a habit of coming back to haunt the people who utter them. A philosophy guru once said at a party I attended, "There are no absolutes." I asked her, "Are you absolutely sure?" What could she say?
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

488. Re: My 85' dipole is actually 94'!! Another ??

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-07 01:21:36 UTC
From: CAM <w5dxp@hotmail.com>
Message-ID: <3D2797A0.316FBDD9@hotmail.com>
Source record: 139230

Dick Carroll wrote:
>
> CAM wrote:
> > Using 50 ohm coax, it is impossible
> > to transform an SWR higher than 1:1 to 50 ohms with a single series section
> > transformer.

> So you're saying that the well known properties of a halfwave line are
> not what the authorititave sources and books say? These properties of a
> halfwave transmission line are subject to all your analysis? I guess I
> missed all that in the ARRL antenna manual.

Assume you have a folded dipole with a 300 ohm feedpoint. You are feeding it
with 50 ohm coax so it has an SWR of 6:1. What length do you make the 50 ohm
coax transmission line to achieve a transformation to 50 ohms at the transmitter?
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

489. Re: BACK TO BASICS - EM waves, E and H fields, in phase orinquadr...

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-07 01:27:15 UTC
From: CAM <w5dxp@hotmail.com>
Message-ID: <3D2798F3.96AD6A48@hotmail.com>
Source record: 139231

Fred Hambrecht wrote:
>
> Let me make one more observation between NOT and NEVER.
>
> You and I are NOT related, however if you were to marry my sister we would
> be. Ergo, Not hardly means never.

That's an entirely different use and definition of the word "related".
My computer bus doesn't have wheels either.

In the context of common mode to differential mode, what else could "NOT
related" mean? "Common mode conditions are NOT related to differential mode
conditions" is pretty clear. If they are sometimes related, why would he say
"NOT related"?
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
------== Over 80,000 Newsgroups - 16 Different Servers! =-----

490. Re: 80 m dipole question??

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-07 01:30:06 UTC
From: CAM <w5dxp@hotmail.com>
Message-ID: <3D27999E.781C8F36@hotmail.com>
Source record: 139232

Dick Carroll wrote:
>
> CAM wrote:
> >
> > Dick Carroll wrote:
> > > That would be true if it was hooked to no external circuitry. When used
> > > with a feedline and radio, not so.
> >
> > Uhhhhhh Dick, do you not comprehend what, "with no transmission line", above means?
>
> Uhhhhhhh Cecil, how many ham radio stations did you ever see using an
> antenna with no transmission line?

Uhhhhhh Dick, we were discussing resonance of single wires without
transmission lines. Please pay attention.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

491. Re: ALL BAND ANT EXPERIMENT?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-07 01:46:20 UTC
From: 2w8ji@contesting.com
Message-ID: <3d279c7b.162426652@news.akorn.net>
Source record: 139233

On Fri, 05 Jul 2002 12:09:41 GMT, "Don Niles" <k2pmc@adelphia.net>
wrote:

>Marvin,
>
>Forget the balun. On 80 meters, where your antenna is resonant, the balun
>will cause a mismatch. The impedance will vary widely, into the thousands
>of ohms on other bands, which will not be handled properly by the balun.
>All you will be doing is generating a lot of heat in the balun and still
>have a high SWR on your transmission line which will result in even greater
>loss.
>
>Feed the antenna with a balanced transmission line to your tuner and it will
>work fine on all bands.
>
>Don - K2PMC

Actually a balun is perfectly fine, you just should not use a voltage
balun. Voltage baluns (like most 4:1 baluns) do not handle wide
impedance ranges very well.

A choke or current balun is the preferred type of balun, and does not
introduce noticeable loss into the system.

All of my ladder line fed antennas use choke baluns on the outputs of
normal T networks. They actually work much better than old KW Johnson
Matchboxes I used to use.

73 Tom

492. need opinions on antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-07 02:27:41 UTC
From: Matt Patterson <mattpatt@1starnet.com>
Message-ID: <xGNV8.578630$Gs.37912307@bin5.nnrp.aus1.giganews.com>
Source record: 139235

I'm currently in the process of putting up a antenna tower and was looking for suggestions on what antenna to put on it. The tower is a 50' Rohn 25G. I have an Alliance HD73 rotor. I've looked at the lightning bolt HF quad. wwww.lightningboltantennas.com and the Tennadyne T6 Log Periodic. $400 is going to be my maximum I'm going to be able to spend so I'd like to keep all suggestions in that price range. Thanks for your time.

Matt
KC5YTV

493. Re: My photos of American Tower antenna in White City, Oregon

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-07 02:28:36 UTC
From: Crazy George <munschNO@attglobal.net.SPAM>
Message-ID: <3d27abce_4@news1.prserv.net>
Source record: 139236

Those look like PCS antennas, but they could be late model cellular. Go to:

http://gullfoss2.fcc.gov/cgi-bin/ws.exe/genmen/index.hts

and walk through the forms with the site location. That will show who is licensed at that site and what frequencies they are on.

American Tower bought many of the defunct ATT microwave towers all over the country, and found that a lot of them were unsuitable for Cellular or PCS applications, and are selling them to Hams and others for reasonable prices. There is a big square 200 foot tower on the next hill from me which I could afford, but the local taxing district thinks it is worth about 10 times what it is, and the taxes would be unbearable. Of course, the 18,000 square foot two story blast proof building may also enter into that equation.

--
Crazy George
Remove NO and SPAM from return address
Al Gershen aldg <aldg@hotmail.com> wrote in message
news:15ae50c5.0207061659.4a435143@posting.google.com...
> Hi group:
>
> I took some photos of a 150 foot American Tower antenna in White City,
> Oregon and put them on the Internet in an album titled, "Amer. Tower's
> White City Tower" at the URL:
>
> http://groups.msn.com/AlsPhotographs/amertowerswhitecitytower.msnw
>
> I'm curious. What type of antenna is this? I suspect it's for
> cellular telephone service but I'm not sure.
>
> If you visit the American Tower website, they give some information
> about the tower at the URL:
>
>
http://www.americantower.com/OASISPublic/SitePublicPagesADO/SiteBrochure.asp
?lngSiteID=11818&lngTowerID=-1&txtCaption=Brochure
>
> I look forward to your comments and I hope that you enjoy my photos.
>
> Regards,
> Al Gershen
> KC6PRJ (inactive and expired)
> Grants Pass, OR
> aldg@hotmail.com

>
> (Submitted thru google.com on 7/6/02 at apx. 5:59 pm pdt)

494. Re: BACK TO BASICS - EM waves, E and H fields, in phase orinquadr...

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-07 02:36:22 UTC
From: 2w8ji@contesting.com
Message-ID: <3d27a162.163681545@news.akorn.net>
Source record: 139237

On Sat, 06 Jul 2002 14:49:58 -0500, CAM <w5dxp@hotmail.com> wrote:

>Fred Hambrecht wrote:
>> Each has crafted his argument to a single situation and both are right for
>> the conditions stated.
>
>Are you really going to support the assertion that "common mode conditions
>and differential mode conditions are NOT related", i.e. never related????

Hi Cecil,

I never said the relationship of some parameters of common mode and differential mode in a system can not have interactions in a particular system.

What I have said, time and time again, is common mode impedance (or voltage, or current) and operation is not related to differential mode impedance or operation, and it is a MISTAKE to assume they are directly related.

As a matter of fact, in a reply to a specific system where someone stuck a balun at at point with low differential impedance, and where everyone concluded the balun should have an effect or be effective, I pointed out the modes were not related. You and Harrison felt obligated to turn the whole topic to a long meaningless argument about the word "not".

All of this is a waste of time, and leads nowhere. Most people in this thread, after some thought, understand common mode is a different mode than differential mode operation, and they are not related in any fixed manner.

I think what is really important is not that you agree with me, like me, or respect me...but that we all do the best we can to help others understand systems.

When wanting to be right gets in the way of helping people, this newsgroup has no usefulness to anyone except perhaps horse's asses who like to argue just to argue.

My goal was to get rid of the common but silly notion that a low differental mode impedance means a choke balun will "work good", and a high differental mode impedance will make balancing the system or energy transfer a problem. I felt, in order to do that, it was necessary to stop the sideways thinking that a given action or change in differental mode operation results in a change...or worse yet a defined change.....in common mode operation.

In trying to get that into one sentence, the best I can come up with is to say "common mode impedance is not related to differential mode impedance".

Why not take a deep breath, and think about what tripped you up on the tuner? Clearly, it was because you (like most people) assume a low differential-mode impedance means the common mode impedance or excitation is low...and a choke balun will "work better".

How would you, in one sentence, tell people that common mode impedance is not related to differetial mode impedance, so they don't make silly assumptions about baluns? that is the goal, not arguing about the word "not".

Any one else have an idea, in case Cecil elects to not help others with this problem?

Please, minimal bafflegab. How do we tell people the differential mode impedance or behavior has nothing directly to do with common mode, and picking a favorable parameter for one has nothing to do with the other being changed the same favorable way?

73 Tom

495. Re: BACK TO BASICS - EM waves, E and H fields, in phase orinquadr...

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-07 03:03:42 UTC
From: richardharrison@webtv.net
Message-ID: <27300-3D27AF8E-178@storefull-2391.public.lawson.webtv.net>
Source record: 139238

Richard Clark wrote:
"I am not asking for proof."

My dictionary says the word "relate" is to tell or associate.

When the sun appears, it not only illuminates fully exposed sites, it also brightens the gloom of shady spots.

The sun`s indirect illumination under the shade depends on its brilliance nearby in the open. It isn`t direct radiation in the shade, but illumination in the shade is related.

With enough data collection regarding the relationship of direct sunlight nearby and the resulting illumination in the shade you could construct tables which allow you to make pretty good predictions of illumination in the shade from sunlight in the open nearby. Of course drought could kill the grass and change reflectivity of light into the shade. That would not be caused by loss of relationship between open space and shade, it just reflects a change in the value of the relationship of light in the two locations.

The same sort of relationship exists between differential-mode signals and the common-mode signals which imbalance in the differential-mode produces. Balance is the only thing that usually undoes the relation between differential-mode and common-mode. In the single-signal case we discussed, if you don`t have any imbalance, you don`t have any common-mode to relate to.

Best regards, Richard Harrison, KB5WZI

496. Re: My 85' dipole is actually 94'!! Another ??

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-07 03:18:54 UTC
From: ryeburn@sfu.caz
Message-ID: <ryeburn-0607022018540001@bni030qny8kc.bc.hsia.telus.net>
Source record: 139239

In article <3D2797A0.316FBDD9@hotmail.com>, CAM <w5dxp@hotmail.com> wrote:

> Dick Carroll wrote:
> >
> > CAM wrote:
> > > Using 50 ohm coax, it is impossible
> > > to transform an SWR higher than 1:1 to 50 ohms with a single series
section
> > > transformer.
>
> > So you're saying that the well known properties of a halfwave line are
> > not what the authorititave sources and books say? These properties of a
> > halfwave transmission line are subject to all your analysis? I guess I
> > missed all that in the ARRL antenna manual.
>
> Assume you have a folded dipole with a 300 ohm feedpoint. You are feeding it
> with 50 ohm coax so it has an SWR of 6:1.

At the antenna. With real-world coax, the SWR will gradually decrease as
we move towards the transmitter.

> What length do you make the 50 ohm coax transmission line to achieve a
> transformation to 50 ohms at the transmitter?

Oh, I think something on the order of the circumference of the Earth
should easily do it, close enough for practical purposes.

(Quoting CAM, "The devil made me do it.")

David, ex W8EZE

--
David or Jo Anne Ryeburn
ryeburn@sfu.caz
To send e-mail, remove the letter "z" from this address.

497. Re: need opinions on antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-07 03:37:32 UTC
From: Matt Patterson <mattpatt@1starnet.com>
Message-ID: <0IOV8.308383$_j6.15086737@bin3.nnrp.aus1.giganews.com>
Source record: 139240

Sorry, I failed to mention what bands I'm looking for...

I'm looking to cover 10 thru 20 meters and possibly 40. I'd mainly be interested in a antenna that would cover all 5 bands thru 20 (i.e 10, 12, 15, 17 and 20) or a tribander (10, 15 and 20) I think probably my best bet would be to have a antenna such as ones described above and then just use a dipole for 40 meters. I have no desire to get on 75/80.

Thanks
Matt
KC5YTV

"Matt Patterson" <mattpatt@1starnet.com> wrote in message
news:xGNV8.578630$Gs.37912307@bin5.nnrp.aus1.giganews.com...
> I'm currently in the process of putting up a antenna tower and was looking
> for suggestions on what antenna to put on it. The tower is a 50' Rohn
25G.
> I have an Alliance HD73 rotor. I've looked at the lightning bolt HF quad.
> wwww.lightningboltantennas.com and the Tennadyne T6 Log Periodic. $400 is
> going to be my maximum I'm going to be able to spend so I'd like to keep
all
> suggestions in that price range. Thanks for your time.
>
> Matt
> KC5YTV
>
>
>
>

498. Re: ALL BAND ANT EXPERIMENT?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-07 04:06:38 UTC
From: n2ey@aol.com
Message-ID: <20020707000638.22468.00000473@mb-fy.aol.com>
Source record: 139241

In article <3D2794D8.F6B2AD9@hotmail.com>, CAM <w5dxp@hotmail.com> writes:

>N2EY wrote:
>>
>> In article <3D27437A.DBCFC070@hotmail.com>, CAM <w5dxp@hotmail.com> writes:
>>
>> >Chris Boone wrote:
>> >>
>> >> You and Don should read the article by Dr. John(Jack) Belrose;
>> >> QST August 1990
>> >> Off-Center-Fed Dipole Revisited, The: A Broadband, Multiband Antenna
>> >> Article: http://www.arrl.org/members-only/tis/info/pdf/9008028.pdf
>> >>
>> >> Note the antenna uses a current balun...and is 4:1 or 6:1..the Germans
>> >> have been using this antenna for over 15 years with success....
>> >> that article by one of the most respected men in antenna design (even
>> >> Jerry will bow to Jack!) is one I have used in antenna work...and
>> >> it works!! No tuner required for what I used it on...
>> >>
>> >This antenna was described in the 1955 ARRL Handbook and I used it in
>> >1956 with a Heathkit air-core balun.
>>
>> Not the same thing, Cecil.
>
>That's what I get for not reading the article.

It's an interestin article. The usual configuration seems to be an inverted V/maypole setup, with 4 legs of unequal length. Good description of balun construction. Neat 4:1 current balun design using ferrite beads and RG-62 coax.

Construction is somewhat complex and the measurements may be a bit fussy. But it claims very low SWR on 80-10 including the WARC bands.

One wonders why it has not caught on here as in DL. I'd put one up but I don't have room for the four wires.

It would be an interesting antenna to model.

>The antenna I used matched
>the description above in this thread.

I don't know about that, but it's of little consequence. The single OCF dipole was in the Handbook for many years. As Dr. Belrose points out, it's NOT a Windom - it's an OCF dipole.
>
>> > It worked well on all HF

>> >amateur bands existing at the time.
>>
>> Even 15 meters?
>
>You're right. I was only thinking about the WARC bands.

The antennas in the QST article do 80 thru 10 including the WARC bands.

73 de Jim, N2EY

499. Re: ALL BAND ANT EXPERIMENT?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-07 04:14:49 UTC
From: Dan Richardson <k6mhe@mendolink.com>
Message-ID: <u0gfiu4tnmlg4n4273ja122gv4d59utoph@4ax.com>
Source record: 139246

On 07 Jul 2002 04:06:38 GMT, n2ey@aol.com (N2EY) wrote:

>Neat 4:1 current balun design using ferrite beads and RG-62 coax.

Does anyone know of a source for that coax?

Danny, K6MHE

500. Re: BACK TO BASICS - EM waves, E and H fields, in phase orinquadr...

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-07 04:16:16 UTC
From: CAM <w5dxp@hotmail.com>
Message-ID: <3D27C090.43F1674B@hotmail.com>
Source record: 139242

Tom W8JI wrote:
> I never said the relationship of some parameters of common mode and
> differential mode in a system can not have interactions in a
> particular system.

Yes, you did, Tom.

I said: The basic question is whether common mode conditions are related to
differential conditions (or not).

> You responded: Then the answer is no, they are not related.

That's an absolute statement, Tom, and leaves no room for doubt. You
said common mode conditions are not related to differential mode
conditions implying not in any way whatsoever. Would you like to admit
that your statement was false and change it to be true?

> What I have said, time and time again, is common mode impedance (or
> voltage, or current) and operation is not related to differential mode
> impedance or operation, and it is a MISTAKE to assume they are
> directly related.

What you said was that common mode conditions are not related to
differential mode conditions. See above.

> In trying to get that into one sentence, the best I can come up with
> is to say "common mode impedance is not related to differential mode
> impedance".

But that's not what you said above. You said common mode conditions are
not related to differential mode conditions. I have offered any number
of examples where common mode conditions *are* related to differential
mode conditions.

Your statement above was and is simply false. It will remain false
no matter how many true statements you make. Why are you unwilling
to hold yourself to the same technical standards that you demand
of others?
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

501. Re: BACK TO BASICS - EM waves, E and H fields, in phaseorinquadr...

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-07 04:19:16 UTC
From: CAM <w5dxp@hotmail.com>
Message-ID: <3D27C144.62BEFBB4@hotmail.com>
Source record: 139243

Richard Harrison wrote:
> The same sort of relationship exists between differential-mode signals
> and the common-mode signals which imbalance in the differential-mode
> produces. Balance is the only thing that usually undoes the relation
> between differential-mode and common-mode. In the single-signal case we
> discussed, if you don`t have any imbalance, you don`t have any
> common-mode to relate to.

I have no doubt that if the DOD had $1,000,000 for the project, they
could document and report the relationship of common mode conditions
to differential mode conditions in a test antenna system to whatever
accuracy is required.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

502. Re: My 85' dipole is actually 94'!! Another ??

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-07 04:23:06 UTC
From: CAM <w5dxp@hotmail.com>
Message-ID: <3D27C22A.C61F1499@hotmail.com>
Source record: 139244

David or Jo Anne Ryeburn wrote:
>
> CAM <w5dxp@hotmail.com> wrote:
> > Assume you have a folded dipole with a 300 ohm feedpoint. You are feeding it
> > with 50 ohm coax so it has an SWR of 6:1.
>
> At the antenna. With real-world coax, the SWR will gradually decrease as
> we move towards the transmitter.
>
> > What length do you make the 50 ohm coax transmission line to achieve a
> > transformation to 50 ohms at the transmitter?
>
> Oh, I think something on the order of the circumference of the Earth
> should easily do it, close enough for practical purposes.
>
> (Quoting CAM, "The devil made me do it.")

You got me, David. :-) But theoretically, it will never reach exactly 1:1.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
------== Over 80,000 Newsgroups - 16 Different Servers! =-----

503. Re: Horizontal Loop Question

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-07 04:30:25 UTC
From: CAM <w5dxp@hotmail.com>
Message-ID: <3D27C3E1.90C16A9D@hotmail.com>
Source record: 139245

N4LQ wrote:
>
> This:
>
> 80-Meter Octagon Loop, Corner-Fed: Fig. 13
>
> Freq. Gain TO Feedpoint Z
> MHz Bi Deg R +/- jX Ohms
> 3.5 4.3 45* 135 - j 55
> 7 6.3 41 205 - j 150
> 10.1 7.9 29 250 - j 580
> 14 9.3 21 155 - j 250
> 18.1 11.6 15 310 + j 250
> 21 11.9 13 275 - j 230
> 24.9 10.5 11 300 + j 40
> 28 11.4 10 310 - j 310

May I point out that the feedpoint impedance is not between 200 and 300
ohms on 75m, 30m, 17m, 15m, 12m, and 10m.

> > N4LQ wrote:
> > > One interesting thing I've noted about the 80m loop, it's the only one that
> > > has a feedpoint impedance of between 200 and 300 ohms on all bands 80-10m
> > > including warc.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

504. Re: My 85' dipole is actually 94'!! Another ??

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-07 04:46:18 UTC
From: " J. Harvey" <JM002.Harvey_TRIMTHIS_@Sympatico.ca>
Message-ID: <vIPV8.25222$2w.1223664@news20.bellglobal.com>
Source record: 139247

"CAM"
> But theoretically, it will never reach exactly 1:1.

I once saw a spec for some lossy 'fibre optic' fibre - the loss was specified as being around "3400 dB per km" (IIRC). I wondered how the heck they would measure that much loss. Funnel a Universe full of photons in at one end and none would come out the other end. Eventually one photon might come out, but the Universe would be long since dead before that would be even remotely likely to happen. Obviously, to come up with that specified loss specification "per km", that they used a much shorter length (like 1m=3.4dB) and extrapolated.

Using such a lossy cable, and *taking into account the quantum nature of radiation*, the SWR would, in fact, theoretically reach exactly 1:1. You just need to use sufficiently lossy cable and the slightly more complete theory that includes the quantum nature of any radiation (including RF).

;-)

505. Re: My 85' dipole is actually 94'!! Another ??

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-07 04:53:19 UTC
From: Dick Carroll <dixie@townsqr.com>
Message-ID: <ag8hfvnvf0@208.207.71.169>
Source record: 139248

CAM wrote:
>
> Dick Carroll wrote:
> >
> > CAM wrote:
> > > Using 50 ohm coax, it is impossible
> > > to transform an SWR higher than 1:1 to 50 ohms with a single series section
> > > transformer.

Then use two.

>
> > So you're saying that the well known properties of a halfwave line are
> > not what the authorititave sources and books say? These properties of a
> > halfwave transmission line are subject to all your analysis? I guess I
> > missed all that in the ARRL antenna manual.
>
> Assume you have a folded dipole with a 300 ohm feedpoint. You are feeding it
> with 50 ohm coax so it has an SWR of 6:1. What length do you make the 50 ohm
> coax transmission line to achieve a transformation to 50 ohms at the transmitter?

Why don't you go ahead and say whatever it is that you want to say? I
wouldn't feed a 300 ohm folded dipole with coax in the first place. (I
might use it for a matching section) Would you? You seem to be equating
that with matching feedline impedances, so explain yourself. Are you
saying that a 50 ohm line can't match any higher impedance? I've never
seen anything like that in print.
So how, then, is a transmission line different from an antenna, which
is in itself just a transmission line?

From ARRL Antenna book, 15th edition, page 26-12:

"Rearranging the equation gives Zo=(sqrt)Zi*ZL. (Zi=input impedance,
ZL=load impedance). This means that any value of load impedance Zl can
be transformed into any desired value of impedance Zi at the input
terminals of a 1/2 wv. line, provided the line can be constructed to
have a characteristic impedance Zo equal to the square root of the
product of the other two impedances. The factor that limits the range of
impedances that can be matched by this method is the range of values for
Zo that is physically realizable. The latter range is approximately 52
to 600 ohms. Practically any type of line can be used for the matching
section, including both air-insulated and solid-dielectric lines".

What say you?

Dick

506. Re: My 85' dipole is actually 94'!! Another ??

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-07 06:21:29 UTC
From: Bill Nelson <billn@spock.peak.org>
Message-ID: <ag8ml9eug10@quark.scn.rain.com>
Source record: 139249

J. Harvey <JM002.Harvey_TRIMTHIS_@sympatico.ca> wrote:
> "CAM"
>> But theoretically, it will never reach exactly 1:1.

> I once saw a spec for some lossy 'fibre optic' fibre - the loss was
> specified as being around "3400 dB per km" (IIRC). I wondered how the heck
> they would measure that much loss. Funnel a Universe full of photons in at
> one end and none would come out the other end. Eventually one photon might
> come out, but the Universe would be long since dead before that would be
> even remotely likely to happen. Obviously, to come up with that specified
> loss specification "per km", that they used a much shorter length (like
> 1m=3.4dB) and extrapolated.

Lossy is right. Even a 1 mm length would have a loss of around 3335 dB.
That isn't a fiber, that is a solid plug of dense matter.

What is 2^1133rd power? Divide 1 km by that and you will have the
approximate length that would provide a 3 dB loss.

Sounds like some sort of advertising hype to me.

--
Bill Nelson (billn@peak.org)

507. Re: Horizontal Loop Question

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-07 10:35:19 UTC
From: "Sverre Holm (LA3ZA)" <la3za@qsl.net>
Message-ID: <HPUV8.3208$HR.42053@news4.ulv.nextra.no>
Source record: 139250

"'Doc" <w5lz@icok.net> wrote in message news:3D26CA7A.3C9111A6@icok.net...
> Alan,
> It doesn't
> seem to like 15 or 10 meters all that much, at least I
> can't get a 1:1 SWR on either band. I can understand 15
> meters not being the best, but I find not being able to
> get a good match on 10 meters a bit strange.

I also have a 75 m loop up about 5-10 meters and with five corners. I am very happy with it - when 10 meters was at its best in March, I could work Brazil, Argentina, Japan at QRP - CW level from my location near Oslo, Norway. It does well on all other bands also, and I have worked JA on 40 m with it. However, it did require a modification to a standard Z-match to tune on 17 - 10 m, see more info at http://www.qsl.net/la3za/Homebrew.html.

73 Sverre

--
Sverre Holm, LA3ZA
Asker, Norway (59.8N, 10.4E)
---
www.qsl.net/la3za

508. Re: BACK TO BASICS - EM waves, E and H fields, in phase orinquadr...

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-07 11:31:19 UTC
From: 2w8ji@contesting.com
Message-ID: <3d2825c0.197573373@news.akorn.net>
Source record: 139251

On Sat, 06 Jul 2002 23:16:16 -0500, CAM <w5dxp@hotmail.com> wrote:

>Tom W8JI wrote:
>> I never said the relationship of some parameters of common mode and
>> differential mode in a system can not have interactions in a
>> particular system.
>
>Yes, you did, Tom.
>
>I said: The basic question is whether common mode conditions are related to
>differential conditions (or not).
>
>> You responded: Then the answer is no, they are not related.

Let's be honest Cecil. I was in a thread about a particular system,
and you still had a chicken bone stck in your craw about the balun and
the tuner.

The truth is, you get attention from these long useless arguments even
if no one on the newsgroup learns a thing because of them.

That is what is important.

73 Tom

509. 'Aerial' Antennas

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-07 12:42:15 UTC
From: G4VGO <g4vgo@qsl.net>
Message-ID: <3d283a0f_3@news2.prserv.net>
Source record: 139252

I am in the process of building an antenna website, focusing on kite and balloon lifted antennas.

http://www.qsl.net/g4vgo/index.htm

Comments welcome

Thanks and 73

Bob G4VGO

510. Re: Horizontal Loop Question

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-07 13:19:28 UTC
From: N4LQ <N4LQ@igLou.com>
Message-ID: <3d26ee40_3@news.iglou.com>
Source record: 139287

One interesting thing I've noted about the 80m loop, it's the only one that has a feedpoint impedance of between 200 and 300 ohms on all bands 80-10m including warc. Other loops including 160m and 40m sizes will present some very high and reactive impedances on some bands. This makes the 80m loop somewhat special since it is the easiest to feed and tune. This is the only loop that one can feed directly with coax without a huge amount of power loss on some bands.

The ideal system would use 300 ohm feed line and a balanced tuner at the transmitter. A 4:1 or 6:1 balun will work nicely with the 80m loop. I've used a 4:1 W2DU current balun at the antenna's feedpoint with a 50 ohm coax feeder and found little or no matching is needed on many bands.

If your goal is making the 80m loop resonant on multiple bands, be sure to do the math. If you cut the loop for the ssb portion of 75 meters, it will not be resonant on the higher bands. Cut and tune the loop for the low end of 80m and you should find the harmonics fall within the ham bands.

As for your 20ft height question.....I've never used one that low. My loop is at 50ft. The problem with such a low loop would be signal absorbsion from surrounding objects such as your house, the earth etc. Feed Z on 80m would be considerably lower than the other bands. -- 73 --
Steve Ellington N4LQ.
"ARDUJENSKI" <ardujenski@aol.com> wrote in message
news:20020706010246.15533.00002671@mb-fx.aol.com...
> I have read various articles on horizontal loops and still have a few
> questions. First let me say that my interest was peaked by several notes i
have
> read from field day groups exclaiming how pleased they were with the
horizontal
> loop at ONLY 20FT.
>
> I got a copy of EZNEC DEMO and played with various size loops and heights.
I
> was surprised to see some noteable gain figures using an 80m loop at 20ft
> height on 20m and above but more significantly there were some nice lobe
> patterns which see like they would accomodate the NW operations.
>
> Elevating or enlarging the loop then developed patterns with multi lobes
at
> various takeoff angles and as you approached 15m and above with very large
> loops (800ft+)--patterns which look like avocadoes.
>
> I am not too sure if my modeling was too crude to be of value. Have any of
you

> used horizontal loops and what was you rexperiences. In particular any one
use
> an 80m loop at about 20ft?
>
> Alan KB7MBI

511. Re: Horizontal Loop Question

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-07 13:32:25 UTC
From: ardujenski@aol.com
Message-ID: <20020707093225.18310.00002577@mb-bg.aol.com>
Source record: 139253

First let me start out with a big THANK YOU to those who replied. It appears the 80m loop does have some benifits in loading. Not much feedback on lobe patterns but I assume the DEMO EZNEC did validate what was suspected is that 80m was a cloud warmer (good for local contacts, 40m was sort of a mix with some high angle and some lower angle in the range of 35 degrees or so. On 20m and up and above you get some gain (3db or so). But more importantly on 20m+ you get primarily low angle lobes (25 degreess and a bit lower) without a lot of high angle lobe patterns (placing your power where you want it).

The difference between 20ft vs 40ft appears to be not so much a matching factor but more importantly what lobe patterns do you want to achieve.

This may be why CEBIK chose 35ft for his horizonal loop (besides being an achievable loop height).

Appears what we need is a set of 4 tall masts (40ft or so) and raise and lower the loop for varying band conditions and station location (both yours and his) to get the best signal (smile)

The important thing from all this appears to be that a loop is a good COMPROMISE all band antenna (80-10m), with very few negative aspects and relatively good performance if you choose the right height for your type of operation.Fairly quiet, some modest gain on upper bands and probably quite comparable to dipoles at the same height. Is this a good summary?

512. Re: My 85' dipole is actually 94'!! Another ??

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-07 13:35:07 UTC
From: CAM <w5dxp@hotmail.com>
Message-ID: <3D28438B.1256D3FD@hotmail.com>
Source record: 139255

Dick Carroll wrote:
>
> CAM wrote:
> >
> > Dick Carroll wrote:
> > >
> > > CAM wrote:
> > > > Using 50 ohm coax, it is impossible
> > > > to transform an SWR higher than 1:1 to 50 ohms with a single series section
> > > > transformer.
>
> Then use two.

You think two series section transformers work better than one?

> > > So you're saying that the well known properties of a halfwave line are
> > > not what the authorititave sources and books say? These properties of a
> > > halfwave transmission line are subject to all your analysis? I guess I
> > > missed all that in the ARRL antenna manual.
> >
> > Assume you have a folded dipole with a 300 ohm feedpoint. You are feeding it
> > with 50 ohm coax so it has an SWR of 6:1. What length do you make the 50 ohm
> > coax transmission line to achieve a transformation to 50 ohms at the transmitter?
>
> Why don't you go ahead and say whatever it is that you want to say? I
> wouldn't feed a 300 ohm folded dipole with coax in the first place. (I
> might use it for a matching section)

Whether you would or would not feed a 300 ohm folded dipole with coax is
irrelevant. Please describe how to use a single piece of lossless 50 ohm
coax as a series section transformer to transform 300 ohms to 50 ohms.

> Are you
> saying that a 50 ohm line can't match any higher impedance? I've never
> seen anything like that in print.

Yes, I am saying that a 50 ohm lossless series section of line cannot be
used to match any impedance higher (or lower) than 50+j0 ohms to exactly
50+j0 ohms. The only load that Z0 transmission line can match to Z0 ohms
is Z0 ohms.

> From ARRL Antenna book, 15th edition, page 26-12:
>
> "Rearranging the equation gives Zo=(sqrt)Zi*ZL. (Zi=input impedance,
> ZL=load impedance). This means that any value of load impedance Zl can
> be transformed into any desired value of impedance Zi at the input

> terminals of a 1/2 wv.

The equation proves what I have been saying. If you can use a piece of 50 ohm coax to transform a load of 300 ohms to 50 ohms, then you can prove that 50 = 122.5. Do you really think that 50 = 122.5?

When varying the length of the transmission line to achieve a match to 50 ohms, a Z0 of 50 ohms will fail to achieve a match to any load except 50 ohms. Varying the length of my ladder-line to match my non-resonant loads to 50 ohms only works because the Z0 of the ladder-line is not equal to 50 ohms. I am deliberately causing an SWR of around 9:1 so that Z0=450 divided by 9 equals 50 ohms.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

513. Re: My 85' dipole is actually 94'!! Another ??

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-07 13:36:49 UTC
From: CAM <w5dxp@hotmail.com>
Message-ID: <3D2843F0.62AFB55D@hotmail.com>
Source record: 139256

Bill Nelson wrote:
> Lossy is right. Even a 1 mm length would have a loss of around 3335 dB.
> That isn't a fiber, that is a solid plug of dense matter.
>
> Sounds like some sort of advertising hype to me.

Remember the DED? (Dark Emitting Diode)
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

514. Re: BACK TO BASICS - EM waves, E and H fields, in phase orinquadr...

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-07 13:38:59 UTC
From: CAM <w5dxp@hotmail.com>
Message-ID: <3D284473.F2BCBB0@hotmail.com>
Source record: 139257

Tom W8JI wrote:
>
> On Sat, 06 Jul 2002 23:16:16 -0500, CAM <w5dxp@hotmail.com> wrote:
>
> >Tom W8JI wrote:
> >> I never said the relationship of some parameters of common mode and
> >> differential mode in a system can not have interactions in a
> >> particular system.
> >
> >Yes, you did, Tom.
> >
> >I said: The basic question is whether common mode conditions are related to
> >differential conditions (or not).
> >
> >> You responded: Then the answer is no, they are not related.
>
> Let's be honest Cecil. I was in a thread about a particular system,
> and you still had a chicken bone stck in your craw about the balun and
> the tuner.

Let's be honest, Tom. Why are you unwilling to hold yourself to the
same standards that you demand for everyone else? Do you have a
chicken bone stuck in your craw?
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

515. Re: Horizontal Loop Question

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-07 13:57:07 UTC
From: CAM <w5dxp@hotmail.com>
Message-ID: <3D2848B3.C00FA10E@hotmail.com>
Source record: 139258

N4LQ wrote:
> You are correct and these figures point out the uselessness of having a 4:1
> balun in the antenna tuner. A 1:1 would be more suitable.

Also, after being transformed by ladder-line to who-knows-what
impedance probably not even close to the known antenna feedpoint
impedances, a 4:1 balun would be a bad choice.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

516. Re: ALL BAND ANT EXPERIMENT?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-07 14:06:49 UTC
From: n2ey@aol.com
Message-ID: <20020707100649.05318.00000539@mb-mb.aol.com>
Source record: 139259

In article <u0gfiu4tnmlg4n4273ja122gv4d59utoph@4ax.com>, Dan Richardson
<k6mhe@mendolink.com> writes:

>On 07 Jul 2002 04:06:38 GMT, n2ey@aol.com (N2EY) wrote:
>
>>Neat 4:1 current balun design using ferrite beads and RG-62 coax.
>
>Does anyone know of a source for that coax?

Hello Danny,
>
I searched Yahoo with "RG-62" and got a whole pile of dealers. Sacramento
Electronics may be close to you if you're in 6 land. Apparently RG-62 was used
in Arcnet networks.

(standard commercial disclaimers apply)

73 de Jim, N2EY

517. Re: ALL BAND ANT EXPERIMENT?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-07 14:45:29 UTC
From: Dan Richardson <k6mhe@mendolink.com>
Message-ID: <irkgiuohrj2hnqksirs34uh3l33tg4ni4q@4ax.com>
Source record: 139264

On 07 Jul 2002 14:06:49 GMT, n2ey@aol.com (N2EY) wrote:

>In article <u0gfiu4tnmlg4n4273ja122gv4d59utoph@4ax.com>, Dan Richardson
><k6mhe@mendolink.com> writes:
>
>>On 07 Jul 2002 04:06:38 GMT, n2ey@aol.com (N2EY) wrote:
>>
>>>Neat 4:1 current balun design using ferrite beads and RG-62 coax.
>>
>>Does anyone know of a source for that coax?
>
>Hello Danny,
>>
>I searched Yahoo with "RG-62" and got a whole pile of dealers. Sacramento
>Electronics may be close to you if you're in 6 land. Apparently RG-62 was used
>in Arcnet networks.
>
>(standard commercial disclaimers apply)
>
>73 de Jim, N2EY
>
Thanks Jim,

However, after taking a closer look I see it is rather dinky. Probably
best for lower power applications.

I tried a search for the specs but came up empty handed.

Thanks again

Danny, K6MHE

518. Re: Fractal Wire Antennas

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-07 14:47:33 UTC
From: "W.G Ewald" <wgewald@att.net>
Message-ID: <p5lgiu8m2g952f8v7hg00j62ds676f120b@4ax.com>
Source record: 139260

On Tue, 02 Jul 2002 14:13:21 GMT, "VE9SRB" <srbest@att.net> wrote:

>This is not intended to be a "debate", just a statement of opinion (or fact
>depending on your perspective). This is also very long - sorry. I won't
>post any other long statements on this subject.
>
>
>
>The electromagnetic behavior and performance properties of a wire antenna
>are a function of the antenna's physical properties. These physical
>properties include the antenna's size (height, area, occupied volume, etc.),
>total wire length, geometry and wire diameter. If we conclude that the
>electromagnetic behavior and/or performance properties of an antenna are
>uniquely or primarily a function of one of these physical properties, we
>must also conclude that significantly modifying this one physical property
>will significantly modify the antenna's electromagnetic behavior and/or
>performance properties.
>
>
>
>If we are to conclude that antennas having fractal geometry behave in a
>manner differently or better than antennas with a non-fractal or some
>arbitrary geometry, then we must fix all of the antenna's other physical
>properties (size, total wire length and wire diameter) and compare the
>electromagnetic behavior and performance properties of the fractal antenna
>with those of antennas having different geometries. This is something that
>none of the proponents of fractal geometry have done in the open literature.
>Not one. Let's consider this further.
>
>
>
>1) Cohen, in a series of Communications Quarterly articles, published the
>performance properties of the Minkowski Island fractal loop antenna. He
>demonstrated that with increasing fractal iteration these antennas exhibit a
>lower resonant frequency than a Euclidean (square or rectangular) loop of
>the same size (occupied area). He also demonstrated that in some regions of
>low frequency, the Minkowski Island fractal loops exhibit a higher radiation
>resistance than the Euclidean loop of the same size. Cohen concluded that
>the electromagnetic behavior and relative performance properties of the
>Minkowski Island fractal loops are primarily a function of the loops'
>fractal geometry. It is significant to note that two physical parameters of
>the antenna change with increasing fractal iteration. One is the antenna's
>geometry and the other is the antenna's total wire length. While the
>performance data presented by Cohen is mostly accurate, his conclusion is

>scientifically flawed because he is varying two of the antenna's physical
>properties but concludes that the antenna's electromagnetic behavior is
>primarily a function of only one of these physical property - its fractal
>geometry.
>
>
>
>To scientifically validate his hypothesis, Cohen would have to compare the
>electromagnetic behavior and performance properties of the Minkowski Island
>fractal loop with those of other geometry loops having the same size, total
>wire length and wire diameter. He did not do this. When we compare the
>Minkowski Island loop with loops of differing geometries but otherwise
>having the same size, total wire length and wire diameter, it is evident
>that they exhibit very similar electromagnetic behavior and performance
>properties. In some cases, the arbitrarily shaped loops behave better than
>the fractal loop and in some cases, the fractal loop behaves better than the
>arbitrarily shaped loop. In all of this however, the most significant fact
>to note is the following: when the total wire length of the arbitrarily
>shaped loops is adjusted such that their resonant frequency matches that of
>the Minkowski Island fractal loop, they have virtually identical radiation
>resistance and bandwidth. The resonant behavior of these loops is primarily
>a function of the loop size with respect to the resonant wavelength and the
>resonant properties of these loops are essentially the same independent of
>the differences in loops' geometry and total wire length.
>
>
>
>2) Puente's work on the Koch fractal monopole suffers from the same
>scientific flaws as Cohen's work on the Minkowski Island loops. Puente
>describes the behavior and performance properties of the Koch fractal
>monopole as a function of increasing fractal iteration (increasing total
>wire length) and demonstrates that, when compared to a Euclidean (straight)
>monopole of the same height, the Koch fractal monopoles exhibit lower
>resonant frequency and increased radiation resistance in some regions of low
>frequency. Puente even goes as far as claiming that the complex shape of
>the Koch fractal curve enhances its radiation properties. Again, it is
>significant to note that Puente did not bother to compare the performance of
>the Koch fractal monopole with another monopole of different geometry but
>otherwise having the same physical properties (height, total wire length and
>wire diameter). For example, if we compare the Koch fractal monopole with a
>simple meander line monopole and normal mode helix of the same height and
>total wire length, we see that these simple geometries exhibit significantly
>lower resonant frequency and higher radiation resistance at low frequencies.
>As a function of height and total wire length, these simple structures are
>more effective radiators. Two points are even more significant: a) when the
>wire length of the meander line and normal mode helix antennas is shortened
>(while maintaining the same height) such that their resonant frequency
>matches that of the Koch fractal, they exhibit virtually identical radiation
>resistance and bandwidth. The resonant behavior of these monopole
>structures is primarily a function of their height with respect to the

>resonant wavelength and is essentially the same independent of the
>differences in geometry and total wire length. b) below the small antenna
>limit (ka < 0.5, k = 2pi/WL and a is the radius of a sphere encompassing the
>maximum dimension of the antenna), the radiation resistance of all these
>antennas converges to that of a Euclidean monopole of the same height.
>
>
>
>3) One of the most profound and yet totally unsubstantiated conclusions
>regarding fractal antennas is that stated by Vinoy et al in an article
>titled "Hilbert Curve Fractal Antenna: A Small Resonant Antenna for VHF/UHF
>Applications" published in Microwave and Optical Technology Letters. In this
>article the authors claim "A fourth iterated fractal Hilbert curve geometry
>inscribed in a square of 7 cm is shown to result in a resonant frequency of
>267 MHz, which is much lower than any other resonant antenna of similar
>size." How many other resonant antennas of the same size did they compare
>with the Hilbert curve antenna? - zero, no even one. I fabricated a simple
>meander line antenna of the same size and total wire length as the Hilbert
>curve and it had a resonant frequency of 154 MHz.
>
>
>
>The trend in the study of fractal wire antennas is to compare the fractal
>antenna with a simple Euclidean antenna and jump to a range of conclusions
>that are, for the most part, unsubstantiated. Comparing the fractal
>antennas with other geometry antennas of the same size, wire length and wire
>diameter provides clear evidence of this. It should be inherently obvious
>that increasing the wire length in a fixed size antenna lowers its resonant
>frequency and increases its radiation resistance over some range of low
>frequencies as compared to a straight Euclidean antenna. This behavior is
>simply not unique to antennas with fractal geometry. There is no inherent
>or unique benefit to a fractal geometry antenna compared to an antenna with
>virtually any other geometry. Fractal wire antennas do not behave in a
>unique manner nor do they behave in a manner significantly different than
>antennas with other geometries. This is especially true when the antennas
>are made to be resonant at the same frequency. It is interesting to note
>however, that in most cases, a self-similar fractal geometry is generally
>the least effective geometry in terms of lowering resonant frequency as a
>function of total wire length.
>
>
>
>If the discussion turns to the concept that all bent wire geometries are
>"fractal" then the discussion gets even more ridiculous - we have assigned a
>new term to bent wire geometries but have learned nothing new about the
>fundamental behavior of antennas.
>
>
>
>Steve VE9SRB

>
>

It's funny that Cohen's challenge to a debate went quiet after
this post.

519. Another 'Back To Basics' - Cable loss (in dB !!!) is proportional to length

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-07 14:50:43 UTC
From: " J. Harvey" <JM002.Harvey_TRIMTHIS_@Sympatico.ca>
Message-ID: <UyYV8.184$c_2.62662@news20.bellglobal.com>
Source record: 139262

J. Harvey mentioned:
> I once saw a spec for some lossy 'fibre optic' fibre -
> the loss was....around "3400 dB per km" (IIRC).
> ... [or about] (1m = 3.4dB) ...

"Bill Nelson" responded:
> Lossy is right. Even a 1 mm length would have a
> loss of around 3335 dB. That isn't a fiber, that
> is a solid plug of dense matter.
> What is 2^1133rd power? Divide 1 km by that
> and you will have the approximate length that
> would provide a 3 dB loss.

I've been confused by this topic (cable loss versus length) once before, but I thought that I had it figured out. The purpose of this posting is simply to make sure that I (or anyone else...) am not confused. Here we go - responses welcome !!!

It is a mental trap to start adding or subtracting 3.01dB while doubling or halving the length of the cable. It is a mental trap to start adding or subtracting 10dB while making the length of the cable ten times longer or ten times shorter. These mental short cuts are wrong. I've fallen into them.

Cable loss (in dB !!!) is *simply* proportional to length. If you double the cable length, then the number of dBs of loss is simply doubled (NOT increased by 3.01dB - unless by coincidence). If the cable is made ten times longer, then the loss (in dBs) is simply multiplied by ten (NOT increased by 10dB - unless by coincidence). If the cable is made one thousand time longer, then the cable loss in dBs is simply multiplied by 1000.

So, for the example given at top, the loss versus length table looks like this:

Lossy 'Fibre Optic' Fibre
==========
1000m or 1km = 3400dB (obviously an extrapolation)
100m = 340dB
10m = 34dB
1m or 100cm or 1000mm = 3.4dB (probably 'as measured')
(or about 1dB per foot)
10cm or 100mm = 0.34dB
1cm or 10 mm = 0.034dB
1mm = 0.0034dB

So, the statement that "...a 1 mm length would have a loss of around 3335 dB..." is not correct (right?). A 1mm length would have a 'quite manageable' loss of about 0.0034dB as per the table above (right?).

The length required to have a 3dB loss is simply a bit less than 1m (since 1m is 3.4dB), not "1km divided by 2^1133" (= 8.57 x 10^-339 m, there's not even a word for that number or length). Right ?

Responses welcome !

520. Re: BACK TO BASICS - EM waves, E and H fields, in phase orinquadr...

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-07 14:53:31 UTC
From: 2w8ji@contesting.com
Message-ID: <3d2853db.209377844@news.akorn.net>
Source record: 139261

On Sun, 07 Jul 2002 08:38:59 -0500, CAM <w5dxp@hotmail.com> wrote:

>
>Let's be honest, Tom. Why are you unwilling to hold yourself to the
>same standards that you demand for everyone else? Do you have a
>chicken bone stuck in your craw?

Yes, I do. The chiken bone is this.

I just asked you, in plain English, how you would suggest conveying to others the differential mode impedance of a system is not related to the common mode impedance.

Your answer, instead of saying anything constructive or offering a suggestion, was to return again to your silly word games.

I ask for suggestions on how you or others would respond to help people not fall into the trap of thinking common mode impedance relates to differential mode impedance, and you revert to the same old nonsense pulling things I said out of context just to continue your attention getting argument.

Either you have a better way to say it, or you have no suggestions. I assume it is the latter.

73 Tom

521. Antenna Traps.

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-07 15:01:37 UTC
From: Reg Edwards <g4fgq.regp@btinternet.com>
Message-ID: <ag9l4goqt1@paris.btinternet.com>
Source record: 139263

I am just completing a program to design coaxial antenna traps. The advantage over ordinary coil and capacitor traps is that a separate high voltage, high current tuning capacitor is not needed.

It occurred to me it may be possible to make a higher Q trap, easier to construct, with twin 150-ohm line or two parallel teflon-insulated wires forming one line.

Has anyone ever made or experimented with such a device ?
--
==========
Regards from Reg G4FGQ
Free Radio Design Software
Go to http://www.g4fgq.com
==========

522. Re: My 85' dipole is actually 94'!! Another ??

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-07 15:10:19 UTC
From: Dick Carroll <dixie@townsqr.com>
Message-ID: <ag9lkr$7su$0@208.206.142.94>
Source record: 139265

```
CAM wrote:
>
> Dick Carroll wrote:
> >
> > CAM wrote:
> > >
> > > Dick Carroll wrote:
> > > >
> > > > CAM wrote:
> > > > > Using 50 ohm coax, it is impossible
> > > > > to transform an SWR higher than 1:1 to 50 ohms with a single series section
> > > > > transformer.
> > >
> > > Then use two.
>
> You think two series section transformers work better than one?
>
> > > > So you're saying that the well known properties of a halfwave line are
> > > > not what the authorititave sources and books say? These properties of a
> > > > halfwave transmission line are subject to all your analysis? I guess I
> > > > missed all that in the ARRL antenna manual.
> > >
> > > Assume you have a folded dipole with a 300 ohm feedpoint. You are feeding it
> > > with 50 ohm coax so it has an SWR of 6:1. What length do you make the 50 ohm
> > > coax transmission line to achieve a transformation to 50 ohms at the transmitter?
> >
> > Why don't you go ahead and say whatever it is that you want to say? I
> > wouldn't feed a 300 ohm folded dipole with coax in the first place. (I
> > might use it for a matching section)
>
> Whether you would or would not feed a 300 ohm folded dipole with coax is
> irrelevant. Please describe how to use a single piece of lossless 50 ohm
> coax as a series section transformer to transform 300 ohms to 50 ohms.
>
> > Are you
> > saying that a 50 ohm line can't match any higher impedance? I've never
> > seen anything like that in print.
>
> Yes, I am saying that a 50 ohm lossless series section of line cannot be
> used to match any impedance higher (or lower) than 50+j0 ohms to exactly
> 50+j0 ohms. The only load that Z0 transmission line can match to Z0 ohms
> is Z0 ohms.
>
> > From ARRL Antenna book, 15th edition, page 26-12:
```

> >
> > "Rearranging the equation gives Zo=(sqrt)Zi*ZL. (Zi=input impedance,
> > ZL=load impedance). This means that any value of load impedance Zl can
> > be transformed into any desired value of impedance Zi at the input
> > terminals of a 1/2 wv.
>
> The equation proves what I have been saying. If you can use a piece of
> 50 ohm coax to transform a load of 300 ohms to 50 ohms, then you can
> prove that 50 = 122.5. Do you really think that 50 = 122.5?
>
> When varying the length of the transmission line to achieve a match
> to 50 ohms, a Z0 of 50 ohms will fail to achieve a match to any load
> except 50 ohms. Varying the length of my ladder-line to match my non-
> resonant loads to 50 ohms only works because the Z0 of the ladder-line
> is not equal to 50 ohms. I am deliberately causing an SWR of around
> 9:1 so that Z0=450 divided by 9 equals 50 ohms.

So far you're the only "authority" I've seen in 45 years of reading
that insists that you have to have a high SWR to match an antenna.
Maybe that's required, but it sure is curious that it doesn't appear
anywhere in the literature. It sure seems it would, if so.

523. Re: Antenna Traps.

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-07 15:17:37 UTC
From: k0bg@aol.com
Message-ID: <20020707111737.06343.00003172@mb-mr.aol.com>
Source record: 139266

In the latest issue of the ARRL Antenna book, are several designs similar to the ones you describe. One of these uses two parallel Rg58 coax coils. Properly designed, these easily handle the legal limit and then some.

As for the Teflon ones, why not?

Alan, Kï¿½bg

524. Re: A whole new 'back to basics' topic - Monopole fundamentals

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-07 15:18:19 UTC
From: klocko@toad.net
Message-ID: <224d9cd4.0207070718.1231e744@posting.google.com>
Source record: 139267

" J. Harvey" <JM002.Harvey_TRIMTHIS_@Sympatico.ca> wrote in message news:<0tLV8.9472$aJ4.2301053@news20.bellglobal.com>...
> I think it is a very important report either way. If there is such a
> fundamental discrepancy in 1997, that is big news. If the report is wrong,
> that is big news too.

Reading the infamous document again, I was struck by a few more thoughts.
The abstract sez that the report is to resolve 6-dB discrepancies that have been
noted between measurements and predictions of ground wave transmission. Their
predictions use a 5.17 dBi gain (2.17 dBi + 3 dB) for the transmitting monopole, a 5.17 dBi gain (2.17 dBi + 3 dB) for the receiving monopole, and an effective
area that has been "corrected" by the addition of a 1/4 fudge factor (wait a
minute, that's -6 dB!).

Rather than adding a fudge factor, could the problem just possibly be the 5.17
dBi value? This value comes about since the gain is evaluated only over the
upper hemisphere above the infinite ground plane on which the monopole is
located. The power is radiated into half the volume for which the dipole
radiates its power. But does a 5.17 dBi gain value actually make sense? Is the
monopole EIRP twice that for a dipole for identical input power?

A 2.17 dBi gain for both the transmitting and receiving monopoles would resolve
any discrepancy without the need to resort to a fudge factor. I can see that
the infinite ground plane adds 3 dB to the gain. However, I also seem to recall
from some long-forgotten tome that there is another factor that *subtracts* 3 dB
to bring the gain back to 2.17 dBi. The monopole on a ground plane would
then be identical to a dipole in free space. I guess that's what would be
expected. Maybe when I get back to work I can look through some of the old texts

there.

I'm hoping that some of the regulars here will dig in
> to the report and come to a consensus.

Not until the discussion as to "not" and "related" plays out.

> Choose one:
> -Fundamental antenna theory was wrong until 1997.
> -Mini-NEC is wrong even now.

I vote for choice (b).

73,
Bill N3WK

525. Re: Chelcom HFV1 Vertical

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-07 15:23:01 UTC
From: k0bg@aol.com
Message-ID: <20020707112301.06343.00003173@mb-mr.aol.com>
Source record: 139268

John is correct! A groundplane for a vertical is not one or two wires cut for each band, but rather a 100 to 120. This is something the manufacturers don't tell you. Oh yes, they work even with a ground rod, but the losses are VERY great.

Alan, Kï¿½BG

526. Re: IM I TOO OLD TO COME BACK? Is this still fun????????????

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-07 15:27:32 UTC
From: k0bg@aol.com
Message-ID: <20020707112732.06343.00003174@mb-mr.aol.com>
Source record: 139169

It keeps you off the streets, but does it keep you out of the bars?

Alan, Kï¿½BG

527. Re: A whole new 'back to basics' topic - Monopole fundamentals

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-07 15:38:13 UTC
From: " J. Harvey" <JM002.Harvey_TRIMTHIS_@Sympatico.ca>
Message-ID: <qfZV8.203$c_2.78826@news20.bellglobal.com>
Source record: 139170

"Bill Klocko"
> > I'm hoping that some of the regulars here will dig
> > in to the report and come to a consensus.
>
>Not until the discussion as to "not" and "related" plays out.

<***JUMPING UP AND DOWN WAVING ARMS***>

This thread isn't (yet ?) getting the attention it deserves...

528. Re: Calling All Electric Utility Power Experts

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-07 16:43:59 UTC
From: W6DKN <w6dkn@qsl.net>
Message-ID: <jd_V8.1974$Tb4.1291@nwrddc02.gnilink.net>
Source record: 139171

"gus" <fertree@yahoo.com> wrote in message
news:3d286a28.1316411@news.telocity.com...
> I am building my dream retirement home on a mountain in the middle
> of nowhere and am having discussions with the electric company about
> running power. They have informed me that in order to get power from
> the road to the house they have to run their poles through a grove of
> trees labelled Antenna Farm on their map, removing the grove and
> prohibiting the tower. The solution they offered was to bury a 6000
> volt line through the area and provide a ground mounted transformer 50
> feet or so from the house to drop down the voltage. My concern is an
> S-9 noise level oth the HF bands, since the idea of moving from the
> city is the get away from that sort of noise problem. Should I be
> concerned about this idea. Thanks for your advice.

I'm not an expert, but I have experience with this set-up because that is what is used in my local. I live in the Mohave Desert, and my property is about 5 miles from the power distribution sub-station. From there it runs to my property via a buried high voltage line, and then into a buried step-down transformer which is about 100 feet from my house.

In my case, I have no noise level problems. Above 75 meters I have a "0" noise level 99% of the time. At 75 meters and below, it can vary occasionally from 1-2 "S" units up to about S-5 on 160 on a "bad" day. But this is mostly from atmospheric noise, it does not seem to be an electrical power related interference.

Compared to my last QTH which was in the city - with power lines on poles - I typically had S-5 to S-9 noise on any band most of the time. Personally, I'll take the buried power lines any day... :>)

73 de W6DKN

529. Re: Another 'Back To Basics' - Cable loss (in dB !!!) is proportional to length

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-07 16:48:07 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <jergiu4o8hk4mspi3vq8msdkpskmp13cv1@4ax.com>
Source record: 139172

On Sun, 7 Jul 2002 10:50:43 -0400, " J. Harvey"
<JM002.Harvey_TRIMTHIS_@Sympatico.ca> wrote:

> Lossy 'Fibre Optic' Fibre
> =================
> 1000m or 1km = 3400dB (obviously an extrapolation)
> 100m = 340dB
> 10m = 34dB
> 1m or 100cm or 1000mm = 3.4dB (probably 'as measured')
> (or about 1dB per foot)
> 10cm or 100mm = 0.34dB
> 1cm or 10 mm = 0.034dB
> 1mm = 0.0034dB
>
>So, the statement that "...a 1 mm length would have a loss of around 3335
>dB..." is not correct (right?). A 1mm length would have a 'quite
>manageable' loss of about 0.0034dB as per the table above (right?).
>
>The length required to have a 3dB loss is simply a bit less than 1m (since
>1m is 3.4dB), not "1km divided by 2^1133" (= 8.57 x 10^-339 m, there's not
>even a word for that number or length). Right ?
>
>Responses welcome !

Hi Jeff,

This is an exceedingly abysmal grade of cable (a string of
superlatives couldn't adequately cover it) unless it is a special
purpose, short haul variety. It appears the original poster
pencil-whipped it (as revealed through your table) when he trimmed it
back to 1mm.

73's
Richard Clark, KB7QHC

530. Re: BACK TO BASICS - EM waves, E and H fields, in phase orinquadr...

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-07 16:50:35 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <cdsgiug51rggkif45c9ss649i2dcsqighi@4ax.com>
Source record: 139173

On Sat, 06 Jul 2002 14:11:55 -0500, CAM <w5dxp@hotmail.com> wrote:

>> This conforms to what I offered some weeks back, glad to see it
>> confirmed in some manner by the IEEE. In light of now knowing what
>> the term Common Mode means, the question is, and remains, is the
>> Common of your Common Mode artifact earth? If it is not, what is it?
>
>To keep from reinventing the wheel, please reference Fig. 1 - (Imbalance
>caused by another path to ground from only one side of the dipole) and
>Fig. 4 - (When the rig is connected to ground, a third conductor in parallel
>with the right side of the feedline is introduced. This causes an imbalance
>in both coaxial cable and twin lead feed lines) in Roy's article in the ARRL
>Antenna Compendium Vol. 1, titled, "Baluns: What They Do And How They Do It".

Hi Cecil,

Good to see you coming around by degrees. I will post the challenge
separately.

73's
Richard Clark, KB7QHC

531. Re: BACK TO BASICS - EM waves, E and H fields, in phase orinquadr...

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-07 16:53:38 UTC
From: richardharrison@webtv.net
Message-ID: <7720-3D287212-677@storefull-2394.public.lawson.webtv.net>
Source record: 139177

Tom, W8JI wrote:
"I just asked you, in plain English, how you would suggest conveying to others the differential impedance of a system is not related to the common mode impedance."

Don`t make that flat statement as it is blatantly wrong.

Richard Clark suggested using a resistance bridge example to explain the relationship between differential-mode and common-mode. Let`s try it.

Call the differential-mode the bridge excitation. Call the common-mode the signal driving the null detector. The roles are reversible. We are just picking the familiar.

When the bridge is balanced, the
differential-mode produces zero common-mode null detector signal.

There is certainly a relationship between the excitation and null reading whenever the bridge is unbalanced.

There is also a relationship between impedances in the bridge and that of the null detector. (maximum power transfer has not been repealed)

The same is true for the differential-mode/common=mode systems we`ve discussed. Tom has consistently taken the wrong side of the argument and now posts diversions.

Richard Harrison, KB5WZI

532. Re: Another 'Back To Basics' - Cable loss (in dB !!!) is proportional to length

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-07 17:00:48 UTC
From: " J. Harvey" <JM002.Harvey_TRIMTHIS_@Sympatico.ca>
Message-ID: <Ss_V8.254$c_2.108277@news20.bellglobal.com>
Source record: 139174

"Richard Clark"
> > Lossy 'Fibre Optic' Fibre
> > =================
> > 1000m or 1km = 3400dB (an extrapolation)
> > 1m = 3.4dB (probably 'as measured')
> > (or about 1dB per foot)

> Hi Jeff,
>
> This is an exceedingly abysmal grade of cable
> (a string of superlatives couldn't adequately
> cover it) unless it is a special purpose, short
> haul variety. It appears the original poster
> pencil-whipped it (as revealed through your
> table) when he trimmed it back to 1mm.

It is interesting how a simple 1km long roll of lossy, short haul, 'fibre optic' fibre, that might easily fit into the trunk of you car, can so completely defy the capabilities of a normal calculator that 'only' goes up to 9.999...x10^99.

533. Re: My photos of American Tower antenna in White City, Oregon

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-07 17:10:42 UTC
From: aldg@hotmail.com
Message-ID: <15ae50c5.0207070910.6eb64363@posting.google.com>
Source record: 139175

Hi Crazy George:

Thank you for your posting.

I'm afraid that the FCC website is a bit too complicated for the likes of me.

I appreciate your interest in this matter.

Have a nice weekend.

Regards,
Al Gershen
KC6PRJ (inactive and expired)
Grants Pass, OR
aldg@hotmail.com

(Submitted thru google.com on 7/7/02 at apx. 10:11 am pdt)

"Crazy George" <munschNO@attglobal.net.SPAM> wrote in message
news:<3d27abce_4@news1.prserv.net>...
> Those look like PCS antennas, but they could be late model cellular. Go to:
>
> http://gullfoss2.fcc.gov/cgi-bin/ws.exe/genmen/index.hts
>
> and walk through the forms with the site location. That will show who is
> licensed at that site and what frequencies they are on.
>
> American Tower bought many of the defunct ATT microwave towers all over the
> country, and found that a lot of them were unsuitable for Cellular or PCS
> applications, and are selling them to Hams and others for reasonable prices.
> There is a big square 200 foot tower on the next hill from me which I could
> afford, but the local taxing district thinks it is worth about 10 times what
> it is, and the taxes would be unbearable. Of course, the 18,000 square foot
> two story blast proof building may also enter into that equation.
>
> --
> Crazy George
> Remove NO and SPAM from return address

534. Re: Horizontal Loop Question

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-07 17:13:07 UTC
From: Walter <walter@accessus.net>
Message-ID: <DE_V8.607407$%y.38330497@bin4.nnrp.aus1.giganews.com>
Source record: 139176

Thanks for the interesting discussion. There are several variables
that
may need addressing. Normally a 1:1 transition balun is sufficient for
using an 80 meter horizontal loop in the multiband operations. But
depending on the length of feedline, and sometimes there is not a
choice as to the "best" length, then having a 4:1 balun is so very
valuable to be able to switch over and use also with the 1:1 balun.

Personally I use 160, 80 and 40 meter horizontal loops which all
are between 10 ft to 20 ft above ground and a selectable balun
box with 1:1 and 4:1 baluns available and all the horiz. loops are
fed with 450 ohm ladderline or 300 ohm twinlead. The 3 loops
are fed with seperate feeders and the unused ones are grounded
at the shack. These loops are nested inside each other and being
as close to center of each other as possible. Point being is that
no single antenna can do it all, but with the three-some there is a
flexibility that was worth all the effort of putting up the hz loops.

At FD this year, we used a 40 meter loop up at approx. 15 ft and
running QRP SSB (5 watts PEP), it was not an unpleasant chore
to work 40, 20 or 15 meters SSB. This was the first time ever that
I tried the QRP SSB on FD and it really works. Yeah, I was so
surprised.

Happy hz loop buiding...73...Walter, AG5P

"ARDUJENSKI" <ardujenski@aol.com> wrote in message
news:20020706010246.15533.00002671@mb-fx.aol.com...
> I have read various articles on horizontal loops and still have a
few
> questions. First let me say that my interest was peaked by several
notes i have
> read from field day groups exclaiming how pleased they were with the
horizontal
> loop at ONLY 20FT.
>
> I got a copy of EZNEC DEMO and played with various size loops and
heights. I
> was surprised to see some noteable gain figures using an 80m loop at
20ft
> height on 20m and above but more significantly there were some nice
lobe
> patterns which see like they would accomodate the NW operations.
>
> Elevating or enlarging the loop then developed patterns with multi

lobes at
> various takeoff angles and as you approached 15m and above with very
large
> loops (800ft+)--patterns which look like avocadoes.
>
> I am not too sure if my modeling was too crude to be of value. Have
any of you
> used horizontal loops and what was you rexperiences. In particular
any one use
> an 80m loop at about 20ft?
>
> Alan KB7MBI

535. Re: A whole new 'back to basics' topic - Monopole fundamentals

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-07 17:25:11 UTC
From: richardharrison@webtv.net
Message-ID: <25852-3D287977-740@storefull-2396.public.lawson.webtv.net>
Source record: 139179

J Harvey wrote:
"This thread isn`t (yet?) getting the attention it deserves..."

Anybody can go straight to Terman and read the right values for the gain of a dipole over an isotropic and the gain of an antenna restricted to a hemisphere over that allowed a whole sphere. He can also read that the qiuarter-wave rod mounted on a large conductive sheet has zero dbd gain.

Terman`s publications have withstood 70 years of challenges. Challengers need more than a casual report to merit attention.

Best regards, Richard Harrison, KB5WZI

536. New program COAXTRAP

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-07 17:39:10 UTC
From: Reg Edwards <g4fgq.regp@btinternet.com>
Message-ID: <ag9ubtqvi1@helle.btinternet.com>
Source record: 139178

New program COAXTRAP.exe

Coaxial traps are often inserted in HF dipole antennas to isolate the ends of the wires from the the feedpoint thus shortening the effective overall length of the antenna. The antenna is then resonant in a higher frequency band. A trap is a parallel tuned circuit which is adjusted to resonate at the higher frequency.

A trap is constructed from a length of coaxial line wound as a solenoid on a cylindrical former. The program models the construction operation by assisting the designer to wind on turns until the required resonant frequency is achieved. The normal coaxial capacitance behaves as the high-voltage tuning capacitance although there is a transformer action in the manner of connecting the ends of the line together. This small program will be interesting even if the user does not intend to make any traps.

This program has been tested by me on only two actual traps - one using 75-ohm coax and the other 50-ohm RG 58 on different diameter formers and different numbers of turns. Errors in predicting resonant frequency were less than 1 percent but great care was taken with measuring and checking dimensions. It would be appreciated if any constructors who have a trap in the shack doing nothing could measure it up and check frequency. If anything is suspicious please let me have the data and how it was obtained. It is possible on my solitary pair of samples I could have made a common error. The best way to measure resonant frequency is to use an antenna analyser on the Z range. Use a thin single-turn coupling loop around the middle and 6 or 10 inches of loosely-twisted pair to the meter. Look for a very sharp peak in Z.

Download COAXTRAP in a few seconds from website below. About 31 kilobytes. Not zipped up. Run immediately.
--
==========
Regards from Reg G4FGQ
Free Radio Design Software
Go to http://www.g4fgq.com
==========

537. Re: A whole new 'back to basics' topic - Monopole fundamentals

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-07 18:15:23 UTC
From: ryeburn@sfu.caz
Message-ID: <ryeburn-0707021115230001@207.6.82.157>
Source record: 139181

In article <0tLV8.9472$aJ4.2301053@news20.bellglobal.com>, " J. Harvey" <JM002.Harvey_TRIMTHIS_@Sympatico.ca> wrote:

> I think it is a very important report either way. If there is such a
> fundamental discrepancy in 1997, that is big news. If the report is wrong,
> that is big news too. I'm hoping that some of the regulars here will dig in
> to the report and come to a consensus.

I'm not a regular poster -- mainly just a lurker -- but here goes:

Let's keep track both of power used and of field strength in the following two thought experiments.

(1) Consider a ground plane and two monopoles, opposite each other but separated by the ground plane. Feed each one with one watt apiece, 180 degrees out of phase. See what the field strength is at arbitrary points on both sides of the ground plane.

(2) Remove the ground plane and the two monopoles, and install a dipole where the two monopoles were. Feed it with two watts. See what the field strength is at arbitrary points on both sides of the former location of the ground plane.

Perhaps this may shed some light on the situation.

David, ex-W8EZE
Retired mathematician, but still thinking geometrically

--
David or Jo Anne Ryeburn
ryeburn@sfu.caz
To send e-mail, remove the letter "z" from this address.

538. 1000 fraudtenna_dollar COMMON MODE CHALLENGE

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-07 18:19:16 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <1hsgiu0femmpeksto5bbtj3j3vdsbcsa53@4ax.com>
Source record: 139180

Hi All,

Today's CHALLENGE is to find the Common of the Common Mode.

>Here is the context, published by myself many days ago.
>XMTR---x---coax-----choke---1/2WL ladder-line---well balanced 1/2WL dipole
>
>Common mode measured at 'x'.

Myself, having been pleaded with to subscribe to a theory based upon the argument provided above, I asked where the Common was given the theory made an appeal to it. This has proven to be one of the most elusive goals for many here since Kirchhoff settled it two centuries ago.

That first question, again, was:
What is the Common of the Common Mode?
In a technical group, I would have presumed that Common had an ordinary meaning of the path where the current returns to its source. It is frequently ground, an all encompassing concept that in circuitry is often the negative lead, or the chassis. But not always.

I then, with hesitation, tried another approach:

The thesis is that XMTR is the source of Common Mode current, my second question is:
Where is the current flowing toward at any point in its cycle (choose your own point except at the zero crossing of course)?

Third question:
Taking that same point in its cycle, can you describe the complete path of current flow?

Fourth question (#2 & #3 combined in a manner of speaking):
Once the Common Mode current (at that same point in its cycle) reaches either the XMTR or dipole, how does it return to its source?

Kirchhoff teaches that if a current exists, it must return to its source in a loop (by passing through what is the Common). If we simply discard the term Common or Common Mode, it is obvious that the current still has to be supported by a loop topology and the questions above are still meaningful (they don't require any notion of the differential or the common). In this sense, the questions are answerable and indeed offer the same answer regardless of the terminology. It is equally obvious that the circuit described above by quote is a linear path and does not conform to a loop to support

current unless this context is incomplete (a frequent problem).

As a gesture to eliminate the inordinate baroque features of the original problem, I offered that this is all resolvable through a simple bridge topology. How so? someone (might have but did not) ask.

The Differential Mode is simply the Common Mode with a 90ï¿½ turn with respect to ground such that the loop (nothing happens in electronics without Kirchhoff's loops) potentials maybe balanced with respect to earth. Balance is not necessary, but it does serve in the reduction of variables as the two modes come with their unique problems (the reason why debates rage on so). In other words, the Common Mode maybe (from its perspective) in a Differential Mode to the original Differential Mode circuit under scrutiny. This is the point of the first question:
Where is the Common of the Common Mode?
in that by turning the perspective (reference) 90ï¿½ you can invert the semantic relationship without having done anything to the entire circuit under consideration. Given that debates rage over semantics to the exclusion of technical discussion, the question, even though simple, confounded most.

For the matter of potentials it is as elementary as asking, where did you put your reference lead when you make a voltage measurement? For the matter of currents, it is as elementary as asking where is the current sink? Measurements without a point of reference are meaningless. If we speak of potentials and measure from one point to another and say we have found a Differential Mode voltage, it follows that both leads were isolated from ground (the common understanding when unstated otherwise). If we speak of potentials and measure from one point to another and say we have found a Common Mode voltage, it follows that at least one of the leads was attached to ground (the common understanding when unstated otherwise).

If I can satisfy the above considerations, and then state that in fact the Differential Mode potential had ground as a reference, there is no problem as long as we don't make the same claim for the Common Mode potential by saying one lead went to ground. [this is the real problem where grounds/commons become mixed] We have simply changed our perspective and chose to name the circuit with the ground reference Differential Mode (there is nothing to preclude this except the eventual confusion of conventional usage of these terms). By extension, the Common Mode must become a floating circuit with respect to ground and the Common of the Common Mode is found in one of the floating leads. Hence, one can easily describe a current measurement as being Common Mode in stark contrast to common usage without being wrong - unless, of course, the measurer does not or cannot describe the reference, the Common of their Common Mode.

If you cannot describe the Common of Common Mode, it is likely because you do not have a complete picture of the entire circuit. Making appeals and generalizations to having shown its effect without being

able to describe the circuit is at best one of luck and offering it as a "proof" is no proof at all.

By taking the conventional meaning of Common to be ground, the CHALLENGE is thus:
Offer the "complete" context to the implicit problem quoted above in the form of a circuit diagram. My preference is that you reduce it to four resistors, source and detectors (with suitable annotation to correlate to the original) - but this is not necessary.
It goes without saying that the winning description must satisfy Kirchhoff's laws (fractal Electro-Hydrodynamics disqualifies you immediately).

ALL winners of the CHALLENGE will be immediately e-mailed 1000 fraudtenna_dollars in virtual currency - you can spend it virtually anywhere! [please note that limitations imposed by various states differ in the regard of unregistered lotteries: offer void where permitted by law]

73's
Richard Clark, KB7QHC

539. Re: BACK TO BASICS - EM waves, E and H fields, in phase orinquadr...

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-07 18:37:22 UTC
From: 2w8ji@contesting.com
Message-ID: <3d288830.222776447@news.akorn.net>
Source record: 139182

On Sun, 7 Jul 2002 11:53:38 -0500 (CDT), richardharrison@webtv.net
(Richard Harrison) wrote:

>Tom, W8JI wrote:
>"I just asked you, in plain English, how you would suggest conveying to
>others the differential impedance of a system is not related to the
>common mode impedance."
>
>Don`t make that flat statement as it is blatantly wrong.

Without 50 lines of rambling jargon, please tell me how to convey in
simple terms that the common mode impedance or actions of a system are
not tied to the differential mode impedance or operation of a system,
and that picking a low impedance point for a choke balun does not help
the system balance or improve action of the balun.

For example, in the case of the EH antenna adding a W2DU balun at at
low impedance differential mode point might not change the operation
at all, and if it does it might make it go any direction at all.

As another example, altering a feedline to acheive a low differential
mode impedance might make balance problems worse, better, or not
change them at all.

As another example, adding a balun at a certain differential mode
impedance or voltage point can make a feedline system radiate more,
less, or not change it at all

Any single sentence you like, and let's see how it comes out. Surely
you can get it into one simple sentence, like "Common mode behavior is
unrelated to differetial mode behavor" or whatever you like.

But lets not dance around the whole universe to explain a simple
concept, like the relationship can be ANYTHING or nothing.

540. Re: A whole new 'back to basics' topic - Monopole fundamentals

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-07 18:41:17 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <6d2hiukl465a97nnash4n49qig0ps5sg08@4ax.com>
Source record: 139183

On Sun, 7 Jul 2002 11:38:13 -0400, " J. Harvey"
<JM002.Harvey_TRIMTHIS_@Sympatico.ca> wrote:

>"Bill Klocko"
>> > I'm hoping that some of the regulars here will dig
>> > in to the report and come to a consensus.
>>
>>Not until the discussion as to "not" and "related" plays out.
>
><***JUMPING UP AND DOWN WAVING ARMS***>
>
>This thread isn't (yet ?) getting the attention it deserves...
>
>
>
Hi Jeff,

That distraction is one like the morbid fascination of examining roadkill. Given the weight of math that comes with equal portions of obfuscation from some corners of science, could you pose the issue you perceive in terms of what you expect might be shown to fail in modeling compared to say the FCC field strengths for AM broadcast antennas (I offer this as a reference given how poor some may be at making measurements that only compound the error)?

I did note their issue, and their math, but I have had to instruct too many engineers and scientists (much less a parade of bozos, also spelled PHD, who held themselves in high esteem) that they were not equally talented in measurement.

73's
Richard Clark, KB7QHC

541. Re: BACK TO BASICS - EM waves, E and H fields, in phase orinquadr...

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-07 18:42:53 UTC
From: CAM <w5dxp@hotmail.com>
Message-ID: <3D288BAD.9EE1B6AD@hotmail.com>
Source record: 139184

Tom W8JI wrote:
> I just asked you, in plain English, how you would suggest conveying to
> others the differential mode impedance of a system is not related to
> the common mode impedance.

There you go mealy-mouthing again, Tom. You said common mode *conditions*
are not related to differential mode *conditions* and that was a false
statement. Are you willing to reverse your mistake and admit that it
is possible for common mode conditions to be related to differential mode
conditions or are you incapable of admitting a mistake?

Why do you hold other posters to a higher standard than you hold yourself?
It doesn't matter how many true statements you make if you are unwilling
to correct your false statements. You dish out a tremendous amount of grief
to others when they are mistaken but you seem to want some sort of guru waiver
against receiving any grief when you are mistaken.

And of course, the common mode impedance can be related to the differential
mode impedance. All we have to do is measure them to determine the relationship.
At least the conducted portion of common mode Vs differential mode obeys
Kirchhoff's laws. If we measure 10 ohms of common mode impedance and 50 ohms of
differential mode impedance at the antenna feedpoint, we are likely to want to
change that 10/50 relationship to a 1000/50 relationship by adding a choke. If,
as you say, there were no relationship, we couldn't change the relationship by
adding a choke, now could we?
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
------== Over 80,000 Newsgroups - 16 Different Servers! =-----

542. Re: A whole new 'back to basics' topic - Monopole fundamentals

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-07 18:47:55 UTC
From: " J. Harvey" <JM002.Harvey_TRIMTHIS_@Sympatico.ca>
Message-ID: <y10W8.344$9U1.134656@news20.bellglobal.com>
Source record: 139185

"David Ryeburn"
> Perhaps this may shed some light on the situation.

I've been previously assured that it might shed RF on the situation, but not light. :-)

If you 'squeeze' the full two watts that you have on offer into the half of the universe 'above' the infinite ground plane, then it seems reasonable that the field strength everywhere (in the 'upper half' of the unverse) will be twice that which might be found with a dipole that must fill twice as much universe.

It seems like a mistake to lable this effect as an increase in the 'gain' of the monopole versus the dipole. How it would relate to receive mode gain is unclear to me.

Something 'stinks' in EM-land.

543. White City, OR Tower

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-07 18:58:31 UTC
From: StarGazer <pti@capnet.com>
Message-ID: <3D288F57.17A120AF@capnet.com>
Source record: 139192

Those pictures of the tower and antennas are Cellular (PCS)
Probably Sprint.
They are sectorized. The T part on top is the antenna mount.
There are 3 sets of 2 antennas each pointing 120 degrees from
its neighbor. Usually it is at 0, 120, 240 azimuth.
If you have only one carrier... the second antenna in the pair
is for spacial diversity. It adds another 3 dB of gain by simply
being located a few wavelengths away from its buddy antenna.
After the cell site reaches it capacity another carrier is added and
is connected directly to the second antenna and there is no longer
spacial diversity on either carrier.
If a third carrier is added a whole new antenna array is added...
usually about 10 feet or so below the original.
There poster on the tower looks like a FCC/FAA antenna
registration sticker.

544. Re: My 85' dipole is actually 94'!! Another ??

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-07 19:03:25 UTC
From: CAM <w5dxp@hotmail.com>
Message-ID: <3D28907D.9F533298@hotmail.com>
Source record: 139186

Dick Carroll wrote:
>
> CAM wrote:
> > When varying the length of the transmission line to achieve a match
> > to 50 ohms, a Z0 of 50 ohms will fail to achieve a match to any load
> > except 50 ohms. Varying the length of my ladder-line to match my non-
> > resonant loads to 50 ohms only works because the Z0 of the ladder-line
> > is not equal to 50 ohms. I am deliberately causing an SWR of around
> > 9:1 so that Z0=450 divided by 9 equals 50 ohms.
>
> So far you're the only "authority" I've seen in 45 years of reading
> that insists that you have to have a high SWR to match an antenna.
> Maybe that's required, but it sure is curious that it doesn't appear
> anywhere in the literature. It sure seems it would, if so.

You can certainly match a 50 ohm antenna to 50 ohm coax with an SWR
of 1:1 so you misunderstood what I said. Here's a correction to what
you inferred that I had said: It is impossible to do any impedance
transformation on a single series section of transmission line unless
the SWR is higher than 1:1. SWR doesn't have to be "high", just higher
than 1:1. You can use 75 ohm coax to convert 112.5 ohms to 50 ohms
because the SWR is not 1:1. It is 1.5:1. 112.5/1.5 = 50*1.5 = 75
All series section transformers carry an SWR above 1:1.

Most of the authors probably assume that you can read a Smith Chart, Dick.
If you cannot, that's not their problem.

When you use 50 ohm coax with a Smith Chart, the normalized 1.0 + j0 point
in the center of the Smith Chart is the 50 + j0 point. Draw an SWR circle
on that Smith Chart. Does the circle intersect the 1.0 + j0 point? If
not, you cannot achieve a match to 50 + j0 ohms using just 50 ohm coax.

Hint: A circle does not intersect the point at the center of the circle.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

545. Re: A whole new 'back to basics' topic - Monopole fundamentals

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-07 19:08:47 UTC
From: " J. Harvey" <JM002.Harvey_TRIMTHIS_@Sympatico.ca>
Message-ID: <6l0W8.372$9U1.140063@news20.bellglobal.com>
Source record: 139187

"Richard Clark"
> That distraction is one like the morbid fascination
> of examining roadkill.

Careful now, we don't want to attrack that 'unrelated' topic onto this thread.

> Given the weight of math that comes with equal
> portions of obfuscation from some corners of science...

I've noticed that too.

> ... compared to say the FCC field strengths for AM
> broadcast antennas (...poor....at making measurements
> that only compound the error)...

The issue here is that 'Theory 1' (their formula as presented) doesn't agree with 'Theory 2' (Mini-NEC - supposed to be based on Maxwell's Equation ?).

Measurements shouldn't (yet!) have to enter into this debate (although the final selected Truth had darn well better agree with good measurements).

546. Re: A whole new 'back to basics' topic - Monopole fundamentals

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-07 19:20:29 UTC
From: CAM <w5dxp@hotmail.com>
Message-ID: <3D28947D.3393BB6A@hotmail.com>
Source record: 139188

David or Jo Anne Ryeburn wrote:
> David, ex-W8EZE
> Retired mathematician, but still thinking geometrically

Have you tried rolling dice in the dark yet?
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

547. Re: 1000 fraudtenna_dollar COMMON MODE CHALLENGE

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-07 19:30:07 UTC
From: CAM <w5dxp@hotmail.com>
Message-ID: <3D2896BF.5375F1E9@hotmail.com>
Source record: 139189

Richard Clark wrote:
> That first question, again, was:
> What is the Common of the Common Mode?

Before I can answer your question, you must prove that
existence exists.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
------== Over 80,000 Newsgroups - 16 Different Servers! =-----

548. Re: Horizontal Loop Question

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-07 19:35:22 UTC
From: 'Doc <w5lz@icok.net>
Message-ID: <3D2897E7.8909B99B@icok.net>
Source record: 139190

ARDUJENSKI,
I'd say that was a pretty fair summary.
Of course, as with any generalization, it
isn't ~always~ true in all cases. Nothing
new about that, either.
'Doc

549. Re: BACK TO BASICS - EM waves, E and H fields, in phase orinquadr...

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-07 19:51:28 UTC
From: CAM <w5dxp@hotmail.com>
Message-ID: <3D289BC0.9213A365@hotmail.com>
Source record: 139191

Tom W8JI wrote:
> Without 50 lines of rambling jargon, please tell me how to convey in
> simple terms that the common mode impedance or actions of a system are
> not tied to the differential mode impedance or operation of a system,
> and that picking a low impedance point for a choke balun does not help
> the system balance or improve action of the balun.

Picking a low impedance point for a choke balun indeed does help
improve the system balance in my antenna system. I have already
posted the measured values. The common mode current is minimum
when I feed my antenna system at a current maximum point. That is
a fact. Please read Roy's article, "Baluns: What They Do And How They
Do It", and get back to us on the errors that you find in that article.

You have simply gone overboard in trying to defend a simple mistake.
Why not just admit you made a simple mistake and move on? The hole
that you are digging for yourself is getting deeper and deeper.

The mistake I made earlier was assuming that moving the choke moved
the unbalanced/balanced point in the system. It doesn't and I was
wrong about that. But if the unbalanced/balanced point is moved along
with the choke, the differential impedance is one of the factors
in the cause of common mode currents as can be seen from the following
example posted earlier.

#1XMTR---worst case length of 50 ohm coax---500 ohm choke---50 ohm antenna

#2XMTR---worst case length of 50 ohm coax---500 ohm choke---5000 ohm antenna

The choke in #1 will do a better job of controlling common mode currents
than the choke in #2. If common mode impedances are unrelated to differential
mode impedances, how do I know that? How can anyone be an expert on common
mode conditions if common mode conditions are unrelated to differential mode
conditions. Are you divinely inspired or what?

Your argument gets more divorced from reality all the time. The differential
current flowing into an antenna feedpoint can be measured. The common mode
current flowing down the outside of the coax at the antenna feedpoint can
be measured. Their relationship is their ratio. To maintain there is no
ratio, i.e. there is no relationship, is sheer insanity.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

550. Re: A whole new 'back to basics' topic - Monopole fundamentals

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-07 20:17:44 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <et7hiu4k4g7n253gajkonhskc45n7sluuf@4ax.com>
Source record: 139193

On Sun, 7 Jul 2002 15:08:47 -0400, " J. Harvey"
<JM002.Harvey_TRIMTHIS_@Sympatico.ca> wrote:

>"Richard Clark"
>> That distraction is one like the morbid fascination
>> of examining roadkill.
>
>Careful now, we don't want to attrack that 'unrelated' topic onto this
>thread.
>
>> Given the weight of math that comes with equal
>> portions of obfuscation from some corners of science...
>
>I've noticed that too.
>
>> ... compared to say the FCC field strengths for AM
>> broadcast antennas (...poor....at making measurements
>> that only compound the error)...
>
>The issue here is that 'Theory 1' (their formula as presented) doesn't agree
>with 'Theory 2' (Mini-NEC - supposed to be based on Maxwell's Equation ?).
>
>Measurements shouldn't (yet!) have to enter into this debate (although the
>final selected Truth had darn well better agree with good measurements).
>

Hi Jeff,

Look at the introduction:
"... it is this value of effective area that resolves the 6-dB
discrepancy between measurements and analysis...."

Measurement appears to be quite centric to their problem. Again, it
goes to show that someone might measure anything and call it what they
will.

Without accepting outside sources or references, almost any statement
can be made and the debased imprimatur of Science applied to it.

73's
Richard Clark, KB7QHC

551. Re: A whole new 'back to basics' topic - Monopole fundamentals

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-07 20:19:54 UTC
From: CAM <w5dxp@hotmail.com>
Message-ID: <3D28A26A.F8A8642@hotmail.com>
Source record: 139194

Richard Clark wrote:
> Measurement appears to be quite centric to their problem. Again, it
> goes to show that someone might measure anything and call it what they
> will.

And of course, no one would dare come up with a model of reality
unrelated to reality. :-)
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

552. Re: BACK TO BASICS - EM waves, E and H fields, in phase orinquadr...

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-07 20:21:16 UTC
From: richardharrison@webtv.net
Message-ID: <14173-3D28A2BC-224@storefull-2392.public.lawson.webtv.net>
Source record: 139197

Tom, W8JI wrote:
"---please tell me how to convey in simple terms that the common mode impedance or actions of a system are not tied to the differential mode impedance of a system---."

Deja vu all over again. That`s wrong except for the trivial case when perfect balance exists.

For example, a coax-fed dipole puts r-f on the coax. Change the coax length and r-f on the coax changes. We did not change surge impedance of the coax, only its length. R-F on the coax indicated system imbalance and is a measure of common-mode current.

Measure differential-mode before and after the coax length change. It too changed because the antenna load changed as more or less energy was accepted by the coax exterior.

More clearly, don`t change the coax length. Just put a W2DU balun on the coax and move it around. All the above is still true.

Moving a balun along the coax would not affect the loading of a transmitter if common-mode were unrelated to the differential mode.

Best regards, Richard Harrison, KB5WZI

553. Re: G5RV

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-07 20:35:19 UTC
From: Reg Edwards <g4fgq.regp@btinternet.com>
Message-ID: <aga8m6$1os$1@venus.btinternet.com>
Source record: 139195

> so what are you trying to say????
==========

Goodbye.

554. Re: A whole new 'back to basics' topic - Monopole fundamentals

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-07 20:35:46 UTC
From: richardharrison@webtv.net
Message-ID: <14172-3D28A622-693@storefull-2392.public.lawson.webtv.net>
Source record: 139198

J. Harvey wrote:
"How it would relate to receive mode gain is unclear to me."

Antennas are completely reciprocal. They have the same characteristics receiving as transmitting. They do both at the same time because they don`t know which mode they are supposed to fill.

Best regards, Richard Harison, KB5WZI

555. Re: 1000 fraudtenna_dollar COMMON MODE CHALLENGE

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-07 20:38:36 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <iu8hiucnnlvccg2668aq9g92kkthurd0sb@4ax.com>
Source record: 139196

On Sun, 07 Jul 2002 14:30:07 -0500, CAM <w5dxp@hotmail.com> wrote:

>Richard Clark wrote:
>> That first question, again, was:
>> What is the Common of the Common Mode?
>
>Before I can answer your question, you must prove that
>existence exists.

Hi Cecil,

Sorry, no grand prize. Fractal ElectroHydroDynamicExistentialism is also forbidden as a basis for discussion. Only one submission per applicant is allowed. Please consult contest rules located at your nearest planning commission office at Alpha Centari, ask for Zephod Beeblebrox (inventor of the PanGalatic Gargleblaster).

However, as an entrant you are entitled to the Honorable Mention award of 1000 fraudtenna_dollars. It should arrive virtually anytime soon.

73's
Richard Clark, KB7QHC

556. Re: Calling All Electric Utility Power Experts

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-07 22:08:45 UTC
From: David Robbins <k1ttt@arrl.net>
Message-ID: <agae5g0136i@enews3.newsguy.com>
Source record: 139203

the buried hv line should be quieter overall than one on poles. insulators on poles are always subject to contamination and weather that can cause corona and arcing which generates noise. buried hv is immune to that. a ground mounted transformer is normally in a steel enclosure and burying the line to the house keeps that protected also. that kind of arrangement should also be less susceptible to lightning damage.

the only thing to be concerned about is if they want to charge you for the work, buried hv lines are generally much more expensive than poles

"gus" <fertree@yahoo.com> wrote in message
news:3d286a28.1316411@news.telocity.com...
> I am building my dream retirement home on a mountain in the middle
> of nowhere and am having discussions with the electric company about
> running power. They have informed me that in order to get power from
> the road to the house they have to run their poles through a grove of
> trees labelled Antenna Farm on their map, removing the grove and
> prohibiting the tower. The solution they offered was to bury a 6000
> volt line through the area and provide a ground mounted transformer 50
> feet or so from the house to drop down the voltage. My concern is an
> S-9 noise level oth the HF bands, since the idea of moving from the
> city is the get away from that sort of noise problem. Should I be
> concerned about this idea. Thanks for your advice.

557. Re: Calling All Electric Utility Power Experts

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-07 22:18:32 UTC
From: "Ed G." <Spectrumhog@_REMOVE_StarBand.net>
Message-ID: <Xns92449C05484E7Frog207Junocom@148.78.248.76>
Source record: 139200

In my experience, you shouldn't have any problems with the buried line... just maybe the power transformer above ground... and usually not from a new one like that.

Just be sure you know mark where there line is underground so you can avoid problems when erecting your antenna farm.

PS: I'm curious how long that underground run is. If its not too long, couldn't they put the transformer on their pole and run 240/120V to your house underground?

Ed WB6SAT

558. Re: Antenna Traps.

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-07 22:20:20 UTC
From: Reg Edwards <g4fgq.regp@btinternet.com>
Message-ID: <agaer3$r2r$1@helle.btinternet.com>
Source record: 139199

Alan wrote -
> In the latest issue of the ARRL Antenna book, are several designs similar
to
> the ones you describe. One of these uses two parallel Rg58 coax coils.
Properly
> designed, these easily handle the legal limit and then some.
==========

I have the 18th edition of the antenna book. I searched it and found an entry only a small fraction of a column long about a trap wound with coax. There is a photograph which shows construction method but complete absence of dimensions and resonant frequency. This is surprising because I am under the impression such traps have around for many years. I can remember experimenting with one 15 years back. Or did I invent it ? ;o)

What is the latest Antenna Book issue number please? I would like to see the coax trap sections to obtain dimensions.

Reg G4FGQ

559. Re: A whole new 'back to basics' topic - Monopole fundamentals

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-07 22:24:58 UTC
From: ryeburn@sfu.caz
Message-ID: <ryeburn-0707021524580001@207.6.82.157>
Source record: 139201

In article <y10W8.344$9U1.134656@news20.bellglobal.com>, " J. Harvey"
<JM002.Harvey_TRIMTHIS_@Sympatico.ca> wrote:

> "David Ryeburn"
> > Perhaps this may shed some light on the situation.
>
> I've been previously assured that it might shed RF on the situation, but not
> light. :-)
>
> If you 'squeeze' the full two watts that you have on offer into the half of
> the universe 'above' the infinite ground plane, then it seems reasonable
> that the field strength everywhere (in the 'upper half' of the unverse) will
> be twice that which might be found with a dipole that must fill twice as
> much universe.

This was pretty much my (unstated) point.

> It seems like a mistake to lable this effect as an increase in the 'gain' of
> the monopole versus the dipole.

Agreed.

> How it would relate to receive mode gain is unclear to me.

If you run time backwards, what's the difference between transmission and
reception?

> Something 'stinks' in EM-land.

I doubt that. But blaming either the monopole or the dipole for the type
of universe (semiverse?) it is supposed to radiate into seems unfair.

David, ex-W8EZE

--
David or Jo Anne Ryeburn
ryeburn@sfu.caz
To send e-mail, remove the letter "z" from this address.

560. Re: A whole new 'back to basics' topic - Monopole fundamentals

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-07 22:26:50 UTC
From: ryeburn@sfu.caz
Message-ID: <ryeburn-0707021526500001@207.6.82.157>
Source record: 139202

In article <3D28947D.3393BB6A@hotmail.com>, CAM <w5dxp@hotmail.com> wrote:

> David or Jo Anne Ryeburn wrote:
> > David, ex-W8EZE
> > Retired mathematician, but still thinking geometrically
>
> Have you tried rolling dice in the dark yet?

Mathematician, not statistician. Mathematicians prefer sure things.

David, who spent money only for gasoline the one time he was in Las Vegas

--
David or Jo Anne Ryeburn
ryeburn@sfu.caz
To send e-mail, remove the letter "z" from this address.

561. Re: 1000 fraudtenna_dollar COMMON MODE CHALLENGE

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-07 22:38:06 UTC
From: David Robbins <k1ttt@arrl.net>
Message-ID: <agafsg0166a@enews3.newsguy.com>
Source record: 139206

"Richard Clark" <kb7qhc@attbi.com> wrote in message
news:1hsgiu0femmpeksto5bbtj3j3vdsbcsa53@4ax.com...
> Hi All,
>
> Today's CHALLENGE is to find the Common of the Common Mode.
>
> >Here is the context, published by myself many days ago.
> >XMTR---x---coax-----choke---1/2WL ladder-line---well balanced 1/2WL
dipole
> >
> >Common mode measured at 'x'.
>
> Myself, having been pleaded with to subscribe to a theory based upon
> the argument provided above, I asked where the Common was given the
> theory made an appeal to it. This has proven to be one of the most
> elusive goals for many here since Kirchhoff settled it two centuries
> ago.
>
> That first question, again, was:
> What is the Common of the Common Mode?
> In a technical group, I would have presumed that Common had an
> ordinary meaning of the path where the current returns to its source.
> It is frequently ground, an all encompassing concept that in circuitry
> is often the negative lead, or the chassis. But not always.

but when dealing with radiating systems, or even systems that are larger
than a small fraction of a wavelength ground is a poorly defined concept.

>
> I then, with hesitation, tried another approach:
>
> The thesis is that XMTR is the source of Common Mode current, my
> second question is:
> Where is the current flowing toward at any point in its cycle
> (choose your own point except at the zero crossing of course)?

the xmitter may be the source, but currents can flow over, under, around,
and through it on their many and varied paths. just ask anyone who has been
burned by rf on a chassis.

>
> Third question:
> Taking that same point in its cycle, can you describe the
> complete path of current flow?
>

> Fourth question (#2 & #3 combined in a manner of speaking):
> Once the Common Mode current (at that same point in its cycle)
> reaches either the XMTR or dipole, how does it return to its
> source?

by the path of least resistance?

>
> Kirchhoff teaches that if a current exists, it must return to its
> source in a loop (by passing through what is the Common). If we
> simply discard the term Common or Common Mode, it is obvious that the
> current still has to be supported by a loop topology and the questions
> above are still meaningful (they don't require any notion of the
> differential or the common). In this sense, the questions are
> answerable and indeed offer the same answer regardless of the
> terminology. It is equally obvious that the circuit described above
> by quote is a linear path and does not conform to a loop to support
> current unless this context is incomplete (a frequent problem).

yep, once you get larger than that small fraction of a wavelength you have
to consider much more than just current going out here comes back there in a
simple loop. the simple dc analogies don't work in the case you describe as
there is no simple closed loop to account for all the current.

>
> As a gesture to eliminate the inordinate baroque features of the
> original problem, I offered that this is all resolvable through a
> simple bridge topology. How so? someone (might have but did not) ask.
>
> The Differential Mode is simply the Common Mode with a 90° turn with
> respect to ground such that the loop (nothing happens in electronics
> without Kirchhoff's loops) potentials maybe balanced with respect to
> earth. Balance is not necessary, but it does serve in the reduction
> of variables as the two modes come with their unique problems (the
> reason why debates rage on so). In other words, the Common Mode maybe
> (from its perspective) in a Differential Mode to the original
> Differential Mode circuit under scrutiny. This is the point of the
> first question:
> Where is the Common of the Common Mode?

common is measured at a point where two or more wires pass. you simply
measure the currents that are 'common' to all the wires. of course it is
not a simple job when there may be larger currents going different
directions in each wire. make it a 3 or 4 wire problem and you can generate
all sorts of different 'modes', ask a utility engineer about all the
possible modes of a 3 phase hv line over real ground... make it a double
circuit 3 phase line and have even more fun.

> in that by turning the perspective (reference) 90° you can invert the
> semantic relationship without having done anything to the entire
> circuit under consideration. Given that debates rage over semantics
> to the exclusion of technical discussion, the question, even though

> simple, confounded most.
>
> For the matter of potentials it is as elementary as asking, where did
> you put your reference lead when you make a voltage measurement? For
> the matter of currents, it is as elementary as asking where is the
> current sink? Measurements without a point of reference are
> meaningless. If we speak of potentials and measure from one point to
> another and say we have found a Differential Mode voltage, it follows
> that both leads were isolated from ground (the common understanding
> when unstated otherwise). If we speak of potentials and measure from
> one point to another and say we have found a Common Mode voltage, it
> follows that at least one of the leads was attached to ground (the
> common understanding when unstated otherwise).

again, grounds are problematic in measuring rf where anything is larger than a small percentage of a wavelength. a 3' ground lead on 10m is 10% of a wavelength and introduces a phase difference between what it is hooked to as a ground and the meter. use it on 2m and you are 180 degrees out of phase.

>
> If I can satisfy the above considerations, and then state that in fact
> the Differential Mode potential had ground as a reference, there is no
> problem as long as we don't make the same claim for the Common Mode
> potential by saying one lead went to ground. [this is the real
> problem where grounds/commons become mixed] We have simply changed

again, grounds are problematic. any wire could be designated 'common' or 'ground' but it may have a current or voltage on it relative to any other object, or even itself a short distance away.

> our perspective and chose to name the circuit with the ground
> reference Differential Mode (there is nothing to preclude this except
> the eventual confusion of conventional usage of these terms). By
> extension, the Common Mode must become a floating circuit with respect
> to ground and the Common of the Common Mode is found in one of the
> floating leads. Hence, one can easily describe a current measurement
> as being Common Mode in stark contrast to common usage without being
> wrong - unless, of course, the measurer does not or cannot describe
> the reference, the Common of their Common Mode.

ah, but that is the key. the person making the measurement is free to define any point they want as the 'reference' as long as they are consistent and take into account distance and time to arrive at consistent loop currents and node voltages they are right. for convenience the source chassis is often used, but it doesn't have to be. if it is more convenient to measure with respect to some other point you are free to do that.

>
> If you cannot describe the Common of Common Mode, it is likely because
> you do not have a complete picture of the entire circuit. Making
> appeals and generalizations to having shown its effect without being
> able to describe the circuit is at best one of luck and offering it as

> a "proof" is no proof at all.
>

the only part of 'common mode' that is 'common' is the confusion about it.

> By taking the conventional meaning of Common to be ground, the
> CHALLENGE is thus:
> Offer the "complete" context to the implicit problem quoted above
> in the form of a circuit diagram. My preference is that you
> reduce it to four resistors, source and detectors (with suitable
> annotation to correlate to the original) - but this is not
> necessary.
> It goes without saying that the winning description must satisfy
> Kirchhoff's laws (fractal Electro-Hydrodynamics disqualifies
> you immediately).

kirchoff's laws as usually stated in undergraduate circuit theory just don't hack it here... unless you go to great pains to replace each piece of the problem with a lumped equivalent circuit.. .and then analyze the many, many, possible current loops.

>
> ALL winners of the CHALLENGE will be immediately e-mailed 1000
> fraudtenna_dollars in virtual currency - you can spend it virtually
> anywhere! [please note that limitations imposed by various states
> differ in the regard of unregistered lotteries: offer void where
> permitted by law]

i accept payment electronically via paypal.

>
> 73's
> Richard Clark, KB7QHC

562. Re: BACK TO BASICS - EM waves, E and H fields, in phase orinquadr...

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-07 22:46:24 UTC
From: 2w8ji@contesting.com
Message-ID: <3d28c135.237375464@news.akorn.net>
Source record: 139204

On Sun, 07 Jul 2002 14:51:28 -0500, CAM <w5dxp@hotmail.com> wrote:

>Picking a low impedance point for a choke balun indeed does help
>improve the system balance in my antenna system. I have already
>posted the measured values.

I asked a simple question, and you try to go back to your system.

In many or most systems, what you claim is NOT true. The reason it is not true is common mode impedance and distribution of that impedance has nothing to do with the differental mode impedance and distribution of that impedance of a system.

The impedance, losses, and velocity factor of the two modes are distinctly different in the vast majority of systems.

For example, the velocity factor of a RG-8U cable in differential mode is about .66, yet in common mode...hanging in air...it is almost unity.

This (another new example) often confuses people who think throwing a few beads here or there on a cable reduces common mode current, or people who design sleeve baluns or other systems dependent on the velocity factors both inside and outside the cable.

If we misterminate the cable both for common mode and differential mode to create standing waves, the standing waves of one mode have nothing to do with the other. They each independently establish their own current maxima's and voltage maximas, and they even don't occur the same distance apart. As a matter of fact, one can be perfectly terminated and the other grossly mismatched.

With that in mind, how do we explain that effect (in a manner that you will permit) to people trying to understand systems?

Not your particular system, but the dozens or hundreds of other systems.

Thanks,

Tom W8JI

563. Re: BACK TO BASICS - EM waves, E and H fields, in phase orinquadr...

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-07 22:54:18 UTC
From: 2w8ji@contesting.com
Message-ID: <3d28c4be.238281509@news.akorn.net>
Source record: 139205

On Sun, 07 Jul 2002 13:42:53 -0500, CAM <w5dxp@hotmail.com> wrote:

>And of course, the common mode impedance can be related to the differential
>mode impedance. All we have to do is measure them to determine the relationship.
>At least the conducted portion of common mode Vs differential mode obeys
>Kirchhoff's laws. If we measure 10 ohms of common mode impedance and 50 ohms of
>differential mode impedance at the antenna feedpoint, we are likely to want to
>change that 10/50 relationship to a 1000/50 relationship by adding a choke. If,
>as you say, there were no relationship, we couldn't change the relationship by
>adding a choke, now could we?

That is where you make another serious mistake, unless you carefully
define the system.

The common mode impedance is driven by a voltage or source someplace,
and the reduction of power from that source only has to do with the
change in common mode impedance when we add the balun. For example, we
can have an across impedance of 50 ohms but a source voltage driving
the common mode system of several hundred volts even at low power.

An example of that is a vertical, like the small ground independent
verticals.

They have a differential impedance of nearly 50 ohms, but many
hundreds of volts driving the common mode system.

With that in mind, how do we explain that obvious disagreement with
your view based on your antenna system, or in a specific system that
might be used as an example in a balun article about a particular
system, when many systems do not follow those same rules?

73 Tom

564. Re: 1000 fraudtenna_dollar COMMON MODE CHALLENGE

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-07 23:12:58 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <qlihiu4eogallu8gr1ea40ea18lhbk3uml@4ax.com>
Source record: 139208

On Sun, 7 Jul 2002 22:38:06 -0000, "David Robbins" <k1ttt@arrl.net>
wrote:

snip
>
>the only part of 'common mode' that is 'common' is the confusion about it.
>
snip
>i accept payment electronically via paypal.

Hi David,

Sorry, no grand prize. Confusion, as a defense does not conform to
the rules as a basis for discussion. Only one submission per
applicant is allowed. Please consult contest rules located at your
nearest planning commission office at Alpha Centari, ask for Zephod
Beeblebrox (inventor of the PanGalatic Gargleblaster).

As an entrant you are entitled to the Honorable Mention award
of 1000 fraudtenna_dollars. It should arrive virtually anytime soon.

73's
Richard Clark, KB7QHC

565. Re: BACK TO BASICS - EM waves, E and H fields, in phase orinquadr...

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-07 23:18:40 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <25jhiuk96mtd12lcgb0tghjj1q6mup422s@4ax.com>
Source record: 139209

On Sun, 07 Jul 2002 22:54:18 GMT, 2w8ji@contesting.com (Tom W8JI)
wrote:

>An example of that is a vertical, like the small ground independent
>verticals.
>
>They have a differential impedance of nearly 50 ohms, but many
>hundreds of volts driving the common mode system.
>

Hi Tom,

Tell me more.

73's
Richard Clark, KG7QHC

566. 6meter end fed wire?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-07 23:25:18 UTC
From: KC8SSG <kc8ssg@qsl.net>
Message-ID: <y54W8.810$13.8300@news>
Source record: 139207

I would like to do an end fed 6m wire. I have a strict antenna policy with the wife.NONE outside.We don't need to get into that part though.1)I just wondered how long it would need to be 2)do I need a balun?3)which direction would be best to run it for my central Ohio location?
It will be in the attic and I will use it primarily for SSB
I currently have a G5RV Jr. and a 2M 4 element Cushcraft beam on an inop rotator in the attic
These all are used on my Icom 706 and Yaesu FT-1500
Oh yea my approx. height to the antennas is about 12ft.
Thanks Gents and Ladies!
--
KC8SSG

567. FS: Copper Wire - #9 Solid Bare

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-07 23:32:00 UTC
From: adam@panix.com
Message-ID: <agaj1g$5cr$1@panix2.panix.com>
Source record: 139210
Cross-posted to: rec.radio.swap,rec.radio.amateur.homebrew,rec.radio.amateur.antenna

I have just acquired over 700 pounds of bare #9 solid copper wire. I'm going to use some of it to redo my radial system, but the rest is for sale.

The lot includes lengths varying from about 33 feet to 37 feet. (Splice it together with pieces of 1/8" copper tubing to make longer lengths).

Asking $1.75 per length. (Less than 6 cents per foot!) 6 lengths for $10.

Pickup in Yorktown Heights or White Plains NY area. Will consider delivering nearby if you want the whole lot. Will also consider shipping if quantity is both worthwhile and manageable. (A 37 foot length weighs about 24 ounces. Buyer to pay shipping).

-Mike, wa2vqw@yahoo.com
--
test

568. Re: 1000 fraudtenna_dollar COMMON MODE CHALLENGE

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-07 23:56:26 UTC
From: dan <danlx@execpc.com>
Message-ID: <3d28d65a$0$1421$272ea4a1@news.execpc.com>
Source record: 139211

On Sun, 07 Jul 2002 18:19:16 GMT, Richard Clark <kb7qhc@attbi.com>
wrote:

>Hi All,
>
>Today's CHALLENGE is to find the Common of the Common Mode.
>
>>Here is the context, published by myself many days ago.
>>XMTR---x---coax-----choke---1/2WL ladder-line---well balanced 1/2WL dipole
>>
>>Common mode measured at 'x'.
>
>Myself, having been pleaded with to subscribe to a theory based upon
>the argument provided above, I asked where the Common was given the
>theory made an appeal to it. This has proven to be one of the most
>elusive goals for many here since Kirchhoff settled it two centuries
>ago.
>
>That first question, again, was:
> What is the Common of the Common Mode?
>In a technical group, I would have presumed that Common had an
>ordinary meaning of the path where the current returns to its source.
>It is frequently ground, an all encompassing concept that in circuitry
>is often the negative lead, or the chassis. But not always.
>
>I then, with hesitation, tried another approach:
Hi Richard,
I think ;<}, what you are trying to describe is extantennaism. It is
where all the acolytes put on black robes, sit in a circle around a
large number of scented candles, pass burning "incense sticks' and
each chants a different nursery rhyme. The burning "incense sticks" ,
for reasons unknown to me ;<}, seem to allow the minds of the acolytes
to attain a higher plane which in turn enables them to view the truth,
extantennaism.
Did I come close? Do I win? Oh, I do hope so!
N9JBF

Dan

I've rambled enough, back to the rocking chair. ZZZZZZZZZ
Remove left x for a direct reply.

569. Re: BACK TO BASICS - EM waves, E and H fields, in phase orinquadr...

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-08 00:06:20 UTC
From: CAM <w5dxp@hotmail.com>
Message-ID: <3D28D77C.488EABBA@hotmail.com>
Source record: 139212

Tom W8JI wrote:
> With that in mind, how do we explain that effect (in a manner that you
> will permit) to people trying to understand systems?

The analogy you introduced concerning solar systems is a good analogy. There is no way to predict the composition and relationships of a solar system that we have never seen. But once we see it, we can ascertain the composition and measure the relationships. There are some laws of physics that all solar systems obey but much about any specific solar system is unpredictable before it is discovered and explored.

There is no way to predict the relationships in an antenna that we have never seen. But I am sure you can look at a lot of antenna systems and predict that they are likely to have common mode problems and on top of that, what steps to take to minimize the common mode problems. Your previous example of a dipole feedline coming off at a 45 degree angle under one side is a good example.

> Not your particular system, but the dozens or hundreds of other
> systems.

The relationship between common mode conditions and differential mode conditions are partially predictable and partially unpredictable. Just because a relationship is unpredictable doesn't mean it doesn't exist. It is OK to say we don't know the exact relationship but it is foolish to say that two signals of the same frequency from the same power source are unrelated.

You make the same point if you say common mode conditions and differential mode conditions during transmit are often related in an unpredictable manner. But we can probably make some valid predictions about conducted common mode currents as Roy did in his Balun article. For instance, if we change a well-balanced dipole to an off-center-fed configuration, we will probably increase the magnitude of the common mode current at the antenna feedpoint. When I did that, the measured common mode current increased by a magnitude.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
------== Over 80,000 Newsgroups - 16 Different Servers! =-----

570. Re: G5RV

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-08 00:14:28 UTC
From: 'Doc <w5lz@icok.net>
Message-ID: <3D28D951.3829A586@icok.net>
Source record: 139213

K4IA wrote:
>
"I was pretty disappointed in mine so I yanked off the feed line
and ran
ladder line all the way back to the shack (the classic G5RV
configuration)
to a 1:1 current balun to a short piece of coax to a tuner."

The 'classic G5RV configuration' was what you had to
start with. You then turned it into something other than
a 'classic G5RV configuration'. But I do agree, you now
have a 'better', more versatile antenna.
'Doc

571. Re: BACK TO BASICS - EM waves, E and H fields, in phase orinquadr...

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-08 00:21:48 UTC
From: CAM <w5dxp@hotmail.com>
Message-ID: <3D28DB1C.9305FADB@hotmail.com>
Source record: 139214

Tom W8JI wrote:
>
> On Sun, 07 Jul 2002 13:42:53 -0500, CAM <w5dxp@hotmail.com> wrote:
>
> >And of course, the common mode impedance can be related to the differential
> >mode impedance. All we have to do is measure them to determine the relationship.
> >At least the conducted portion of common mode Vs differential mode obeys
> >Kirchhoff's laws. If we measure 10 ohms of common mode impedance and 50 ohms of
> >differential mode impedance at the antenna feedpoint, we are likely to want to
> >change that 10/50 relationship to a 1000/50 relationship by adding a choke. If,
> >as you say, there were no relationship, we couldn't change the relationship by
> >adding a choke, now could we?
>
> That is where you make another serious mistake, unless you carefully
> define the system.

I am not defining the system, Tom. The system exists in reality. I am merely making measurements to discover the various relationships. If I don't have any common mode problems, I probably won't make any measurements and will remain ignorant of the various relationships. But my ignorance doesn't dictate reality and render those relationships unrelated. You seem to think that ignorance has some supernatural effect on reality.

> With that in mind, how do we explain that obvious disagreement with
> your view based on your antenna system, or in a specific system that
> might be used as an example in a balun article about a particular
> system, when many systems do not follow those same rules?

Most antenna systems are measurable. If an antenna tuner knob setscrew burns a hole in one's finger, one has made a crude measurement. More measurements may have to be made to find out the best placement for a choke but we can probably say there exists a solution. Think about the mental steps that you would go through to try to solve a common mode problem. You are following a general set of *rules*. If common mode conditions were truly unrelated to differential mode conditions there would be rules to follow and common mode problems would be completely outside of our control.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

572. Re: 1000 fraudtenna_dollar COMMON MODE CHALLENGE

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-08 00:26:05 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <mfmhiu04fb56pmfvad69o1q74s6rcn35j0@4ax.com>
Source record: 139215

On Sun, 07 Jul 2002 18:56:26 -0500, dan <danlx@execpc.com> wrote:

>On Sun, 07 Jul 2002 18:19:16 GMT, Richard Clark <kb7qhc@attbi.com>
>wrote:
>
>>Hi All,
>>
>>Today's CHALLENGE is to find the Common of the Common Mode.
>>
>>>Here is the context, published by myself many days ago.
>>>XMTR---x---coax-----choke---1/2WL ladder-line---well balanced 1/2WL dipole
>>>
>>>Common mode measured at 'x'.
>>
>>Myself, having been pleaded with to subscribe to a theory based upon
>>the argument provided above, I asked where the Common was given the
>>theory made an appeal to it. This has proven to be one of the most
>>elusive goals for many here since Kirchhoff settled it two centuries
>>ago.
>>
>>That first question, again, was:
>> What is the Common of the Common Mode?
>>In a technical group, I would have presumed that Common had an
>>ordinary meaning of the path where the current returns to its source.
>>It is frequently ground, an all encompassing concept that in circuitry
>>is often the negative lead, or the chassis. But not always.
>>
>>I then, with hesitation, tried another approach:
>Hi Richard,
>I think ;<}, what you are trying to describe is extantennaism. It is
>where all the acolytes put on black robes, sit in a circle around a
>large number of scented candles, pass burning "incense sticks' and
>each chants a different nursery rhyme. The burning "incense sticks" ,
>for reasons unknown to me ;<}, seem to allow the minds of the acolytes
>to attain a higher plane which in turn enables them to view the truth,
>extantennaism.
>Did I come close? Do I win? Oh, I do hope so!
>N9JBF
>
>
>Dan
>
>I've rambled enough, back to the rocking chair. ZZZZZZZZZ
>Remove left x for a direct reply.

Hi Dan,

Sorry, no grand prize. Extantennaism, as an explanation does not conform to the rules as a basis for discussion. Only one submission per applicant is allowed. Please consult contest rules located at your nearest planning commission office at Alpha Centari, ask for Zephod Beeblebrox (inventor of the PanGalatic Gargleblaster).

As an entrant your charity is entitled to the Honorable Mention award of 1000 fraudtenna_dollars. It should arrive virtually anytime soon at the Church of Extantennaism, in the form of an offering benefitting the publication of their scriptures of Common Mode Prayer. Acolytes now prepare for the second Differential Mode imbalance to reveal their way to higher potentials. [note, what are thought to be burning incense sticks, are in fact misplaced baluns alight with the glory of 1KW announcing that imbalance's coming - praise be to Antenna, from which all radiation flows!]

73's
Richard Clark, KB7QHC

573. Re: 85 foot dipole not in straight line. A problem?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-08 00:30:01 UTC
From: 'Doc <w5lz@icok.net>
Message-ID: <3D28DCF6.FFFB96A9@icok.net>
Source record: 139216

Wayne wrote:
>
> 85 feet is short for 80 meters, and long for 40 meters.
> Unless you use an antenna tuner, it will be way off resonance.
-----clipped-----

Wayne,
Even with the use of a tuner, the doublet will still
be 'way off resonance'. It should have a pretty good
impedance match, though.
'Doc

574. Re: BACK TO BASICS - EM waves, E and H fields, in phase orinquadr...

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-08 00:30:28 UTC
From: richardharrison@webtv.net
Message-ID: <4717-3D28DD24-598@storefull-2393.public.lawson.webtv.net>
Source record: 139121

Tom, W8JI wrote:
"For example, we can have an across impedance of 50 ohms but a source voltage driving the common mode of several hundred volts even at low power."

Let`s plug numbers into Tom`s example:

Several hundred volts = 300
Source impedance = 50 ohms
P = Esquared/R = 90,000/50 = 1800 watts
1800 watts may be low power in tom`s opinion.
This QRP is another "Tomism"

Best regards, Richard Harrison, KB5WZI

575. Re: 85 foot dipole not in straight line. A problem?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-08 00:34:34 UTC
From: 'Doc <w5lz@icok.net>
Message-ID: <3D28DE07.3D237BB0@icok.net>
Source record: 139217

Andy Cowley wrote:
>
> CAM wrote:
> >
> > Wayne wrote:
> > > But to use a non resonant length requires a tuner, period.
> >
> > Not if you resonate your non resonant length antenna with a
> > series section transformer. I use my dipole on all HF bands
> > without a tuner. The tuning function is performed by the
> > transmission line itself.
>
> So it is a tuner, then, isn't it? That's what tuner means - something
> that performs the tuning function. Wayne was quite right wasn't he?
>
> vy 73
>
> Andy, M3ABC

Andy,
Actually, no, he wasn't, and still isn't. A tuner doesn't
adjust resonance, it matches impedances. Completely different
thing. The 'antenna' is still nonresonant, which doesn't mean
it won't work.
'Doc

576. Back To Basics - Antenna Reciprocity

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-08 00:35:24 UTC
From: " J. Harvey" <JM002.Harvey_TRIMTHIS_@Sympatico.ca>
Message-ID: <j75W8.286$KY6.200747@news20.bellglobal.com>
Source record: 139218

"Richard Harrison"
> Antennas are completely reciprocal. They have
> the same characteristics receiving as transmitting.
> They do both at the same time because they
> don`t know which mode they are supposed to fill.

"David Ryeburn"
> If you run time backwards, what's the difference
> between transmission and reception?

Is there a 'reactive field' surrounding a receive antenna ? We've just had a discussion on the relative phase of the E and H fields near a transmitting antenna. It was generally agreed that there existed a reactive field close to the transmitting antenna where the E and H fields were not "related" by 377 + zero*j ohms.

What about the 'near field' ? If an antenna were transmitting, the 'wavefront' would be very much non-planer. If the antenna were receiving, then the 'wavefront' would be much closer to planer (assuming that the signal source was far away). Even given identical signal strengths (very weak transmitting), the difference would be obvious to a skilled observer.

What about the fact that a transmitting antenna might radiate 'from the middle' with passive elements equidistant experiencing the same phase, whereas a receive antenna will experience the waves passing from front to back and those passive elements might be out of phase ?

If you were to run a film of a transmitting antenna backwards (time reversal), people would rightfully ask why all the RF in the neighbourhood was converging on the antenna like that. I can't imagine flashlights sucking light, let alone recharging their batteries, even if time runs backwards. [The only reason that the Universe doesn't run backwards is because of the warning written on the side of non-rechargeable batteries !] Tea cups break, but they don't spontaneously reassemble.

Three laws of thermodynamics (as slightly extended by Yours Truly):
1) You can't win.
2) You can't break even.
3) You can't quit.
4) You can't run time backwards.

Does anyone have a simple proof (or even an indication) that antennas must be reciprocal ?

Has anyone ever made an antenna that wasn't ?

Are all of the quantifiable characteristics the exactly same ? Even given that the fields in the vicinity are different (reactive versus 377+0*j ohms, and planer versus non-planer) ?

577. Re: 85 foot dipole not in straight line. A problem?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-08 00:40:22 UTC
From: 'Doc <w5lz@icok.net>
Message-ID: <3D28DF62.AE2E6AFB@icok.net>
Source record: 139119

CAM,
So in effect, you're using both a variable
length feed line AND a tuner. I thought doing
the variable length feed line was supposed to
work withOUT a tuner. Me thinketh thee speaketh
from both sides of thy mouth...
'Doc

578. Re: 85 foot dipole not in straight line. A problem?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-08 00:43:31 UTC
From: 'Doc <w5lz@icok.net>
Message-ID: <3D28E020.FD858988@icok.net>
Source record: 139120

CAM,
I think the 'key' here is differentiating
between an 'antenna', and an 'antenna system'.
'Doc

579. Re: 85 foot dipole not in straight line. A problem?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-08 00:44:39 UTC
From: CAM <w5dxp@hotmail.com>
Message-ID: <3D28E077.9F039E09@hotmail.com>
Source record: 139122

'Doc wrote:
>
> Wayne wrote:
> > 85 feet is short for 80 meters, and long for 40 meters.
> > Unless you use an antenna tuner, it will be way off resonance.

> Even with the use of a tuner, the doublet will still
> be 'way off resonance'. It should have a pretty good
> impedance match, though.

You can bring the system into resonance by adding a shorted stub
of the proper length to the center feedpoint. Once resonance
is reached, you can pump RF into the bottom of the stub
from a source that is low enough impedance to mimic the
previous short. :-)
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

580. Re: A whole new 'back to basics' topic - Monopole fundamentals

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-08 00:49:41 UTC
From: " J. Harvey" <JM002.Harvey_TRIMTHIS_@Sympatico.ca>
Message-ID: <Ik5W8.296$KY6.203715@news20.bellglobal.com>
Source record: 139123

"Richard Clark"
> Look at the introduction:
> "... it is this value of effective area that resolves the 6-dB
> discrepancy between measurements and analysis...."

Interesting, you're right (I'd forgotten that). The introduction does mention measurement. Measurements are not mentioned anywhere else in the report. The report is very much theory versus NEC. One can only assume that they have compared Mini-NEC against all the other NECs.

The report compares Kraus and "Eq. 18" against Mini-NEC. There isn't a problem with the Kraus's gain (so they say), only the end-to-end pathloss.

Something stinks.

If the basic theory is wrong, then that's big news.

If NEC is wrong on monopoles, then that's big news.

If the author(s) of NEC are wrong on basic theory, then that's big news (but not quite so big).

581. Re: Back To Basics - Antenna Reciprocity

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-08 00:55:49 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <g4ohiu0j1t6bpuvktrier19npa44qg09mh@4ax.com>
Source record: 139124

On Sun, 7 Jul 2002 20:35:24 -0400, " J. Harvey"
<JM002.Harvey_TRIMTHIS_@Sympatico.ca> wrote:

>"Richard Harrison"
>> Antennas are completely reciprocal. They have
>> the same characteristics receiving as transmitting.
>> They do both at the same time because they
>> don`t know which mode they are supposed to fill.
>
>"David Ryeburn"
>> If you run time backwards, what's the difference
>> between transmission and reception?
>
>Is there a 'reactive field' surrounding a receive antenna ? We've just had
>a discussion on the relative phase of the E and H fields near a transmitting
>antenna. It was generally agreed that there existed a reactive field close
>to the transmitting antenna where the E and H fields were not "related" by
>377 + zero*j ohms.
>
>What about the 'near field' ? If an antenna were transmitting, the
>'wavefront' would be very much non-planer. If the antenna were receiving,
>then the 'wavefront' would be much closer to planer (assuming that the
>signal source was far away). Even given identical signal strengths (very
>weak transmitting), the difference would be obvious to a skilled observer.
>
>What about the fact that a transmitting antenna might radiate 'from the
>middle' with passive elements equidistant experiencing the same phase,
>whereas a receive antenna will experience the waves passing from front to
>back and those passive elements might be out of phase ?
>
>If you were to run a film of a transmitting antenna backwards (time
>reversal), people would rightfully ask why all the RF in the neighbourhood
>was converging on the antenna like that. I can't imagine flashlights
>sucking light, let alone recharging their batteries, even if time runs
>backwards. [The only reason that the Universe doesn't run backwards is
>because of the warning written on the side of non-rechargeable batteries !]
>Tea cups break, but they don't spontaneously reassemble.
>
>Three laws of thermodynamics (as slightly extended by Yours Truly):
>1) You can't win.
>2) You can't break even.
>3) You can't quit.
>4) You can't run time backwards.
>

>Does anyone have a simple proof (or even an indication) that antennas must
>be reciprocal ?
>
>Has anyone ever made an antenna that wasn't ?
>
>Are all of the quantifiable characteristics the exactly same ? Even given
>that the fields in the vicinity are different (reactive versus 377+0*j ohms,
>and planer versus non-planer) ?
>
>
>

Hi Jeff,

Once again, you have to separate the effects from the characteristics that cause the effects. The near field's characteristics of impedance and geometry with respect to its surroundings are analogs of a lens in that the presence of this discontinuity in space distorts it to same purpose: reciprocity.

Example of reciprocity is most striking in the yagi. If reciprocity failed, it would be most apparent for this particular design.

If you can stretch your imagination (speaking to others than Jeff now, as his is most malleable), search Scientific American's archives about passive sonar (sometime in the past two years). They in fact rebuild the source of a radiation (at sound levels) observed through the detection of a random field of detectors replaying their detected same sound, in time synchrony - backwards. That is, each detector has its own re-radiator that when properly sequenced and playing the sound in reverse, all such detectors/re-radiators add at the origin of the initial source reconstructed.

73's
Richard Clark, KB7QHC

582. Re: Horizontal Loop Question

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-08 01:10:51 UTC
From: Steve <n4lq@iglou.com>
Message-ID: <3d28f45f_3@news.iglou.com>
Source record: 139128

Antennas drive me crazy and like you say, no one antenna does it all. I have an 80m horizontal loop at 50ft and a 40m loop at 30ft. For some reason, the 40m loop usually does better on 20 through 10m.
Sometimes I have the feeling that the big loop's take off angle is too low and I either loose lots of RF to the ground and trees or else signals are arriving at higher angles than the big loop can hear.
It's hard for me to force myself to lower the loop when I can get it up so high! Do you think the 80m loop would perform better at low heights such as 20ft? I'm willing to give it a try.

--
Steve
N4LQ

"Walter" <walter@accessus.net> wrote in message
news:DE_V8.607407$%y.38330497@bin4.nnrp.aus1.giganews.com...
> Thanks for the interesting discussion. There are several variables
> that
> may need addressing. Normally a 1:1 transition balun is sufficient for
> using an 80 meter horizontal loop in the multiband operations. But
> depending on the length of feedline, and sometimes there is not a
> choice as to the "best" length, then having a 4:1 balun is so very
> valuable to be able to switch over and use also with the 1:1 balun.
>
> Personally I use 160, 80 and 40 meter horizontal loops which all
> are between 10 ft to 20 ft above ground and a selectable balun
> box with 1:1 and 4:1 baluns available and all the horiz. loops are
> fed with 450 ohm ladderline or 300 ohm twinlead. The 3 loops
> are fed with seperate feeders and the unused ones are grounded
> at the shack. These loops are nested inside each other and being
> as close to center of each other as possible. Point being is that
> no single antenna can do it all, but with the three-some there is a
> flexibility that was worth all the effort of putting up the hz loops.
>
> At FD this year, we used a 40 meter loop up at approx. 15 ft and
> running QRP SSB (5 watts PEP), it was not an unpleasant chore
> to work 40, 20 or 15 meters SSB. This was the first time ever that
> I tried the QRP SSB on FD and it really works. Yeah, I was so
> surprised.
>
> Happy hz loop buiding...73...Walter, AG5P
>
> "ARDUJENSKI" <ardujenski@aol.com> wrote in message
> news:20020706010246.15533.00002671@mb-fx.aol.com...
> > I have read various articles on horizontal loops and still have a

> few
> > questions. First let me say that my interest was peaked by several
> notes i have
> > read from field day groups exclaiming how pleased they were with the
> horizontal
> > loop at ONLY 20FT.
> >
> > I got a copy of EZNEC DEMO and played with various size loops and
> heights. I
> > was surprised to see some noteable gain figures using an 80m loop at
> 20ft
> > height on 20m and above but more significantly there were some nice
> lobe
> > patterns which see like they would accomodate the NW operations.
> >
> > Elevating or enlarging the loop then developed patterns with multi
> lobes at
> > various takeoff angles and as you approached 15m and above with very
> large
> > loops (800ft+)--patterns which look like avocadoes.
> >
> > I am not too sure if my modeling was too crude to be of value. Have
> any of you
> > used horizontal loops and what was you rexperiences. In particular
> any one use
> > an 80m loop at about 20ft?
> >
> > Alan KB7MBI
>
>

583. Re: BACK TO BASICS - EM waves, E and H fields, in phase orinquadr...

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-08 01:25:48 UTC
From: k1bqt@aol.com
Message-ID: <20020707212548.19554.00002627@mb-dd.aol.com>
Source record: 139125

>But we can probably make some valid predictions about conducted common mode currents....<

Kinda like saying, "this medicine should make you feel better.....if the side effects don't kill you".

Rick K1BQT

584. Re: Back To Basics - Antenna Reciprocity

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-08 01:45:57 UTC
From: " J. Harvey" <JM002.Harvey_TRIMTHIS_@Sympatico.ca>
Message-ID: <t96W8.325$KY6.217674@news20.bellglobal.com>
Source record: 139127

"Richard Clark"
> Example of reciprocity is most striking in the yagi.
> If reciprocity failed, it would be most apparent for
> this particular design.

I had thought about a Yagi antenna while drafting the posting. It certainly provides comfort in the face of doubts...

> ...Scientific American's archives about passive sonar
> (sometime in the past two years). They in fact rebuild
> the source of a radiation (at sound levels) observed
> through the detection of a random field of detectors
> replaying their detected same sound, in time synchrony
> - backwards. That is, each detector has its own
> re-radiator that when properly sequenced and playing
> the sound in reverse, all such detectors/re-radiators
> add at the origin of the initial source reconstructed.

If the original noise source at the origin was (for example) an exploding stick of dynamite near the ocean surface and it was weakly detected by an array of hydrophones scattered around at some significant distance, having those same hydrophones replay the same small signal that they so weakly detected will obviously not recreate the effect of a stick of dynamite back at the origin.

Even having those hydrophones pay the ultimate price and literally explode with the largest possible amplitude signal, those signals arriving back at the origin will add up in phase only in proportion to the number of hyrophones. Use a hundred exploding hydrophones and you'll be only 20dB above the sounds of a single distant exploding hydrophone. This would still be far less than a locally exploding stick of dynamite.

Things can add up in phase - that is true. This doesn't mean that time can run backwards.

Scientific American is just the sort of breathless rag to leap from one to the other. I dropped my subscription because they were getting so 'over the top'. One example is how Scientific American (and others) went crazy over the Eve Hypothesis.

www.google.com/search?q=eve+hypothesis
3rd from the top.

585. Re: My 85' dipole is actually 94'!! Another ??

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-08 01:49:16 UTC
From: Mike Coslo <mcoslo@adelphia.net>
Message-ID: <3D2919B5.60809@adelphia.net>
Source record: 139126

CAM wrote:

> Bill Nelson wrote:
>
>>Lossy is right. Even a 1 mm length would have a loss of around 3335 dB.
>>That isn't a fiber, that is a solid plug of dense matter.
>>
>>Sounds like some sort of advertising hype to me.
>>
>
> Remember the DED? (Dark Emitting Diode)

Oh my yes! that's when they finally figured out the speed of Dark. ;^)

- Mike KB3EIA -

586. Re: Back To Basics - Antenna Reciprocity

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-08 02:09:30 UTC
From: ryeburn@sfu.caz
Message-ID: <ryeburn-0707021909300001@207.6.82.157>
Source record: 139129

In article <j75W8.286$KY6.200747@news20.bellglobal.com>, " J. Harvey" <JM002.Harvey_TRIMTHIS_@Sympatico.ca> wrote:

> "David Ryeburn"
> > If you run time backwards, what's the difference
> > between transmission and reception?
>
> Is there a 'reactive field' surrounding a receive antenna ?

Yes, I would think there would be. At most (only when the receiving antenna is conjugately matched [heaven help us! -- don't want to start *that* thread up again]) 50% of the incoming energy will be deployed elsewhere (into whatever we have for a receiver) and at least 50% of the incoming energy will be re-radiated. The latter process will involve "reactive fields" as well as a radiation field.

> What about the 'near field' ? If an antenna were transmitting, the
> 'wavefront' would be very much non-planer. If the antenna were receiving,
> then the 'wavefront' would be much closer to planer (assuming that the
> signal source was far away). Even given identical signal strengths (very
> weak transmitting), the difference would be obvious to a skilled observer.

I thought about the non-planarity after I posted. If there were *lots* of such receiving antennas, each doing their appropriate jobs, then I would think the nearly planar field would be reconstituted by their re-radiated fields. If there were *lots* of such transmitting antennas, appropriately located and fed with appropriate power and phase, a nearly planar field could be synthesized (at least locally). I don't know if this is a satisfactory answer or not.

> What about the fact that a transmitting antenna might radiate 'from the
> middle' with passive elements equidistant experiencing the same phase,
> whereas a receive antenna will experience the waves passing from front to
> back and those passive elements might be out of phase ?

What if there were more than one distant transmitting antenna, appropriately synchronized, so that the passive elements *did* receive in-phase signals? It isn't the receiving antenna's fault that the time reversal seems only be working in one spatial direction. Again I don't know if this is a satisfactory answer.

> If you were to run a film of a transmitting antenna backwards (time
> reversal), people would rightfully ask why all the RF in the neighbourhood
> was converging on the antenna like that. I can't imagine flashlights
> sucking light, let alone recharging their batteries, even if time runs
> backwards. [The only reason that the Universe doesn't run backwards is

> because of the warning written on the side of non-rechargeable batteries !]
> Tea cups break, but they don't spontaneously reassemble.
>
> Three laws of thermodynamics (as slightly extended by Yours Truly):
> 1) You can't win.
> 2) You can't break even.
> 3) You can't quit.
> 4) You can't run time backwards.

You're getting closer to convincing me. Maybe I should stick to
mathematics and not dabble in physics.

> Does anyone have a simple proof (or even an indication) that antennas must
> be reciprocal ?

I'd like to see it too.

> Has anyone ever made an antenna that wasn't ?

Again I'd want to hear about such an antenna too.

> Are all of the quantifiable characteristics the exactly same ? Even given
> that the fields in the vicinity are different (reactive versus 377+0*j ohms,
> and planer versus non-planer) ?

These two things I tried (perhaps unsuccessfully) to deal with. But
nevertheless I'm now not convinced what I first said made sense.

David

--
David or Jo Anne Ryeburn
ryeburn@sfu.caz
To send e-mail, remove the letter "z" from this address.

587. Re: Horizontal Loop Question

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-08 02:17:48 UTC
From: N4LQ <N4LQ@igLou.com>
Message-ID: <3d27a4ad$1_2@news.iglou.com>
Source record: 139234

This:

80-Meter Octagon Loop, Corner-Fed: Fig. 13

Freq. Gain TO Feedpoint Z
MHz Bi Deg R +/- jX Ohms
3.5 4.3 45* 135 - j 55
7 6.3 41 205 - j 150
10.1 7.9 29 250 - j 580
14 9.3 21 155 - j 250
18.1 11.6 15 310 + j 250
21 11.9 13 275 - j 230
24.9 10.5 11 300 + j 40
28 11.4 10 310 - j 310

From here
http://www.cebik.com/atl1.html

I'm not certain what height he used.
--
Steve Ellington N4LQ.
"CAM" <w5dxp@hotmail.com> wrote in message
news:3D27474B.430ABD2F@hotmail.com...
> N4LQ wrote:
> > One interesting thing I've noted about the 80m loop, it's the only one
that
> > has a feedpoint impedance of between 200 and 300 ohms on all bands
80-10m
> > including warc.
>
> That's an interesting assertion. Here's what EZNEC sez:
>
> 3.7 MHz 115 +j0 ohms
> 7.3 MHz 293 + j0 ohms
> 10.125 MHz 391 - j872 ohms
> 14.2 MHz 246 - j445 ohms
> 18.14 MHz 333 - j 136 ohms
> 21.3 MHz 501 - j428 ohms
> 24.95 MHz 376 - j464 ohms
> 28.3 MHz 479 - j668 ohms
>
> What is the magic length and height of an 80m loop such as you describe?
> --
> cheers, CAM http://www.qsl.net/w5dxp
>

>
> -----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
> http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
> ------== Over 80,000 Newsgroups - 16 Different Servers! =-----

588. Re: BACK TO BASICS - EM waves, E and H fields, in phase orinquadr...

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-08 02:24:24 UTC
From: 2w8ji@contesting.com
Message-ID: <3d28f5dd.250857464@news.akorn.net>
Source record: 139130

On Sun, 7 Jul 2002 15:21:16 -0500 (CDT), richardharrison@webtv.net
(Richard Harrison) wrote:

>Tom, W8JI wrote:
>"---please tell me how to convey in simple terms that the common mode
>impedance or actions of a system are not tied to the differential mode
>impedance of a system---."
>
>Deja vu all over again. That`s wrong except for the trivial case when
>perfect balance exists.

No, that is NOT wrong Richard. Think about it a bit before shooting
from the hip.

The differential surge impedance of a line is determined by inside
characteristics of the line.

The common mode surge impedance is determined by what is OUTSIDE the
line.

They are entirely different in virtually every case, as is the
velocity factor.

Second, the terminations are different for each mode in nearly every
case. The load placed across the line is not equal to the load from
the line to ground.

That means the impedance, or ratio of voltage to current, changes all
along the line at a different rate and even often a different
direction as we move along the line.

With that in mind, how on earth can you say this??

>Tom, W8JI wrote:
>"---please tell me how to convey in simple terms that the common mode
>impedance or actions of a system are not tied to the differential mode
>impedance of a system---."
>
>Deja vu all over again. That`s wrong except for the trivial case when
>perfect balance exists.

??
That's a very odd response when the rate and slope of the impedances,
voltages,and currents can be in any relationship along the line
depending on termination, the line, and what is around the line.

73 Tom

589. Re: 6meter end fed wire?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-08 02:32:09 UTC
From: Dale Parfitt <parinc@gte.net>
Message-ID: <3D28F7F8.7621418E@gte.net>
Source record: 139131

KC8SSG wrote:

> I would like to do an end fed 6m wire. I have a strict antenna policy with
> the wife.NONE outside.We don't need to get into that part though.1)I just
> wondered how long it would need to be 2)do I need a balun?3)which direction
> would be best to run it for my central Ohio location?
> It will be in the attic and I will use it primarily for SSB
> I currently have a G5RV Jr. and a 2M 4 element Cushcraft beam on an inop
> rotator in the attic
> These all are used on my Icom 706 and Yaesu FT-1500
> Oh yea my approx. height to the antennas is about 12ft.
> Thanks Gents and Ladies!
> --
> KC8SSG

You may be interested in our End-Fedz at:
http://www.universal-radio.com/catalog/hamwire/4456.html

Dale W4OP

590. Re: BACK TO BASICS - EM waves, E and H fields, in phase orinquadr...

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-08 02:38:24 UTC
From: richardharrison@webtv.net
Message-ID: <24468-3D28FB20-844@storefull-2397.public.lawson.webtv.net>
Source record: 139132

Richard Clark wrote:
"---the question is and remains, is the Common of your Common Mode artifact earth?"

J. Harvey, I think, in a much earlier posting to this thread, asked the situation for a free space site of transmitter, coax, and dipole. Let`s use that example even if J`s example was different.

At the junction of the coax with the dipole, current from the inside shield surface usually divides between the antenna element with which it is connected, and the outside surface of the shield with which it is also connected.

Return of the current from outside the shield and from the element of the antenna connected to the shield is via displacement current exchange with the element of the antenna connected with the center-conductor of the coax.

Thus, the voltage on the antenna element connected with the the center-conductor of the coax provides the voltage reference "common to all conductors of a group" (the coax outer shield surface and the antenna element joined to it being the group). The earth is not the arbitrary reference in this case.

Best regards, Richard Harrison, KB5WZI

591. Re: Back To Basics - Antenna Reciprocity

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-08 03:13:17 UTC
From: richardharrison@webtv.net
Message-ID: <27299-3D29034D-646@storefull-2391.public.lawson.webtv.net>
Source record: 139135

J. Harvey wrote:
"Does anyone have a simple proof (or even an indication) that antennas must be reciprocal?"

Yes. 99 and 44/100ths% of the time or more.
Countless measurements and observations confirm reciprocity. Antenna characteristics have been determined by transmitting from many locations into the antenna, and by receiving at many locations from the same antenna. Patterns and gains are identical whichever method is used.

Far-field and near-field complications are unnecessary to consider in reciprocity. The antenna conductor has a current in it and a voltage across, no matter how it got there. It may have come out of a feedpoint or off the air. It causes radiation the same way, which means production of induction fields and all the rest, weak or strong, depending on the signal.

Best regards, Richard Harrison, KB5WZI

592. Re: Calling All Electric Utility Power Experts

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-08 03:15:25 UTC
From: Chris Boone <Cboone@earthlink.net>
Message-ID: <3D290384.5FBBD56D@earthlink.net>
Source record: 139133

Go for the Underground service with the pad mounted xfmr....
6KV is usually quiet at HF / RF freqs...and if it does cause
problems, its easy to find.....besides, it will look better too!

Chris
WB5ITT
Former Sr Telecom/RF/TVI Tech for Entergy/Gulf States Util (who operates
one of the largest URD systems in the southern US)

gus wrote:
>
> I am building my dream retirement home on a mountain in the middle
> of nowhere and am having discussions with the electric company about
> running power. They have informed me that in order to get power from
> the road to the house they have to run their poles through a grove of
> trees labelled Antenna Farm on their map, removing the grove and
> prohibiting the tower. The solution they offered was to bury a 6000
> volt line through the area and provide a ground mounted transformer 50
> feet or so from the house to drop down the voltage. My concern is an
> S-9 noise level oth the HF bands, since the idea of moving from the
> city is the get away from that sort of noise problem. Should I be
> concerned about this idea. Thanks for your advice.

593. Re: A whole new 'back to basics' topic - Monopole fundamentals

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-08 03:41:00 UTC
From: 'Doc <w5lz@icok.net>
Message-ID: <3D2909BA.6A5FA092@icok.net>
Source record: 139134

" J. Harvey" wrote:
>
> This thread isn't (yet ?) getting the attention it deserves...

I disagree. I think it has received far more
attention than it desrves.
'Doc

594. Re: BACK TO BASICS - EM waves, E and H fields, in phase orinquadr...

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-08 03:52:02 UTC
From: richardharrison@webtv.net
Message-ID: <7720-3D290C62-787@storefull-2394.public.lawson.webtv.net>
Source record: 139137

Tom, W8JI wrote:
"No, that is NOT wrong Richard. (the common mode impedance or actions of a system are not tied to to the differential mode impedance of a system---)"

Turn-off the source of energy shared by both modes and their response to that energy ends. That is a shared action and evidence of a relationship. They form a consumers union. They are both dependent on the same source. So, they are hardly independent. As energy is funneled through one mode to reach the other, it can`t be independent because one mode can be interrupted to discontinue the other. Some independence!

When there is imbalance in the system shared by the modes, a perturbation in either mode affects the other. They are coupled, ergo they are related.

Best regards, Richard Harrison, KB5WZI

595. Re: Back To Basics - Antenna Reciprocity

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-08 04:06:30 UTC
From: CAM <w5dxp@hotmail.com>
Message-ID: <3D290FC6.497F1DA6@hotmail.com>
Source record: 139136

" J. Harvey" wrote:
> Does anyone have a simple proof (or even an indication) that antennas must
> be reciprocal ?

What if the driving impedance of the transmitter is a lot different
than the impedance across the transmission line during receive, e.g.
the transmission line acting like a shorted stub during transmit
and like an open stub during receive?
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

596. Re: 85 foot dipole not in straight line. A problem?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-08 04:13:56 UTC
From: CAM <w5dxp@hotmail.com>
Message-ID: <3D291184.2E7A98A4@hotmail.com>
Source record: 139138

'Doc wrote:
>
> CAM,
> So in effect, you're using both a variable
> length feed line AND a tuner. I thought doing
> the variable length feed line was supposed to
> work withOUT a tuner. Me thinketh thee speaketh
> from both sides of thy mouth...

I don't have to use the external tuner but I just bought an IC-756pro
with one built in so why not use it? The point is that I don't have
to use an external tuner because the internal tuner won't work into
SWRs higher than 3:1. I simply adjust the length of the ladder-line
until the internal tuner will handle the load.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
------== Over 80,000 Newsgroups - 16 Different Servers! =-----

597. Re: BACK TO BASICS - EM waves, E and H fields, in phase orinquadr...

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-08 04:31:08 UTC
From: CAM <w5dxp@hotmail.com>
Message-ID: <3D29158C.2D433CA2@hotmail.com>
Source record: 139139

Tom W8JI wrote:
> That's a very odd response when the rate and slope of the impedances,
> voltages,and currents can be in any relationship along the line
> depending on termination, the line, and what is around the line.

The point is that, as long as nothing changes, they are in a particular relationship, not any random relationship. Seems to me you continue to make the mistake of assuming that if the relationship is unknown to you, then it can be anything. That's not true. The relationship is what it is. That you don't know what it is, is irrelevant to reality.

Remember the coin toss I did in which you didn't know the outcome? Based on your above logic, you would say the outcome is still in doubt because you don't know what the outcome was.

The relationships may be unknown and unpredictable but they are what they are and are measurable and knowable. You are not going to observe the common mode current randomly changing magnitude and phase X times per second during key down transmit.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

598. Re: PVC coax conduit to tower

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-08 05:59:29 UTC
From: Roger Halstead <rdhalste@tm.net>
Message-ID: <5T9W8.1011$FW5.901493@newshog.newsread.com>
Source record: 139140

"Gary Schafer" <gaschafer@attbi.com> wrote in message
news:3d233215.3715839@netnews.attbi.com...
> I would second the idea of using larger pipe. I have a very long run
> under ground and used 2"

I used 3" and it's pretty well filled.

> pipe. It filled up quick. I don't think I could ever pull another line
> in it now. Be sure to use the

Just pour in lots of soap, or get a few cans of the wire pulling soap. It's
amazing how much stuff you can squeeze in there.

> "long sweep" elbows. Much easier to pull wire through. Or even two 45
> degree bends
> together. I would bring the pipe up along side the concrete rather
> than inside it. Makes for

I ran mine right through the basement wall.

> easier digging if you do have to get at it for some reason.
> All lines run up the tower together so there shouldn't be any problem
> with them together in the

I have a "Hoffman Box" installed about 4 feet above ground on the side of
the tower. The conduit comes up into the box and is clamped in place. The
cables loop out the bottom on the other side and then go up the NE leg of
the tower. Well, actually the NE and SE. There are 8 cables going up
including the rotor cable to the remote coax switch for the wire antennas.

--
Roger Halstead (K8RI EN73)
www.rogerhalstead.com
N833R World's oldest Debonair? (S/N CD-2)
> ground. It may actually help as far as lightning currents go with the
> mutual coupling to each
> other.
>
> 73
> Gary K4FMX
>
>
> On Wed, 3 Jul 2002 09:23:40 -0400, "David"
> <phochief@nonspamhotmail.com> wrote:
>
> >Dick...thanks for the reply....I used the underground gray electrical
type

> >of PVC so I think I'm in good shape. I just don't know if I should use
> >another pipe to carry the rotor cable separate from the feedlines?
> >
> >73,
> >David, K4ZZR
> >
> >
> >"Dick Hughes" <rhughes33@cableone.net> wrote in message
> >news:oeq4iu8uca7ukv1naqfm4tpqegp0an36ng@4ax.com...
> >> I would make it 2" and use electrical PVC, the gray type. Something I
> >> do is make two "U's" (out of two 90 degree elbows) for each end that I
> >> don't use cement on. Keeps the rain out, and is still easy to remove
> >> when pulling coax. Of course this assumes you have upward 90's at
> >> each end. Be sure and pull a strong rope/cord through the pipe as you
> >> assemble it. And leave it in after you pull your wires in case you
> >> need something else later. I have an RG-213, RG-9913 and an 8-wire
> >> rotator cable in mine. It's about to get another RG-9913.
> >>
> >> Dick - W6CCD
> >>
> >> On Tue, 2 Jul 2002 21:30:31 -0400, "David"
> >> <phochief@nonspamhotmail.com> wrote:
> >>
> >> >Getting ready to dig the concrete base for my new tower and plan to
run a
> >1
> >> >1/2 inch PVC pipe from my shack to my tower about 30' away and up
through
> >> >the concrete base. This pipe is big enough to carry several coax
lines
> >plus
> >> >the rotor cable, so is there any reason I would want to run a separate
> >pipe
> >> >for anything else? I've never had a problem running the coax and
rotor
> >> >cable next to each other. The reason I ask is because I see photos of
a
> >> >tower installation on the texas towers website with two PVC conduits
> >coming
> >> >up through the concrete base.
> >> >
> >> >David
> >> >
> >> >
> >>
> >
> >
> >
>

599. It's finished...for the time being

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-08 05:59:29 UTC
From: Roger Halstead <rdhalste@tm.net>
Message-ID: <5T9W8.1012$FW5.901551@newshog.newsread.com>
Source record: 139141

Well, the tower and antenna work is pretty much finished. Now it's going to be mainly maintenance, or an experiment here, or there. Unless we get one of those big ice storms with a lot of wind. It's gone through winds gusting up to 70 MPH and survived one winter and one lightening strike so far.

http://rogerhalstead.com/tower.htm

--
Roger Halstead (K8RI EN73)
www.rogerhalstead.com
N833R World's oldest Debonair? (S# CD-2)

600. Re: Antenna Traps.

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-08 06:53:04 UTC
From: remove_ok1sip@atlas.cz
Message-ID: <5f5159fa.0207072253.2405cdf@posting.google.com>
Source record: 139142

Hi Reg,
you wrote

> I am just completing a program to design coaxial antenna traps.

Tony Field, VE6YP, field@nucleus.com, has published his application COAXIAL TRAP DESIGN, which seems to work well. Maybe this info will save your time and effort. Otherwise, I appreciate your programs very much, they are easy to use and do not require excessive hardware.

73 de Ivan

601. Re: Back To Basics - Antenna Reciprocity

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-08 09:56:20 UTC
From: 'Doc <w5lz@icok.net>
Message-ID: <3D2961B1.73E16C7A@icok.net>
Source record: 139143

```
CAM,
---------------
>
> What if the driving impedance of the transmitter is a lot different
> than the impedance across the transmission line during receive, e.g.
> the transmission line acting like a shorted stub during transmit
> and like an open stub during receive?
> --
> cheers, CAM http://www.qsl.net/w5dxp
----------------

But how does it know when to switch?
'Doc
```

602. Re: Antenna Traps.

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-08 10:08:36 UTC
From: n2ey@aol.com
Message-ID: <20020708060836.25425.00000365@mb-da.aol.com>
Source record: 139144

In article <ag9l4goqt1@paris.btinternet.com>, "Reg Edwards"
<g4fgq.regp@btinternet.com> writes:

>I am just completing a program to design coaxial antenna traps. The
>advantage over ordinary coil and capacitor traps is that a separate high
>voltage, high current tuning capacitor is not needed.

Really cool, Reg. Thanks
>
>It occurred to me it may be possible to make a higher Q trap, easier to
>construct, with twin 150-ohm line or two parallel teflon-insulated wires
>forming one line.
>
>Has anyone ever made or experimented with such a device ?

Never heard of such a thing. Might be worth a couple of tries on the bench with
the dipper.

I've been using coax-cable-and-PVC traps (40 meter/RG-58 versions) since the
mid 1980s in a variety of antennas. All are based on the article by N4UU in QST
for December 1983/1984 (I'm not exactly sure which year). That design connects
the center conductor of one end to the braid of the other end, and then uses
the free ends as the trap connections. The N4UU article gives charts of trap
dimensions for various bands, using either RG-174 or RG-58 coax. I have only
used RG-58.

One thing I learned early on about these traps is that they all need
adjustment. Variations in coax cable and PVC pipe characteristics are such that
assembly from formulas alone is inadequate.

From my own crude measurements and the work of others, the unloaded Q of RG-58
coax-cable traps made with optimum coils (square or a little shorter) is about
150. That's less than half the Q obtainable from lumped-constant traps of good
design and the same dimensions, and a coax trap's LC ratio is not readily
adjustable. Coax traps are also asymmetrical.

The main advantages of coax traps are their low cost, ruggedness and being
constructed from easily available materials. In a simple 2 band dipole design
with 2 traps, the total trap losses are probably less than 1 dB, which is
probably tolerable in exchange for the convenience and size reduction. The
losses in a multi-trap antenna can be much higher.

73 de Jim, N2EY

603. Re: Horizontal Loop Question

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-08 10:13:41 UTC
From: 'Doc <w5lz@icok.net>
Message-ID: <3D2965C0.C643708C@icok.net>
Source record: 139145

Steve,
If it were mine, I'd leave it at 50 feet! Leaving
the 'matching' part out of it, the biggest change you
would probably see by lowering the 80 meter loop would
be an increase in 'take-off' angle and general shape
of the radiation pattern. Even at 50 feet, the 'take-
off' angle isn't very low at all, so personally, I don't
think you would be gainning anything usable.
There's no particular 'good' reason to lower your 80
meter antenna. The lower height 'thing' isn't desirable
as such. The original question was if a loop at a low
height was 'worth' doing. If the original postor could
have gotten a loop up at 50 feet, I feel confident in
assuming that he would have done so. I would have!
'Doc

604. Re: A whole new 'back to basics' topic - Monopole fundamentals

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-08 10:20:59 UTC
From: " J. Harvey" <JM002.Harvey_TRIMTHIS_@Sympatico.ca>
Message-ID: <4IdW8.942$c_2.349278@news20.bellglobal.com>
Source record: 139146

" J. Harvey" wrote:
> This thread isn't (yet ?) getting the attention it deserves...

"'Doc" <w5lz@icok.net> wrote
> I disagree. I think it has received far more
> attention than it desrves.

Can you justify your opinion ?

Here's mine:
If the basic theory is wrong, then that's big news.
If NEC is wrong on monopoles, then that's big news.
If the author(s) of NEC are wrong on basic theory,
then that's big news (but not quite so big).

All you need to do is explain why the previously referenced report isn't big news. You might be correct, but I can't think of a 'non-big news' explanation.

605. Re: Back To Basics - Antenna Reciprocity

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-08 10:29:24 UTC
From: " J. Harvey" <JM002.Harvey_TRIMTHIS_@Sympatico.ca>
Message-ID: <YPdW8.945$c_2.350136@news20.bellglobal.com>
Source record: 139147

"CAM"
> What if the driving impedance of the transmitter is
> a lot different than the impedance across the
> transmission line during receive, e.g. the
> transmission line acting like a shorted stub
> during transmit and like an open stub during receive?

Even if the Zo of the transmitter were zero, the E/I ratio would start-out as the cable Zo for a while (time 'related' to the length of the cable), and then revert back to the normal antenna SWR mess. The Zo of the transmitter never enters into it. (?)

You're certainly correct that the receiver might be different.

Not the 'antenna' reciprocity though.

'Doc
> But how does it know when to switch?

PTT switch (or key).

606. Re: BACK TO BASICS - EM waves, E and H fields, in phase

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-08 11:10:07 UTC
From: k1bqt@aol.com
Message-ID: <20020708071007.05944.00003085@mb-mf.aol.com>
Source record: 139148

Anyone for "English as a Second Language for Engineers?" Geez!

If you and I are riding the same train, Cecil, we're "related" in only the very loosest way (unless you've been messing with my sister again). Give it up! My teeth are starting to itch.

Rick K1BQT

607. Re: Back To Basics - Antenna Reciprocity

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-08 11:55:14 UTC
From: 'Doc <w5lz@icok.net>
Message-ID: <3D297D8E.61792A2@icok.net>
Source record: 139149

```
" J. Harvey" wrote:
-------------
> 'Doc
> > But how does it know when to switch?
>
> PTT switch (or key).
-------------

Gee, I thought it would be smarter than that...
'Doc
```

608. Re: Back To Basics - Antenna Reciprocity

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-08 12:34:10 UTC
From: richardharrison@webtv.net
Message-ID: <14172-3D2986C2-746@storefull-2392.public.lawson.webtv.net>
Source record: 139154

CAM wrote:
"---transmission lines acting like a shorted stub during transmit and like an open stub during receive."

A receiver can extract maximum energy only when matched to an antenna. The antenna`s radiation resistance is the source resistance for volts "generated" in an antenna.

When an antenna is matched to a receiver, 50% of the energy in the antenna goes to the receiver. The other 50% is reradiated.

There are T/R switches, isolators, directional couplers, etc. As Cecil noted, receivers and transmitters can have vast differences in impedance, but inherently, antennas are reciorocal.

Best regards, Richard Harrison, KB5WZI

609. Re: Back To Basics - Antenna Reciprocity

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-08 12:39:48 UTC
From: David Robbins <k1ttt@arrl.net>
Message-ID: <agc16k0vhd@enews3.newsguy.com>
Source record: 139151

"David or Jo Anne Ryeburn" <ryeburn@sfu.caz> wrote in message
news:ryeburn-0707021909300001@207.6.82.157...
> In article <j75W8.286$KY6.200747@news20.bellglobal.com>, " J. Harvey"
> <JM002.Harvey_TRIMTHIS_@Sympatico.ca> wrote:
>
> > "David Ryeburn"
> > Does anyone have a simple proof (or even an indication) that antennas
must
> > be reciprocal ?
>
> I'd like to see it too.
>

Ramo, Whinnery, and Van Duzer 'Fields and Waves in Commumication
Electronics' section 12.31.

and yes, in the second sentence it does assume there is a 'conjugate match'.

and yes, you can have antennas that aren't reciprocal. they one example
they give is when the transmission path includes something like the
ionosphere that does not have 'strictly bilateral properties'. one other
example i have heard of elsewhere that can make antennas non reciprocal is
the introduction of ferrites in microwave systems. (not the same as beads on
coax!)

610. Re: Antenna Traps.

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-08 12:40:30 UTC
From: Bibby <bibby@attbi.com>
Message-ID: <2LfW8.279329$R61.134480@rwcrnsc52.ops.asp.att.net>
Source record: 139150

Ivan, please tell us where he published it.

Malcolm, GW3NJY/W1

"OK1SIP" <remove_ok1sip@atlas.cz> wrote in message
news:5f5159fa.0207072253.2405cdf@posting.google.com...
> Hi Reg,
> you wrote
>
> > I am just completing a program to design coaxial antenna traps.
>
> Tony Field, VE6YP, field@nucleus.com, has published his application
> COAXIAL TRAP DESIGN, which seems to work well. Maybe this info will
> save your time and effort. Otherwise, I appreciate your programs very
> much, they are easy to use and do not require excessive hardware.
>
> 73 de Ivan

611. Re: Back To Basics - Antenna Reciprocity

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-08 12:44:15 UTC
From: David Robbins <k1ttt@arrl.net>
Message-ID: <agc1es0vuc@enews3.newsguy.com>
Source record: 139152

```
" J. Harvey" <JM002.Harvey_TRIMTHIS_@Sympatico.ca> wrote in message
news:YPdW8.945$c_2.350136@news20.bellglobal.com...
> "CAM"
> > What if the driving impedance of the transmitter is
> > a lot different than the impedance across the
> > transmission line during receive, e.g. the
> > transmission line acting like a shorted stub
> > during transmit and like an open stub during receive?
>
> Even if the Zo of the transmitter were zero, the E/I ratio would start-out
> as the cable Zo for a while (time 'related' to the length of the cable),
and
> then revert back to the normal antenna SWR mess. The Zo of the
transmitter
> never enters into it. (?)
>
> You're certainly correct that the receiver might be different.
>
> Not the 'antenna' reciprocity though.
>
> 'Doc
> > But how does it know when to switch?
>
> PTT switch (or key).
>
>
in the proof by ramo, whinnery, and van duzer (and probably others) this
would violate the assumptions that the conjugate match exist and that all
other parts of the system remain the same when exchanging the tx and rx
antennas to prove reciprocity. obviously if you change the external systems
connected to the antennas they will not necessarily perform the same way.
```

612. Re: BACK TO BASICS - EM waves, E and H fields, in phase

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-08 12:55:08 UTC
From: richardharrison@webtv.net
Message-ID: <14173-3D298BAC-236@storefull-2392.public.lawson.webtv.net>
Source record: 139153

Rick, K1BQT wrote:
"If you and I are riding the same train, Cecil, we are "related" in only the loosest way---."

But if you are coupled?

Whenever changing one mode changes the other mode, it is because the modes are coupled.

The coupling is measured by Ohm`s law. We take the voltage of one mode produced by current in the other mode and call the vottage to current ratio the mutual impedance. This is the quantification of the coupling.

Best regards, Richard Harrison, KB5WZI

613. Re: Back To Basics - Antenna Reciprocity

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-08 13:25:32 UTC
From: CAM <w5dxp@hotmail.com>
Message-ID: <3D2992CC.44389606@hotmail.com>
Source record: 139155

'Doc wrote:
>
> CAM wrote:
> > What if the driving impedance of the transmitter is a lot different
> > than the impedance across the transmission line during receive, e.g.
> > the transmission line acting like a shorted stub during transmit
> > and like an open stub during receive?

> But how does it know when to switch?

With my high school ham rig, I threw the switch(s). Nowadays, there's
usually a T/R switch/relay built in. It just seems to me that the
driving impedance of the transmitter would have to equal the loading
impedance of the receiver for the antenna system to be truly reciprocal.
Just a random thought.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

614. Re: Horizontal Loop Question

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-08 13:33:46 UTC
From: N4LQ <N4LQ@igLou.com>
Message-ID: <3d28431d_2@news.iglou.com>
Source record: 139254

Cecil:
You are correct and these figures point out the uselessness of having a 4:1
balun in the antenna tuner. A 1:1 would be more suitable.

--
Steve Ellington N4LQ.
"CAM" <w5dxp@hotmail.com> wrote in message
news:3D27C3E1.90C16A9D@hotmail.com...
> N4LQ wrote:
> >
> > This:
> >
> > 80-Meter Octagon Loop, Corner-Fed: Fig. 13
> >
> > Freq. Gain TO Feedpoint Z
> > MHz Bi Deg R +/- jX Ohms
> > 3.5 4.3 45* 135 - j 55
> > 7 6.3 41 205 - j 150
> > 10.1 7.9 29 250 - j 580
> > 14 9.3 21 155 - j 250
> > 18.1 11.6 15 310 + j 250
> > 21 11.9 13 275 - j 230
> > 24.9 10.5 11 300 + j 40
> > 28 11.4 10 310 - j 310
>
> May I point out that the feedpoint impedance is not between 200 and 300
> ohms on 75m, 30m, 17m, 15m, 12m, and 10m.
>
> > > N4LQ wrote:
> > > > One interesting thing I've noted about the 80m loop, it's the only
one that
> > > > has a feedpoint impedance of between 200 and 300 ohms on all bands
80-10m
> > > > including warc.
> --
> cheers, CAM http://www.qsl.net/w5dxp
>
>
> -----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
> http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
> -----== Over 80,000 Newsgroups - 16 Different Servers! =-----

615. Re: Back To Basics - Antenna Reciprocity

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-08 13:36:40 UTC
From: CAM <w5dxp@hotmail.com>
Message-ID: <3D299568.67469834@hotmail.com>
Source record: 139156

```
" J. Harvey" wrote:
>
> "CAM" wrote:
> > What if the driving impedance of the transmitter is
> > a lot different than the impedance across the
> > transmission line during receive, e.g. the
> > transmission line acting like a shorted stub
> > during transmit and like an open stub during receive?
>
> Even if the Zo of the transmitter were zero, the E/I ratio would start-out
> as the cable Zo for a while (time 'related' to the length of the cable), and
> then revert back to the normal antenna SWR mess. The Zo of the transmitter
> never enters into it. (?)

If there is an SWR on the line greater than 1:1, the steady-state E/I ratio
will be anything except Z0. A 1/2WL dipole with a 1/2WL shorted stub hanging
from the middle would be resonant on a certain frequency. Would that same 1/2WL
dipole with a 1/2WL open stub hanging from the middle be resonant on that same
frequency? If not, it leads me to believe that the driving impedance
on transmit and the loading impedance on receive need to be the same for
the antenna to have the same characteristics on transmit and receive.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----
```

616. Re: BACK TO BASICS - EM waves, E and H fields, in phase

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-08 13:51:27 UTC
From: CAM <w5dxp@hotmail.com>
Message-ID: <3D2998DF.14D0D028@hotmail.com>
Source record: 139157

Rick Littlefield wrote:
>
> Anyone for "English as a Second Language for Engineers?" Geez!
>
> If you and I are riding the same train, Cecil, we're "related" in only the very
> loosest way (unless you've been messing with my sister again). Give it up! My
> teeth are starting to itch.

There are three definitions of "related" in my dictionary, Rick. One has to
do with kinfolk. One has to do with audio tones. Those two definitions obviously
do not apply to RF common mode conditions versus differential mode conditions.
The third and last definition that does apply in this case is:

"related - connected by reason of an established or discoverable relation"

The established relationship between common mode conditions and differential
mode conditions during transmit is the sharing of a common power source.
A close to exact relationship between them for any given set of steady-state
conditions is discoverable through measurements. Common mode conditions
and differential mode conditions during transmit are related, by definition.
(Take some Benedryl for those itching teeth.)

P.S. If you are of European descent, more than likely
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
------== Over 80,000 Newsgroups - 16 Different Servers! =-----

617. Re: Back To Basics - Antenna Reciprocity

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-08 13:55:18 UTC
From: CAM <w5dxp@hotmail.com>
Message-ID: <3D2999C6.FA4A28B0@hotmail.com>
Source record: 139159

David Robbins wrote:
>
> > <JM002.Harvey_TRIMTHIS_@Sympatico.ca> wrote:
> >
> > > "David Ryeburn"
> > > Does anyone have a simple proof (or even an indication) that antennas
> > > must be reciprocal ?
>
> Ramo, Whinnery, and Van Duzer 'Fields and Waves in Commumication
> Electronics' section 12.31.
>
> and yes, in the second sentence it does assume there is a 'conjugate match'.

Which probably implies a lossless antenna system.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
------== Over 80,000 Newsgroups - 16 Different Servers! =-----

618. Re: 6meter end fed wire?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-08 13:57:18 UTC
From: Bob Miller <bamiller@texas.net>
Message-ID: <BIkpPezod6gn4GocKPJpGpwzBtNT@4ax.com>
Source record: 139158

"KC8SSG" <kc8ssg@qsl.net> wrote:

>I would like to do an end fed 6m wire. I have a strict antenna policy with
>the wife.NONE outside.We don't need to get into that part though.1)I just
>wondered how long it would need to be 2)do I need a balun?3)which direction
>would be best to run it for my central Ohio location?
>It will be in the attic and I will use it primarily for SSB
>I currently have a G5RV Jr. and a 2M 4 element Cushcraft beam on an inop
>rotator in the attic
>These all are used on my Icom 706 and Yaesu FT-1500
>Oh yea my approx. height to the antennas is about 12ft.
>Thanks Gents and Ladies!

Any particular reason you want an end-fed wire? A 1/2-wave center-fed dipole works well on 6 meters. The formula is...

overall length in feet = 492/frequency in megahertz

It'll be about 9 or 10 feet long, including both legs. Feed it with coax. No balun really needed. If the SWR is too high, shorten each side an inch or two at a time until it's where you want it. There isn't much directivity to an attic dipole, so orient it to any direction you wish.

Bob
k5qwg

619. FA: Multiband Scanner Antenna (few hours left)

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-08 14:12:58 UTC
From: Cutter <sgrubor@shaw.caNSPM>
Message-ID: <K5hW8.26080$Xs6.1166681@news2.calgary.shaw.ca>
Source record: 139160
Cross-posted to: alt.ham-radio.marketplace,alt.radio.scanner,rec.radio.amateur.antenna,rec.radio.amateur.equipment

http://cgi.ebay.com/ws/eBayISAPI.dll?ViewItem&item=1364556029

--
*** Remove NSPM to reply ***

620. Re: BACK TO BASICS - EM waves, E and H fields, in phase

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-08 14:16:30 UTC
From: CAM <w5dxp@hotmail.com>
Message-ID: <3D299EBE.6CB82DA6@hotmail.com>
Source record: 139161

CAM wrote:
> P.S. If you are of European descent, more than likely

That's strange, part of my posting got lost. It should have
said, "more than likely you and I are cousins".
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

621. Re: Back To Basics - Antenna Reciprocity

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-08 14:36:04 UTC
From: Gene Fuller <W4SZzzzzz@att.net>
Message-ID: <3D29A397.EABFC972@att.net>
Source record: 139162

CAM wrote:

> . . . Nowadays, there's
> usually a T/R switch/relay built in. It just seems to me that the
> driving impedance of the transmitter would have to equal the loading
> impedance of the receiver for the antenna system to be truly reciprocal.

I don't think anyone has seriously claimed that any arbitrary antenna
system is reciprocal, truly or otherwise.

Quoting from Kraus "Antennas", 2nd edition, pages 409-410,

*****

This theorem [reciprocity theorem for antennas] as applied to antennas
may be stated as follows:

If an emf is applied to the terminals of an antenna A and the current
measured at the terminals of another antenna B, then an equal current
(in both amplitude and phase) will be obtained at the terminals of
antenna A if the same emf is applied to the terminals of antenna B.

It is assumed that the emfs are of the same frequency and that the media
are linear, passive and also isotropic.

[end quote]
*****

If one tries to add real-world conditions to this ideal system then all
reciprocity bets are off.

As usual, this thread was not arguable in its original form, so it is
quickly drifting to an ill-defined topic that can be argued ad nauseam.

73,
Gene
W4SZ

622. Re: Back To Basics - Antenna Reciprocity

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-08 14:40:33 UTC
From: Crazy George <munschNO@attglobal.net.SPAM>
Message-ID: <3d29a987_4@news1.prserv.net>
Source record: 139164

Antenna reciprocity has absolutely nothing to do with anything beyond the
feedpoint. Most of you are confusing what might be called system
reciprocity with antenna characteristics. A couple of you have realized
this, but not yet expressed it in simple terms. System reciprocity and
antenna reciprocity are not necessarily the same demon.
--
Crazy George
Remove NO and SPAM from return address
J. Harvey <JM002.Harvey_TRIMTHIS_@Sympatico.ca> wrote in message
news:j75W8.286$KY6.200747@news20.bellglobal.com...
> "Richard Harrison"
> > Antennas are completely reciprocal. They have
> > the same characteristics receiving as transmitting.
> > They do both at the same time because they
> > don`t know which mode they are supposed to fill.
>
> "David Ryeburn"
> > If you run time backwards, what's the difference
> > between transmission and reception?
>
> Is there a 'reactive field' surrounding a receive antenna ? We've just
had
> a discussion on the relative phase of the E and H fields near a
transmitting
> antenna. It was generally agreed that there existed a reactive field
close
> to the transmitting antenna where the E and H fields were not "related" by
> 377 + zero*j ohms.
>
> What about the 'near field' ? If an antenna were transmitting, the
> 'wavefront' would be very much non-planer. If the antenna were receiving,
> then the 'wavefront' would be much closer to planer (assuming that the
> signal source was far away). Even given identical signal strengths (very
> weak transmitting), the difference would be obvious to a skilled observer.
>
> What about the fact that a transmitting antenna might radiate 'from the
> middle' with passive elements equidistant experiencing the same phase,
> whereas a receive antenna will experience the waves passing from front to
> back and those passive elements might be out of phase ?
>
> If you were to run a film of a transmitting antenna backwards (time
> reversal), people would rightfully ask why all the RF in the neighbourhood
> was converging on the antenna like that. I can't imagine flashlights
> sucking light, let alone recharging their batteries, even if time runs

> backwards. [The only reason that the Universe doesn't run backwards is
> because of the warning written on the side of non-rechargeable batteries
!]
> Tea cups break, but they don't spontaneously reassemble.
>
> Three laws of thermodynamics (as slightly extended by Yours Truly):
> 1) You can't win.
> 2) You can't break even.
> 3) You can't quit.
> 4) You can't run time backwards.
>
> Does anyone have a simple proof (or even an indication) that antennas must
> be reciprocal ?
>
> Has anyone ever made an antenna that wasn't ?
>
> Are all of the quantifiable characteristics the exactly same ? Even given
> that the fields in the vicinity are different (reactive versus 377+0*j
ohms,
> and planer versus non-planer) ?
>
>
>
>

623. Re: 6meter end fed wire?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-08 14:44:45 UTC
From: k0bg@aol.com
Message-ID: <20020708104445.16358.00003541@mb-fz.aol.com>
Source record: 139163

My first thought? Get another wife! Since you don't necessarily want to do that, why not use a dipole? What ever you use, 6 meters has a tendency to make life hard on nearby TV sets, even those hooked to cable. The use of high-pass filters is a given. Good Luck.

Alan, Kï¿½BG

624. Re: Calling All Electric Utility Power Experts

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-08 14:52:34 UTC
From: k0bg@aol.com
Message-ID: <20020708105234.16358.00003542@mb-fz.aol.com>
Source record: 139165

I'm surprised they gave you a choice! The REA specifies URD (Underground Rural Distribution) as the norm. And over head lines require special permits in most states nowadays. Lastly, I'm surprised it's 6kv. Typically, it's either 7,350 or 13.6 kv. In any case, URD is the way to go.

Alan, Kï¿½BG

625. Re: Antenna Traps.

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-08 14:57:28 UTC
From: k0bg@aol.com
Message-ID: <20020708105728.16358.00003544@mb-fz.aol.com>
Source record: 139166

I don't remember where I read it (maybe QST), but just recently there was an article about double wound coax traps. I'll look and see if I can find it.

Alan, Kï¿½BG

626. Re: Horizontal Loop Question

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-08 15:01:14 UTC
From: ardujenski@aol.com
Message-ID: <20020708110114.29736.00002762@mb-fe.aol.com>
Source record: 139167

Doc
I think the question of height falls into what you are trying to accomplish. Being a COMPROMISE I would say you need to first define what band(s) you want to focus on. My guess is that round 30-35ft you are maximizing it for 20m (lobe wise) , for 20ft at 15m, at 50ft+ for 40m.This guess is based upon lobe patterns for halfwave dipoles. Above 1/2wl you start getting odd lobe shapes. On 80m it is pretty much a NVIS antenna unless you short the feedline wires and feed it as a top loaded vertical.

Probably the BEST compromise antenna (in my limited experience) is an Inverted-L. Reason being is you have both high and low angle lobes generated together so which ever is the most effective lobe you have it available. I think of it as an automatic antenna switching circuit in that I have both a vertical and a horizontal antenna working at the same time.

The reason for the loop is that in my guestimation is that the more wire up the more signal (transmit and receive) and this seems to be verified by various user reports and the slight gain figures EZNEC predicts for the 80m loop on the upper bands.

It appears to get back to the basic question what type of operation do you do and which antenna(s) help you to achieve it.

Doc, I would probably agree that if you have 50ft high loop in most situation height is better (to a degree). If I had capability of the 50 ft I probably would take full advantage of it too (smile). I just wish installing power poles was not so expensive. Up here outside Seattle a set of 4 would run almost $2000. Used poles are only $0.50 a ft but installation crews are a killer

Alan KB7MBI

627. Re: BACK TO BASICS - EM waves, E and H fields, in phase orinquadr...

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-08 15:56:05 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <02djiu0n4ar1co4jphmnf5k4jtsh6499b9@4ax.com>
Source record: 139168

On Sun, 7 Jul 2002 21:38:24 -0500 (CDT), richardharrison@webtv.net
(Richard Harrison) wrote:

>
>Thus, the voltage on the antenna element connected with the the
>center-conductor of the coax provides the voltage reference "common to
>all conductors of a group" (the coax outer shield surface and the
>antenna element joined to it being the group). The earth is not the
>arbitrary reference in this case.
>
>Best regards, Richard Harrison, KB5WZI

Thank you Richard,

As I mentioned, not a very complex issue, but certainly a complex
effect. The follow-on question to consider is now that it has been
shown that the center-conductor is the Common of the Common Mode (for
a free space example) the current distribution on that same wire is
different than it would be for a balanced feed dipole (which gives
rise to a change in the launch characteristics suitably re-inforced by
the "new" Common Mode radiator).

It would have been sadistic to then ask Cecil to confirm the Common
through measurement. Even with a tall ladder, free space is a long
way up to climb. ;-)

However for the earth borne (in more ways that one), confirmation
"should be" simpler. That analysis remains to be explored. Hint,
this relates to the nature of knowing the Common of the Common Mode in
that the Common is not always "fixed" to earth (and has no need to be,
as this is simply a semantic device that carries a lot of unstated
associations as baggage for the unwary).

73's
Richard Clark, KB7QHC

628. Re: Back To Basics - Antenna Reciprocity

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-08 16:09:42 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <judjiugdk3j5cbkk5dgj54kttq4tsn8thi@4ax.com>
Source record: 139069

On Sun, 7 Jul 2002 21:45:57 -0400, " J. Harvey"
<JM002.Harvey_TRIMTHIS_@Sympatico.ca> wrote:

>
>Even having those hydrophones pay the ultimate price and literally explode
>with the largest possible amplitude signal, those signals arriving back at
>the origin will add up in phase only in proportion to the number of
>hyrophones. Use a hundred exploding hydrophones and you'll be only 20dB
>above the sounds of a single distant exploding hydrophone. This would still
>be far less than a locally exploding stick of dynamite.
>

Hi Jeff,

Certainly if the receiver/transmitter faithfully reproduced the
signal, the result at the origin of the sound would be weak - however
many dB down suggests simply turning up the gain (haven't you seen
Dune?).

I recall that back in the 60's the French experimented with a sonic
weapon. The problem there (and typically French) was that it
scrambled the brains of the operator. C'est ca....

You are right to say this is not running time backwards, that would
suggest the effect of the reversal would lead to an "implosion."
However I might guess that a fish at that site, that survived the
original to only experience the reverse, would think (in fish
thoughts) Deja Vu.

73's
Richard Clark, KB7QHC

629. How 'bout that StarGazer?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-08 16:19:49 UTC
From: dt@dt.prohosting.com
Message-ID: <ud6tyxkd6.fsf@dt.prohosting.com>
Source record: 139070

StarGazer, did you hang out on CB Channel 10 in Austin in the late 70s? This is the Little Boy Breaker tryin'.

David

ps: My apologies for posting this. StarGazer's email address doesn't seem to work.

630. Re: BACK TO BASICS - EM waves, E and H fields, in phase

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-08 16:26:46 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <vrejius11rqqdr47689s373kmvvs371s14@4ax.com>
Source record: 139071

On Mon, 08 Jul 2002 08:51:27 -0500, CAM <w5dxp@hotmail.com> wrote:

>
>There are three definitions of "related" in my dictionary, Rick. One has to
>do with kinfolk. One has to do with audio tones. Those two definitions obviously
>do not apply to RF common mode conditions versus differential mode conditions.
>The third and last definition that does apply in this case is:
>
>"related - connected by reason of an established or discoverable relation"
>

Hi Cecil,

You certainly have poor dictionaries, I didn't even have to pick mine
up to observe yours missed "related" as in communicated, expressed,
told... (he related this morning's news about a traffic accident).

73's
Richard Clark, KB7QHC

631. Re: It's finished...for the time being

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-08 16:31:53 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <3nfjiu4l2euk0214vh5072h6jd22gsjca4@4ax.com>
Source record: 139072

On Mon, 08 Jul 2002 05:59:29 GMT, "Roger Halstead" <rdhalste@tm.net>
wrote:

>Well, the tower and antenna work is pretty much finished. Now it's going to
>be mainly maintenance, or an experiment here, or there. Unless we get one
>of those big ice storms with a lot of wind. It's gone through winds gusting
>up to 70 MPH and survived one winter and one lightening strike so far.
>
>http://rogerhalstead.com/tower.htm

Hi Roger,

Very good photos of your tower, antennas, and installation - better
than 90% of what I've seen offered here.

73's
Richard Clark, KB7QHC

632. Re: How 'bout that StarGazer?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-08 17:00:37 UTC
From: StarGazer <pti@capnet.com>
Message-ID: <3D29C535.DB60CD3@capnet.com>
Source record: 139076

Wasn't me. Never been to TX.

"David B. Thomas" wrote:

> StarGazer, did you hang out on CB Channel 10 in Austin in the late
> 70s? This is the Little Boy Breaker tryin'.
>
> David
>
> ps: My apologies for posting this. StarGazer's email address doesn't
> seem to work.

633. Re: PVC coax conduit to tower

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-08 17:16:02 UTC
From: Roger Halstead <rdhalste@tm.net>
Message-ID: <mNjW8.1048$FW5.964315@newshog.newsread.com>
Source record: 139073

"Roger Halstead" <rdhalste@tm.net> wrote in message
news:5T9W8.1011$FW5.901493@newshog.newsread.com...
>
> "Gary Schafer" <gaschafer@attbi.com> wrote in message
> news:3d233215.3715839@netnews.attbi.com...
> > I would second the idea of using larger pipe. I have a very long run
> > under ground and used 2"
>
> I used 3" and it's pretty well filled.

One additional thought for the conduit....seal both ends with
"foam-in-place" insulation. Those little rhodents (that will cause my cat
to destroy half the basement catching) will climb up the cables and then
follow the pipe right on into the house. Of course the same is true, where
ever you bring in cables. Don't leave holes for critters. Give 'em a chance
and they'll move right in and take up housekeeping.

I figured with near a 100 foot run that is nearly full and comes out of the
Hoffman Box at nearly 4 feet above the gound would be safe. Wrong! It was
like putting out a sign, "Enter Here!"

--
Roger Halstead (K8RI EN73)
www.rogerhalstead.com
N833R World's oldest Debonair? (S# CD-2)

634. Re: BACK TO BASICS - EM waves, E and H fields, in phase

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-08 17:19:06 UTC
From: CAM <w5dxp@hotmail.com>
Message-ID: <3D29C98A.FF6CE54A@hotmail.com>
Source record: 139074

Richard Clark wrote:
> You certainly have poor dictionaries, ...

Maybe so, my workhorse dictionary is "Webster's Ninth New Collegiate".
My unabridged dictionary has that forth definition, "narrated".
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

635. Re: PVC coax conduit to tower

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-08 17:27:06 UTC
From: CAM <w5dxp@hotmail.com>
Message-ID: <3D29CB6A.AC703430@hotmail.com>
Source record: 139075

Roger Halstead wrote:
> One additional thought for the conduit....seal both ends with
> "foam-in-place" insulation. Those little rhodents (that will cause my cat
> to destroy half the basement catching) will climb up the cables and then
> follow the pipe right on into the house. Of course the same is true, where
> ever you bring in cables. Don't leave holes for critters. Give 'em a chance
> and they'll move right in and take up housekeeping.

The clothes dryer of a friend of mine quit turning. He took the back off,
reached in, and pulled out a live injured five foot long Copperhead snake,
i.e. deadly poisonous. He was extremely lucky not to be bitten.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
------== Over 80,000 Newsgroups - 16 Different Servers! =-----

636. Re: Antenna Traps.

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-08 18:23:59 UTC
From: n2ey@aol.com
Message-ID: <9f4bfe89.0207081023.7ecac943@posting.google.com>
Source record: 139077

k0bg@aol.com (K0bg) wrote in message news:<20020708105728.16358.00003544@mb-fz.aol.com>...
> I don't remember where I read it (maybe QST), but just recently there was an
> article about double wound coax traps. I'll look and see if I can find it.
>
> Alan, Kï¿½BG

It's a QST article by Al Bruxton, W8NX. I think it's on the ARRL website.

I experimented with double-coax traps in search of higher Q and a different LC ratio, but was disappointed. In order to get a reasonably square 40 meter coil using RG-58, the coil diameter has to be over 3 inches, resulting in a much heavier trap. The two pieces of coax must be as identical as possible to avoid shorted turn effects, and adjustment is a real pain because two cables need to be trimmed.

Reg's program works like a champ, and his predictions for 40 meter RG-58 traps on 2 and 2-1/2 inch formers match my actual experience very closely.

73 de Jim, N2EY

637. tower question

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-08 18:55:04 UTC
From: Tazanator <tazanator1@hotmail.com>
Message-ID: <8elW8.453374$cQ3.33515@sccrnsc01>
Source record: 139078

okay was goning to just drop in a section of tower and cement it in... now I foind out the section will last maybe 5 years ... is that true? and what do I get for a long lasting mount?

638. Re: Horizontal Loop Question

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-08 19:02:58 UTC
From: Walter <walter@accessus.net>
Message-ID: <CIlW8.32944$Im2.1004359@bin2.nnrp.aus1.giganews.com>
Source record: 139079

Hi Steve, well I would leave the two horizontal loops up just like you have them installed. There are several reasons that the 80 horz loop may not be working as good as the 40 horz loop. First, let's examine the feedpoint. If the 80 loop is a square config. then on the upper bands
and having a corner feed, you will experience a rhombic effect that leaves
your signal both incoming and outgoing pretty much in only 2 directions.
I would feed the 80 at 10 to 15 feet away from a corner, But Not at the middle of a side (swr is very uncontrollable, here). Second, loops don't get signal heartburn over trees. They are one of the few antennas
that perform wonderfully in the trees and folage. Third, leave the 80 meter horz loop up at 50 feet, but, if it is possible to just simply lay
a reflector loop on the ground and under the 80 loop. This loop counterpoise can be the same length as the upper loop or you can make it not over 3% longer. By laying on the ground it is going to look electrically longer anyway. You will notice some difference in tuning the antenna coupler, and give it a try on the air on any of your
favorite bands. Normally you will see a difference, and the 80/75 meter
band is going to seem a little longer than normal. Not to get into the subject here, but you can also put a remote L-network on the counterpoise and do some interesting changes to the takeoff angle.

Hope this helps...73...Walter, AG5P

"Steve" <n4lq@iglou.com> wrote in message
news:3d28f45f_3@news.iglou.com...
> Antennas drive me crazy and like you say, no one antenna does it all. I have
> an 80m horizontal loop at 50ft and a 40m loop at 30ft. For some reason, the
> 40m loop usually does better on 20 through 10m.
> Sometimes I have the feeling that the big loop's take off angle is too low
> and I either loose lots of RF to the ground and trees or else signals are
> arriving at higher angles than the big loop can hear.
> It's hard for me to force myself to lower the loop when I can get it up so
> high! Do you think the 80m loop would perform better at low heights

such as
> 20ft? I'm willing to give it a try.
>
> --
> Steve
> N4LQ
>
> "Walter" <walter@accessus.net> wrote in message
> news:DE_V8.607407$%y.38330497@bin4.nnrp.aus1.giganews.com...
> > Thanks for the interesting discussion. There are several variables
> > that
> > may need addressing. Normally a 1:1 transition balun is sufficient
for
> > using an 80 meter horizontal loop in the multiband operations. But
> > depending on the length of feedline, and sometimes there is not a
> > choice as to the "best" length, then having a 4:1 balun is so very
> > valuable to be able to switch over and use also with the 1:1
balun.
> >
> > Personally I use 160, 80 and 40 meter horizontal loops which all
> > are between 10 ft to 20 ft above ground and a selectable balun
> > box with 1:1 and 4:1 baluns available and all the horiz. loops are
> > fed with 450 ohm ladderline or 300 ohm twinlead. The 3 loops
> > are fed with seperate feeders and the unused ones are grounded
> > at the shack. These loops are nested inside each other and being
> > as close to center of each other as possible. Point being is that
> > no single antenna can do it all, but with the three-some there is
a
> > flexibility that was worth all the effort of putting up the hz
loops.
> >
> > At FD this year, we used a 40 meter loop up at approx. 15 ft and
> > running QRP SSB (5 watts PEP), it was not an unpleasant chore
> > to work 40, 20 or 15 meters SSB. This was the first time ever that
> > I tried the QRP SSB on FD and it really works. Yeah, I was so
> > surprised.
> >
> > Happy hz loop buiding...73...Walter, AG5P
> >
> > "ARDUJENSKI" <ardujenski@aol.com> wrote in message
> > news:20020706010246.15533.00002671@mb-fx.aol.com...
> > > I have read various articles on horizontal loops and still have
a
> > few
> > > questions. First let me say that my interest was peaked by
several
> > notes i have
> > > read from field day groups exclaiming how pleased they were with
the
> > horizontal

> > > loop at ONLY 20FT.
> > >
> > > I got a copy of EZNEC DEMO and played with various size loops
and
> > heights. I
> > > was surprised to see some noteable gain figures using an 80m
loop at
> > 20ft
> > > height on 20m and above but more significantly there were some
nice
> > lobe
> > > patterns which see like they would accomodate the NW operations.
> > >
> > > Elevating or enlarging the loop then developed patterns with
multi
> > lobes at
> > > various takeoff angles and as you approached 15m and above with
very
> > large
> > > loops (800ft+)--patterns which look like avocadoes.
> > >
> > > I am not too sure if my modeling was too crude to be of value.
Have
> > any of you
> > > used horizontal loops and what was you rexperiences. In
particular
> > any one use
> > > an 80m loop at about 20ft?
> > >
> > > Alan KB7MBI
> >
> >
>
>

639. Re: ALL BAND ANT EXPERIMENT?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-08 19:09:46 UTC
From: Dick Carroll <dixie@townsqr.com>
Message-ID: <agco1q$r4f$0@208.206.142.113>
Source record: 139080

N2EY wrote:
>
The antennas described
> in the cq-DL articles and in the 1990 QST article are double-dipoles (four
> wires, each a different length). The double-dipole OCF antenna appears to have
> originated in Germany in the early 1980s (cq-DL articles from about 1983).

Maybe not. Bill Orr's column in Ham Radio had several different
submissions on the subject in the early 80's. All were US hams, as I
recall, and there was some variation. One was a "three legged dipole" on
75/80 using one wire cut to the center of the band hooked to the coax
center conductor, with two other wires hooked to the shield, one 5%
longer and the other 5% shorter. Gave a pretty good useful response
pattern across the entire band. I used that with three stainless steel
tower guys as my sole 75/80 antenna for years. Worked well.

Dick

640. Re: A whole new 'back to basics' topic - Monopole fundamentals

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-08 19:36:15 UTC
From: 'Doc <w5lz@icok.net>
Message-ID: <3D29E99A.8274F71C@icok.net>
Source record: 139081

J. Harvey,
My opinion doesn't ~need~ justification. Nor
am I 'turned on' by meaningless conjecture.
'Doc

641. Re: Back To Basics - Antenna Reciprocity

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-08 19:39:18 UTC
From: 'Doc <w5lz@icok.net>
Message-ID: <3D29EA50.BBF6A032@icok.net>
Source record: 139082

Gene,

> If one tries to add real-world conditions to this ideal system then all
> reciprocity bets are off.
>
> As usual, this thread was not arguable in its original form, so it is
> quickly drifting to an ill-defined topic that can be argued ad nauseam.
>
> 73,
> Gene
> W4SZ

"10-4" the ad nauseum...
'Doc

642. Re: Back To Basics - Antenna Reciprocity

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-08 19:42:27 UTC
From: 'Doc <w5lz@icok.net>
Message-ID: <3D29EB0D.4A47637@icok.net>
Source record: 139083

CAM,
Then, answer this. Since when is the feed line
and transmitter/receiver part of the antenna?
'Doc

643. Re: Coax conduit to tower

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-08 19:42:49 UTC
From: Sylvan Butler <Znospam+noZs_0207@hpb13799Z.Zboi.hpZ.com.invalid>
Message-ID: <slrnaijqpp.h8c.Znospam+noZs_0207@hpb13799Z.Zboi.hpZ.com.invalid>
Source record: 139086

On Wed, 03 Jul 2002 10:36:54 -0400, Bill Ogden <ogden@us.ibm.com> wrote:
> strongly recommend using a larger PVC pipe. After you have a few cables (coax
> or other) in the 1.5 inch pipe, you will find it very difficult to pull another
> cable through it. (Of course, you will include a pull-cord in the pipe. (?))

Yup. I've some 2" in place right now that is plenty big enough to
hold the additional I want to pull thru it, but the way the existing
cable is lying on the corners, I can't get the new ones to go thru.
:(

sdb
--
| Sylvan Butler | Not speaking for Hewlett-Packard | sbutler-boi.hp.com |
| Watch out for my e-mail address. Thank UCE. ##### change ^ to @ ##### |
They that can give up essential liberty to obtain a little temporary
safety deserve neither liberty nor safety. --Benjamin Franklin, 1759
Fight terrorism, arm the population!

644. Re: 1000 fraudtenna_dollar COMMON MODE CHALLENGE

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-08 19:44:21 UTC
From: dan <danlx@execpc.com>
Message-ID: <3d29ecc8$0$1426$272ea4a1@news.execpc.com>
Source record: 139084

On Mon, 08 Jul 2002 00:26:05 GMT, Richard Clark <kb7qhc@attbi.com>
wrote:

>On Sun, 07 Jul 2002 18:56:26 -0500, dan <danlx@execpc.com> wrote:
>
>>On Sun, 07 Jul 2002 18:19:16 GMT, Richard Clark <kb7qhc@attbi.com>
>>wrote:
>>
>>>Hi All,
>>>
>>>Today's CHALLENGE is to find the Common of the Common Mode.
>>>
>>>>Here is the context, published by myself many days ago.
>>>>XMTR---x---coax-----choke---1/2WL ladder-line---well balanced 1/2WL dipole
>>>>
>>>>Common mode measured at 'x'.
>>>
>>>Myself, having been pleaded with to subscribe to a theory based upon
>>>the argument provided above, I asked where the Common was given the
>>>theory made an appeal to it. This has proven to be one of the most
>>>elusive goals for many here since Kirchhoff settled it two centuries
>>>ago.
>>>
>>>That first question, again, was:
>>> What is the Common of the Common Mode?
>>>In a technical group, I would have presumed that Common had an
>>>ordinary meaning of the path where the current returns to its source.
>>>It is frequently ground, an all encompassing concept that in circuitry
>>>is often the negative lead, or the chassis. But not always.
>>>
>>>I then, with hesitation, tried another approach:
>>Hi Richard,
>>I think ;<}, what you are trying to describe is extantennaism. It is
>>where all the acolytes put on black robes, sit in a circle around a
>>large number of scented candles, pass burning "incense sticks' and
>>each chants a different nursery rhyme. The burning "incense sticks" ,
>>for reasons unknown to me ;<}, seem to allow the minds of the acolytes
>>to attain a higher plane which in turn enables them to view the truth,
>>extantennaism.
>>Did I come close? Do I win? Oh, I do hope so!
>>N9JBF
>>
>>
>>Dan

>>
>>I've rambled enough, back to the rocking chair. ZZZZZZZZZ
>>Remove left x for a direct reply.
>
>Hi Dan,
>
>Sorry, no grand prize. Extantennaism, as an explanation does not
>conform to the rules as a basis for discussion. Only one submission
>per applicant is allowed. Please consult contest rules located at
>your nearest planning commission office at Alpha Centari, ask for
>Zephod Beeblebrox (inventor of the PanGalatic Gargleblaster).
>
>As an entrant your charity is entitled to the Honorable Mention award
>of 1000 fraudtenna_dollars. It should arrive virtually anytime soon
>at the Church of Extantennaism, in the form of an offering benefitting
>the publication of their scriptures of Common Mode Prayer. Acolytes
>now prepare for the second Differential Mode imbalance to reveal their
>way to higher potentials. [note, what are thought to be burning
>incense sticks, are in fact misplaced baluns alight with the glory of
>1KW announcing that imbalance's coming - praise be to Antenna, from
>which all radiation flows!]
>
>73's
>Richard Clark, KB7QHC

The acolytes and I thank you for your detection of defective incense
sticks and the virtual bucks that will allow them to try and correct
the problem.
Again, thank you for your effort!

Dan

I've rambled enough, back to the rocking chair. ZZZZZZZZZ
Remove left x for a direct reply.

645. Re: Horizontal Loop *new* Question

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-08 20:04:03 UTC
From: Vito <vito@crosslink.net>
Message-ID: <3D29F033.5BE4A78B@crosslink.net>
Source record: 139085

Walter wrote:
>
> Hi Steve, well I would leave the two horizontal loops up just like you
> have them installed. There are several reasons that the 80 hertz loop
> may not be working as good as the 40 horz loop.

How well do y'all gurus think concentric near-square horizontal loops,
all fed by one feed line might work? Coax or window line?
73 de K3DWW

646. Re: Horizontal Loop *new* Question

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-08 21:19:06 UTC
From: Walter <walter@accessus.net>
Message-ID: <elnW8.338204$_j6.16170498@bin3.nnrp.aus1.giganews.com>
Source record: 139087

Vito, the ARRL handbook and antenna books all feed horz loops with
coax, even on a multiband use. As for myself, the only coax used is
for
a very few short jumpers from rig to antenna coupler/swr bridge and
the antenna feeders are twinlead or ladderline. Loops are no different
than other antennas in that (unless it is a 1,000 ft loop or larger)
there
are going to be awesome swr challenges in a multiband use, so why not
cut the losses and the extra expense of the coax also makes the
twinlead / ladderline very attractive.

Your concentric near-square horizontal loops, all fed by one feed line
will work just fine, just like a quad beam driven element, however,
you would probably see less interaction between the loops when
you are tuning them up and on the air if the unused loops were
grounded. Since you are basically using monoband loops the coax
feed will do the job but it is difficult to get the correct impedance
transformation piece of 72 ohm coax for the 50 ohm system that
will make your transmitter happy. Since you are more than likely
going to still have an antenna coupler in the line, then my preference
would still be using twinlead / ladderline. And since they are
monobanders, I would feed them mid-way on one side, just like
a quad driven element.

Maybe some of the other folks on here will jump in and help out
with your question.
73...Walter, AG5P

"Vito" <vito@crosslink.net> wrote in message
news:3D29F033.5BE4A78B@crosslink.net...
> Walter wrote:
> >
> > Hi Steve, well I would leave the two horizontal loops up just like
you
> > have them installed. There are several reasons that the 80 hertz
loop
> > may not be working as good as the 40 horz loop.
>
> How well do y'all gurus think concentric near-square horizontal
loops,
> all fed by one feed line might work? Coax or window line?
> 73 de K3DWW
>

647. TV Interference Problem-vertical lines???

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-08 21:33:17 UTC
From: mouln@yahoo.com
Message-ID: <30da9028.0207081333.52cde402@posting.google.com>
Source record: 139088
Cross-posted to: rec.radio.amateur.antenna,misc.consumers.house,rec.video,sci.electronics.repair

I have a TV interference problem that's driving me nuts.

I've been getting vertical interference lines on the weaker VHF channels in my area. (antenna reception) It does not affect UHF. The vertical lines appear slightly to the right of the center of the screen.

The lines are subtle on the stronger stations, but pronounced on the weaker stations. The strongest broadcast VHF station in my area shows no interference lines.
The same lines ALSO appear on cable channels except more subtle than on VHF over the air broadcast stations.

The lines DO NOT appear on the screen when using my DVD player.

I cannot identify the source of this interference as an electrical appliance in my house.

Any techies who might speculate what's causing this problem???

648. Re: Horizontal Loop Question

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-08 21:48:18 UTC
From: 2w8ji@contesting.com
Message-ID: <3d2a073f.9481209@news.akorn.net>
Source record: 139090

On Mon, 8 Jul 2002 02:10:51 +0100, "Steve" <n4lq@iglou.com> wrote:

>Antennas drive me crazy and like you say, no one antenna does it all. I have
>an 80m horizontal loop at 50ft and a 40m loop at 30ft. For some reason, the
>40m loop usually does better on 20 through 10m.
>Sometimes I have the feeling that the big loop's take off angle is too low
>and I either loose lots of RF to the ground and trees or else signals are
>arriving at higher angles than the big loop can hear.
>It's hard for me to force myself to lower the loop when I can get it up so
>high! Do you think the 80m loop would perform better at low heights such as
>20ft? I'm willing to give it a try.

One problem is all of the nulls.

Multiple nulls increase problems with fading, and lower system
reliability when the lobes are not broad-nosed and in the correct
directions.

It is common to point out the "gain", despite the fact right next to
each gain peak is a deep null with high "loss" in a direction.

I'll take a clean pattern any day over one with multiple close spaced
nulls and narrow nosed lobes, as long as avaergae gain is the about
the same.

73 Tom

649. Re: BACK TO BASICS - EM waves, E and H fields, in phase orinquadr...

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-08 22:10:09 UTC
From: 2w8ji@contesting.com
Message-ID: <3d2a093c.9990677@news.akorn.net>
Source record: 139089

On Sun, 07 Jul 2002 23:31:08 -0500, CAM <w5dxp@hotmail.com> wrote:

>The point is that, as long as nothing changes, they are in a particular
>relationship, not any random relationship. Seems to me you continue to
>make the mistake of assuming that if the relationship is unknown to you,
>then it can be anything. That's not true. The relationship is what it
>is. That you don't know what it is, is irrelevant to reality.

The problem is not me, I understand how these systems work quite well.
I was the first one who ever posted on this newsgroup that moving the
balun on a floating network provided no improvement to balance
problems.

The problem is explaining such effects to casual experimenters trying
to determine if a system has common mode problems, or who are trying
to correct those problems. Examples are small loops, dipoles, EH
antennas, end-fed verticals or wires, etc.

I am not allowed to use the term "unrelated" or "not related" in the
context of any specific discussion, so any ability to get into how the
system works is thwarted by a series of endless arguments about the
words "not related".

Somehow there has to be one simple sentence or phrase that tells
people the differential impedance is not related to what the system
might have for common mode impedance.

You are in control, because I have neither time or energy for endless
pointless arguments.

I am begging you for an acceptable phrase or word that you will be
happy with, so I can address specific technical issues without being
badgered by you and Harrison.

Please help me.

73 Tom

650. Re: Back To Basics - Antenna Reciprocity

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-08 22:10:25 UTC
From: CAM <w5dxp@hotmail.com>
Message-ID: <3D2A0DD1.3EE5F88E@hotmail.com>
Source record: 139092

'Doc wrote:
> Then, answer this. Since when is the feed line
> and transmitter/receiver part of the antenna?

The reciprocity theorem apparently requires a conjugate match.
Where is the conjugate match with just an antenna? How can
you compare transmit to receive without a transmitter and
receiver? Without a transmitter and receiver, what is the
meaning of transmit versus receive "reciprocity"? For a
center-fed antenna, removing the feedline drastically
changes the antenna characteristics so what is the meaning
of "reciprocity" after we remove the feedline?
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

651. Re: BACK TO BASICS - EM waves, E and H fields, in phase orinquadr...

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-08 22:12:37 UTC
From: 2w8ji@contesting.com
Message-ID: <3d2a0dc4.11150030@news.akorn.net>
Source record: 139091

On Sun, 7 Jul 2002 19:30:28 -0500 (CDT), richardharrison@webtv.net
(Richard Harrison) wrote:

>Tom, W8JI wrote:
>"For example, we can have an across impedance of 50 ohms but a source
>voltage driving the common mode of several hundred volts even at low
>power."
>
>Let`s plug numbers into Tom`s example:
>
>Several hundred volts = 300
>Source impedance = 50 ohms
>P = Esquared/R = 90,000/50 = 1800 watts
>1800 watts may be low power in tom`s opinion.
>This QRP is another "Tomism"
>
>Best regards, Richard Harrison, KB5WZI
>

Richard,

You really just don't understand the problem. That's probably why you
can't give correct technical responses using Ohm's law.

73 Tom

652. Re: BACK TO BASICS - EM waves, E and H fields, in phase orinquadr...

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-08 22:34:40 UTC
From: 2w8ji@contesting.com
Message-ID: <3d2a0e36.11264310@news.akorn.net>
Source record: 139093

On Sun, 07 Jul 2002 23:18:40 GMT, Richard Clark <kb7qhc@attbi.com>
wrote:

>On Sun, 07 Jul 2002 22:54:18 GMT, 2w8ji@contesting.com (Tom W8JI)
>wrote:
>
>>An example of that is a vertical, like the small ground independent
>>verticals.
>>
>>They have a differential impedance of nearly 50 ohms, but many
>>hundreds of volts driving the common mode system.
>>
>
>Hi Tom,
>
>Tell me more.

Take for example a small vertical, like the MFJ, Hygain, or CushCraft
verticals.

The "across" impedance at the feedpoint might be around 50 ohms with
modest voltage, but the voltage from that point to earth can be dozens
of times higher than the across voltage. This is a huge problem with
antennas like the R7, and is a real show stopper if the designer tries
to use a conventional balun.

The most simple circuit analogy to antennas like this is an
autotransformer with an off-center tap, and the load at the upper end
between the two upper terminals.

Like this:

Gen A-------Top
2 turns
Gen B-------tap
10 turns
Ground--------Bottom

As you can see, excitation with only 5 volts of differential voltage
on the transmission line feeding the top and bottom will result in 25
volts of common mode excitation to terminal B when terminal B is
grounded, or 30 volts if A is grounded.

In practice, MANY antenna systems behave like this. Some are even
designed to take advantage of this effect. One example is the
Reflection Beverage antenna when the common mode is used to gather
signal and a low impedance transmission line is used to provide the

transmission of that signal back to the near end of the antenna, where it is terminated or fed to a receiver.

The EH Antenna is designed like a Reflection Beverage, hence my warning that kicked this latest round of shelling off.

There are many other examples, but these are enough to illustrate the problem.

Pay particular attention to Harrison's response that was already posted, because his response demonstrates with crystal clarity how people who think differential voltage is always in a fixed relationship to common mode voltage can get into trouble.

What I'm looking for is a way to tell these people that the common mode voltage can be ANYTHING, and does not have a universal fixed relationship, to differential mode voltages. Feel free to substitute the words impedance or current for voltage.

I generally run into a few people a month who do not understand this basic concept.

73 Tom

653. Re: BACK TO BASICS - EM waves, E and H fields, in phase orinquadr...

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-08 22:55:37 UTC
From: CAM <w5dxp@hotmail.com>
Message-ID: <3D2A1869.27E8100B@hotmail.com>
Source record: 139094

Tom W8JI wrote:
> I am not allowed to use the term "unrelated" or "not related" in the
> context of any specific discussion, so any ability to get into how the
> system works is thwarted by a series of endless arguments about the
> words "not related".

Given the Webster's definitions of "not" and "related", it is obvious
that they are at least a poor choice of words and at worst misleading.
You may well have had a definition in mind that differs from Webster's
but if we don't honor standard definitions, communications is impossible.
And I apologize for getting testy with you.

> Somehow there has to be one simple sentence or phrase that tells
> people the differential impedance is not related to what the system
> might have for common mode impedance.

Trouble is, they are sometimes related as they are in my well balanced
dipole system. When I made my measurements, I was amazed at just how
related they can be in a well-balanced tunerless antenna system fed at
a choked differential current maximum point.

> You are in control, because I have neither time or energy for endless
> pointless arguments.

I don't want to be in control, Tom, and I cannot hold a candle to your
antenna system expertise.

> I am begging you for an acceptable phrase or word that you will be
> happy with, so I can address specific technical issues without being
> badgered by you and Harrison.

I can't speak for Richard, but I would be satisfied with "often unpredictable"
or "usually unknown". I thought we had settled this topic a week ago.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

654. Re: TV Interference Problem-vertical lines???

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-08 23:12:41 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <co6kiugbbu6svr2vog0c4vu3g3arn5uafq@4ax.com>
Source record: 139095
Cross-posted to: rec.radio.amateur.antenna,misc.consumers.house,rec.video,sci.electronics.repair

On 8 Jul 2002 14:33:17 -0700, mouln@yahoo.com (victor voul) wrote:

>I have a TV interference problem that's driving me nuts.
>
>I've been getting vertical interference lines on the weaker VHF
>channels in my area. (antenna reception) It does not affect UHF.
>The vertical lines appear slightly to the right of the center of the
>screen.
>
>The lines are subtle on the stronger stations, but pronounced on the
>weaker stations. The strongest broadcast VHF station in my area shows
>no interference lines.
>The same lines ALSO appear on cable channels except more subtle than
>on VHF over the air broadcast stations.
>
>The lines DO NOT appear on the screen when using my DVD player.
>
>I cannot identify the source of this interference as an electrical
>appliance in my house.
>
>Any techies who might speculate what's causing this problem???

Hi Victor,

Usually this problem is associated with the Horizontal Flyback and the high voltage rectifier (a problem with no real solution however). It sometimes appears to be a broad (say 1 inch wide for a screen width of a foot or so) ghost gray line (subtle as you describe) with perhaps some fine features inside. The line is quite vertical and fixed (does not drift across the screen, always appears at the same place). Signals that have a high AGC (strong signals) mask this as it is always part of the display. As a problem it is not one that can be fixed, except through obtaining a stronger signal.

73's
Richard Clark, KB7QHC

655. Re: tower question

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-08 23:17:29 UTC
From: Crazy George <munschNO@attglobal.net.SPAM>
Message-ID: <3d2a242c_2@news1.prserv.net>
Source record: 139096

I sunk a piece of 25G in cement in 1962 for a base for a 100 foot tower. In 1985, I sawed it off at the ground and moved. As far as I know, that base is still there and intact. To make it last forever, coat it with an asphaltic coating and PVC tape, as is done for metallic conduit in cement in the ground, before covering it with cement. Be sure the legs are open on the bottom so condensation and leakage can drain. This is typically done by putting a couple of inches of sand in first, and suspending the legs in the sand before the cement is poured.

The correct way is to obtain a base system from the tower manufacturer. All the components to be set in cement are solid rather than tubular, and hopefully, more heavily galvanized.

--
Crazy George
Remove NO and SPAM from return address
Tazanator <tazanator1@hotmail.com> wrote in message
news:8elW8.453374$cQ3.33515@sccrnsc01...
> okay was goning to just drop in a section of tower and cement it in... now
I
> foind out the section will last maybe 5 years ... is that true? and what
do
> I get for a long lasting mount?
>
>

656. Re: Back To Basics - Antenna Reciprocity

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-08 23:29:22 UTC
From: jgboyles@aol.com
Message-ID: <20020708192922.01465.00002358@mb-fa.aol.com>
Source record: 139097

>"Richard Harrison"
>> Antennas are completely reciprocal. They have
>> the same characteristics receiving as transmitting.
Right,
If one considers an rf path as two rather large copper wires (no loss), as does reciprocal theory, then move the generator and load from one end to the other. Check the voltage across the load each time it is moved. It will be the same each time. That is reciprocal. The rf circuit is reciprocal. The effects of fields, propagation, transmitter power, ect should not enter. If you look at it as a dc circuit it makes sense, but if you add other stuff?
Reciprocal is defined, so the discussion is about external influences changing Reciprocity is??.
73 Gary N4AST

657. Re: Back To Basics - Antenna Reciprocity

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-08 23:49:11 UTC
From: " J. Harvey" <JM002.Harvey_TRIMTHIS_@Sympatico.ca>
Message-ID: <GxpW8.1296$c_2.521724@news20.bellglobal.com>
Source record: 139098

"Gene Fuller"
> Quoting from Kraus "Antennas", 2nd edition, pages 409-410,
> *****
> This theorem [reciprocity theorem for antennas] as
>applied to antennas may be stated as follows:
>
> If an emf is applied to the terminals of an antenna A
> and the current measured at the terminals of another
> antenna B, then an equal current (in both amplitude
> and phase) will be obtained at the terminals of
> antenna A if the same emf is applied to the terminals
> of antenna B.
>
> It is assumed that the emfs are of the same frequency
> and that the media are linear, passive and also isotropic.
> [end quote]
> *****

Oh, is THAT (-^) all ? That is a much smaller claim than the ones that I
questioned.

> Antennas are completely reciprocal. They have
> the same characteristics receiving as transmitting.
and
> If you run time backwards, what's the difference
> between transmission and reception?

Thank you Gene (and Kraus). Subject nailed.

658. Re: A whole new 'back to basics' topic - Monopole fundamentals

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-09 00:10:45 UTC
From: " J. Harvey" <JM002.Harvey_TRIMTHIS_@Sympatico.ca>
Message-ID: <TRpW8.1326$c_2.533287@news20.bellglobal.com>
Source record: 139099

"'Doc" grumbled:
> My opinion doesn't ~need~ justification. Nor
> am I 'turned on' by meaningless conjecture.

Other than your previously-stated opinion on the relative value and related interest level of this particular thread (that it is getting "...far more attention than it deserves"), did you have any particular opinion regarding the previously-linked technical report ? The polls are still open...

1 If the basic theory is wrong, then that's big news.
2 If NEC is wrong on monopoles, then that's big news.
3 If the author(s) of NEC are wrong on basic theory,
then that's big news (but not quite so big).

If *anyone* can think of a possible conclusion (related to the report, not this thread as such) other than one of the three listed above, please add it to the list. Hers's one...

4 The report is a complete fake (joke).

659. Want High Gain 2.2-2.7Ghz ATV Antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-09 00:24:42 UTC
From: ddmga@yahoo.com
Message-ID: <296ea75a.0207081624.776f4a1e@posting.google.com>
Source record: 139100

Looking for high gain base station antenna in this range.

Also might be interested in mobile type antenna for same range.

Thanks for any help!

660. Re: BACK TO BASICS - EM waves, E and H fields, in phase orinquadr...

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-09 00:49:13 UTC
From: richardharrison@webtv.net
Message-ID: <3290-3D2A3309-282@storefull-2395.public.lawson.webtv.net>
Source record: 139101

Tom, W8JI wrote:
"Somehow there has to be some simple sentence or phrase that tells
people the differential impedance is not related to what the system
might have for a common mode impedance."

Don`t mislead people with false phrases.

I just gave an example of how a W2DU balun could change
differential-mode energy accepted by by the common-mode. That energy was
piped inside the coax to the outside of the coax. Inside the coax it is
differential-mode. Outside on the exterior of the coax, the energy is
common-mode.

Common-mode energy on the exterior of the coax is proof of the coax`s
exterior coupling to the differential-mode energy.

Coupling = mutual impedance = relationship.

Don`t ask for help in spreading error. Desist from further spread of
this stuff.

The only time the modes are not related is when perfect balance exists,
and that is nearly never.

Just admit you are wrong in this one instance, however correct you are
in most instances.

Best regards, Richard Harrison, KB5WZI

661. Re: BACK TO BASICS - EM waves, E and H fields, in phase orinquadr...

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-09 01:09:30 UTC
From: richardharrison@webtv.net
Message-ID: <7720-3D2A37CA-855@storefull-2394.public.lawson.webtv.net>
Source record: 139102

Tom, W8JI wrote:
"You really don`t understand the problem."

I made up the problem. I assumed a match to the 50-ohm line. When I make the problem, I can choose any impedance I like. My load impedance includes all loads so as to match my line. I constrained myself to the "several hundred volts" Tom specified.

I showed my work.

It`s time Tom shows his.

Best regards, Richard Harrison, KB5WZI

662. Re: tower question

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-09 01:23:11 UTC
From: 2w8ji@contesting.com
Message-ID: <3d2a3a39.22533301@news.akorn.net>
Source record: 139103

On Mon, 08 Jul 2002 18:55:04 GMT, "Tazanator" <tazanator1@hotmail.com>
wrote:

>okay was goning to just drop in a section of tower and cement it in... now I
>foind out the section will last maybe 5 years ... is that true? and what do
>I get for a long lasting mount?

You have to put enough stone in the hole to make sure the concrete
does not plug up the legs by getting int the holes at the bottom of
the legs. Then you pour concrete, and crown the top so water runs off.

If you do that, the tower in the concrete will outlast the tower in
the air.

73 Tom

663. Matching coil vs antenna length - mobile antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-09 01:59:02 UTC
From: KA8DDZ <ka8ddz@hotmail.com>
Message-ID: <GrrW8.299$CG6.12810531@newssvr15.news.prodigy.com>
Source record: 139104

I have recently started turning up the flame on antenna building. I have not used matching coils in the past as most everything I have made was 1/4 wave. I recently put a 1/2 wave 6m vertical on the car and I am very pleased with it's performance.

My question is, when tapping around for the lowest SWR on the coil I assume I have the best impeadance match but the dip or flat SWR comes at 53 Mhz, I will of course extend the length of the antenna since I am looking for 51Mhz but how much does the coil effect the resonance of the antenna. Im not sure if I am using the right terminology but it seems based on all the swr readings I have taken is that no matter where I tap the coil the only way to get it to resonate is to change the length. In this configuration should the matching coil be able to compesate for a long or short antenna? or does it have to be resonant FIRST then transform the impeadance to 50 ohms?

Tim ka8ddz

664. Re: BACK TO BASICS - EM waves, E and H fields, in phase orinquadr...

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-09 02:11:41 UTC
From: "George, W5YR" <w5yr@att.net>
Message-ID: <3D2A465C.D882335E@att.net>
Source record: 139105

The expression "mutually indeterminate" comes to mind, which is probably unfortunate.

But the thrust is that neither differential mode "activity" nor common mode "activity" (current, voltage, impedance, etc.) determines an "activity" in the other. The systems thus are jointly or mutually indeterminate.

Knowing all there is to know about one does not imply that one thereby knows all there is to know about the other. The notion of "predictability" is buried in there somewhere, as well. If two systems are mutually indeterminate, then the degree with which aspects of one can be predicted from known aspects of the other is small to non-existent.

I do not know if I subscribe to all that, but at least it gives Tom an alternative to "related."

73/72/oo, George W5YR - the Yellow Rose of Texas
Fairview, TX 30 mi NE of Dallas in Collin county EM13qe
Amateur Radio W5YR, in the 56th year and it just keeps getting better!
QRP-L 1373 NETXQRP 6 SOC 262 COG 8 FPQRP 404 TEN-X 11771 I-LINK 11735
Icom IC-756PRO #02121 Kachina 505 DSP #91900556 Icom IC-765 #02437

Tom W8JI wrote:
>
>
> I am begging you for an acceptable phrase or word that you will be
> happy with, so I can address specific technical issues without being
> badgered by you and Harrison.
>
> Please help me.
>
> 73 Tom

665. Re: CAM?? Comments and More Questions

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-09 02:49:03 UTC
From: Janice and Ed <eseniors@earthlink.net>
Message-ID: <zasW8.641$Kx3.53@newsread1.prod.itd.earthlink.net>
Source record: 139107

Hi again, CAM -

I would first like to thank you for the courtesy you extended in answering my several questions directly in this thread. Considering that most of the answers turned up on your interesting web site, it would have been very easy (but not as nice) for you just to shunt me off there with a link.

I have a few follow-up comments below...

73, Ed

"CAM" <w5dxp@hotmail.com> wrote in message news:3D24D0E4.E0EE38C2@hotmail.com...
> Janice and Ed wrote:
> > BTW, some folks might call an adjustment device used to change the
> > apparent system resonance at the input of a transmission line a "tuner"--
> > regardless of whether said device is implemented with lumped-constant
> > elements or distributed elements.
>
> Yes, some might, but it wouldn't satisfy the definition of an antenna
> tuner (transmatch) in the ARRL Handbook.
>
"Some folks" searched the 2002 Handbook quite diligently looking for a formal definition of "antenna tuner" and/or "Transmatch," but found none. [The handbook doesn't seem to emphasize definition of terms. It is interesting
(and unexplained) that they capitalize Transmatch like it was a proper name or trademark.] However, they do describe the functions of these devices, per the quotes below.

While searching in vain for definitions, "some folks" did run across a few interesting Handbook tidbits:

"The antenna tuner's function is to transform the impedance, whatever it is, at the shack end of the transmission line into the 50 (ohms) required by their (sic) transmitter." (p. 19.9)

"Impedance matching networks can take a variety of physical forms, depending on the circumstances." (p. 19.9)

"Over the years, radio amateurs have derived a number of circuits for use as tuners." (p. 19.14)

"...a transmission line can very simply be considered as an impedance transformer." (p. 19.8)

"If there are problems <with a ladder-line fed doublet> (such as extremely high SWR...) change the feed-line length by adding or subtracting 1/8 (wavelength) at the problem frequency." (p. 20.5)

"Such a system is sometimes called a 'center-fed zepp'." (p. 20.5)

Note that elsewhere in the Handbook, they define a "dipole" as a half-wavelength antenna, independent of the feed scheme. (End-fed qualifies.) So by their terminology, your antenna would be a ladder-line fed dipole on 80, but would then become a center-fed zepp on the higher bands. Hmmm. Don't much care for that terminology.

Note also that their description of the "Transmatch" function is NOT the same as their description of the "antenna tuner" function... or (best case), it is awkwardly worded and somewhat conflicted:

"When a matching network such as a Transmatch is tuned properly, it "matches" (that is, makes equal) a particular load impedance to the fixed characteristic impedance of the transmission line used at the Transmatch input." (p. 13.10)

This sounds very much like a balun transformer type of function, which, of course, is entirely different from matching the (transformed) antenna impedance PRESENTED at the end of the line--per the antenna tuner function.

> > I see you refer to it below as a "ladder line length selector."
> > Is that your preferred name?
>
> LLLS for short.
>
<clip>

> > How fine are these adjustments, in length/frequency?
>
> It is adjustable in one foot lengths. That's a little course for 10m but
> works OK. On 80m, I use six foot increments.
>
<clip>

In his book "HF Antennas for All Locations," G6XN discusses your type of setup at some length. (p. 62-64) He refers to it as a "resonant feeder"
antenna and/or "tuned feeder" antenna, which seems like appropriate terminology. He also discusses an interesting extension of the idea to TWO (or more?) parallel structures, in which one tuned-feeder antenna operates as a driven element, and the other tuned-feeder antenna operates passively as a director or reflector, in a Yagi-like mode. Interesting.

> --
> cheers, CAM http://www.qsl.net/w5dxp
>
>
> -----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----

> http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
> ------== Over 80,000 Newsgroups - 16 Different Servers! =-----
>

666. Re: 6meter end fed wire?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-09 02:58:56 UTC
From: KC8SSG <kc8ssg@qsl.net>
Message-ID: <QjsW8.841$13.8436@news>
Source record: 139106

I said we weren't going the wife route haha I've had her for 15 years and she's put up with alot of my crap so I'm keeping her.As for the dipole I have one up there with a Hi-Q balun and it doesn't seem to work very good.Should I just delete the Hi-Q?Don't ask me what it is I don't know it was at Universal Radio when I wanted one. Maybe the balun was my problem?I'll delete it and see how it works out.Thanks all!
"K0bg" <k0bg@aol.com> wrote in message news:20020708104445.16358.00003541@mb-fz.aol.com...
> My first thought? Get another wife! Since you don't necessarily want to do
> that, why not use a dipole? What ever you use, 6 meters has a tendency to make
> life hard on nearby TV sets, even those hooked to cable. The use of high-pass
> filters is a given. Good Luck.
>
> Alan, K&#65533;BG

667. Re: It's finished...for the time being

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-09 03:05:43 UTC
From: Roger Halstead <rdhalste@tm.net>
Message-ID: <bqsW8.2003$oN.785731@monger.newsread.com>
Source record: 139108

"Richard Clark" <kb7qhc@attbi.com> wrote in message
news:3nfjiu4l2euk0214vh5072h6jd22gsjca4@4ax.com...
> On Mon, 08 Jul 2002 05:59:29 GMT, "Roger Halstead" <rdhalste@tm.net>
> wrote:
>
> >Well, the tower and antenna work is pretty much finished. Now it's going
to
> >be mainly maintenance, or an experiment here, or there. Unless we get
one
> >of those big ice storms with a lot of wind. It's gone through winds
gusting
> >up to 70 MPH and survived one winter and one lightening strike so far.
> >
> >http://rogerhalstead.com/tower.htm
>
> Hi Roger,
>
> Very good photos of your tower, antennas, and installation - better
> than 90% of what I've seen offered here.

Thanks Richard,

I tried to keep it up as a running diary, but got behind.
Now my wife and I think we'd like a larger place...but I have so much time invested in the tower and shop while my wife has many hundreds of hours into the landscaping that about the only way we would probably move would be to wind the lottery. Then we could afford to hire some one else to redo what we've done here. <:-)) <sigh> And...if we had that kind of money we'd probably look for a better climate.

73

Roger (K8RI)
>
> 73's
> Richard Clark, KB7QHC

668. Re: PVC coax conduit to tower

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-09 03:13:38 UTC
From: Roger Halstead <rdhalste@tm.net>
Message-ID: <CxsW8.2004$oN.786875@monger.newsread.com>
Source record: 139110

"CAM" <w5dxp@hotmail.com> wrote in message
news:3D29CB6A.AC703430@hotmail.com...
> Roger Halstead wrote:
> > One additional thought for the conduit....seal both ends with
> > "foam-in-place" insulation. Those little rhodents (that will cause my
cat
> > to destroy half the basement catching) will climb up the cables and then
> > follow the pipe right on into the house. Of course the same is true,
where
> > ever you bring in cables. Don't leave holes for critters. Give 'em a
chance
> > and they'll move right in and take up housekeeping.
>
> The clothes dryer of a friend of mine quit turning. He took the back off,
> reached in, and pulled out a live injured five foot long Copperhead snake,
> i.e. deadly poisonous. He was extremely lucky not to be bitten.

They're not all "deadly", but even the ones that aren't can make you pretty
sick.
We don't have those here in the frozen North. We only have the Missauga
(sp?) rattler that doesn't usually get very big, but The guy who lived next
door to my folks (30 some years ago) caught a 4 footer along side the road.

He'd had a flat tire. He changed the tire and when he let the car back down,
He heard the tire leaking. Looking down, he saw the rattler coiled up by
his leg. He was hanging onto the tire iron, but waited (stood very still)
until the snake uncoiled and started to crawl. Then he nailed it with the
tire iron.

Some years later I was trimming the bushes in front of our house when I felt
my arm sting. I thought I'd scraped it on the branches. That is, until I
noted to two neat little holes in the side of my upper arm. It was curled
up/around on one of the branches, very close to a bird's nest. I didn't get
sick, but I was black and blue from almost my elbow through part of my
shoulder. (and it did hurt) Good thing it was just a little feller! He,
she, it? was only about 16 inches long.

--
Roger (my that smarts) Halstead (K8RI EN73)
www.rogerhalstead.com
N833R World's oldest Debonair? (S# CD-2)
> --
> cheers, CAM http://www.qsl.net/w5dxp
>
>

> -----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
> http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
> -----== Over 80,000 Newsgroups - 16 Different Servers! =-----

669. Re: TV Interference Problem-vertical lines???

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-09 03:14:27 UTC
From: jerryg50@hotmail.com
Message-ID: <460a833b.0207081914.362ead3a@posting.google.com>
Source record: 139109
Cross-posted to: rec.radio.amateur.antenna,misc.consumers.house,rec.video,sci.electronics.repair

Try another TV in this location in order to determine if the fault is
the TV, or a reception problem.

Jerry Greenberg
http://www.zoom-one.com

--

mouln@yahoo.com (victor voul) wrote in message
news:<30da9028.0207081333.52cde402@posting.google.com>...
> I have a TV interference problem that's driving me nuts.
>
> I've been getting vertical interference lines on the weaker VHF
> channels in my area. (antenna reception) It does not affect UHF.
> The vertical lines appear slightly to the right of the center of the
> screen.
>
> The lines are subtle on the stronger stations, but pronounced on the
> weaker stations. The strongest broadcast VHF station in my area shows
> no interference lines.
> The same lines ALSO appear on cable channels except more subtle than
> on VHF over the air broadcast stations.
>
> The lines DO NOT appear on the screen when using my DVD player.
>
> I cannot identify the source of this interference as an electrical
> appliance in my house.
>
> Any techies who might speculate what's causing this problem???

670. HOHPL (horizontal loops revisited)

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-09 03:17:02 UTC
From: ardujenski@aol.com
Message-ID: <20020708231702.00721.00003251@mb-mc.aol.com>
Source record: 139111

A lot of our discussion is paralleled in LB CEBIK's article on HOHPL
(Horizontally Oriented, Horizontally Polarized Large Wire Loop Antennas)
http://www.cebik.com/atl1.html
He has some good points and a real cood conclusion and it is interesting his
discussion of going to 2wl on lowest operating frequency.

An excerpt from his article is:
"As a consequence of this behavior, the advantage of the HOHPL will not show
itself in any one contact or in a short period. Satisfaction with the antenna
grows with time and changes in the propagation paths, a successful
communications almost everywhere shows up in the log" LB CEBIK

Here is to some good reading...Alan KB7MBI

671. Re: tower question

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-09 03:18:01 UTC
From: Roger Halstead <rdhalste@tm.net>
Message-ID: <JBsW8.2005$oN.787506@monger.newsread.com>
Source record: 139113

"Tazanator" <tazanator1@hotmail.com> wrote in message
news:8elW8.453374$cQ3.33515@sccrnsc01...
> okay was goning to just drop in a section of tower and cement it in... now
I
> foind out the section will last maybe 5 years ... is that true? and what
do
> I get for a long lasting mount?
>
That's one of those "It all depends" answers.
It depends on the type of tower. It depends on from that the tower is
constructed, and it depends on how well the tower base is drained and
prepaired. It also depends on how well the base was installed in the first
place.

I've had plain old dirt mounts that were still in good shape after being in
the damp ground (clay)for nearly 20 years. I've also seen bases that went
to pieces in short order.

So, without a bit more information, I can't really give you an answer.
--
Roger Halstead (K8RI EN73)
www.rogerhalstead.com
N833R World's oldest Debonair? (S# CD-2)
>

672. Re: BACK TO BASICS - EM waves, E and H fields, in phase

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-09 03:24:30 UTC
From: k3bu@aol.com
Message-ID: <20020708232430.05049.00004719@mb-mv.aol.com>
Source record: 139112

>Just admit you are wrong in this one instance, however correct you are
>in most instances.
>
>Best regards, Richard Harrison, KB5WZI
>
>
>

Fuggetaboutit!
Tom is "never" wrong. If he is, he will go QRT on the subject for a while, then later will emerge as an expert on it (proclaiming what he denied or danced around is OK now :-). Just give him some time and watch. Had my share of duels like that with him. Not sure what the diagnosis is, Tomism, or Fractasices, or EH?

da BUm

673. Re: ALL BAND ANT EXPERIMENT?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-09 04:06:14 UTC
From: n2ey@aol.com
Message-ID: <20020709000614.13189.00000501@mb-mj.aol.com>
Source record: 139114

In article <agco1q$r4f$0@208.206.142.113>, Dick Carroll <dixie@townsqr.com>
writes:

>N2EY wrote:
>>
> The antennas described
>> in the cq-DL articles and in the 1990 QST article are double-dipoles (four
>> wires, each a different length). The double-dipole OCF antenna appears to
>have
>> originated in Germany in the early 1980s (cq-DL articles from about 1983).

> Maybe not. Bill Orr's column in Ham Radio had several different
>submissions on the subject in the early 80's. All were US hams, as I
>recall, and there was some variation. One was a "three legged dipole" on
>75/80 using one wire cut to the center of the band hooked to the coax
>center conductor, with two other wires hooked to the shield, one 5%
>longer and the other 5% shorter. Gave a pretty good useful response
>pattern across the entire band. I used that with three stainless steel
>tower guys as my sole 75/80 antenna for years. Worked well.
>
I've heard of that idea, but did not know where it originated.

The OCF dipoles described in the QST article have four "legs", all of different
lengths. Two of them make up a classic 80 meter OCF, and the other two make up
an OCF somewhat higher in frequency. 6:1 and 4:1 baluns were tried at the
feedpoint.

The end result is an antenna that allegedly covers 80/40/30/20/17/15/12 and 10
meters with coax feed and low SWR on all of the bands mentioned.

http://www.arrl.org/members-only/tis/info/pdf/9008028.pdf

73 de Jim, N2EY

674. Re: CAM?? Comments and More Questions

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-09 04:09:53 UTC
From: CAM <w5dxp@hotmail.com>
Message-ID: <3D2A6211.BE4A0E69@hotmail.com>
Source record: 139115

Janice and Ed wrote:
> "Some folks" searched the 2002 Handbook quite diligently looking for a
> formal definition of "antenna tuner" and/or "Transmatch," but found none.

It's in "The ARRL Antenna Book" glossary. Transmatch = antenna tuner
"a device containing variable reactances (and perhaps a balun). It is
connected between the transmitter and the feedpoint of an antenna system,
and adjusted to 'tune' or resonate the system to the operating frequency."
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

675. multi-band dipole - newcomer question

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-09 04:50:32 UTC
From: Andreas Hofmann <andreash23@hotmail.com>
Message-ID: <3d2a6b98$1@news.microsoft.com>
Source record: 139116

Well,

Even after studiyng the Antennabook, I am still confused about which multiples of lambda/2 are good to reach a resonant state on another band.

I have a 40 m dipole. very low hanging right now, since I am still in the experiment phase. It is resonant somewhere around 7,000kHz (1:1) (I kept it long for finetuning later).

1. I thought that on any multiples of lambda/2 the antenna is resonant again. But for some reason the antenna does not seem to be good at all on 14,000kHz (1 : inf). It is, however pretty good on 21,000Khz+ (1:2). Can someone explain to me why this is?

2. I am pretty restricted with antennas, due tu CC&Rs. So my dipole is actually a stealth antenna, pretty thin wire. If I had to, I could make it a multiband dipole, by adding one or two parallel dipoles. Adding a total new antenna is probably not a good option in my case. My goal is to get as many as possible HF bands covered with a 2 (maybe 3) parallel dipole antenna starting from 40m up (WARC would be good). I dont care too much about 12 and 10m. Also, an 80m dipole does not fit in my yard.

any hints, tips are appreciated.

Andy, KU7T

676. Re: Want High Gain 2.2-2.7Ghz ATV Antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-09 05:34:59 UTC
From: Dennis Kaylor <k4oxg@tampabay.rr.com>
Message-ID: <7CuW8.216474$db.3171454@twister.tampabay.rr.com>
Source record: 139117

hi david
i would check out http://www.directivesystems.com
they sell all kinds of microwave antennas for amature use and commerical
they should have something with high enough gain to suit you
as for mobile i dont think its feesible with any kind of range anyways
good luck

"David" <ddmga@yahoo.com> wrote in message
news:296ea75a.0207081624.776f4a1e@posting.google.com...
> Looking for high gain base station antenna in this range.
>
> Also might be interested in mobile type antenna for same range.
>
> Thanks for any help!
>

677. Re: multi-band dipole - newcomer question

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-09 05:37:10 UTC
From: CAM <w5dxp@hotmail.com>
Message-ID: <3D2A7686.69D5A714@hotmail.com>
Source record: 139020

Andreas Hofmann wrote:
> 1. I thought that on any multiples of lambda/2 the antenna is resonant
> again. But for some reason the antenna does not seem to be good at all on
> 14,000kHz (1 : inf). It is, however pretty good on 21,000Khz+ (1:2). Can
> someone explain to me why this is?

Odd multiples of 1/2 wavelengths are resonant with current maximum points
in the center. Even multiples of 1/2 wavelength are anti-resonant with
voltage maximum points in the center. So a dipole that is resonant on
about 7 MHz will be resonant on about 3x7 = 21 MHz. A 1/2 wavelength
dipole cut for 40m will have an extremely high feedpoint impedance on
20m, not good for coax.

> 2. I am pretty restricted with antennas, due tu CC&Rs. So my dipole is
> actually a stealth antenna, pretty thin wire. If I had to, I could make it
> a multiband dipole, by adding one or two parallel dipoles.

You could also make it a multiband antenna by feeding it with TV twinlead.
With any luck, you could work all HF bands 40m-10m. Just such an antenna
is described on my web page.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

678. Re: multi-band dipole - newcomer question

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-09 05:39:57 UTC
From: Dennis Kaylor <k4oxg@tampabay.rr.com>
Message-ID: <NGuW8.216475$db.3171967@twister.tampabay.rr.com>
Source record: 139118

how about putting up a ground mounted multiband vertical like the R8 from
cushcraft or something similar and hide it in the back yard or if you are
allowed a flag pole make one out of PVC pipe and hide the vertical inside of
it
that way you will get all of the HF bands with not much trouble
good luck
"Andreas Hofmann" <andreash23@hotmail.com> wrote in message
news:3d2a6b98$1@news.microsoft.com...
> Well,
>
> Even after studiyng the Antennabook, I am still confused about which
> multiples of lambda/2 are good to reach a resonant state on another band.
>
> I have a 40 m dipole. very low hanging right now, since I am still in the
> experiment phase. It is resonant somewhere around 7,000kHz (1:1) (I kept
it
> long for finetuning later).
>
> 1. I thought that on any multiples of lambda/2 the antenna is resonant
> again. But for some reason the antenna does not seem to be good at all on
> 14,000kHz (1 : inf). It is, however pretty good on 21,000Khz+ (1:2). Can
> someone explain to me why this is?
>
> 2. I am pretty restricted with antennas, due tu CC&Rs. So my dipole is
> actually a stealth antenna, pretty thin wire. If I had to, I could make
it
> a multiband dipole, by adding one or two parallel dipoles. Adding a total
> new antenna is probably not a good option in my case. My goal is to get
as
> many as possible HF bands covered with a 2 (maybe 3) parallel dipole
antenna
> starting from 40m up (WARC would be good). I dont care too much about 12
> and 10m. Also, an 80m dipole does not fit in my yard.
>
>
> any hints, tips are appreciated.
>
>
> Andy, KU7T
>
>
>

679. Re: PVC coax conduit to tower

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-09 05:40:55 UTC
From: tmgroatatpeakpeakdotcom
Message-ID: <3d2a74ad.1546804@news.peakpeak.com>
Source record: 139019

"Gary Schafer" <gaschafer@attbi.com> wrote:
> I would second the idea of using larger pipe. I have a very long run
> under ground and used 2"

Applying the general rule from the electrical code, total
cross-section of the cables shouldn't exceed 40% fill (of the
available conduit area). That allows no more than nine .405" OD coax
cables in a 2" ID conduit.

The practical limit is lower, because you almost certainly will have
complications:
* Long runs,
* Curves,
* Connectors on the cables,
* Etc.

Besides, it's a real pain to dig it up and replace it if you outgrow a
smaller conduit.

--KR0U

-- Tim Groat

To reply by e-mail, change the quoted words to
the corresponding punctuation marks.

680. Re: My 85' dipole is actually 94'!! Another ??

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-09 05:49:27 UTC
From: Dick Carroll <dixie@townsqr.com>
Message-ID: <agdth7mrf0@208.207.71.138>
Source record: 139021

CAM wrote:
>
> Dick Carroll wrote:
> >
> > CAM wrote:
> > > When varying the length of the transmission line to achieve a match
> > > to 50 ohms, a Z0 of 50 ohms will fail to achieve a match to any load
> > > except 50 ohms. Varying the length of my ladder-line to match my non-
> > > resonant loads to 50 ohms only works because the Z0 of the ladder-line
> > > is not equal to 50 ohms. I am deliberately causing an SWR of around
> > > 9:1 so that Z0=450 divided by 9 equals 50 ohms.
> >
> > So far you're the only "authority" I've seen in 45 years of reading
> > that insists that you have to have a high SWR to match an antenna.
> > Maybe that's required, but it sure is curious that it doesn't appear
> > anywhere in the literature. It sure seems it would, if so.
>
> You can certainly match a 50 ohm antenna to 50 ohm coax with an SWR
> of 1:1 so you misunderstood what I said.

Nope. It's already matched.

: It is impossible to do any impedance
> transformation on a single series section of transmission line unless
> the SWR is higher than 1:1.

And matching of any 1:1 junction is totally unneeded. So?

SWR doesn't have to be "high", just higher
> than 1:1. You can use 75 ohm coax to convert 112.5 ohms to 50 ohms
> because the SWR is not 1:1. It is 1.5:1. 112.5/1.5 = 50*1.5 = 75
> All series section transformers carry an SWR above 1:1.
>

So you're saying that all matching relates to SWR and impedance is only
incidental?

> Most of the authors probably assume that you can read a Smith Chart, Dick.

I seriously doubt it, given that all my electronic training as well as
study for all levels of both amateur and commercial FCC licensing
contained no reference to the Smith Chart. Not once did it ever show up
in a test.
It is noted in some texts that the Smith Chart is very useful for "RF
designers". That makes it useful for engineers at any level. So far I
have done no design where I needed the Chart to do any matching. Yes, it

would come in handy and useful, but it isn't needed for the successful design, installation nor operation of normal ham radio antenna systems. Frankly I would have learned it anyway had it not been such a involved subject that I have yet to find a text or other publication that treated the teaching of the Chart in any practical fashion. Invariably engineers seem unable to present it in a way that can be readily absorbed by most ham radio operators, even most of those who have a technical background. Why this should be is obscure to me, but most writings on the subject deal with the interminable details of discussing at length all the Chart's attributes and never get around to actually dealing with how the chart can be used on a practical level by practical people-if indeed it can be. That makes it particularly difficult for non engineering people to learn the operation of the chart. Your last post on the subject sheds no light whatever on the subject.

In fact I would like to learn how to use the chart even now. If anyone has a lead on a good tutorial which actually gets to the use of the chart without all the engineering explanations that always accompany most descriptions of it I would be interested.

Dick

681. Re: TV Interference Problem-vertical lines???

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-09 08:34:59 UTC
From: "Dave C." <spammersdie@slowlyandpainfully.com>
Message-ID: <TexW8.1065$Kx3.302@newsread1.prod.itd.earthlink.net>
Source record: 139022
Cross-posted to: rec.radio.amateur.antenna,misc.consumers.house,rec.video,sci.electronics.repair

"Jerry Greenberg" <jerryg50> wrote in message
news:460a833b.0207081914.362ead3a@posting.google.com...
> Try another TV in this location in order to determine if the fault is
> the TV, or a reception problem.
>
> Jerry Greenberg
> http://www.zoom-one.com
>
> --

Good suggestion. To me, it sounds like a TV problem, rather than a
reception problem. -Dave

682. about transition of waveguide

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-09 09:05:46 UTC
From: savitesh@yahoo.com
Message-ID: <da32bb5a.0207090105.7ff57cfd@posting.google.com>
Source record: 139023

1. Explain the transition of cylindrical waveguide to rectangular waveguide?
2. Why we use strap break in the resonant cavity of magnetron?

683. Re: BACK TO BASICS - EM waves, E and H fields, in phase orinquadr...

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-09 10:34:43 UTC
From: k1bqt@aol.com
Message-ID: <20020709063443.14362.00002493@mb-mn.aol.com>
Source record: 139024

>The expression "mutually indeterminate" comes to mind.<

Thank you George. A voice of reason from an otherwise dismal quagmire.

Rick K1BQT

684. Re: multi-band dipole - newcomer question

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-09 11:39:38 UTC
From: cprstn54zz@att.net
Message-ID: <3d2aca9b.237751687@news-server.optonline.net>
Source record: 139025

On Mon, 8 Jul 2002 21:50:32 -0700, "Andreas Hofmann"
<andreash23@hotmail.com> wrote:

I have an Alpha-Delta DX-LB+ shortened inverted dipole. It covers
every HF band from 160M to 10M. Using a wide-range manual tuner
(MFJ-986), I get SWR 1.0 everywhere. Only drawback is the four bright
coppery loading coils in the breeze. Manufacturer says you can't
paint them, either.

See: http://www.alphadeltacom.com/dxlb_ii.htm

Ken KC2JDY

Ken
(to reply via email
remove "zz" from address)

685. Re: BACK TO BASICS - EM waves, E and H fields, in phase orinquadr...

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-09 11:59:02 UTC
From: richardharrison@webtv.net
Message-ID: <4718-3D2AD006-211@storefull-2393.public.lawson.webtv.net>
Source record: 139028

George, W5YR wrote:
"The expression "mutually indeterminate" comes to mind, which is
probably unfortunate."

Overstates the case I believe.

Two balanced telephone pairs. The signal in one pair is measurable in the other pair because balance is imperfect.

We don`t know in advance exactly how much cross-talk we will have but we can measure it as built. Predictable and determinable are not the same thing.

Best regards, Richard Harrison, KB5WZI

686. Re: tower question

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-09 12:03:40 UTC
From: 2w8ji@contesting.com
Message-ID: <3d2ad0f6.61128435@news.akorn.net>
Source record: 139026

On Mon, 08 Jul 2002 18:55:04 GMT, "Tazanator" <tazanator1@hotmail.com>
wrote:

>okay was goning to just drop in a section of tower and cement it in... now I
>foind out the section will last maybe 5 years ... is that true? and what do
>I get for a long lasting mount?

You have to put enough stone in the hole to make sure the concrete
does not plug up the legs by getting int the holes at the bottom of
the legs. Then you pour concrete, and crown the top so water runs off.

If you do that, the tower in the concrete will outlast the tower in
the air.

73 Tom

687. Re: BACK TO BASICS - EM waves, E and H fields, in phase orinquadr...

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-09 12:04:12 UTC
From: 2w8ji@contesting.com
Message-ID: <3d2ad10a.61147592@news.akorn.net>
Source record: 139027

On Sun, 7 Jul 2002 19:30:28 -0500 (CDT), richardharrison@webtv.net
(Richard Harrison) wrote:

>Tom, W8JI wrote:
>"For example, we can have an across impedance of 50 ohms but a source
>voltage driving the common mode of several hundred volts even at low
>power."
>
>Let`s plug numbers into Tom`s example:
>
>Several hundred volts = 300
>Source impedance = 50 ohms
>P = Esquared/R = 90,000/50 = 1800 watts
>1800 watts may be low power in tom`s opinion.
>This QRP is another "Tomism"
>
>Best regards, Richard Harrison, KB5WZI
>

Richard,

You really just don't understand the problem. That's probably why you
can't give correct technical responses using Ohm's law.

73 Tom

688. Re: BACK TO BASICS - EM waves, E and H fields, in phase orinquadr...

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-09 12:22:03 UTC
From: richardharrison@webtv.net
Message-ID: <4717-3D2AD56B-789@storefull-2393.public.lawson.webtv.net>
Source record: 139029

Rick, K1BQT wrote:
"Thank you George. A voice of reason from an otherwise dismal quagmire."

"Indeterminate" I recall from complicated redundancies in design of physical structures. That does not eliminate practical designs. You make some safe, educated, practical estimates
and calculate as before.

But, this thread did not require prediction. This thread argued:
related? or unrelated?

Best regards, Richard Harrison, KB5WZI

689. Re: BACK TO BASICS - EM waves, E and H fields, in phase orinquadr...

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-09 12:55:50 UTC
From: richardharrison@webtv.net
Message-ID: <14172-3D2ADD56-911@storefull-2392.public.lawson.webtv.net>
Source record: 139032

Tom, W8JI wrote:
"That`s probably why you can`t give correct technical responses using
Ohm`s law."

I challenged Tom to show his work. Instead he reposted mine.

Ohm says; P = E squared over R.
Tom specified "several hundred volts"
I picked a resistance of 50 ohms as most transmitters are designed for
this load.
300 volts qualifies as "several hundred volts".
P = 1800 watts, hardly QRP.

Tom should show how he would get a different answer.

Best regards, Richard Harrison, KB5WZI

690. Re: My 85' dipole is actually 94'!! Another ??

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-09 13:04:29 UTC
From: CAM <w5dxp@hotmail.com>
Message-ID: <3D2ADF5D.6B97414E@hotmail.com>
Source record: 139030

Dick Carroll wrote:
>
> CAM wrote:
> > SWR doesn't have to be "high", just higher
> > than 1:1. You can use 75 ohm coax to convert 112.5 ohms to 50 ohms
> > because the SWR is not 1:1. It is 1.5:1. 112.5/1.5 = 50*1.5 = 75
> > All series section transformers carry an SWR above 1:1.
>
> So you're saying that all matching relates to SWR and impedance is only
> incidental?

I'm saying that all series section transformers carry an SWR greater than
1:1. If it doesn't carry an SWR greater than 1:1, it is not a series section
transformer - it is a "flat" section of line and is not doing any impedance
transformation.

> > Most of the authors probably assume that you can read a Smith Chart, Dick.
>
> I seriously doubt it, given that all my electronic training as well as
> study for all levels of both amateur and commercial FCC licensing
> contained no reference to the Smith Chart. Not once did it ever show up
> in a test.

You keep saying the present exams are easier than they were in the past
but the Extra exam I took and the present Extra exam contain questions
on the Smith Chart.

> In fact I would like to learn how to use the chart even now.

Do you know how to plot impedances on a Smith Chart? It's hardly any
harder than plotting points on a graph. In fact, a simplified tutorial
on the Smith Chart might be interesting to a lot of people. Would you
be willing to participate in a thread titled, "Smith Charting Made Easy"?
That's a half finished magazine article of mine.

Here's where you can obtain a Smith Chart from the web.

http://www.ee.surrey.ac.uk/Personal/D.Jefferies/smithc.html
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

691. Re: BACK TO BASICS - EM waves, E and H fields, in phase orinquadr...

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-09 13:09:49 UTC
From: CAM <w5dxp@hotmail.com>
Message-ID: <3D2AE09D.44353EE7@hotmail.com>
Source record: 139031

Rick Littlefield wrote:
>
> >The expression "mutually indeterminate" comes to mind.<
>
> Thank you George. A voice of reason from an otherwise dismal quagmire.

The orbits of the Earth and Pluto were "mutually indeterminate" until
Pluto was discovered and its orbit observed and measured.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

692. Re: My 85' dipole is actually 94'!! Another ??

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-09 13:23:11 UTC
From: CAM <w5dxp@hotmail.com>
Message-ID: <3D2AE3BF.C75CF6A5@hotmail.com>
Source record: 139033

CAM wrote:
> Here's where you can obtain a Smith Chart from the web.
>
> http://www.ee.surrey.ac.uk/Personal/D.Jefferies/smithc.html

also: http://www.sss-mag.com/smith.html
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
------== Over 80,000 Newsgroups - 16 Different Servers! =-----

693. Re: multi-band dipole - newcomer question

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-09 13:48:11 UTC
From: G Blair <gblair@sympatico.ca>
Message-ID: <3D2AE99B.32CF3C12@sympatico.ca>
Source record: 139034

Ken wrote:
>
> On Mon, 8 Jul 2002 21:50:32 -0700, "Andreas Hofmann"
> <andreash23@hotmail.com> wrote:
>
> I have an Alpha-Delta DX-LB+ shortened inverted dipole. It covers
> every HF band from 160M to 10M. Using a wide-range manual tuner
> (MFJ-986), I get SWR 1.0 everywhere. Only drawback is the four bright
> coppery loading coils in the breeze. Manufacturer says you can't
> paint them, either.
>
> See: http://www.alphadeltacom.com/dxlb_ii.htm
>
> Ken KC2JDY
>
> -----
>
> Ken
> (to reply via email
> remove "zz" from address)

What is the wire spacing from the main support dipole to the 10 and 20
meter dipoles?

694. Re: 85 foot dipole not in straight line. A problem?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-09 15:21:48 UTC
From: Andy Cowley <andy.cowley@uwe.ac.uk>
Message-ID: <3D2B01F6.F9B07226@uwe.ac.uk>
Source record: 139035

'Doc wrote:
>
> Andy Cowley wrote:
> >
> > CAM wrote:
> > >
> > > Wayne wrote:
> > > > But to use a non resonant length requires a tuner, period.
> > >
> > > Not if you resonate your non resonant length antenna with a
> > > series section transformer. I use my dipole on all HF bands
> > > without a tuner. The tuning function is performed by the
> > > transmission line itself.
> >
> > So it is a tuner, then, isn't it? That's what tuner means - something
> > that performs the tuning function. Wayne was quite right wasn't he?
> >
> > vy 73
> >
> > Andy, M3ABC
>
> Andy,
> Actually, no, he wasn't, and still isn't. A tuner doesn't
> adjust resonance, it matches impedances. Completely different
> thing. The 'antenna' is still nonresonant, which doesn't mean
> it won't work.
> 'Doc

Dear 'Doc,

Thanks for the reply.

Isn't a transmission line a transformer? Don't mean to be too picky
but any transmission line performs an impedance transformation unless
it is n * 1/2 lambda at the operating frequency. A tuner doesn't make
the antenna resonant, I agree, but is does make the antenna system
(antenna, transmission line, tuner) resonant, doesn't it? I can't see
how a transmission line is different from a lumped impedance tuner.
You seem to imply that there is some sort of real difference. What is
it?

If I am wrong I'll tear up my Smith charts and start again. ;-)

vy 73

Andy, M3ABC

695. Re: Want High Gain 2.2-2.7Ghz ATV Antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-09 16:20:55 UTC
From: Don Widders <widders@talkwithoutdifficulty.org>
Message-ID: <uim3bk5572p0c9@corp.supernews.com>
Source record: 139036

"David" <ddmga@yahoo.com> wrote in message
news:296ea75a.0207081624.776f4a1e@posting.google.com...
> Looking for high gain base station antenna in this range.
>
> Also might be interested in mobile type antenna for same range.
>
> Thanks for any help!

For 500 MHz of bandwidth you'll have to sacrifice gain and for that much bandwidth you don't have a lot of good choices. A log periodic is the logical alternative.

Try here:
http://www.ramseyelectronics.com/cgi-bin/commerce.exe?preadd=action&key=LPY2
or here:
http://www.ramseyelectronics.com/cgi-bin/commerce.exe?preadd=action&key=LPY2
6

Don W.

696. horizontal loop revisited

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-09 16:42:23 UTC
From: ardujenski@aol.com
Message-ID: <20020709124223.26799.00003548@mb-da.aol.com>
Source record: 139037

I had missed this artilce in LB CEBIK's website but talks about HOHPLs (Horizontally Oriented, Horizontally Polarized Large Wire Loop Antennas) but it does address many issues we discussed here
http://www.cebik.com/atl1.html
An interesting part of his conclusions is QUOTE:

"For nation-wide and world-wide communications, evenness of pattern may often be more important than the gain of one or more individual lobes. As a consequence of this behavior, the advantage of the HOHPL will not show itself in any one contact or in a short period. Satisfaction with the antenna grows with time and changes in the propagation paths, a successful communications almost everywhere shows up in the log" .... LB CEBIK

looks like I need to be planting those poles for the corners (smile)
Alan KB7MBI

697. Re: 85 foot dipole not in straight line. A problem?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-09 17:21:37 UTC
From: CAM <w5dxp@hotmail.com>
Message-ID: <3D2B1BA1.228191A2@hotmail.com>
Source record: 139038

Andy Cowley wrote:
>
> 'Doc wrote:
> > Actually, no, he wasn't, and still isn't. A tuner doesn't
> > adjust resonance, it matches impedances. Completely different
> > thing. The 'antenna' is still nonresonant, which doesn't mean
> > it won't work.

> Isn't a transmission line a transformer? Don't mean to be too picky
> but any transmission line performs an impedance transformation unless
> it is n * 1/2 lambda at the operating frequency. A tuner doesn't make
> the antenna resonant, I agree, but is does make the antenna system
> (antenna, transmission line, tuner) resonant, doesn't it? I can't see
> how a transmission line is different from a lumped impedance tuner.

The definition of a transmission line is different from a lumped
impedance tuner. From the "ARRL Antenna Book":

"Transmatch - antenna tuner - A device containing variable reactances
(and perhaps a balun). It is connected between the transmitter and
the feedpoint of an antenna system, and adjusted to 'tune' or resonate
the system to the operating frequency."
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

698. Re: UHF OR N CONNECTOR?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-09 18:11:00 UTC
From: David E Allen <davea@mse13.cos.agilent.com>
Message-ID: <1026238260.45311@goodnews.cos.agilent.com>
Source record: 139039

Richard <richardtracy@nospam.com> wrote:
: If assembled properly, a crimp type connection is just as effective as a
: soldered connection.
...
: BTW, why the need to reference CB or 'cheap' for crimp connectors ?

Sorry. It was just an observation (not a "need"). My intention in asking about crimp connectors was to change my mind about them if warranted, and it does indeed seem warranted. Thank you.

dave allen, wb0taq, colorado springs

699. Re: My 85' dipole is actually 94'!! Another ??

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-09 18:16:06 UTC
From: Dick Carroll <dixie@townsqr.com>
Message-ID: <agf996mhd0@208.207.71.137>
Source record: 139040

CAM wrote:

> You keep saying the present exams are easier than they were in the past
> but the Extra exam I took and the present Extra exam contain questions
> on the Smith Chart.

Yep. And the question pool included the exact answer!

>
> > In fact I would like to learn how to use the chart even now.
>
> Do you know how to plot impedances on a Smith Chart? It's hardly any
> harder than plotting points on a graph. In fact, a simplified tutorial
> on the Smith Chart might be interesting to a lot of people. Would you
> be willing to participate in a thread titled, "Smith Charting Made Easy"?
> That's a half finished magazine article of mine.

Indeed I would, it's been long overdue. Bring it on. And finish the
article.

700. Re: BACK TO BASICS - EM waves, E and H fields, in phase orinquadr...

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-09 18:21:12 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <rdamiukta5tn0qebcklfj7h62qdems3djf@4ax.com>
Source record: 139041

On Tue, 9 Jul 2002 06:59:02 -0500 (CDT), richardharrison@webtv.net
(Richard Harrison) wrote:

>Predictable and determinable are not the same
>thing.
>
>Best regards, Richard Harrison, KB5WZI

Hi Richard,

Quite so. However, predictable carries the burden of proof only once,
determinable is always in error to some degree.

73's
Richard Clark, KB7QHC

701. Re: BACK TO BASICS - EM waves, E and H fields, in phase orinquadr...

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-09 18:24:32 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <imamius86lv78uvegku3rad7jbv2sv45jk@4ax.com>
Source record: 139042

On Mon, 08 Jul 2002 22:34:40 GMT, 2w8ji@contesting.com (Tom W8JI)
wrote:

>The "across" impedance

Hi Tom,

Is this Common or Differential Mode?

73's
Richard Clark, KB7QHC

702. antenna (relay) switch?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-09 18:48:32 UTC
From: David E Allen <davea@mse13.cos.agilent.com>
Message-ID: <1026240511.848645@goodnews.cos.agilent.com>
Source record: 139043

Hi, all.
I am trying to build a relay-operated antenna switch for HF.
I threw together one in a 4x4x1" box with 2 so-239 connectors on
one side, a bnc (for the common) on an adjacent side, and a "mini" relay
from radio shack to do the switching.

I wanted the unused antenna grounded, so I'm using a DPDT relay.

The swr through the switch into a dummy load is around 1.3:1 to 1.4:1
(on 20m). My ts-850 starts limiting output around 1.5:1, so that doesn't
leave much room for swr in the antennas.

How can I design / build a switch that has a lower swr? I know the relay
adds some, but even hooking an so-239 directly to the bnc gives me about
1.2:1, so hopefully I can design the box better.

Would I have better results with an older-style open-frame relay?

Thanks for your ideas.

73, dave, wb0taq

703. Dressler ARA 60S

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-09 18:56:57 UTC
From: Richard <flathat@bellsouth.net>
Message-ID: <B950AA39.6459%flathat@bellsouth.net>
Source record: 139044

Does anyone have any experience with this active antenna?

I'm all ears.

Cheers,

Richard K.

704. Re: TV Interference Problem-vertical lines???

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-09 18:58:13 UTC
From: Arthur Jernberg <stubby@comcast.net>
Message-ID: <9nGW8.8875$Bt1.301205@bin5.nnrp.aus1.giganews.com>
Source record: 139045
Cross-posted to: rec.radio.amateur.antenna,misc.consumers.house,rec.video,sci.electronics.repair

Seen way to many very similar problems due to corroded connections both in antennea and catv systems. Very good suggestion to check system with another tele to make sure.
"victor voul" <mouln@yahoo.com> wrote in message news:30da9028.0207081333.52cde402@posting.google.com...
> I have a TV interference problem that's driving me nuts.
>
> I've been getting vertical interference lines on the weaker VHF
> channels in my area. (antenna reception) It does not affect UHF.
> The vertical lines appear slightly to the right of the center of the
> screen.
>
> The lines are subtle on the stronger stations, but pronounced on the
> weaker stations. The strongest broadcast VHF station in my area shows
> no interference lines.
> The same lines ALSO appear on cable channels except more subtle than
> on VHF over the air broadcast stations.
>
> The lines DO NOT appear on the screen when using my DVD player.
>
> I cannot identify the source of this interference as an electrical
> appliance in my house.
>
> Any techies who might speculate what's causing this problem???

705. Re: Coax conduit to tower

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-09 19:08:50 UTC
From: Roger Halstead <rdhalste@tm.net>
Message-ID: <6xGW8.1162$FW5.1118648@newshog.newsread.com>
Source record: 139046

"Sylvan Butler" <Znospam+noZs_0207@hpb13799Z.Zboi.hpZ.com.invalid> wrote in message
news:slrnaijqpp.h8c.Znospam+noZs_0207@hpb13799Z.Zboi.hpZ.com.invalid...
> On Wed, 03 Jul 2002 10:36:54 -0400, Bill Ogden <ogden@us.ibm.com> wrote:
> > strongly recommend using a larger PVC pipe. After you have a few cables (coax
> > or other) in the 1.5 inch pipe, you will find it very difficult to pull another
> > cable through it. (Of course, you will include a pull-cord in the pipe. (?))
>
> Yup. I've some 2" in place right now that is plenty big enough to
> hold the additional I want to pull thru it, but the way the existing
> cable is lying on the corners, I can't get the new ones to go thru.

Go to an electrical supplier and get a couple cans of cable pulling soap (usually an ugly bright yellow). When you go to pull in another cable, liberally coat the new cable with the soap. Acually you fill your hands with the stuff and pull the cable throught them.

Considering you already have cables in the conduit without the soap, you might want to take a quarter inch rope and pull it through a few times after liberally soaping it up.

If it's only a few feet to those cornerswhere the cable hangs, you might try attaching a 1/4 tygon tube to the soap can and thouroughly soaping the corners as well. With the corners, old coax, and new coax soaped up well, it will just push the old coax over and slide right on through.

With *things* liberally soaped up, you can pretty much put the 10# in the 5# bag, so to speak. We've pulled so many wires through a conduit that there was a guy at each bend, plus about every 10 feet beating on the conduit (steel in this case) with a hammer to pull through more. When taken out some years later, they looked like they'd been molded into the pipe.

I just did a recount and I have 6 LMR-400 and 6 RG8X size coax cables which includes one with two RG-6 coax cables and the control cable for the C-band satellite dish, and 3 rotor cables (one for rotor and two for switching) through 3 inch conduit.
I could probably squeeze in another three, although I'd like to make two runs of LMR 900 (if the stock market ever comes back up)

Just don't forget the soap! It not only makes pulling in more cables a breeze, it's much easier on the cables themselves.

--
Roger Halstead (K8RI EN73)
www.rogerhalstead.com
N833R World's oldest Debonair? (S# CD-2)

> :(
>
> sdb
> --
> | Sylvan Butler | Not speaking for Hewlett-Packard | sbutler-boi.hp.com |
> | Watch out for my e-mail address. Thank UCE. #### change ^ to @ #### |
> They that can give up essential liberty to obtain a little temporary
> safety deserve neither liberty nor safety. --Benjamin Franklin, 1759
> Fight terrorism, arm the population!

706. Re: BACK TO BASICS - EM waves, E and H fields, in phase orinquadr...

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-09 19:09:20 UTC
From: richardharrison@webtv.net
Message-ID: <7720-3D2B34E0-961@storefull-2394.public.lawson.webtv.net>
Source record: 139052

Richard Clark, KB7QHC wrote:
"However, predictable carries the burden of proof only once,
determinable is always in error to some degree."

I expect Richard Clark knows more about the probability and magnitude of error that almost anybody. Still, I have more confidence in measurement than in prediction. Think of rain in the gauge versus the forecast.

There are no absolute certainties and you can be certain of that!

Best regards, Richard Harrison, KB5WZI

707. Re: WX4A Re: My 85' dipole is actually 94'!! Another ??

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-09 19:17:41 UTC
From: Harris <aharris@bookworm.suffolk.lib.ny.us>
Message-ID: <pFGW8.22205$A%3.268422@ord-read.news.verio.net>
Source record: 139047

StarGazer <pti@capnet.com> wrote:

> Does the ladder line part have to come straight down or will
> it screw it up?

> My dipole is only 22' up.

How come you have to use 150' of line to feed an antenna only 22' high?

Can't you get the antenna closer to the shack and/or up higher? That would make a huge difference.

Art Harris N2AH

708. Re: CAM?? Re: WX4A Re: My 85' dipole is actually 94'!! Another ??

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-09 19:27:27 UTC
From: Harris <aharris@bookworm.suffolk.lib.ny.us>
Message-ID: <zOGW8.22206$A%3.268422@ord-read.news.verio.net>
Source record: 139048

StarGazer <pti@capnet.com> wrote:

> If I used 450 ladder line how much loss would I have with the
> 94' dipole? 450 would be easier if i got a ladder lok.

> This is such a pain. I could easily make a resonant 40 m dipole
> a feed it with coax. (Or would that have too much loss too)
> But the resonant 80 m dipole feed with coax would have to
> take some creative 60 turns here and there.

Don't be afraid to zig-zag the wire (especially at the ends). If you could get up 120' of wire and feed it with 450 ohm line, you would be ok.
To minimize losses, you could use 14 gauge ladder line. (BTW, Ladder Loc is a great product.)

How about a mast on your chimney to get the center up around 35'?

Art Harris N2AH

709. Re: multi-band dipole - newcomer question

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-09 19:30:48 UTC
From: k0bg@aol.com
Message-ID: <20020709153048.04633.00001441@mb-cb.aol.com>
Source record: 139049

Apparent, Andy (KU7T) in your answer to Dennis' question, you've never seen an R8. It really IS NOT a ground mounted antenna, and if you do mount it on the ground, it won't work very well. It is technically a loaded 1/2 wave and needs to be clear of surrounding objects including the earth. I tried for 4 months to get one to work as advertized, and finally Cushcraft replaced it with a new one. I gave it away!

As for disguising it inside a chunk of PVC (aside from the above statement), the PVC would be about 10" or 12" in diameter. Obviously not an ideal flagpole.

Sorry.

Alan, Kï¿½BG

710. Re: Matching coil vs antenna length - mobile antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-09 19:37:03 UTC
From: k0bg@aol.com
Message-ID: <20020709153703.04633.00001442@mb-cb.aol.com>
Source record: 139050

You can't use the VSWR readings to establish resonance. Unless you're very lucky, or the antenna ground and coil losses are large, the input won't be 50 ohms. You can use a full 1/4 wave on 6, and infact several folks make 5/8 wave verticals for 6 meters, something you can't do very well on 80 and 40!

You need to invest in a good antenna bridge. The best bang for the buck is the 259B MFJ (269 has UHF added). There are others, too. This way you will know both the resonance point, and the VSWR at that point.

If you can find an older issue of the Mobile Manual, say circa 1960 to 1965, therein was published a good homebrew 6 meter 5/8 wave vertical. At least it'll give you a place to start.

Fun isn't it?

Alan, Kï¿½BG

711. Re: tower question

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-09 19:44:19 UTC
From: k0bg@aol.com
Message-ID: <20020709154419.04633.00001443@mb-cb.aol.com>
Source record: 139051

Tom is correct. Just make sure that any water gets into or condensation which forms inside the tower legs can drain, and you'll be OK. Sand and then a stone layer works well. The advantage of using a folderover base should be obvious, but it has a little less strength.

Alan, Kï¿½BG

712. Re: A whole new 'back to basics' topic - Monopole fundamentals

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-09 19:47:22 UTC
From: Harris <aharris@bookworm.suffolk.lib.ny.us>
Message-ID: <e5HW8.22207$A%3.268422@ord-read.news.verio.net>
Source record: 139053

Bill Klocko <klocko@toad.net> wrote:

> I've got another important question. If the gain of a monopole is
> twice that of a free-space dipole, wouldn't the monopole's effective
> area also be twice the dipole's? It may be new news if they are
> arguing that the monopole violates reciprocity. Meanwhile, I'll have
> to go back and look at the PDF. 73,

My thoughts exactly!

Art Harris N2AH

713. Re: My 85' dipole is actually 94'!! Another ??

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-09 19:52:45 UTC
From: CAM <w5dxp@hotmail.com>
Message-ID: <3D2B3F0D.D7B7918C@hotmail.com>
Source record: 139054

Dick Carroll wrote:
>
> CAM wrote:
>
> > You keep saying the present exams are easier than they were in the past
> > but the Extra exam I took and the present Extra exam contain questions
> > on the Smith Chart.
>
> Yep. And the question pool included the exact answer!

What good would inexact answers be? Even my 1951 ARRL License Manual
contained exact answers if not exact questions.

> > > In fact I would like to learn how to use the chart even now.
> >
> > Do you know how to plot impedances on a Smith Chart? It's hardly any
> > harder than plotting points on a graph. In fact, a simplified tutorial
> > on the Smith Chart might be interesting to a lot of people. Would you
> > be willing to participate in a thread titled, "Smith Charting Made Easy"?
> > That's a half finished magazine article of mine.
>
> Indeed I would, it's been long overdue. Bring it on. And finish the
> article.

The article depended on the great graphics generating capability that
I had access to as a marketing engineer with Intel. I can't generate
those sophisticated graphics anymore. But at your request, I will start
a thread titled, "Smith Charting Made Easy".
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

714. Re: Matching coil vs antenna length - mobile antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-09 20:04:43 UTC
From: Dan Richardson <k6mhe@mendolink.com>
Message-ID: <mbgmiu8fjqrj0dqg0jsle13f63lqorvd94@4ax.com>
Source record: 139056

On 09 Jul 2002 19:37:03 GMT, k0bg@aol.com (K0bg) wrote:

>You can't use the VSWR readings to establish resonance.

I think you'll find that lowest VSWR reading will be at the resonate
point. Not necessarily 1:1 but the lowest point indicated.

73
Danny, K6MHE

715. Re: BACK TO BASICS - EM waves, E and H fields, in phaseorinquadr...

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-09 20:09:52 UTC
From: CAM <w5dxp@hotmail.com>
Message-ID: <3D2B4310.DFC1B2F@hotmail.com>
Source record: 139055

Richard Harrison wrote:
> There are no absolute certainties and you can be certain of that!

Are you absolutely certain of that? :-)
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

716. Re: multi-band dipole - newcomer question

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-09 20:42:37 UTC
From: Bob Cook <captcook@compuserve.com>
Message-ID: <agflcf$ai8$1@nntp-m01.news.aol.com>
Source record: 139060

Andy,

I am using multi-band dipoles as well. I have found that 1. the number of dipoles must be limited to no more than antennas, and 2. the resonant frequency of each will be about 10% lower than that calculated due to the proximity of the other wires.

Bob

www.Ocean-Pro.com
Professional Yacht Delivery
Offshore Sailing Instruction
Naples, FL 800-329-4884

717. Re: Horizontal Loop Question

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-09 21:05:04 UTC
From: n2ey@aol.com
Message-ID: <9f4bfe89.0207091305.47a61bcd@posting.google.com>
Source record: 139057

ardujenski@aol.com (ARDUJENSKI) wrote in message
news:<20020706010246.15533.00002671@mb-fx.aol.com>...
> I have read various articles on horizontal loops and still have a few
> questions. First let me say that my interest was peaked by several notes i have
> read from field day groups exclaiming how pleased they were with the horizontal
> loop at ONLY 20FT.

Hello Alan,

Claims of antenna performance should always be taken with a grain of
salt unless there is "hard" data. For example, some hams would
consider a Field Day setup that averages 20 QSOs per hour using a 100
W rig to be doing really well, while another group would consider that
same setup to be unproductive.

> I got a copy of EZNEC DEMO and played with various size loops and heights. I
> was surprised to see some noteable gain figures using an 80m loop at 20ft
> height on 20m and above but more significantly there were some nice lobe
> patterns which see like they would accomodate the NW operations.
>
> Elevating or enlarging the loop then developed patterns with multi lobes at
> various takeoff angles and as you approached 15m and above with very large
> loops (800ft+)--patterns which look like avocadoes.
>
> I am not too sure if my modeling was too crude to be of value.

EZNEC is wonderful but the demo version limits you to 20 segments. For
a model to be accurate, segments must be less than a certain fraction
of a wavelength - otherwise errors develop.

A 270 foot loop of wire that uses all 20 segments will have a segment
length of
13.5 feet - almost a quarter wave on 20 and almost a half wave on 10.
The accuracy of such a model is somewhat doubtful.

Also, you might want to compare the loop model against other antenna
types before making a decision. Your 95 x 110 foot lot can fit a 130
foot dipole or inverted V diagonally. You might consider comparing the
patterns and gain levels of such a dipole or inverted V vs. a loop.

73 de Jim, N2EY

718. Re: multi-band dipole - newcomer question

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-09 21:17:45 UTC
From: Bob Miller <bamiller@texas.net>
Message-ID: <rVIrPSj7YRqhQ=ykVT+ie=vcdKkG@4ax.com>
Source record: 139058

k0bg@aol.com (K0bg) wrote:

>Apparent, Andy (KU7T) in your answer to Dennis' question, you've never seen an
>R8. It really IS NOT a ground mounted antenna, and if you do mount it on the
>ground, it won't work very well. It is technically a loaded 1/2 wave and needs
>to be clear of surrounding objects including the earth. I tried for 4 months to
>get one to work as advertized, and finally Cushcraft replaced it with a new
>one. I gave it away!
>
>As for disguising it inside a chunk of PVC (aside from the above statement),
>the PVC would be about 10" or 12" in diameter. Obviously not an ideal flagpole.

Force 12 has a neat little flagpole vertical for 40-10 at
http://force12inc.com/F12-flagpoles-002.htm

Bob
k5qwg
>
>
>Sorry.
>
>Alan, Kï¿½BG

719. Re: CAM?? Re: WX4A Re: My 85' dipole is actually 94'!! Another ??

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-09 21:20:14 UTC
From: captbrian <captbrian@ukonline.co.uk>
Message-ID: <3d2bad31$0$24414$afc38c87@news.ukonline.co.uk>
Source record: 138991

Please describe Ladder-loc??

Harris <aharris@bookworm.suffolk.lib.ny.us> wrote in message
news:zOGW8.22206$A%3.268422@ord-read.news.verio.net...
> StarGazer <pti@capnet.com> wrote:
>
> > If I used 450 ladder line how much loss would I have with the
> > 94' dipole? 450 would be easier if i got a ladder lok.
>
> > This is such a pain. I could easily make a resonant 40 m dipole
> > a feed it with coax. (Or would that have too much loss too)
> > But the resonant 80 m dipole feed with coax would have to
> > take some creative 60 turns here and there.
>
> Don't be afraid to zig-zag the wire (especially at the ends). If you could
> get up 120' of wire and feed it with 450 ohm line, you would be ok.
> To minimize losses, you could use 14 gauge ladder line. (BTW, Ladder
> Loc is a great product.)
>
> How about a mast on your chimney to get the center up around 35'?
>
> Art Harris N2AH

720. Re: antenna (relay) switch?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-09 21:23:52 UTC
From: Torsten Clay <tclay@roton.physics.arizona.edu>
Message-ID: <m2hej84mtz.fsf@roton.physics.arizona.edu>
Source record: 139059

>How can I design / build a switch that has a lower swr? I know the relay
>adds some, but even hooking an so-239 directly to the bnc gives me about
>1.2:1, so hopefully I can design the box better.
>
>Would I have better results with an older-style open-frame relay?

Look at the following site:

http://www.iol.ie/~bravo/remote.htm

In particular look at his suggestions for modifying the relays.
I did this for a 3-way switch I just made, and it seems to work
pretty well.

Torsten
N4OGW

721. Re: Matching coil vs antenna length - mobile antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-09 21:42:25 UTC
From: richardharrison@webtv.net
Message-ID: <25852-3D2B58C1-1059@storefull-2396.public.lawson.webtv.net>
Source record: 139061

Tim, KA8DDZ wrote:
"---I assume I have the best impedance match but the dip or that SWR comes at 53 MHz."

Resonance is elimination of reactance in the antenna at a particular frequency. The antenna becomes a resistance that usually does not match your coax surge impedance. A mismatched resonant load produces SWR on the transmission line An impedance transformation is required for an SWR of 1:1.

Best regards, Richard Harrison, KB5WZI

722. The Torch is Passed

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-09 22:29:40 UTC
From: "W.G Ewald" <wgewald@att.net>
Message-ID: <vvomiugvt00i0qangth7s1tdkrdllbbrr1@4ax.com>
Source record: 139062

http://people.bu.edu/nca/aces.pdf

723. Re: BACK TO BASICS - EM waves, E and H fields, in phase

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-09 22:31:09 UTC
From: k1bqt@aol.com
Message-ID: <20020709183109.04645.00002260@mb-mn.aol.com>
Source record: 139063

>We don`t know in advance exactly how much cross-talk we will have but we can measure it as built. Predictable and determinable are not the same thing.<

I "predicted" you would resond, Richard, but I never could have determined your words ahead of time. That's because we have no connection. No matter, I guess we're still related (along with Cecil who can't keep his hands off my sister)!

Rick K1BQT
(We are fam-i-ly!!!)

724. Re: BACK TO BASICS - EM waves, E and H fields, in phase orinquadr...

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-09 22:36:18 UTC
From: 2w8ji@contesting.com
Message-ID: <3d2b6423.29106451@news.akorn.net>
Source record: 139064

On Tue, 9 Jul 2002 07:55:50 -0500 (CDT), richardharrison@webtv.net
(Richard Harrison) wrote:

>Tom, W8JI wrote:
>"That`s probably why you can`t give correct technical responses using
>Ohm`s law."
>
>I challenged Tom to show his work. Instead he reposted mine.
>
>Ohm says; P = E squared over R.
>Tom specified "several hundred volts"
>I picked a resistance of 50 ohms as most transmitters are designed for
>this load.
>300 volts qualifies as "several hundred volts".
>P = 1800 watts, hardly QRP.
>
>Tom should show how he would get a different answer.
>
>Best regards, Richard Harrison, KB5WZI

Harrison,

Quit being so silly. I allready posted a response to Richard Clark
that gave an example.

All the silly pointless attacks accomplish is to show you don't
understand the problem at all, and prove my point that some people
need a clear single-sentence phrase to help them understand that the
differential mode conditions, including voltage, do not have a fixed
relationship to common mode volatges.

Read my earlier example.

73 Tom

725. The Moebius Antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-09 23:06:56 UTC
From: "W.G Ewald" <wgewald@att.net>
Message-ID: <u7rmiu4c9qun8h49q68960ojfug193pjef@4ax.com>
Source record: 139065

Rediscovering the ZENNECK Surface Wave

In 1916 while speaking of his system for global
transmission, Nikola Tesla cited the analysis of
mathematician Arnold N. Sommerfeld as verification of his explanations
of observed radio phenomena.
Tesla was referring to his system in which 90% to 95% of the
electrical energy was manifested at the
transmitters output as "current waves" with the remainder directed to
the antenna structure, resulting in
dissipating EM radiation.
In 1909 another investigator by the name of Johann Zenneck,
while working to explain Marconi's
transoceanic results, showed that a unique type of surface wave could
travel along the interface between the
ground and the air. In the words of Dr. James Corum, "The
distinguishing feature of the Zenneck wave was
that the propagating energy didn't spread like radiation, but was
concentrated near the guiding surface.
Sommerfeld had shown that an electromagnetic wave could be guided
along a wire of finite conductivity,
and Zenneck conceived that the earth's SURFACE would perform in a
manner similar to a SINGLE
CONDUCTING WIRE."
In commenting on Sommerfeld's analysis of the surface wave,
Dr. James R. Wait states that "The field
amplitude varies inversely AS THE SQUARE ROOT of the horizontal
distance from the source . . . " It is
interesting to note that Sommerfeld made a point of distinguishing
between the "electrodynamic" SURFACE
WAVE and its Hertzian counterpart the SPACE WAVE, believing that both
components could be present in
VARYING PROPORTION in the WAVE COMPLEX. It was Tesla's assertion
that the exact composition
of the emissions was dependant upon the design of the transmitter.
As the study of radio propagation progressed and certain
mathematical analyses EXCLUDED IT, some
question as to the existence of the Zenneck surface waves began to
develop. In 1937 limited supports was
given to these doubts after tests showed SIMPLE ANTENNAS driven at
150mHZ produced 100 times
LOWER field strengths than predicted.
More recent investigations show evidence that Zenneck waves
can, indeed, be generated. The LOWER

the frequency, the lower the PROPAGATION LOSSES.
It is also apparent that they are NOT major contributors to
the field produced by an electric dipole or
quarter wave RADIATOR. However, they can be strongly excited by a
quarter wave RESONATOR! Once
again to quote Dr. Corum, "the resulting wave is a SURFACE GUIDED
(single conductor)
TRANSMISSION LINE mode which attenuates EXPONENTIALLY ALONG THE
GUIDE . . . There is
NO INVERSE SQUARE spreading or DIFFRACTION, as with Hertzian waves .
. . With appropriate
constitutive parameters, a pure Zenneck wave would seem to hold out
the promise of GUIDED
PROPAGATION with NO radiation field to WASTE ENERGY."
Plots of field strength vs. frequency indicate that a
Zenneck wave propagates best at ELF and VLF
frequencies and would lose much of its advantage as frequency rose
ABOVE 1mHZ.
A new Russian magazine AURA-Z was published almost one
year ago. On the back cover was an
advertisement for papers describing a 'new' effect that had been
discovered for the transmission of power
over a single very fine wire.
The wire could be cut and tied in a bow, yet the power still
flowed over the wire. It used something
called a 'monovibrator' to produce the peculiar wave necessary to
achieve this effect. There was no technical
data except for that offered in the papers for $100.
Power transmitted over a wire (note over, not through) is
subject to dissipation through impedance,
capacitance, inductance and resistance.
Hooper showed that a moebius coil could produce what he
called a 'motional wave' or a wave of
PURE ELECTRIC CHARGE. When energy moves through matter, it is sapped
capacitively (electrostatic)
and inductively (magnetically).
The pure electric wave was not sapped in any way and so
could be transmitted over enormous
distances with no signal loss. Propagation of such a signal through a
transmission line or conductive path
apparently takes the form of successive solitons that regenerate their
spherical pattern much like a smoke
ring vortex. It is an enfolded structure consisting of high rotation
energy in the doughnut shape.
This ties in with Walter Russell's claims that energy rings
form, transmute and destroy matter, as well
as with Larry Spring's claim that energy propagates through space in
the form of successive spheres as he
had measured by field strength mapping of fixed frequency
transmitters.

The point here is that everyone is using similar terms and
concepts to describe the same thing. The
bottom line will be a circuit which we can all use to verify the
truth of it and then put it TO PRACTICAL
USE in doing real work.
According to the information published in the Russian
magazine INVENTOR AND
DEVELOPER, a new opportunity to transmit electric energy has been
discovered.
As it was demonstrated by scientist Vladislav Avramenko at
the Russian (former All-Union)
Electro-Technical Institute in Moscow, it is now possible to transmit
electric energy through just a SINGLE
WIRE (similar to superconductivity at room temperature). The article
does not disclose the details of the
method. It does say that the primary power source generates electric
energy in OSCILLATING FORM in the
RANGE OF SOUND FREQUENCIES.
This energy is then transmitted in a regular way to a small
monovibrator (which is the inventor's
secret). Only one wire goes out of the monovibrator. The wire
extremity is connected by means of this single
wire to a small (matchbox size) box. The box has a regular double
contact OUTLET thus providing a power
supply for electric bulbs and other devices. It is disclosed that the
energy transmission through a single wire
occurs when the appropriate frequency (not specified) has been
ADJUSTED (tuned) at the input of the
monovibrator.
If the single wire has been cut there is no need to solder
the ends of the wire; it is sufficient to tie the
separated ends with a bow knot in order to restore the line. They
measured the loss of energy in the single
wire when transmitting relatively HIGH POWER over the distance of 100
meters. It was reported to be
ALMOST ZERO.
The phenomenon disclosed contradicts contemporary accepted
science. But the article claims it works!
This information, if accurately presented, suggests that some type of
scalar-wave transmission might be
involved. A normal electric sonic frequency signal would be unlikely
to travel (or be guided) along a
conductor of 100 m without significant losses.
A scalar field can be generated from just about any type
of energy, sound, electricity, magnetism,
light, etc.. That energy simply has to be IN VIBRATION so that it
can be 180 degree phase reversed to
create the hyper space bubble or the soliton bubble called a scalar
potential or a scalar field, or even a
'quantum potential'. These bubbles can be sent down a guided conductor

as successively driven bubbles for
information or energy transmission.
So, the energy is vibrating at a frequency determined by
the vibration across the diameter of the mass
structure. When this frequency (as in some cases) is phase reversed,
it creates the scalar potential bubble.
The energy disappears from our detection threshold and creates a
stress wave in hyper space. From that
point, it can be sent to a target where it is received, the phase
restored to 3D space coordinates and the
energy is again available for use, all with the minimum diminution of
energy.
The one major problem is our understanding of how to
receive these scalar bubbles. Transmission
appears to be simply a 180-degree phase shift, done with a bifilar
wire to cancel the magnetic component, a
moebius to create the one-dimensional surface (pure electric wave of
Hooper) or a caduceus.
For reception of a scalar potential, the bubble still has a
vibrational component that can be accessed
via resonance. Using a caduceus or moebius antenna tuned to the
frequency of the transmitted scalar bubble,
it would be received but not detectable with normal instrumentation
UNTIL the phase had been restored. It
is best understood as an enfolding process where the wave is folded
onto itself (like a doughnut vortex),
moved to the target, then opened back up.
I have also been told that the scalar is a kind of building
block for all energy. Once the energy has
been converted to the base form of scalar, it can be 'reconverted' to
any type of energy in our 3D space.
Thus, using scalars, you could convert sound to scalar, then scalar
back into electricity or light to scalar,
then back to magnetism.
At this time, I think the form of the re-conversion back to
3D space is dependent on the medium used
for its reception. That is a coil would produce magnetic energy, a
capacitor would produce electrostatic
energy and I have no idea how sound would be produced direct from
scalar energy. There are indications it
is a matter of frequency based on the 'aether spectrum'.
At this point, perhaps these correlations will lead to
something practical. It is not over unity because
we are dealing with power transmission, not generation. Where this
information is useful, is in providing
very high transmission efficiencies approaching unity, but that is a
start...

726. Re: Coax conduit to tower

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-09 23:09:09 UTC
From: Sylvan Butler <Znospam+noZs_0207@hpb13799Z.Zboi.hpZ.com.invalid>
Message-ID: <slrnaimr8f.mls.Znospam+noZs_0207@hpb13799Z.Zboi.hpZ.com.invalid>
Source record: 139067

On Tue, 09 Jul 2002 19:08:50 GMT, Roger Halstead <rdhalste@tm.net> wrote:
> "Sylvan Butler" <Znospam+noZs_0207@hpb13799Z.Zboi.hpZ.com.invalid> wrote in
> message
> news:slrnaijqpp.h8c.Znospam+noZs_0207@hpb13799Z.Zboi.hpZ.com.invalid...
>> Yup. I've some 2" in place right now that is plenty big enough to
>> hold the additional I want to pull thru it, but the way the existing
>> cable is lying on the corners, I can't get the new ones to go thru.
>
> Go to an electrical supplier and get a couple cans of cable pulling soap
> (usually an ugly bright yellow). When you go to pull in another cable,

Got it.

> liberally coat the new cable with the soap. Acually you fill your hands with
> the stuff and pull the cable throught them.

I pulled thru a continually soaked a terry towel, or actually my
helper did, while feeding in the cable. Things were dripping...

> Considering you already have cables in the conduit without the soap, you

Nope. They are soaped with the yellow teflon (or is it wax?)
-bearing goop. It dries out but leaves a slick film EVERYWHERE.

> might want to take a quarter inch rope and pull it through a few times after
> liberally soaping it up.

That's an idea. My original pull line was 1/4" yellow poly (600lb
test). Also tried some smaller twine but still hung same place.

> If it's only a few feet to those cornerswhere the cable hangs, you might try

About four feet vertical from one end.

> attaching a 1/4 tygon tube to the soap can and thouroughly soaping the
> corners as well. With the corners, old coax, and new coax soaped up well,
> it will just push the old coax over and slide right on through.

My trouble is probably because the old stuff isn't coax. It is 3 *
#6, 9 * #12, and 2 * #10. The 3 * #6 kind of spiraled together as
they were pulled in, and they lay pretty heavy. They feel about as
awkward as if they were a single 4/0 (which I've run 2x in another
pipe). I've put more than 100 pounds on the new bundle pull line.

I'll try getting some goop around at the corner. Also going to have
to try again slimming down the head of my new bundle... Might try
pulling multiple smaller bundles (I'm trying to add another #6 and
12 * #12 ...). Right now it is a really solid "thunk" when it hits

the existing wires in the sweep.

> With *things* liberally soaped up, you can pretty much put the 10# in the 5#
> bag, so to speak. We've pulled so many wires through a conduit that there
> was a guy at each bend, plus about every 10 feet beating on the conduit
> (steel in this case) with a hammer to pull through more. When taken out some
> years later, they looked like they'd been molded into the pipe.

Yikes! They had been molded in. Or hammered! :)

Was that adding new wires into an already full run or pulling a new
bundle thru empty conduit? I've pulled some pretty full initial
loads, but adding more is always worse.

How did you attach the bundle to your pull line? Usually I have
enough room to do a really secure attachment, but not this time. I
tried a long overlap but somewhere over 100 lbs pull the pull
line slipped thru without moving the bundle. :(

> I just did a recount and I have 6 LMR-400 and 6 RG8X size coax cables which
> includes one with two RG-6 coax cables and the control cable for the C-band
> satellite dish, and 3 rotor cables (one for rotor and two for switching)
> through 3 inch conduit.

:) Yeah, larger conduit is much better than multiple smaller runs.
I'm not running anything under 3in for coax. Unfortunately the
electrical isn't that big... (usually 1-1/4in to 2in)

> I could probably squeeze in another three, although I'd like to make two
> runs of LMR 900 (if the stock market ever comes back up)

:(

> Just don't forget the soap! It not only makes pulling in more cables a
> breeze, it's much easier on the cables themselves.

Definitely. I'd never put 100 lbs pull on LMR-400. Who knows what
the impedance would be after that!

You gave me some more ideas and renewed hope. Now I've got to crawl
into that hot attic again.

Thanks!

sdb
--
| Sylvan Butler | Not speaking for Hewlett-Packard | sbutler-boi.hp.com |
| Watch out for my e-mail address. Thank UCE. >>>> change ^ to @ <<<< |
They that can give up essential liberty to obtain a little temporary
safety deserve neither liberty nor safety. --Benjamin Franklin, 1759
Stop Palladium, TCPA and Senator Fritz Hollings, NOW!
http://www.cl.cam.ac.uk/users/rja14/tcpa-faq.html

727. Re: Matching coil vs antenna length - mobile antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-09 23:10:46 UTC
From: k7itm@aol.com
Message-ID: <3200347.0207091510.41afa94a@posting.google.com>
Source record: 139066

So...the antenna part (your nominally half-wave vertical in this case, fed against the car body as a ground plane presumably) has some feedpoint impedance at all frequencies. It will look like a fairly high impedance (hundreds of ohms), resistive, at resonance, and be reactive above and below that resonant frequency. You can always tune out the reactance by putting some inductance or capacitance in series, or in parallel; your coil can serve that purpose in addition to stepping up the impedance, if the antenna feedpoint is capacitive. You can get analytical about it if you really want: you can find tables or graphs of the feedpoint impedance versus frequency, or use an antenna program to get it...even the evaluation version of EZNEC should do, I think. Then the tapped coil can be thought of as two coils which also have mutual inductance...that probably gets a bit harder to evaluate. Whether it's worth getting analytical or not probably depends a lot on how much effort it would be for you and what you'd get out of it. But I would expect that you could get a good match by using a tapped coil and a capacitor; that lets you have two adjustments (the cap and the coil tap) which you pretty much need to get both the resistive and the reactive part matched. Or, as you note, you can do it with the coil tap and the antenna length. A "trombone" sort of sliding section on the antenna makes that part easier.

Cheers,
Tom

"KA8DDZ" <ka8ddz@hotmail.com> wrote in message
news:<GrrW8.299$CG6.12810531@newssvr15.news.prodigy.com>...
> I have recently started turning up the flame on antenna building. I have not
> used matching coils in the past as most everything I have made was 1/4 wave.
> I recently put a 1/2 wave 6m vertical on the car and I am very pleased with
> it's performance.
>
> My question is, when tapping around for the lowest SWR on the coil I assume
> I have the best impeadance match but the dip or flat SWR comes at 53 Mhz, I
> will of course extend the length of the antenna since I am looking for 51Mhz
> but how much does the coil effect the resonance of the antenna. Im not sure
> if I am using the right terminology but it seems based on all the swr
> readings I have taken is that no matter where I tap the coil the only way to
> get it to resonate is to change the length. In this configuration should the
> matching coil be able to compesate for a long or short antenna? or does it
> have to be resonant FIRST then transform the impeadance to 50 ohms?
>
> Tim ka8ddz

728. Shack resonates at 40M

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-09 23:33:43 UTC
From: cprstn54zz@att.net
Message-ID: <3d2b72d4.17317968@news-server.optonline.net>
Source record: 139068

When I TX on 40M at anything over 50 watts, my smoke detectors set off my house alarm. Also, my shack seems to get a little RF hot at 40M. This doesn't happen up to and beyond 100 watts on any other band, from 160M to 10M. I can measure the field on my Radio Shack field strength meter, which deflects full scale at max sensitivity at 1" from the mic. I do not get a shock from my mic tho, so it is not all that hot.

I am using a sloping multiband dipole. There is a horizontal 40 ft. long metal A/C duct (grounded) pointing at the antenna hub, but 10 ft away from it. My RG-8X coax feed line runs along the length of the duct and 6" away from it. There is also some electrical wiring running parallel to the feed line and 6" away for up to 15 ft.

In addition, there are three vertical steel fireplace flues terminating around 2 ft from the dipole hub -- all of them also grounded. One is 22 ft long, the second is 30 ft. long and the third is 40 ft long (all plus or minus 2 ft). The 30 footer is 1/4 wavelength at 40M.

I believe I am pumping some RF into the house ground at 40 M through the duct, the flues or the electrical wiring. Is my feed line doing it, or is the antenna RF lighting up my duct the flues and my house ground? BTW, before I bought and installed the antenna the manufacturer opined that neither the duct nor the flues would impair propagation. I didn't ask him about other possible problems -- like the one I am experiencing.

I could relocate the feed line away from the duct, but it would then be closer to plumbing lines and other wiring. I could also try disconnecting the duct and flues from the house ground or choking the lead(s) to the furnaces/fireplaces which effect(s) the grounding. Any oher thoughts?

I have seen some postings on solving the smoke detector problem. Should I just try to solve that, or is that just a symptom?

Ken KC2JDY

Ken
(to reply via email
remove "zz" from address)

729. IT IS A TV PROBLEM!

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-10 00:14:49 UTC
From: margeo67@aol.comremove
Message-ID: <20020709201449.19274.00002795@mb-mt.aol.com>
Source record: 138969

Thanks guys. I hooked up the suspect antenna cable to another tv set and the other tv had no problem. What do you think the culprit is now???
Vic

730. Re: Shack resonates at 40M

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-10 00:31:45 UTC
From: "H. Adam Stevens" <solo@totalaccess.net>
Message-ID: <uin05ohbh1i59@corp.supernews.com>
Source record: 138971

Can you move the antenna around? Is it a good match on 40?
The feedline is likely irrelevant if it's quality coax and matched at the antenna.
Something is resonant. (DUH).....
This is good for antennas and bad for alarms.
Walk around with the field strength meter. TAKE DATA, LOOK AT IT, PLANNING IS CHEAP.
This stuff is always fun. Nature contains exquisite beauty.

If you understand the issue, a simple, elegant solution usually presents itself.
This is physics, after all, not superstition.

Mindless, shotgun "solutions" waste time and energy.
Make sure the fundamentals are correct.

I have a double bazooka on 40 that plays nicely.
My 80 meter bouble bazooka used to set off the alarms 'till I moved it.
This is all at 1200 watts PEP.
H.
NQ5H

"Ken" <cprstn54zz@att.net> wrote in message
news:3d2b72d4.17317968@news-server.optonline.net...
> When I TX on 40M at anything over 50 watts, my smoke detectors set off
> my house alarm. Also, my shack seems to get a little RF hot at 40M.
> This doesn't happen up to and beyond 100 watts on any other band, from
> 160M to 10M. I can measure the field on my Radio Shack field strength
> meter, which deflects full scale at max sensitivity at 1" from the
> mic. I do not get a shock from my mic tho, so it is not all that hot.
>
> I am using a sloping multiband dipole. There is a horizontal 40 ft.
> long metal A/C duct (grounded) pointing at the antenna hub, but 10 ft
> away from it. My RG-8X coax feed line runs along the length of the
> duct and 6" away from it. There is also some electrical wiring
> running parallel to the feed line and 6" away for up to 15 ft.
>
> In addition, there are three vertical steel fireplace flues
> terminating around 2 ft from the dipole hub -- all of them also
> grounded. One is 22 ft long, the second is 30 ft. long and the third
> is 40 ft long (all plus or minus 2 ft). The 30 footer is 1/4
> wavelength at 40M.
>
> I believe I am pumping some RF into the house ground at 40 M through
> the duct, the flues or the electrical wiring. Is my feed line doing

> it, or is the antenna RF lighting up my duct the flues and my house
> ground? BTW, before I bought and installed the antenna the
> manufacturer opined that neither the duct nor the flues would impair
> propagation. I didn't ask him about other possible problems -- like
> the one I am experiencing.
>
> I could relocate the feed line away from the duct, but it would then
> be closer to plumbing lines and other wiring. I could also try
> disconnecting the duct and flues from the house ground or choking the
> lead(s) to the furnaces/fireplaces which effect(s) the grounding.
> Any oher thoughts?
>
> I have seen some postings on solving the smoke detector problem.
> Should I just try to solve that, or is that just a symptom?
>
> Ken KC2JDY
>
>
> ----
> Ken
> (to reply via email
> remove "zz" from address)

731. Re: Matching coil vs antenna length - mobile antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-10 00:33:43 UTC
From: Reg Edwards <g4fgq.regp@btinternet.com>
Message-ID: <agfvd6ltk1@venus.btinternet.com>
Source record: 138970

> You can't use the VSWR readings to establish resonance.

==========

Sorry to disagree.

If frequency is varied while observing the SWR meter then the resonant frequency is where minimum SWR occurs. The input resistance of the transmission line will then be a pure resistance as it should be at resonance.

But what the won't tell you is whether the input resistance is greater or smaller than 50 ohms. For example: if minimum SWR is 2-to-1 then the line input resistance is either 25 or 100 ohms which is rather a large uncertainty.

Reg, G4FGQ

732. Re: BACK TO BASICS - EM waves, E and H fields, in phase

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-10 00:54:15 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <l61niu01urt4siaqab6jn6011qal64rr7u@4ax.com>
Source record: 138972

On 09 Jul 2002 22:31:09 GMT, k1bqt@aol.com (Rick Littlefield) wrote:

>I "predicted" you would resond, Richard, but I never could have determined your
>words ahead of time.

Hi Rick,

You may have predicted, but you cannot make a future determination as
you describe without it becoming (obviously) - a prediction - your
statement which then negates itself:
>I [successfully] "predicted" you would resond, Richard,
>but I [failed to predict] never could have determined your
>words ahead of time.
Sounds like the testimony of the central players in the WorldCom (or
fill in the blank ______) scandal before congress. There may be an
accounting career in your future.

73's
Richard the III (actII, sc1)

733. Re: BACK TO BASICS - EM waves, E and H fields, in phase orinquadr...

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-10 01:08:01 UTC
From: 2w8ji@contesting.com
Message-ID: <3d2b8848.38360393@news.akorn.net>
Source record: 138973

On Tue, 09 Jul 2002 18:21:12 GMT, Richard Clark <kb7qhc@attbi.com>
wrote:

Richard,
Did you respond to my comments about ONE of the means that high
voltages can be generated despite having low differetial feedpoint
voltages? I hope it was clear enough.

My server seems to be dropping or delaying newsgroup messages for some
reason.

73 Tomr

734. Re: antenna (relay) switch?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-10 01:12:39 UTC
From: 2w8ji@contesting.com
Message-ID: <3d2b8902.38546300@news.akorn.net>
Source record: 138974

On Tue, 9 Jul 2002 18:48:32 +0000 (UTC), David E Allen
<davea@mse13.cos.agilent.com> wrote:

>Hi, all.
>I am trying to build a relay-operated antenna switch for HF.
>I threw together one in a 4x4x1" box with 2 so-239 connectors on
>one side, a bnc (for the common) on an adjacent side, and a "mini" relay
>from radio shack to do the switching.

Normally such a short lead (four inches) won't cause problems.

Make sure the ground path is good. Some boxes are folded and painted,
and some have clear anodized surfaces that is a good invisible
insulator.

Also, be sure you use a fairly thick conductor and avoid woven or
finely stranded wire for connections.

Other than that, you might have a bunch of small problems adding up.

73 Tom

735. Re: My 85' dipole is actually 94'!! Another ??

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-10 01:21:08 UTC
From: Dick Carroll <dixie@townsqr.com>
Message-ID: <agg264$dk2$0@208.206.142.108>
Source record: 138975

CAM wrote:
>
> Dick Carroll wrote:
> >
> > CAM wrote:
> >
> > > You keep saying the present exams are easier than they were in the past
> > > but the Extra exam I took and the present Extra exam contain questions
> > > on the Smith Chart.
> >
> > Yep. And the question pool included the exact answer!
>
> What good would inexact answers be?

Useful as distractors, but not on the question pool only on the test. I understand some vendors don't include distracters in the question pool.

Even my 1951 ARRL License Manual
> contained exact answers if not exact questions.

Yep. One never had any good idea what they were going to ask on the test, so one tended to make darn sure you were ready by learning the information discussed, usually at length, in the study guide also known as the License Manual of the time. Getting an advance copy ot any test was at the risk of FCC fine or jail, and for darn sure disqualification for any ham radio license.

>
> > > In fact I would like to learn how to use the chart even now.
> > >
> > Do you know how to plot impedances on a Smith Chart?

No, I don't. That device is a most un-intuitive tool from my point of view.

It's hardly any
> > > harder than plotting points on a graph.

In fact, a simplified tutorial
> > > on the Smith Chart might be interesting to a lot of people.

I've long believed just that. The writings I've seen to date all seem directed at engineers who are already pretty well familiar with the details involved. I haven't had a chance to look over the stuff I downloaded and printed today in any detail, so there may be something different in it, but a tutorial from the beginning would be a welcome change.

Would you
> > > be willing to participate in a thread titled, "Smith Charting Made Easy"?
> > > That's a half finished magazine article of mine.
> >
> > Indeed I would, it's been long overdue. Bring it on. And finish the
> > article.
>
> The article depended on the great graphics generating capability that
> I had access to as a marketing engineer with Intel. I can't generate
> those sophisticated graphics anymore. But at your request, I will start
> a thread titled, "Smith Charting Made Easy".

Hey, that was at your offer! But go ahead and I'll try to stay with
you.

We'll see what kind of teacher you are. If you can teach an old dog like
me the Smith Chart I'll consider you a success.

736. Re: Matching coil vs antenna length - mobile antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-10 01:21:46 UTC
From: CAM <w5dxp@hotmail.com>
Message-ID: <3D2B8C2A.25D42D9D@hotmail.com>
Source record: 138976

Dan Richardson wrote:
>
> On 09 Jul 2002 19:37:03 GMT, k0bg@aol.com (K0bg) wrote:
>
> >You can't use the VSWR readings to establish resonance.
>
> I think you'll find that lowest VSWR reading will be at the resonate
> point. Not necessarily 1:1 but the lowest point indicated.

My MFJ-259B indicates the lowest (50 ohm) SWR is not at the purely
resistive point and I don't know why.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
------== Over 80,000 Newsgroups - 16 Different Servers! =-----

737. Force 12 Flagpole Antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-10 01:25:02 UTC
From: Van DeWald <dewald@bellsouth.net>
Message-ID: <3D2B8CEE.A39220AA@bellsouth.net>
Source record: 138977

Anyone have experience with the Force12 Flagpole Antenna? They have the antenna and associated base/coax kit for $129 plus shipping. Seems like a good solution for a restrictive neighborhood, and a good chance to be patriotic as well. I've got a nice place for it on the corner of our house, and have access to a flood light which could be used to spot the flag. Any thoughts?

Regards,
Van, KG4PTM

738. Re: BACK TO BASICS - EM waves, E and H fields, in phase

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-10 01:25:31 UTC
From: CAM <w5dxp@hotmail.com>
Message-ID: <3D2B8D0B.ECE11229@hotmail.com>
Source record: 138978

Rick Littlefield wrote:
> No matter, I guess
> we're still related (along with Cecil who can't keep his hands off my sister)!

Would you believe that I'm a lesbian trapped in a male body?
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

739. Re: BACK TO BASICS - EM waves, E and H fields, in phase orinquadr...

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-10 01:29:39 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <4i3niu4b0e24hol8uo08fj2n6i0sad5jpg@4ax.com>
Source record: 138979

On Mon, 08 Jul 2002 22:34:40 GMT, 2w8ji@contesting.com (Tom W8JI)
wrote:

>The "across" impedance

Hi Tom,

Is this Common or Differential Mode?

73's
Richard Clark, KB7QHC

740. Re: The Torch is Passed

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-10 01:40:09 UTC
From: " J. Harvey" <JM002.Harvey_TRIMTHIS_@Sympatico.ca>
Message-ID: <YfMW8.1943$KY6.817841@news20.bellglobal.com>
Source record: 138980

"W.G Ewald"
> http://people.bu.edu/nca/aces.pdf

A thousand chimpanzees writing bad Shakespeare...

741. Re: Matching coil vs antenna length - mobile antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-10 01:45:33 UTC
From: CAM <w5dxp@hotmail.com>
Message-ID: <3D2B91BD.3262B883@hotmail.com>
Source record: 138982

Reg Edwards wrote:
>
> > You can't use the VSWR readings to establish resonance.
>
> ================================
>
> Sorry to disagree.
>
> If frequency is varied while observing the SWR meter then the resonant
> frequency is where minimum SWR occurs. The input resistance of the
> transmission line will then be a pure resistance as it should be at
> resonance.

I'm not saying these measurements are correct, Reg, just reporting
what my MFJ-259B says. For my antenna system, it says minimum SWR
occurs when the resistance is 42 ohms and the reactance is 8 ohms.
It says the purely minimum resistance at resonance is 21 ohms.

50 ohm SWR for 42+j8 is 1.3:1 at 7.120 MHz

50 ohm SWR for 21+j0 is 2.4:1 at 7.015 MHz

The MFJ-259B is reporting that the resistance is changing with frequency
much faster than the reactance - for a one wavelength dipole fed with
3/4WL of ladder-line on 40m - so that minimum 50 ohm SWR does not
occur at system resonance. Could this be a function of an antenna
operated at the voltage maximum feedpoint.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
------== Over 80,000 Newsgroups - 16 Different Servers! =-----

742. Re: Back To Basics - Antenna Reciprocity

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-10 01:45:36 UTC
From: Dick Carroll <dixie@townsqr.com>
Message-ID: <agg3k0$g73$0@208.206.142.108>
Source record: 138981

CAM wrote:
>
For a
> center-fed antenna, removing the feedline drastically
> changes the antenna characteristics so what is the meaning
> of "reciprocity" after we remove the feedline?

It means that the drastically changed antenna is still reciprocal as a
drastically changed antenna.

Dick

743. Re: Back To Basics - Antenna Reciprocity

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-10 02:05:23 UTC
From: CAM <w5dxp@hotmail.com>
Message-ID: <3D2B9663.1C6006C7@hotmail.com>
Source record: 138983

Dick Carroll wrote:
> It means that the drastically changed antenna is still reciprocal as a
> drastically changed antenna.

Bart has reminded that the reciprocity theorem requires a transmitter
and a receiver connected to those antennas.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
------== Over 80,000 Newsgroups - 16 Different Servers! =-----

744. Re: horizontal loop revisited

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-10 02:52:38 UTC
From: CAM <w5dxp@hotmail.com>
Message-ID: <3D2BA176.E67E4A8@hotmail.com>
Source record: 138985

N4LQ wrote:
> Question: How is the loop a "balanced antenna"? Looks to me like the concept
> of being balanced doesn't apply as it does a dipole.

The loop is "balanced" because the impedance referenced to ground
is close to the same looking either direction at the feedpoint (as
it also is with a dipole).
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

745. Re: BACK TO BASICS - EM waves, E and H fields, in phase

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-10 02:56:16 UTC
From: Fred Hambrecht <w4jle@charter.net>
Message-ID: <uin8iils94cj04@corp.supernews.com>
Source record: 138986

See, that makes us related...

"CAM" <w5dxp@hotmail.com> wrote in message
news:3D2B8D0B.ECE11229@hotmail.com...

> Would you believe that I'm a lesbian trapped in a male body?
> --
> cheers, CAM http://www.qsl.net/w5dxp
>
>
> -----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
> http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
> -----== Over 80,000 Newsgroups - 16 Different Servers! =-----

746. Making a flexable handheld VHF antenna, any ideas?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-10 03:17:13 UTC
From: grant <5@6.7>
Message-ID: <ZGNW8.32071$P%6.2623817@news2.west.cox.net>
Source record: 138988

Hello,
I am interested in finding out how to possibly build flexible handheld VHF antennas.

Any of you here done this before?

I have been given some suggestions as to using something like speedometer cable housing for the casing and also using guitar string for the antenna element wire. Cut the wire to the appropriate length and solder it to the BNC connector. Put it in the housing. Possibly epoxying the base or using glue filled heat shrink to stiffen the base and cap the top.

I am looking to replace an antenna for a VHF marine band radio. I bought this 15" flexible antenna http://members.cox.net/radiocheck/Antenna.jpg , about ten year ago from a marine electronics store called Neptune Electronic in San Pedro. It had no packaging at the time, and was just under the glass counter, and they said it was for the VHF marine band. It has been MUCH better than the stock 7" flex antenna that come with the Standard Horizon HX220S that I use, and as you can see from the picture it gets used a lot at work. In fact part of metal are falling out of the BNC connector on the antenna.

I could use a 30"(approximately) metal telescopic antenna which I have and get even better reception, but the length and stiffness of such an antenna breaks the BNC fitting at the top of the radio if the radio is moved around to much or to quickly as I do at work. So this 15" flexible antenna has been perfect because it is thin and light, but flexes if hit or the radio is jarred, and I move around a lot at work and need to have the radio with me. So I've also been thinking that the building materials could be something like using a bicycle break/shift cable housing, and using some good copper wire for the element. Any ideas as to what would be the best housing and element material, so that it would be as thin as possible, light and still flexible? And I really need this longer antenna because I need/like to hear stations that are well away from the harbor at times, further away than the stock 7" will receive.

These VHF FM marine band radios use a frequency range of 156.2500 - 157.4250 (plus 161.8000 - 162.0000 for "marine operator" repeater outputs). And this Standard Horizon has a transmit power of 1watt and 6watt.

I gotten a formula for cutting the wire to the appropriate length and here it is:

Now I don't know much about this stuff yet. And I am just assuming that I understand the 1/4, 1/2, 1/8 wave idea. Correct me if I'm wrong.

So using 156.800 (channel 16) as the frequency I get:

1/4 wave; 234 / 156.800 = 1.4923469, then x 12 = 17.908162, then x .8 = 14.326529
inches.

1/2 wave; 468 / 156.800 = 2.9846938, then x 12 = 35.816325, then x .8 = 28.65306
inches.

And looking at the math going on here I just assumed the a typical stock 7-8" antenna is 1/8 wave. Again, correct me if I'm wrong.

And going up in length gets proportionally better reception. Does that also mean the transmission gets better as well? Again, for my handheld, I want reception as the key feature I want out of it. After I hear someone calling for assistance I can run to the boat for best transmission on the fixed mount VHF marine radio if the handheld is not getting through to them.

Now there are antennas on the market that sold where they say that they "cut length to frequency". And some of those out there that look interesting to me are said to be "base loaded", and end up being not quite as long as a straight element antenna. One company called Smiley Antenna makes a model called the "5/8 Slim Duck" http://www.htantennas.com/2meter.htm that is base loaded. Would an antenna like this be better than a straight element antenna? Is making a "base loaded" antenna possible?

Well enough for now. Any Ideas?

Grant

747. Solving a problem with the Smith Chart

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-10 03:29:09 UTC
From: CAM <w5dxp@hotmail.com>
Message-ID: <3D2BAA05.5C3221C3@hotmail.com>
Source record: 138989

This is for Dick and anyone else who wants to observe the usefulness of the Smith Chart. Here's a real world problem for us to solve. The G5RV is a poor performer on 30m. Let's use the Smith Chart to diagnose why and modify that G5RV to perform well on 30m.

Position a Smith Chart in front of you so the only straight line on the chart is horizontal with 1.0 in the middle and 2.0, 3.0, 4.0, ... to the right. The Smith Chart is a graph upon which complex impedances can be plotted. That horizontal line is the purely resistive line. All impedances with zero reactances can be plotted on that line. Note that all the way to the left on that horizontal line is zero ohms and all the way to the right on that line is infinite ohms. Since all common resistances fall in that range, we can plot any resistance in the world on that line.

The Smith Chart is normalized to a certain characteristic impedance, i.e. the characteristic impedance (Z0) of the transmission line with which we are dealing represents that 1.0 in the middle of the Smith Chart. For our G5RV example, the Z0 of the twinlead is 300 ohms. Thus, the 1.0 in the center of our Smith Chart will represent 300 ohms. All resistances less than 300 ohms will fall to the left of center on that horizontal line and all resistances more than 300 ohms will fall to the right of center on that horizontal line. Zero ohms is still all the way to the left and infinite ohms is still all the way to the right on that horizontal line. For all points on that horizontal line, the reactance is zero.

In order to plot points on our Z0=300 Smith Chart, we must normalize the different impedances to 300 ohms. That means simply dividing the impedances by 300 ohms. So 300+j0 divided by 300 equals 1.0+j0 and represents the point in the center of the Smith Chart. 50+j0 on a Z0=300 Smith Chart becomes 50/300 = 0.167+j0. 1500+j0 ohms on a Z0=300 Smith Chart becomes 1500/300 = 5.0+j0 ohms.

Time for a checkpoint. Normalize the following seven values of resistance and plot them on the horizontal line on a Smith Chart normalized to Z0=300.

20+j0 ohms, 50+j0 ohms, 100+j0 ohms, 300+j0 ohms,

600+j0 ohms, 1200+j0 ohms, 3000+j0 ohms
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!

------== Over 80,000 Newsgroups - 16 Different Servers! =-----

748. G5RV Question

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-10 03:30:32 UTC
From: KA3MTT <nani@fuse.net>
Message-ID: <uinam0l1e0r53c@corp.supernews.com>
Source record: 138990

Greetings! I have a question concerning my G5RV that I just recently installed. I have my shack in the basement, and my RG-8X runs through a PVC pipe that my builder installed between my walls. The pipe leads all the way to the attic, which is where I have the ladder line part of the G5RV arranged in a horizontal loop configuration. I know you're supposed to have it hanging vertically, but there was no way for me to conceivably arrange it that way. The ladder line then terminates into the dipole part of the G5RV outside at the corner of my roof gable. The dipole portion is approx. 51 feet on each side. I am using an externall antenna tuner and can not get a match on 80 meters and 15 meters. I get a half-way decent match on 10 meters, but the receive side is lacking. Anyone have any suggestions for these bands? Thanks in advance for your time. 73's, Nathan KA3MTT

749. Re: BACK TO BASICS - EM waves, E and H fields, in phase orinquadr...

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-10 03:44:00 UTC
From: richardharrison@webtv.net
Message-ID: <4717-3D2BAD80-909@storefull-2393.public.lawson.webtv.net>
Source record: 138994

Tom, W8JI wrote:
"---some people need a clear single-sentence phrase to help them understand that the differential mode conditions, including voltage, do not have a fixed relation to common mode voltages."

Wrong.

For example, take a 1/2-wave simple horizontal dipole center-fed with ladder-line at ordinary height above the earth. Take the feedline off at 45/135 degrees, not 90/90 degrees.

We unbalance the feed by lack of the perpendicular, and create a common-mode.

When we transmit, some unbalanced r-f (with respect to earth for Richard Clark) is likely to appear at the sender to bite Cecil, should he be operating. This energy has made a round-trip, starting as a differential signal and returning as a common-mode signal.

We may enjoy the jeopardy and leave things just as they are.

So long as the transmitter output is constant and no physical or electrical changes are made, the common-mode energy returned to the transmitter will remain the same. The relationship is fixed for this set of conditions.

This is like the voltage divider analogy I gave earlier. It can be reset, but once set, it can be relied upon to retain its position and function.

The common-mode voltage at the sender can be stated as a percentage of the transmitter output voltage. Measurement of the voltages is all that you need to calculate a percentage.

Best regards, Richard Harrison, KB5WZI

750. AB-577/GRC

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-10 03:52:14 UTC
From: nedrog@aol.comNOSPAM
Message-ID: <20020709235214.01501.00000317@mb-dd.aol.com>
Source record: 138992

Looking for source for adapter from the top to a 2" pipe to mount the rotator.

73's

Howard W3CQH
W3CQH@ARRL.NET

751. Re: Ham Band Use for Direct TV Dish and LNA?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-10 03:54:08 UTC
From: Richard Miles <richamil@charter.net>
Message-ID: <3D2BAFE0.9000805@charter.net>
Source record: 138993

Actually there are good uses for it besides using it for a planter. A
friend of mine K7PF modified one to use with a 2.4G wireless netowrk.
The primary modification was to the antenna feed. he used a tin can fed
about two inches from the end and mounted it with a hose clamp to the
LNB arm
The initial tests were very good with about 20-25 db of gain realized.

Richard Miles K7RNZ

Dick Carroll wrote:
>
> Dick Carroll wrote:
>
>>"Christopher A. Bowne" wrote:
>>
>>>A discarded (for reasons unknown) DirecTV dish and LNA followed me home from
>>>the freebie shed at our local town dum..err. solid waste recycling facility.
>>>Other than mounting it on the house to fool the neighbors into thinking we
>>>have satellite TV, does it have any practical UHF ham band application?
>>>
>>
>> It'd make a good "dummy'. Mount it high and run RG58 to it-but don't
>>hook the dish end of the coax to anything, just let it float. Load the
>>coax shield as a random wire antenna vertically polarized. You won't
>>even have to worry about antenna insulators. Lay a 30-40 foot wire on
>>the ground in a flower bed etc. for the counterpoise.
>>
>> I use a "spare" dish mounted on a discarded floor model electric fan
>>stand (which breaks down for compact storage) for portable satellite TV
>>when we travel.
>>
>>Dick
>
>
>
> With a little imagination you can invent your own name for it.
> Something like cross attitude field or XZY H.....

752. Re: IT IS A TV PROBLEM!

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-10 04:32:37 UTC
From: richardharrison@webtv.net
Message-ID: <4717-3D2BB8E5-919@storefull-2393.public.lawson.webtv.net>
Source record: 138995

Vic wrote:
"What do you think the culprit is now?"

The vertical bar depends on fairly weak desired signals and worsens at lower frequencies.

R-F interference generated within the set is the likely cause. The most powerful harmonic generator is the horizontal output / sweep citrcuit.

This would be an intolerable design defect, so it`s likely caused by a circuit failure. A bad part.

I wouldn`t advise you to cover the set with aluminum foil and super-shield all the antenna parts within the set. Just replace the bad part.

Best regards, Richard Harrison, KB5WZI

753. Re: Making a flexable handheld VHF antenna, any ideas?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-10 05:08:01 UTC
From: Bob Headrick <bobh@proaxis.com>
Message-ID: <uinga196aqmo29@corp.supernews.com>
Source record: 138997

"grant" <5@6.7> wrote in message
news:ZGNW8.32071$P%6.2623817@news2.west.cox.net...
> Hello,
> I am interested in finding out how to possibly build flexible handheld VHF
> antennas.
[snip]
> I am looking to replace an antenna for a VHF marine band radio. I bought
> this 15" flexible antenna http://members.cox.net/radiocheck/Antenna.jpg ,
> about ten year ago from a marine electronics store called Neptune Electronic
> in San Pedro. It had no packaging at the time, and was just under the glass
> counter, and they said it was for the VHF marine band. It has been MUCH
> better than the stock 7" flex antenna that come with the Standard Horizon
> HX220S that I use, and as you can see from the picture it gets used a lot at
> work. In fact part of metal are falling out of the BNC connector on the
> antenna.

See http://www.aesham.com/pdf/096-103.pdf, the RD-78 or RD-98 may be what you are looking for. If you really want to build something you probably want a 1/4 wave of wire, you can coil it a bit to make things shorter overall. To be resonant the antenna should be 1/4 wavelength. 1/2 wavelength antennas have higher gain and need less of a counterpoise (which ends up being you for an HT), but they have very high impedance and need a matching network. 5/8 antennas have better gain but are not resonant and require a bit of a matching network. The 5/8 require a better counterpoise. Longer than 5/8 wave results in more signal going up in the air rather than to the horizon, and even half waves at this frequency are a bit unwieldy for an HT.

I have made 1/4 and 5/8 wave mobile antennas from thin fiberglass tubing running the wire up the center, but these are pretty stiff. For an HT I would just stick with commercial units. You can often pick these up for $5 or so at hamfests. A 2M rubber duck would probably be an adequate match, if not you could snip small lengths off the end.

An antenna that improves your reception will also improve your transmission.

Regards,
Bob Headrick

754. Re: My 85' dipole is actually 94'!! Another ??

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-10 05:08:20 UTC
From: 'Doc <w5lz@icok.net>
Message-ID: <3D2BC12A.BE28B785@icok.net>
Source record: 138996

CAM wrote:
>
> Dick Carroll wrote:
> >
> > CAM wrote:
> >
> > > You keep saying the present exams are easier than they were in the past
> > > but the Extra exam I took and the present Extra exam contain questions
> > > on the Smith Chart.
> >
> > Yep. And the question pool included the exact answer!
>
> What good would inexact answers be? Even my 1951 ARRL License Manual
> contained exact answers if not exact questions.
>
Hmm, not at all sure I would agree with that statement. The
license manuals had questions that were ~represenative~ of those
on
the tests, not the exact questions (same for the answers). I
can't
swear to that for the 'Extra', but I do know it to be true for
the
rest of the license class manuals.
I do think that the 'new' tests and testing procedures are
easier
than the older kind which had to be taken in front of an FCC
examiner.
Back then, there was no 'one source' to find all the information
you
needed to pass a test. There was also the intimidation factor of
that
little green room, the too small desks, and that burr-headed,
bow-tied,
be-specticaled examiner watching you from the front of the room.
Now,
there is a 'one source' place to find the questions and answers,
and
if you really want to know what they're asking, it's much easier
to find
out. Personally, the intimidation factor had more to do with how
well
I did on a test than knowing the information required.
As far as the integrity in testing, well, there were
'exceptions'

even under the FCC's testing. How many people do you know of who
ever
tested for a 3rd Class R.O. Permit with a 'Radar' endorsement?
And,
had the 'Permit' stamped with a 'Radar' endorsement?? There may
have
been more, but I only know of one. (LOL)
'Doc

755. Re: Matching coil vs antenna length - mobile antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-10 05:13:27 UTC
From: 'Doc <w5lz@icok.net>
Message-ID: <3D2BC25E.6DCA75B5@icok.net>
Source record: 138999

Dan,
You're right, in general, the lowest SWR
reading is usually the resonant point of the
antenna. But that's not true in all cases.
A 5/8 wave antenna is a good example.
'Doc

756. Re: antenna (relay) switch?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-10 05:18:42 UTC
From: 'Doc <w5lz@icok.net>
Message-ID: <3D2BC398.AB27ECAE@icok.net>
Source record: 138998

David,
I don't think the relay has much to do with
your problem. I think it's more in how your
TS-850 is set up, and the antenna system. At
least I've never had much of a 'cut-back' problem
with my '850 (and no, I haven't diddle-sticked it).
'Doc

757. W5QJR Loop Antenna Book - lost

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-10 06:32:07 UTC
From: Douglas Snowden <snowden@peoplepc.com>
Message-ID: <uin9k86otbau11@corp.supernews.com>
Source record: 138987

I seem to have lost my copy of W5QJR book on
small loops. I remember it had a orange or red cover.
Been looking for a long time. Anyone have one they
can spare (for a fee of course). I doubt it is still
available anywhere.

Doug N4IJ

758. Re: Matching coil vs antenna length - mobile antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-10 07:11:15 UTC
From: ryeburn@sfu.caz
Message-ID: <ryeburn-1007020011150001@bni030qny8kc.bc.hsia.telus.net>
Source record: 139000

In article <3D2B91BD.3262B883@hotmail.com>, CAM <w5dxp@hotmail.com> wrote:

> Reg Edwards wrote:
> >
> > > You can't use the VSWR readings to establish resonance.
> >
> > ================================
> >
> > Sorry to disagree.
> >
> > If frequency is varied while observing the SWR meter then the resonant
> > frequency is where minimum SWR occurs. The input resistance of the
> > transmission line will then be a pure resistance as it should be at
> > resonance.
>
> I'm not saying these measurements are correct, Reg, just reporting
> what my MFJ-259B says. For my antenna system, it says minimum SWR
> occurs when the resistance is 42 ohms and the reactance is 8 ohms.
> It says the purely minimum resistance at resonance is 21 ohms.
>
> 50 ohm SWR for 42+j8 is 1.3:1 at 7.120 MHz
>
> 50 ohm SWR for 21+j0 is 2.4:1 at 7.015 MHz
>
> The MFJ-259B is reporting that the resistance is changing with frequency
> much faster than the reactance - for a one wavelength dipole fed with
> 3/4WL of ladder-line on 40m - so that minimum 50 ohm SWR does not
> occur at system resonance. Could this be a function of an antenna
> operated at the voltage maximum feedpoint.

Warning: This is long, but I think no longer than necessary to describe what I found. If you don't like mathematics, skip this and read the next post after mine.

I thought about the very same question -- whether minimum SWR and resonance are the same thing -- many years ago, long before things like MATLAB and Maple and Mathematica were available, and got nowhere since the mathematics involved is an algebraic mess. I have a copy of Maple V Release 4, which is ancient history but was the current version when I retired from Simon Fraser University nearly 5 years ago; retired faculty can keep the site-licenced versions they had at retirement, but cannot get upgrades unless they pay for them themselves, and my retirement income isn't *that* large. The old version works, and does what I need.

I did a little bit of work with Maple tonight and Maple agrees that it's algebraically a mess. Here's how I set it up. Note that I normalized resistance and reactance variables to the transmission line impedance.

```
SWR:=
(abs(1+A+B*f+I*C*f)+abs(1-A-B*f-I*C*f))/(abs(1+A+B*f+I*C*f)-abs(1-A-B*f-I*C*f))
```

Here the parameter A is the normalized resistance (i.e., R/R_0) at the frequency of zero reactance. For example A would be 0.5 for 25 ohms if the transmission line impedance is 50 ohms. The variable f is the displacement from the frequency of zero reactance; it can be negative or positive, and is zero at the frequency of zero reactance. The parameter B can be negative or positive, and represents the rate of change of the real (i.e. resistive) part of the normalized impedance with respect to frequency; I am assuming that near the frequency of zero reactance, the resistive component changes (if at all) linearly with respect to frequency. Likewise C represents the rate of change of the reactive part of the normalized impedance with respect to frequency, and again I am assuming that the reactive component changes linearly with respect to frequency. In the event that the impedance goes capacitive above the frequency of zero reactance, and inductive below it, you have to take C to be negative; this happens for example at the centre of a full-wave dipole. Upper case I is what Maple demands one use for the square root of -1; my preference as a mathematician is lower case i, and electrical engineers use j. With this interpretation the formula for SWR is equivalent to the usual one.

The obvious thing to do is to differentiate SWR with respect to f, set the derivative equal to zero, and solve for f. Maple chokes when asked to do this, as I did many years ago, before Maple.

So I took some numerical values for A, B, and C and asked Maple to plot SWR for values of f near zero. What I found was interesting.

If I took A = 1 (in other words, at the frequency of zero reactance, the impedance is equal to the transmission line impedance and of course the SWR is 1), but took non-zero values for one or both of B and C, in the neighbourhood of f = 0 the graph showed an SWR of 1 at f = 0 as expected, and this was the minimum. Of course this is to be expected; you can't do better than perfection.

For the case where A = 1, the "curve" wasn't curved; there was a cusp at f = 0, as one would expect with absolute value functions. The derivative, in addition to being an algebraic mess, isn't zero at f = 0 in this case; it doesn't exist there, because of the cusp. For the cases where A > 1, or A < 1, the curve was curved, not cuspy, and the derivative would exist and be zero at the point where SWR is minimized. But as I indicated, setting the derivative equal to zero isn't the way to handle the question; life is too short.

If I took a value of A slightly greater than 1 (in other words, at the frequency of zero reactance, the impedance is real and greater than the transmission line impedance and the SWR is A), and took positive values for B, then whether or not C = 0, in the neighborhood of f = 0 the SWR was

not minimized right at f = 0 but the minimum occurred at a lower frequency; the decrease in resistance with decreasing frequency more than made up for the increase in reactance (when C was nonzero), when the initial resistance at the frequency of zero reactance was too large. Of course if I moved far enough to the left of f = 0, the increasing reactance (if C was nonzero) eventually made the SWR curve move upward again. When you think about it, this really isn't surprising. If instead I took negative values for B, exactly what you would expect happened -- the frequency of minimum SWR was somewhat to the right of f = 0. Again, for a while, when the initial resistance was too high at f = 0, moving in the direction in which resistance decreased overcame the damage done by increasing reactance. By playing with the numerical values of A, B, and C I could change the shape of the curve and the location of the frequency of minimum SWR, but for *all* the numerical choices I used (with A > 1), the same pattern always held, whether C = 0 or not. To get minimum SWR, one has to move away from f = 0 in the direction that brings the real part of the impedance closer to the transmission line impedance, but one should not move too far, or the reactance change will have its say and the SWR will go up again.

If I took a value of A slightly less than 1 (in other words, at the frequency of zero reactance, the impedance is real and smaller than the transmission line impedance and the SWR is 1/A), exactly the opposite happened. To minimize the SWR, one has to move in whichever direction increases the resistance, higher frequencies for B > 0 and lower for B < 0, and for a while this is more important than the increase of reactance from zero, but if you go far enough, eventually the reactance change becomes more important and the curve turns the other way.

If you have one of these programs, try it out. Play with reasonable, and not so reasonable, values for A, B, and C. You may have to choose the negative and positive bounds for f, for your plot, to be numerically quite small to see what is going on, if the minimum SWR frequency is very near, but not at, f = 0. If you confirm what I found (and even more important, if your plots *don't* confirm what I found!), let us hear about it. If you do find a contradictory result to mine, please let me know what the parameters are that produced it. I only tried a handful of numerical examples, and there are infinitely many more out there -- maybe some of them behave differently.

Now if there is no transmission line and one measures the SWR right at the antenna (please, Reg, don't remind me that there is nowhere for the standing wave to stand!) then it is reasonable to expect the resistive component of the antenna impedance to change with frequency in the neighbourhood of the resonant frequency, although I would imagine that for an antenna fed at a current maximum point the rate of change of resistance with respect to frequency would be numerically quite small. What happens in a case like Cecil's, where there *is* a transmission line, is more complicated -- you have to think about the Smith chart.

I'm convinced now that minimum SWR and "resonance" are not necessarily the same thing. Whether it matters, is another question.

David, ex-W8EZE, and retired pure mathematician (despite the use of Maple)

--
David or Jo Anne Ryeburn
ryeburn@sfu.caz
To send e-mail, remove the letter "z" from this address.

759. Looking for a ham on Grand Cayman

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-10 08:11:10 UTC
From: Bob Cook <captcook@compuserve.com>
Message-ID: <aggtni$545$1@nntp-m01.news.aol.com>
Source record: 139006

Greetings,

I am wondering if there are any hams here who live in or will soon be visiting Grand Cayman. I would like to seek and try to arrange for some assistance to another ham, who is 84 years old, and who lives on Grand Cayman. He has a beam antenna he would like to get up.

Thanks,

Bob K9KKY

www.Ocean-Pro.com
Professional Yacht Delivery
Offshore Sailing Instruction
Naples, FL 800-329-4884

760. Re: multi-band dipole - newcomer question

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-10 08:14:28 UTC
From: Bob Cook <captcook@compuserve.com>
Message-ID: <aggttl$5g1$1@nntp-m01.news.aol.com>
Source record: 139008

Re typo in my prior post:

I see I omitted the word "three" in the sentence..."I have found that 1. the number of
dipoles must be limited to no more than (three) antennas, and 2. the resonant
frequency of each will be about 10% lower than that calculated due to the
proximity of the other wires.

Bob K9KKY

www.Ocean-Pro.com
Professional Yacht Delivery
Offshore Sailing Instruction
Naples, FL 800-329-4884

761. Re: A whole new 'back to basics' topic - Monopole fundamentals

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-10 08:25:21 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <3D2BEF71.4000204@eznec.com>
Source record: 139001

To answer the original question, this isn't really news.

A ground plane antenna with horizontal radials has very little radiation from the radials compared to the vertical portion, so for practical purposes it's a monopole. The gain of a ground plane antenna in free space is nearly identical to the gain of a vertical dipole in free space.

The "gain" difference between the monopole and dipole in Logan and Rockway's analysis is due simply to the different environments they're measured in. The dipole is in free space. The monopole is in a half-space, with the other half being the ground plane. So the energy from the monopole is concentrated in half the volume that the dipole energy is. ANY antenna measured over an infinite ground plane will have twice the field strength (or 3 dB greater gain compared to any single reference antenna) as the counterpart antenna measured in free space. And a dipole over ground has considerable gain relative to a dipole in free space. The amount depends on the dipole's orientation and the direction in which it's measured.

There's nothing wrong with the NEC and MININEC analysis that gives these results. Any other conclusion would be wrong.

Roy Lewallen, W7EL

762. Re: IT IS A TV PROBLEM!

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-10 08:53:02 UTC
From: 'Doc <w5lz@icok.net>
Message-ID: <3D2BF5D3.4D11D0E9@icok.net>
Source record: 139002

Margeo,
Beats me! What are you talking about?
'Doc

763. Re: Shack resonates at 40M

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-10 09:00:25 UTC
From: 'Doc <w5lz@icok.net>
Message-ID: <3D2BF788.5044014D@icok.net>
Source record: 139004

Ken,
More than likely, the feed line has littl to do
with the problem. It's much more likely that the
antenna proximity is causing the problem. If you
cn, move the antenna further away from the flu, etc,
and see if that 'cures' of reduces the problem. If
it does, start looking for a new permanent home for
your antenna further from your house. If it
doesn't, well, keep looking...
'Doc

764. Re: The Torch is Passed

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-10 09:02:20 UTC
From: 'Doc <w5lz@icok.net>
Message-ID: <3D2BF801.B7C36E48@icok.net>
Source record: 139005

W.G.,
That torch doesn't need to be passed, it
needs to be put out.
'Doc

765. Re: Matching coil vs antenna length - mobile antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-10 09:06:49 UTC
From: Reg Edwards <g4fgq.regp@btinternet.com>
Message-ID: <aggtf8$rd7$1@paris.btinternet.com>
Source record: 139003

Could this be a function of an antenna
> operated at the voltage maximum feedpoint.
=====================

Sorry, Cecil, I havn't the foggiest idea.

But there's one thing which should not be forgotten - your SWR meter does
NOT measure the SWR on your feedline. And any analysis (too good a word for
amateur antennas) based on that old-wives assumption is doomed.

Regards, Reg.

766. Re: Matching coil vs antenna length - mobile antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-10 09:11:08 UTC
From: Reg Edwards <g4fgq.regp@btinternet.com>
Message-ID: <aggtnc$451$1@helle.btinternet.com>
Source record: 139007

```
> You're right, in general, the lowest SWR
> reading is usually the resonant point of the
> antenna. But that's not true in all cases.
> A 5/8 wave antenna is a good example.
> 'Doc
================================
It is the resonant point of the whole SYSTEM which matters.

But why should a 5/8-wave antenna behave differently from any other?
---
Reg.
```

767. Re: A whole new 'back to basics' topic - Monopole fundamentals

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-10 09:47:58 UTC
From: " J. Harvey" <JM002.Harvey_TRIMTHIS_@Sympatico.ca>
Message-ID: <2pTW8.2709$5i5.1110975@news20.bellglobal.com>
Source record: 139009

"Roy Lewallen"
> To answer the original question, this isn't really news.
> ...
> ANY antenna measured over an infinite ground plane
> will have twice the field strength (or 3 dB greater gain
> compared to any single reference antenna) as the
> counterpart antenna measured in free space.
> ...
> There's nothing wrong with the NEC and MININEC
> analysis that gives these results. Any other conclusion
> would be wrong.

Thanks Roy, I was hoping to hear from you...

How about the other report conclusions, do you have any comments about those
?

...2) The effective area of a receive monopole is one-fourth that of a
dipole.
...3) If the monopole and dipole are in identical fields, then the dipole
will deliver to a matched load four times the power.

Number 2) above was presented in the report as being "news".

768. Re: 85 foot dipole not in straight line. A problem?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-10 10:08:02 UTC
From: Wayne <wleake@wayneleake.net>
Message-ID: <uio1rtmt9g8ce7@corp.supernews.com>
Source record: 139010

At no point did I say that the tuner would make a non resonant antenna resonant...
I know what the tuner does, it makes the radio think it is a good match (impedence wise).
And I am aware that a resonant antenna may not always have the best impedence.

Wayne W6YNE

"'Doc" <w5lz@icok.net> wrote in message news:3D28DCF6.FFFB96A9@icok.net...
>
>
> Wayne wrote:
> >
> > 85 feet is short for 80 meters, and long for 40 meters.
> > Unless you use an antenna tuner, it will be way off resonance.
> -----clipped-----
>
> Wayne,
> Even with the use of a tuner, the doublet will still
> be 'way off resonance'. It should have a pretty good
> impedance match, though.
> 'Doc

769. Re: Matching coil vs antenna length - mobile antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-10 10:09:18 UTC
From: Reg Edwards <g4fgq.regp@btinternet.com>
Message-ID: <agh14d$8lb$1@helle.btinternet.com>
Source record: 139012

David or Joe,

If you would like to vary frequency and monitor SWR, simultaneously checking line input impedance for zero reactance, download program DIPOLE3 which models the situation.

The reason the line input reactance is not EXACTLY zero at minimum SWR is because the radiation resistance also changes a moderate amount with frequency.

Another minor reason is that Zo is not a pure resistance. It is R+jX.

==========
Regards from Reg G4FGQ
Free Radio Design Software
Go to http://www.g4fgq.com
==========

770. Re: Matching coil vs antenna length - mobile antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-10 10:09:19 UTC
From: Reg Edwards <g4fgq.regp@btinternet.com>
Message-ID: <agh14e$8lb$2@helle.btinternet.com>
Source record: 139011

It is a fundamental property of LCR tuned circuits of reasonable Q, say 5 or greater, that as the impedance magnitude versus frequency passes through a minimum or a maximum, the reactance passes through zero. L,C & R are assumed to be linear and independent of frequency.

If loss in C is equal to loss in L then the foregoing is true for any value of Q.

In the case of antennas, minimum SWR does not occur EXACTLY when line input reactance is EXACTLY zero simply because the radiation resistance varies rather slowly with frequency. It breaks the rules.

The variation of SWR due to a changing radiation resistance is superimposed on the resonance curve. It puts a slope on it. Which causes the minimum to be offset.

But considering the accuracy of so-called SWR meters, for practical purposes SWR = minimum when X=0.

Radio amateurs are inclined to suffer from delusions of accuracy !

Reg, G4FGQ

771. Re: Matching coil vs antenna length - mobile antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-10 10:34:12 UTC
From: "Ian White, G3SEK" <G3SEK@ifwtech.co.uk>
Message-ID: <mK3TN2Bk2AL9EAhf@ifwtech.co.uk>
Source record: 139015

CAM wrote:
>
>I'm not saying these measurements are correct, Reg, just reporting what
>my MFJ-259B says. For my antenna system, it says minimum SWR occurs
>when the resistance is 42 ohms and the reactance is 8 ohms. It says the
>purely minimum resistance at resonance is 21 ohms.
>
>50 ohm SWR for 42+j8 is 1.3:1 at 7.120 MHz
>
>50 ohm SWR for 21+j0 is 2.4:1 at 7.015 MHz
>
That seems reasonable - if you look at it in Smith chart terms, it means that the impedance-frequency plot is making a swing past the center, then curling round and cutting through the X=0 axis. It comes closest to the center at (42+j8) which you therefore measure as minimum SWR; but the place where it cuts the X=0 axis is farther away from the center so the SWR is higher.

"Resonant frequency" usually means when X=0. It's not strictly correct to use the term to mean the frequency where SWR is a minimum, because those two frequencies don't have to be the same - and generally speaking they are *not*.

The main cause of confusion is the "half-wave" center-fed dipole, where the resonant frequency and the dip in SWR very nearly *are* the same. That is because the resistive part of the feedpoint impedance is changing much more slowly with frequency than the reactive part, so the reactance dominates the SWR, and the SWR minimum is very close to X=0.

But in spite of being very common, the "half-wave" dipole is actually a special case. Cecil's antenna/feedline system is a better example of the way things can be.

--
73 from Ian G3SEK Editor, 'The VHF/UHF DX Book'
'In Practice' columnist for RadCom (RSGB)

772. Re: BACK TO BASICS - EM waves, E and H fields, in phase

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-10 10:39:49 UTC
From: k1bqt@aol.com
Message-ID: <20020710063949.14524.00002569@mb-mn.aol.com>
Source record: 139013

>Would you believe that I'm a lesbian trapped in a male body?<

Geez, my sister says the same thing...perhaps there's more of a relationship here than I thought! :-)

Rick K1BQT

773. Re: Public Offer to Scientifically Debate Fractal Antennas

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-10 11:26:42 UTC
From: Wayne <wleake@wayneleake.net>
Message-ID: <uio6fd9ls8g57b@corp.supernews.com>
Source record: 139014

damned spammer, send us to a crap site like that...
I get enough crap in my email.
user blocked now.

" J. Harvey" <JM002.Harvey_TRIMTHIS_@Sympatico.ca> wrote in message
news:1%XS8.9868$T33.1903413@news20.bellglobal.com...
> "Fractenna"
> > a public forum where fractal antennas
> > may be discussed factually in a debate ?
> > The discussions may be published for all
> > to see.
>
> Sounds like a newsgroup would fit the bill...
>
> I've mentioned this before... Why don't you go into the military market ?
> UHF Military SatCom. ~300 MHz. RHCP. Aircraft require this capability.
> Present antennas are big and bulky. Fractal antennas are supposed to be
> small and yet efficient. Some aircraft will use multiple antennas and a
> 'smart' combiner, others will strive for more-than-hemispheric coverage
with
> one antenna. Some use conformal antennas, others use 'Batwings'. Some
> aircraft can't have SatCom simply due to the lack of feasible (small)
> antenna technology.
>
> If you could produce a conformal (flush with the surface) antenna that
meets
> the other requirements, while being significantly smaller than the present
> state of the art, you would sell many thousands. Don't scoff at the 'low'
> volume - you could name your own price (kilo$). I'm sure that are several
> companies that would be willing to do the militarization and build if you
> provide the design basis.
>
> There is of course the small matter of specification, testing,
qualification
> and certification. The government systems engineers and procurement
people
> tend to insist that things work exactly as claimed. They'll occasionally
> waive minor spec variations, but you still have to 'pound the nail all the
> way in' to get the cheque.
>
> Here's a link to help get you started:
site url removed
>
> Good luck.

>
>
>

774. Re: Public Offer

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-10 12:46:31 UTC
From: jmackie1860@my-deja.com
Message-ID: <aghab7kar1@news.netmar.com>
Source record: 139017

In article <uio6fd9ls8g57b@corp.supernews.com>, Wayne <wleake@wayneleake.net>
writes:

> damned spammer, send us to a crap site like that...

You mean like http:\\www.wayneleake.net?

----- Posted via NewsOne.Net: Free (anonymous) Usenet News via the Web -----
http://newsone.net/ -- Free reading and anonymous posting to 60,000+ groups
NewsOne.Net prohibits users from posting spam. If this or other posts
made through NewsOne.Net violate posting guidelines, email abuse@newsone.net

775. Re: My 85' dipole is actually 94'!! Another ??

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-10 12:50:31 UTC
From: CAM <w5dxp@hotmail.com>
Message-ID: <3D2C2D97.2A128396@hotmail.com>
Source record: 139016

'Doc wrote:
>
> CAM wrote:
> > What good would inexact answers be? Even my 1951 ARRL License Manual
> > contained exact answers if not exact questions.
> >
> Hmm, not at all sure I would agree with that statement. The
> license manuals had questions that were ~represenative~ of those
> on the tests, not the exact questions (same for the answers).

You are saying the same thing I said. Rearranging my words: Even
if the 1951 ARRL License Manual didn't contain the exact questions,
it contained exact answers. What good would inexact answers be?
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

776. Re: Matching coil vs antenna length - mobile antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-10 13:09:13 UTC
From: CAM <w5dxp@hotmail.com>
Message-ID: <3D2C31F9.F6CDA621@hotmail.com>
Source record: 138919

Reg Edwards wrote:
>
> Could this be a function of an antenna
> > operated at the voltage maximum feedpoint.
> ======================
>
> Sorry, Cecil, I havn't the foggiest idea.
>
> But there's one thing which should not be forgotten - your SWR meter does
> NOT measure the SWR on your feedline. And any analysis (too good a word for
> amateur antennas) based on that old-wives assumption is doomed.

Well, the formula for an SWR referenced to 50 ohms based only on impedances is well known. We don't even need the SWR meter. We can calculate the 50 ohm SWR based only on the impedances involved.

The point is: If the MFJ-259B is correct in the measurement of the following impedances, then minimum 50 ohm SWR doesn't occur at resonance for my antenna system used on 40m.

7.015 MHz, impedance measured at 21+j0, calculated 50 ohm SWR = 2.4:1

7.120 MHz, impedance measured at 42+j8, calculated 50 ohm SWR = 1.3:1

Incidentally, the measured common mode current is minimum at the 21+j0 point not at the minimum 50 ohm SWR point.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

777. Re: BACK TO BASICS - EM waves, E and H fields, in phase orinquadr...

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-10 13:10:40 UTC
From: 2w8ji@contesting.com
Message-ID: <3d2c2f8d.41955693@news.akorn.net>
Source record: 139018

On Wed, 10 Jul 2002 01:29:39 GMT, Richard Clark <kb7qhc@attbi.com>
wrote:

>On Mon, 08 Jul 2002 22:34:40 GMT, 2w8ji@contesting.com (Tom W8JI)
>wrote:
>
>>The "across" impedance
>
>Hi Tom,
>
>Is this Common or Differential Mode?

Across would be between the two or more conductor transmission line,
or the differential mode.

As you should plainly see by the example I gave, termination impedance
does not necessarily or even often define the common mode excitation
of the system.

Richard Harrison provided an excellent demonstration of how thinking
the two are tied directly together by Ohm's law and power equations
trips people up.

The autotransformer, while intentionally added to a Reflection
Beverage, occurs naturally without lumped components in most systems
to varying degrees.

This is why baluns like W2DU style baluns can work quite well in some
50 ohm systems (with low SWR), and burn up at very low power in other
50 ohm systems.

Small ground system verticals can be problematic for common mode, as
can any antenna where the feedline does not exit at a "neutral" point
in the induction fields surrounding the antenna. The EH antenna is a
prime example of how to excite the feedline with extreme common mode
excitation voltage levels, even though the "across" (differential)
voltage of the antenna feedpoint is very low.

73 Tom

778. Re: Matching coil vs antenna length - mobile antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-10 13:13:11 UTC
From: 2w8ji@contesting.com
Message-ID: <3d2c327f.42709638@news.akorn.net>
Source record: 138920

On Wed, 10 Jul 2002 05:13:27 GMT, 'Doc <w5lz@icok.net> wrote:

>Dan,
> You're right, in general, the lowest SWR
>reading is usually the resonant point of the
>antenna. But that's not true in all cases.
>A 5/8 wave antenna is a good example.
> 'Doc

If you do not see lowest SWR at resonance, your meter or method is in
error.

Dan is right, lowest SWR always occurs at resonace.

73 Tom

779. Re: Matching coil vs antenna length - mobile antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-10 13:16:50 UTC
From: 2w8ji@contesting.com
Message-ID: <3d2c3304.42843426@news.akorn.net>
Source record: 138921

On Wed, 10 Jul 2002 05:13:27 GMT, 'Doc <w5lz@icok.net> wrote:

>Dan,
> You're right, in general, the lowest SWR
>reading is usually the resonant point of the
>antenna. But that's not true in all cases.
>A 5/8 wave antenna is a good example.
> 'Doc

If you do not see lowest SWR at resonance, your meter or method is in
error.

Dan is right, lowest SWR always occurs at resonace.

Of course, this only applies to high-Q systems being discussed. I
forget sometimes the thread police are lurking.

I could design a system where the slope of reactance change is much
less than the slope of resistance change, and then lowest SWR would
not necessarily be resonance.

73 Tom

780. Re: ALL BAND ANT EXPERIMENT?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-10 13:21:44 UTC
From: "R.Wilhelm" <nhbiwilh@rrzn-user.uni-hannover.de>
Message-ID: <Pine.GSO.4.44.0207101451230.11153-100000@unics>
Source record: 138922

On 9 Jul 2002, N2EY wrote:

> In article <agco1q$r4f$0@208.206.142.113>, Dick Carroll <dixie@townsqr.com>
> writes:
>
> >N2EY wrote:
> >>
> > > The antennas described
> >> in the cq-DL articles and in the 1990 QST article are double-dipoles (four
> >> wires, each a different length). The double-dipole OCF antenna appears to
> >have
> >> originated in Germany in the early 1980s (cq-DL articles from about 1983).
> >
> > > Maybe not. Bill Orr's column in Ham Radio had several different
> >submissions on the subject in the early 80's. All were US hams, as I
> >recall, and there was some variation. One was a "three legged dipole" on
> >75/80 using one wire cut to the center of the band hooked to the coax
> >center conductor, with two other wires hooked to the shield, one 5%
> >longer and the other 5% shorter. Gave a pretty good useful response
> >pattern across the entire band. I used that with three stainless steel
> >tower guys as my sole 75/80 antenna for years. Worked well.
> >
> I've heard of that idea, but did not know where it originated.
>
> The OCF dipoles described in the QST article have four "legs", all of different
> lengths. Two of them make up a classic 80 meter OCF, and the other two make up
> an OCF somewhat higher in frequency. 6:1 and 4:1 baluns were tried at the
> feedpoint.
>
> The end result is an antenna that allegedly covers 80/40/30/20/17/15/12 and 10
> meters with coax feed and low SWR on all of the bands mentioned.
>
> http://www.arrl.org/members-only/tis/info/pdf/9008028.pdf
>
> 73 de Jim, N2EY
>

Hi all,
here in Germany, a commercially made OCF dipole named FD4 has been on the
market for more than 25 years. It covers 80/40/20/10 mtrs and the idea to
extend it to 15 mtrs by adding a second OCF dipole at the feedpoint was
promoted by a DJ2 (I guess suffix was EY but not sure) in the mid
seventies. There are two more articles in cq DL magazine (one in '83 and
one in '84) by DL1BBC et al that cover the idea to double the length of
the 15 mtrs OCF in order to cover 30 mtrs as well. I turned out that the

antenna is resonant with good swr on 17 and 12 mtrs as well. The '84 article covers doubling the length of the original 41.5 mtrs FD4 part in order to add 160 mtrs as well.

If you model the FD4 with the 30/15 mtrs OCF added, you discover that the approx 10 mtr long part of the added OCF is quarter wave resonant on 40 mtrs and the 5 mtrs long part is approx resonant on 20 mtrs, so that the current distribution will change from the original FD4. What I found when trying this idea (with antenna in the attic in a kind of loop) was that my 20 mtrs resonance moved down to less than 13.5 MHz, but SWR on 20 wasn't above 2.0. All resonance are broad, so this effect isn't important (actually it is seen in the graphs in the cqDL article, but the antenna described there is only 8 mtrs above ground and even closer to a nearby roof).

There are two versions of the FD4 on the market which differ slightly in length (41.5 vs 40.7 mtrs) and in power rating (500 vs 2kW PA input). The high power version uses what they call a duplex balun. It symmetrizes in one step and transforms 1:6 in a second step, while the old balun in the 500 W version is a voltage transformer and was said to be responsible for TVI due to current on the outer conductor of the coax.

73

Ralf

==========
Ralf Wilhelm
DL 6 OAP

==========
Hannover, Germany, where mankind's first motorized flight took place:
Karl Jatho, August 18th 1903, 4 months before the Wright Bros.
(When will history notice this ?)
==========

781. Re: The Moebius Antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-10 13:24:09 UTC
From: a_g_lyph@hotmail.com
Message-ID: <f8479612.0207100524.6c64012@posting.google.com>
Source record: 138923

W.G Ewald <wgewald@att.net> wrote in message
news:<u7rmiu4c9qun8h49q68960ojfug193pjef@4ax.com>...

> The one major problem is our understanding of how to
> receive these scalar bubbles. Transmission

<cough>'Self-similar' antennae?<cough> =)

But, seriously, I know that you can make a noninductive/nonreactive
resistor out of a Moebius loop, attaching the leads opposite each
other on the loop. If I remember right, it won't couple to metal,
itself or other fields. I wonder how well it would radiate. Or, more
importantly, how small it could be for working 160m. Theoretically,
you can bunch it up in a ball and it will work the same, so...

AG

782. Re: Dressler ARA 60S

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-10 13:38:20 UTC
From: "R.Wilhelm" <nhbiwilh@rrzn-user.uni-hannover.de>
Message-ID: <Pine.GSO.4.44.0207101522510.11153-100000@unics>
Source record: 138924

On Tue, 9 Jul 2002, Richard wrote:

> Does anyone have any experience with this active antenna?
>
> I'm all ears.
>
> Cheers,
>
> Richard K.
>
>
>
Hi Richard,

I have the ARA 60 (there's no 'S' version in Germany) and am satisfied with that antenna. The version I have is called old version, it looks like PVC rod of about 7 cm diameter, the newer version looks like a whip.

I can use the antenna from less than 50 kHz to more than 146 MHz (heard OSCAR 10 with it on a ICOM R7000 RX).

I don't have any problems with 3rd order intermod (on a AOR 7030) but have little problems with 2nd order intermod (local am bc mixes with 6 MHz bc stns and produces some spurs near 40 mtrs and a lot of am bc stns appear again between 2 and 3 MHz).

Some other problems I had could be traced back to an impure local oscillator in the AOR 7030. The antenna can produce so much voltage that using a simple preselector is a good idea (at least here in central europe) even if you use a receiver with a high IP like the 7030 if you want full sensitivity, but cou can also reduce the overall gain if needed.

I live in a village 20 km west of Hannover, although I have railway only 200 mtrs away, the location is very quiet and I can always hear external noise (or better weak stations in the noise) with my ARA 60, so that you should not be limited by the antenna's noisefigure.

73

Ralf

==========
Ralf Wilhelm
DL 6 OAP

==========
Hannover, Germany, where mankind's first motorized flight took place:
Karl Jatho, August 18th 1903, 4 months before the Wright Bros.

(When will history notice this ?)
==========

783. Re: G5RV Question

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-10 13:40:24 UTC
From: 'Doc <w5lz@icok.net>
Message-ID: <3D2C3929.839D2DBE@icok.net>
Source record: 138925

Nathan,
I hate to say it, but put the G5RV up as it's
supposed to be, otherwise, you have to accept what
you can get.
'Doc

784. Re: Matching coil vs antenna length - mobile antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-10 13:43:28 UTC
From: CAM <w5dxp@hotmail.com>
Message-ID: <3D2C3A00.4CEB94DB@hotmail.com>
Source record: 138926

Tom W8JI wrote:
> Dan is right, lowest SWR always occurs at resonace.

I'm gonna have to disagree with you again, Tom. Methinks my
antenna system is again a thorn in the side of your "always". :-)

Which of the following impedances results in the lowest 50
ohm SWR?

21+j0 at 7.015 MHz or 42+j8 at 7.120 MHz.

Those are measured values from my antenna system when only the
frequency is changed. Any system, where resistance is changing
toward 50 ohms faster than the reactance is changing, can exhibit
this characteristic. Please see Ian's posting.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
------== Over 80,000 Newsgroups - 16 Different Servers! =-----

785. Re: The Moebius Antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-10 13:54:42 UTC
From: tdonaly@aol.com
Message-ID: <20020710095442.01521.00003567@mb-cs.aol.com>
Source record: 138927

W.G.Ewald wrote,
>
> Rediscovering the ZENNECK Surface Wave
>
> In 1916 while speaking of his system for global
>transmission, Nikola Tesla cited the...

(Much entertaining B.S. snipped.)

You forgot the Poynting vector. No
crackpot antenna theory is any good
without an appeal to the Poynting
vector.
Tom Donaly KA6RUH

786. Re: Shack resonates at 40M

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-10 14:14:55 UTC
From: cprstn54zz@att.net
Message-ID: <3d2c3e2a.69372468@news-server.optonline.net>
Source record: 138928

On Tue, 9 Jul 2002 19:31:45 -0500, "H. Adam Stevens"
<solo@totalaccess.net> wrote:
>Walk around with the field strength meter. TAKE DATA, LOOK AT IT, PLANNING
>IS CHEAP.
>This stuff is always fun. Nature contains exquisite beauty.

I just did this and you were correct. It was surprising and fun.

My 2d floor wiring in the ceiling (where the smoke detector lives) is
RF hot. The field is also strong near the duct and flues in the
vicinity of the antenna (i.e. 10-20 ft away), but diminishes quickly
with distance. Either the steel is merely concentrating the signal or
it is dissipating rapidly in eddy currents. The steel is not pumping
much RF into the house wiring.

OTOH, the hottest items were the electrical wires in the attic framing
near the antenna (and roughly parallel to the antenna leg it was
near). These are the most likely source of the RF getting to the
smoke detectors.

So, I appear to have what must be a typical problem for anyone who
has his dipole attached to his house: common mode RF picked up by
house wiring near the antenna.

Any suggestions of where I should start my research into solving this
will be appreciated.

Ken KC2JDY

Ken
(to reply via email
remove "zz" from address)

787. Re: Matching coil vs antenna length - mobile antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-10 14:18:57 UTC
From: Dan Richardson <k6mhe@mendolink.com>
Message-ID: <d9goiukauup3oj8trfqiaoj6i4k0me2o42@4ax.com>
Source record: 138931

On Wed, 10 Jul 2002 05:13:27 GMT, 'Doc <w5lz@icok.net> wrote:

>Dan,
> You're right, in general, the lowest SWR
>reading is usually the resonant point of the
>antenna. But that's not true in all cases.
>A 5/8 wave antenna is a good example.
> 'Doc

How's that? All the the popular 5/8-wave antennas have a matching unit (normally a coil in the base) which adds the necessary inductance so that resonance is obtained at the desired frequency the result is the same - lowest VSWR point.

Danny

788. Re: Back To Basics - Antenna Reciprocity

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-10 14:28:22 UTC
From: Dick Carroll <dixie@townsqr.com>
Message-ID: <aghga6$h94$1@208.207.71.176>
Source record: 138929

CAM wrote:
>
> Dick Carroll wrote:
> > It means that the drastically changed antenna is still reciprocal as a
> > drastically changed antenna.
>
> Bart has reminded that the reciprocity theorem requires a transmitter
> and a receiver connected to those antennas.

OK. What that means is the separate transmit and receive *systems*
aren't reciprocal unless identically well matched to the antenna.

789. Re: A whole new 'back to basics' topic - Monopole fundamentals

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-10 14:31:12 UTC
From: richardharrison@webtv.net
Message-ID: <13057-3D2C4530-11@storefull-2397.public.lawson.webtv.net>
Source record: 138930

Richard Clark wrote:
"Look at the introduction---
it is the effective area that resolves the 6-dB discrepancy between
measurements and analysis."

Effective area doesn`t give the authors any slack if they stick to
"capture area".

Capture area is a definition which squares with power per unit area in a
wave. It is a definition based on that. Its value is: Gain times
Wavelength squared divided by 4 pi.

Terman gives an example: Gain of the elementary doublet is 1.5.
Therefore, its capture area is 0.12 times the wavelength squared.

Best regards, Richard Harrison, KB5WZI

790. Re: BACK TO BASICS - EM waves, E and H fields, in phase orinquadr...

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-10 15:10:12 UTC
From: richardharrison@webtv.net
Message-ID: <18727-3D2C4E54-46@storefull-2395.public.lawson.webtv.net>
Source record: 138936

Tom, W8JI wrote:
'Richard Harrison provided an excellent example of how thinking the two are tied directly together by Ohm`s law and power equations trips people up."

Your receiving antenna is tied to the transmitting antenna by Ohm`s law.

The current in the transmitting antenna determines the voltage in your receiving antenna. This application of Ohm`s law is called "mutual impedance". Double the transmitting antenna current and you double the receiving antenna voltage becauset the Ohm`s law impedance (coupling) does not change. It is fixed by the situation and conditions of the antennas.

In a practical situation of amps in the transmitting antenna, and resulting millivolts in the receiving antenna, the ratio of volts to amps, the Ohm`s law mutual impedance, is very small indeed. There is little coupling, but there is some if you are receiving a signal.

Best regards, Richard Harrison, KB5WZI

791. Re: G5RV Question

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-10 15:12:10 UTC
From: k0bg@aol.com
Message-ID: <20020710111210.23816.00002546@mb-cc.aol.com>
Source record: 138932

Doc is correct. the G5RV uses the twin lead as a transmission line transformer, and/or matching device, and needs to be run perpendicular to the antenna itself. And the fact remains, it doesn't work well if the antenna is in an inverted V configuration. If you use twin lead (ladder line) to a doublet, then any losses you have as a result of VSWR isn't of much concern. The major loss will be in the internal balun, and if it is of the correct type, the losses are too great under most amateur operating conditions. A better solution would be to use a doublet long enough to cover 80 and use it for the rest of the bands as well. One problem you'll no doubt encounter is the length is just right (or just wrong depending upon your view) is trying to feed the double at or near a voltage node—high impedance. You have two solutions. Use more than one doublet pair, or very carefully select the length.

One pair of my doublet is resonant at 6.9 Mhz, and the other at 15.6 Mhz. This antenna works well on all bands from 40 thru 10, and will tune satisfactorly on 30, someting the G5RV doesn't do well.

The latest issue of QST has a very good article on wire antennas written by Hal Kennedy, N4GG. It bears reading.

Alan, KØBG

792. Re: horizontal loop revisited

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-10 15:13:18 UTC
From: 'Doc <w5lz@icok.net>
Message-ID: <3D2C4EF3.319A47C8@icok.net>
Source record: 138933

N4LQ,
Not sure who Dave Fischer is, but trying to
use coax for the feed line of an 'all band' loop
antenna will result in some pretty wild mismatches.
I doubt if it would make any difference as far as
the radiation pattern goes, but it would make a
fairly large difference in the amount of power
radiated.
The question about a loop being a balanced
antenna has already been answered.
'Doc

793. Re: IT IS A TV PROBLEM!

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-10 15:18:55 UTC
From: k0bg@aol.com
Message-ID: <20020710111855.23816.00002549@mb-cc.aol.com>
Source record: 138934

It's probably a reflection caused by some component inside the TV which has been unmasked by the weak signal going to the TV. You didn't say what kind, model etc., but it really doesn't make much difference. The "FIX" probably isn't worth the cost, and maybe it's time you invested in a good digital TV. In any case, it is a darn good excuse for one, isn't it?

Alan, Kï¿½BG

794. Re: Making a flexable handheld VHF antenna, any ideas?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-10 15:23:19 UTC
From: post_to_usenet@hotmail.com
Message-ID: <b6b4e772.0207100723.4a269c59@posting.google.com>
Source record: 138935

> Hello,
> I am interested in finding out how to possibly build flexible handheld VHF
> antennas.
>
> Any of you here done this before?
> ....
> Grant

Hi Grant,

Follow this link:

http://groups.google.com/groups?threadm=b6b4e772.0202010017.32110d46%40posting.google.com

and look at my answer to Jason. I have used this antenna with my TH-D7
and I am using it now on an IC-R2 scanner. It performs much better
than the supplied rubber whips and when you are done you can roll it
and put it in a pocket.

Just try it, it is cheap and easy to make.

Toni

795. Will paralleled dipoles have smaller Bandwidths?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-10 15:24:43 UTC
From: StarGazer <pti@capnet.com>
Message-ID: <3D2C51BB.10AA4200@capnet.com>
Source record: 138938

Compared with individual dipoles.

796. Re: Back To Basics - Antenna Reciprocity

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-10 15:47:51 UTC
From: richardharrison@webtv.net
Message-ID: <18728-3D2C5727-11@storefull-2395.public.lawson.webtv.net>
Source record: 138941

Dick Carroll wrote:
"OK. What that means is the separate transmit and receive "systems"
aren`t reciprocal unless identically well matched to the antenna."

Yeah. A joker earlier asked: "What if I stick a ferrite circulator in
your waveguide?"

Best regards, Richard Harrison, KB5WZI

797. Re: BACK TO BASICS - EM waves, E and H fields, in phase orinquadr...

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-10 15:54:42 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <a9loiukd4d9394vegei3h70e5pqbpuavhe@4ax.com>
Source record: 138939

On Wed, 10 Jul 2002 13:10:40 GMT, 2w8ji@contesting.com (Tom W8JI)
wrote:

>On Wed, 10 Jul 2002 01:29:39 GMT, Richard Clark <kb7qhc@attbi.com>
>wrote:
>
>>On Mon, 08 Jul 2002 22:34:40 GMT, 2w8ji@contesting.com (Tom W8JI)
>>wrote:
>>
>>>The "across" impedance
>>
>>Hi Tom,
>>
>>Is this Common or Differential Mode?
>
>Across would be between the two or more conductor transmission line,
>or the differential mode.

Hi Tom,

I have presumed that your examples were coax fed, do these examples
lack ground connection, by design, at the fed end?

73's
Richard Clark, KB7QHC

798. Smith Chart Tutorial

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-10 15:56:02 UTC
From: Dick Carroll <dixie@townsqr.com>
Message-ID: <aghleirln0@208.207.71.153>
Source record: 138940

Cecil, maybe this is a good spot to start with the thread on the Smith Chart.

I finally found a plain language explanation of the Smith Chart and how to use it, in my own library, in a book entitled "Amateur Radio-Theory and Practice" by Robert L Shrader, W6BNB. I found the book at a hamfest a couple years ago and had loaned it out to a new ham who recently returned it. I recalled that in leafing through it initially I had noticed a Smith chart, and last night I went back to see what treatment Bob had given the subject. Characteristically, it was exactly the treatment that is needed to learn to use the chart initially. In 4 fairly short paragraphs Bob conveys exactly what is needed without all the usual disorienting chaff. It uses an example chart which one can make up with the downloaded chart from

The book is 20 years old and evidently long out of print. I imagine I could quote those 4 paragraphs here with proper credit, for others to learn also. It will be without the Smith Chart graphic, but one can easily make up your own with the instructions given. If you happen across a copy as I did it's worth grabbing. Bob's major work, "Electronic Communication", ISBN 0-07-057150-3, is a classic in the field and covers almost anything connected with radio that you can name,(at least in that time, but it's also 20 years old) but contains nothing on the Smith chart. I wish he could update both of these volumes but it seems doubtful.

BTW, I worked Bob on 20 meter CW a couple months ago while portable visiting my daughter in the Salt Lake City area. He's in his 80's and still makes that cootie key hum!

Here goes.....

From "Amateur Radio Theory and Practice", by Robert L. Shrader, W6BNB, ISBN 0-07-057146-5 Gregg Division, McGraw-Hill Book Company, 1982, page 198:
Quoting;

A Smith Chart can be used to make many computations of antenna and feed-line mismatches, SWR, etc. The horizontal line across the chart represents the "resistance component". The center of the chart, the "1.0" point, is where things start. For example, if you know that a 50ohm transmission line is terminated with a resonant 150ohm antenna, the SWR must be 150/50, or 3:1. By using a pencil-compass and drawing a circle from the chart center through the "3" on the resistance line, you will have a circle that tells you all the ratios of Zo (transmission

line impedance) to Zl (antenna impedance) of nonresonant antennas that will give a 3:1 SWR. If you move 180 degrees around the circle, you find that the resistance line is again crossed at the 0.33 point. A 1:0.33 ratio is the same as a 3:1 ratio.

The curves above the R line, and originating at the right end, are labeled "inductive reactance component" (Xc curves are below). The 3:1 SWR circle tells you all the ratios of R + jX (Sec 4-9)(in the book) that a nonresonant antenna might have which would produce a 3:1 SWR reading on the SWR meter. For example, the 3:1 circle happens to cross both the R = 0.5 (Zo) circle and the Xl = 0.65 curve. This means that if you coupled the output of a 50 ohm transmission line to the feedpoint of an antenna that had a measured impedance of R + Jx or R = 0.5 (50 ohms) or 25 ohms, and an Xl = 0.65 (50 ohms), or 32.5 ohms, the SWR meter in the feedline would read 3:1. At all other places where the R circle, the X curves and the 3:1 circle intersect, a 3:1 SWR would result.

The R + jX values of a dipole having an unknown feedpoint impedance can be measured with an R-X meter. Such a meter consists of an RF oscillator and a calibrated impedance bridge. The transmission line is removed from the antenna, and the R-X meter is connected to the antenna feed point. The meter is tuned to the operating frequency and the controls varied to a null indication of the bridge. The settings of the dials on the meter now indicate the values of R and X that are exhibited by the antenna at its feed point.

Suppose a 50ohm transmission line output is coupled to a dipole with a measured feedpoint impedance of R + jX = 75 +j 100. *Normalizing* the R part of the R + jX value by *dividing by the transmission line impedance* gives R = 75/50, or 1.5. Normalizing the +jX value gives Xl = 100/50, or 2. The normalized R + jX is therefore 1.5 + j2. A circle with its center at the chart center and passing through the R = 1.5 and the + jX = 2 curves on the chart will indicate the SWR that will result when the feedline is coupled to the antenna. (What SWR do you find it to be?) How to correct this antenna to make it present a 1:1 match to the feedline can also be determined by a Smith chart, as can be the return losses, power reflection coeficient, voltage or current reflection coefficient, attenuation, reflection loss, peak of standing waves, and power transmission coefficiet.

(end of quoted material)

While not a comprehensive tutorial, this is certainly enough to get one familiar with the Chart so that one can learn more from there.

And there's plenty of room for further discussion here :-)

And it might set some hams to searching for Bobs's book. I once saw it for sale in one of the online used book stores.

Dick

799. Re: Back To Basics - Antenna Reciprocity

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-10 15:59:25 UTC
From: Bart Rowlett <BHRowlett@raytheon.com>
Message-ID: <3D2C59DD.CE2133DB@raytheon.com>
Source record: 138942

CAM wrote:
>
> Dick Carroll wrote:
> > It means that the drastically changed antenna is still reciprocal as a
> > drastically changed antenna.
>
> Bart has reminded that the reciprocity theorem requires a transmitter
> and a receiver connected to those antennas.

In the paper I forwarded, the proof of reciprocity utilized a source
and load but
it certainly is not required for a reciprocal relationship to exist
between two ports.

Reciprocity between two ports in a network exists when the transfer
impedance, or admittance, is the same in one direction as in the
other. In other words, Zji = Zij or Yji = Yij. That's all there
is to it. In the usual matrix representation, reciprocal networks
have Z, Y, or S parameters which are symmetrical about the diagonal.

The transfer impedance between two ports (port 1 input, and port 2
output) is defined as the voltage applied to port 1 divided by the
short circuit current in port 2 with all other ports open circuited.

Various other equivalent relationships exist, such as the
representation used in scattering (S) parameters, and for the very
special, but unnecessary, case where a conjugate match exists
somewhere in the system. They all can be reduced to the basic
definition given above with algebraic manipulation. Any good network
theory textbook will provide the proofs.

bart
wb6hqk

800. Re: A whole new 'back to basics' topic - Monopole fundamentals

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-10 15:59:41 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <3jmoiuovh1d77p4e2kh1kaq9sogq4i2ig0@4ax.com>
Source record: 138937

On Wed, 10 Jul 2002 09:31:12 -0500 (CDT), richardharrison@webtv.net
(Richard Harrison) wrote:

>
>Effective area doesn`t give the authors any slack if they stick to
>"capture area".
>

Hi Richard,

So this is where they are pencil-whipping themselves?

73's
Richard Clark, KB7QHC

801. Re: BACK TO BASICS - EM waves, E and H fields, in phase orinquadr...

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-10 17:02:17 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <q7qoiu0s30skro08sf1bbjjcsh60htloim@4ax.com>
Source record: 138943

On Wed, 10 Jul 2002 15:54:42 GMT, Richard Clark <kb7qhc@attbi.com>
wrote:

>On Wed, 10 Jul 2002 13:10:40 GMT, 2w8ji@contesting.com (Tom W8JI)
>wrote:
>
>>On Wed, 10 Jul 2002 01:29:39 GMT, Richard Clark <kb7qhc@attbi.com>
>>wrote:
>>
>>>On Mon, 08 Jul 2002 22:34:40 GMT, 2w8ji@contesting.com (Tom W8JI)
>>>wrote:
>>>
>>>>The "across" impedance
>>>
>>>Hi Tom,
>>>
>>>Is this Common or Differential Mode?
>>
>>Across would be between the two or more conductor transmission line,
>>or the differential mode.
>
>Hi Tom,
>
>I have presumed that your examples were coax fed, do these examples
>lack ground connection, by design, at the fed end?
should read: lack ground connection, by design, at the antenna feed?
>
>73's
>Richard Clark, KB7QHC

802. Re: A whole new 'back to basics' topic - Monopole fundamentals

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-10 17:07:45 UTC
From: richardharrison@webtv.net
Message-ID: <18727-3D2C69E1-56@storefull-2395.public.lawson.webtv.net>
Source record: 138944

Richard Clark wrote:
"So this is where they pencil-whipped themselves?"

Yup. Roy posted the correct analysis.

Terman will do until something better comes along. Terman has been so right for so long that it pays to be skeptical of new claims that diverge.

Best regards, Richard Harrison, KB5WZI

803. Re: Back To Basics - Antenna Reciprocity

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-10 17:13:08 UTC
From: CAM <w5dxp@hotmail.com>
Message-ID: <3D2C6B24.464AB651@hotmail.com>
Source record: 138945

Dick Carroll wrote:
>
> CAM wrote:
> > Bart has reminded that the reciprocity theorem requires a transmitter
> > and a receiver connected to those antennas.
>
> OK. What that means is the separate transmit and receive *systems*
> aren't reciprocal unless identically well matched to the antenna.

Actually, my memory was fuzzy on exactly what reciprocity means. It
means in (almost) any RF communications system, if the receiver and
transmitter positions are swapped, the result will be the same.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

804. Re: TV Interference Problem-vertical lines???

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-10 18:05:37 UTC
From: free24-v21 <pceq@hotmail.com>
Message-ID: <3d2c7749_1@news.greennet.net>
Source record: 138946
Cross-posted to: rec.radio.amateur.antenna,misc.consumers.house,rec.video,sci.electronics.repair

Highly sensitive televisions can show these symptons. The television is simply picking up its own radiated energy.

These problems are sometimes worse when internal aerials are utilised even loft based aerials.

Problems are also usually exagerated when the television is placed into the corner of the room. Withdrawing the tv from the corner even a few inchs / cm can make big differences.

The placement of cables and aerial interconnection leads at the rear of all the electrical equipment can have dramatic effects. Cooling up some leads and altering there position in relation to other leads again can give big improvement.

Adding ferrite cores to leads can also reduce cross interference.

805. FA: Workman Marine Antenna New

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-10 18:29:50 UTC
From: Cutter <sgrubor@shaw.caNSPM>
Message-ID: <y2%W8.53326$Xs6.2799937@news2.calgary.shaw.ca>
Source record: 138952

http://cgi.ebay.com/ws/eBayISAPI.dll?ViewItem&item=1365773543

This antenna is a 3dB gain 5 ft sealed unit, tuned for marine channels
around 160MHz
possibly can be retuned to 2m band.

--
*** Remove NSPM to reply ***

806. Re: Smith Chart Tutorial

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-10 18:41:58 UTC
From: CAM <w5dxp@hotmail.com>
Message-ID: <3D2C7FF6.B133A4C6@hotmail.com>
Source record: 138947

Dick Carroll wrote:
> Cecil, maybe this is a good spot to start with the thread on the Smith
> Chart.

Thanks Dick, but the internet delay strikes again. I posted the first
installment yesterday. Have you read it?
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
------== Over 80,000 Newsgroups - 16 Different Servers! =-----

807. Re: Matching coil vs antenna length - mobile antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-10 19:14:27 UTC
From: ryeburn@sfu.caz
Message-ID: <ryeburn-1007021214270001@bni030qny8kc.bc.hsia.telus.net>
Source record: 138948

In article <agh14d$8lb$1@helle.btinternet.com>, "Reg Edwards"
<g4fgq.regp@btinternet.com> wrote:

> David or Joe,
***
My wife's name is Jo Anne.

> If you would like to vary frequency and monitor SWR, simultaneously checking
> line input impedance for zero reactance, download program DIPOLE3 which
> models the situation.

Thanks, but no thanks. When I want excitement I do something safe, such as
climb a glaciated volcano, properly equipped and accompanied. Mt. Baker is
conveniently nearby. There are no dangerous Microsoft operating systems
installed on any of our four computers.

> The reason the line input reactance is not EXACTLY zero at minimum SWR is
> because the radiation resistance also changes a moderate amount with
> frequency.

Right.

> Another minor reason is that Zo is not a pure resistance. It is R+jX.

Also right, but at reasonable frequencies and with reasonable coax, X is
numerically small compared to R.

David, ex-W8EZE

--
David or Jo Anne Ryeburn
ryeburn@sfu.caz
To send e-mail, remove the letter "z" from this address.

808. Re: Matching coil vs antenna length - mobile antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-10 19:26:28 UTC
From: ryeburn@sfu.caz
Message-ID: <ryeburn-1007021226280001@bni030qny8kc.bc.hsia.telus.net>
Source record: 138949

In article <3D2C31F9.F6CDA621@hotmail.com>, CAM <w5dxp@hotmail.com> wrote:

> Reg Edwards wrote:
> >
> > Could this be a function of an antenna
> > > operated at the voltage maximum feedpoint.
> > ======================
> >
> > Sorry, Cecil, I havn't the foggiest idea.
> >
> > But there's one thing which should not be forgotten - your SWR meter does
> > NOT measure the SWR on your feedline. And any analysis (too good a word for
> > amateur antennas) based on that old-wives assumption is doomed.
>
> Well, the formula for an SWR referenced to 50 ohms based only on impedances
> is well known. We don't even need the SWR meter. We can calculate the 50 ohm
> SWR based only on the impedances involved.
>
> The point is: If the MFJ-259B is correct in the measurement of the following
> impedances, then minimum 50 ohm SWR doesn't occur at resonance for my antenna
> system used on 40m.
>
> 7.015 MHz, impedance measured at 21+j0, calculated 50 ohm SWR = 2.4:1

The normalized resistance at resonance is
A = 21/50 = 0.42.

> 7.120 MHz, impedance measured at 42+j8, calculated 50 ohm SWR = 1.3:1

The rate of change of resistance with respect to frequency is
(42 - 21)/(7.120 - 7.015) = 200 ohm/MHz.
This normalizes to
B = 200/50 = 4 (MHz)^(-1).
The rate of change of reactance with respect to frequency is
(8 - 0)/(7.120 - 7.015) = 76.2 ohm/MHz.
This normalizes to
C = 76.2/50 = 1.52 (MHz)^(-1).

I am using the notation of my earlier posting
<ryeburn-1007020011150001@bni030qny8kc.bc.hsia.telus.net>.

I used these values of A, B, and C and asked Maple for a plot. Here f = 0
at 7.015 MHz, with this offset frequency value also measured in MHz.
Reading from the Maple graph, the SWR values at various frequencies across
the 40 metre band are as follows (use a monospaced font):

f Freq SWR

-0.015 7.000 2.78
0.000 7.015 2.38 (Resonance)
0.105 7.120 1.28 (Cecil's measured frequency of minimum SWR)
0.130 7.145 1.24 (calculated minimum SWR)
0.285 7.300 1.75

The 25 kHz discrepancy between Cecil's measured frequency of minimum SWR and my calculated frequency of minimum SWR is easily explained if the measured resistance and reactance figures he gives are slightly in error, or if his SWR measurements are slightly in error, or if (contrary to the simplifying assumption of my calculations) R and/or X are not linear functions of frequency in the neighbourhood of resonance. The SWR curve is nearly horizontal near its minimum, and anyway what's a frequency difference of 25 kHz and an SWR value difference of 0.04 among friends?

Resonance and minimum SWR differ here by 130 kHz, and I can't say "What's a difference of 130 kHZ among friends?". Also in this example, the SWR curve is broader on the high frequency side of the frequency of minimum SWR. The 1.75 value for SWR observed at 7.300 MHz (0.155 MHz above the frequency of minimum SWR) occurs again at 7.055 MHz (only 0.90 MHz below the frequency of minimum SWR). This is rather unsymmetrical. Maybe that's why, in the old days, the CW sub-bands were lower in frequency than the phone sub-bands ;-)!

David, ex-W8EZE, whose transmitters had keys but not microphones

--
David or Jo Anne Ryeburn
ryeburn@sfu.caz
To send e-mail, remove the letter "z" from this address.

809. Re: Matching coil vs antenna length - mobile antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-10 19:31:23 UTC
From: ryeburn@sfu.caz
Message-ID: <ryeburn-1007021231230001@bni030qny8kc.bc.hsia.telus.net>
Source record: 138951

In article <3d2c3304.42843426@news.akorn.net>, 2w8ji@contesting.com (Tom W8JI) wrote:

> On Wed, 10 Jul 2002 05:13:27 GMT, 'Doc <w5lz@icok.net> wrote:
>
> >Dan,
> > You're right, in general, the lowest SWR
> >reading is usually the resonant point of the
> >antenna. But that's not true in all cases.
> >A 5/8 wave antenna is a good example.
> > 'Doc
>
>
> If you do not see lowest SWR at resonance, your meter or method is in
> error.
>
> Dan is right, lowest SWR always occurs at resonace.
>
> Of course, this only applies to high-Q systems being discussed. I
> forget sometimes the thread police are lurking.
>
> I could design a system where the slope of reactance change is much
> less than the slope of resistance change, and then lowest SWR would
> not necessarily be resonance.

You don't need steeper resistance curves than reactance curves for this to happen.

I took the values A = 0.42, B = 4, C = 1.52 calculated from Cecil's data for the 40 metre band (used in an earlier posting of mine) and increased C by a factor of 10, to C = 15.2. Here's what Maple shows:

f Freq SWR

-0.015 7.000 3.0
0.000 7.015 2.4 (Resonance)
0.015 7.030 1.25 (Minimum SWR)
0.285 7.300 14.75

I think you'll agree that this is a much more narrow band antenna than the typical 40 metre dipole. At least I never had one that bad back in my days as W8EZE. Of course I never used tiny antennas with loading, such as are required for mobile use. Yet even with such a high Q, there is still a 15 kHz difference between resonance and minimum SWR frequency. The difference in SWRs (2.4 versus 1.25) is about the same as in Cecil's case (2.38 versus 1.24). The calculated frequency difference, 15 kHz, is an order of

magnitude less than the calculated difference for Cecil's antenna (130 kHz), and that's not surprising with C now an order of magnitude higher than before.

It seems that the ratio of C to B is what counts -- the higher it is, the closer to resonance the minimum SWR frequency will be, but I have yet to see a numerical example where they are the *same* except for the case where A = 1 (i.e., the resistive component of the impedance, at resonance, is equal to the transmission line impedance, resulting in an SWR of 1.0 at resonance).

With broad-banded antennas (e.g. those with large effective conductor diameter such as can be obtained by using multiple equal-length wires fanned out a bit on each side of the centre of the dipole), where C/B will be numerically small, the discrepancy between resonance and minimum SWR could be significant compared to the width of an amateur band, perhaps even more extreme than Cecil's antenna exhibits.

David, ex-W8EZE

--
David or Jo Anne Ryeburn
ryeburn@sfu.caz
To send e-mail, remove the letter "z" from this address.

810. Re: Matching coil vs antenna length - mobile antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-10 19:37:47 UTC
From: k7itm@aol.com
Message-ID: <3200347.0207101137.260e9838@posting.google.com>
Source record: 138950

Resonance of what? The antenna structure proper as measured at the feedpoint, or the whole system including matching networks and transmission lines? VSWR measured where? At the point where we connect the transmitter to the feedline, or at the feedpoint of the antenna proper?

I think it's valuable to realize that efficient radiation does not require resonance of the antenna element(s), and the feedpoint impedance may be much different from the desired transmitter load impedance (presumably the reference impedance for our vswr measurements). If we measure vswr at the feedline input, and include whatever matching networks are in the system, it's certainly not generally true that lowest vswr occurs at a frequency where the reactance is zero (one possible definition of "resonance"). Cecil gave one example, and there are lots of others.

But I think the vswr versus frequency is a red herring. Design the antenna to have the radiation pattern you want, and a feedpoint impedance you can deal with over the frequency range of interest, and then design the coupling to that feedpoint impedance and the decoupling of the feedline from the antenna fields. There's no need to assume anything has to be "resonant," though that may be convenient in some cases.

Cheers,
Tom

Dan Richardson <k6mhe@mendolink.com> wrote in message news:<mbgmiu8fjqrj0dqg0jsle13f63lqorvd94@4ax.com>...
> On 09 Jul 2002 19:37:03 GMT, k0bg@aol.com (K0bg) wrote:
>
> >You can't use the VSWR readings to establish resonance.
>
> I think you'll find that lowest VSWR reading will be at the resonate
> point. Not necessarily 1:1 but the lowest point indicated.
>
> 73
> Danny, K6MHE

811. Re: The Moebius Antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-10 19:57:12 UTC
From: k7itm@aol.com
Message-ID: <3200347.0207101157.54995315@posting.google.com>
Source record: 138953

a_g_lyph@hotmail.com (A. Gordon Lyph) wrote in message
news:<f8479612.0207100524.6c64012@posting.google.com>...
> ... If I remember right, it won't couple to metal,
> itself or other fields. I wonder how well it would radiate.

Well, if it won't couple to conductors or fields, it sounds to me like
it won't radiate very well. :-)

812. Re: Matching coil vs antenna length - mobile antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-10 19:58:50 UTC
From: CAM <w5dxp@hotmail.com>
Message-ID: <3D2C91FA.5AFDF435@hotmail.com>
Source record: 138954

David or Jo Anne Ryeburn wrote:
> f Freq SWR
>
> -0.015 7.000 2.78
> 0.000 7.015 2.38 (Resonance)
> 0.105 7.120 1.28 (Cecil's measured frequency of minimum SWR)
> 0.130 7.145 1.24 (calculated minimum SWR)
> 0.285 7.300 1.75

David, if you've ever used an MFJ-259B, you probably know one gets
what one pays for. With that in mind, I ran the above measurements
and obtained the following for my one wavelength ladder-line fed
dipole on 40m:

6.900 MHz 13+j0 SWR = 3.8:1
7.000 MHz 18+j0 SWR = 2.8:1
7.025 MHz 21+j0 SWR = 2.4:1
7.050 MHz 24-j4 SWR = 2.1:1
7.075 MHz 29-j5 SWR = 1.7:1
7.100 MHz 35-j7 SWR = 1.5:1
7.125 MHz 42-j8 SWR = 1.3:1
7.150 MHz 50-j10 SWR = 1.2:1
7.175 MHz 60-j12 SWR = 1.3:1
7.200 MHz 74-j15 SWR = 1.6:1

Even given the inaccuracies involved, the overall trend seems to be
consistent and obvious. The resonant point is 250 kHz away from the
point of least (50 ohm) SWR. Because of the A/D resolution involved,
the above impedances of 18+j0 and 21+j0 probably should have been 18+j1
and 21+j3.

Seems every time I make measurements on my antenna system, I seem to encounter
things that disagree with conventional amateur radio wisdom which makes me
wonder if conventional amateur radio wisdom is suffering from a case of arrested
development.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

813. Re: Matching coil vs antenna length - mobile antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-10 20:07:51 UTC
From: CAM <w5dxp@hotmail.com>
Message-ID: <3D2C9417.12DBD7D2@hotmail.com>
Source record: 138955

Tom Bruhns wrote:
> But I think the vswr versus frequency is a red herring. Design the
> antenna to have the radiation pattern you want, and a feedpoint
> impedance you can deal with over the frequency range of interest, and
> then design the coupling to that feedpoint impedance and the
> decoupling of the feedline from the antenna fields. There's no need
> to assume anything has to be "resonant," though that may be convenient
> in some cases.

Tom, are you giving us conventional wisdom here or are you going against
conventional wisdom?

I have a one wavelength dipole on 40m fed by 3/4WL of ladder-line. The
difference between the "resonant" frequency and the minimun 50 ohm SWR
frequency seems to be about 250 kHz. Does that fly in the face of
conventional wisdom or agree with it?
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
------== Over 80,000 Newsgroups - 16 Different Servers! =-----

814. Re: The Moebius Antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-10 20:08:53 UTC
From: CAM <w5dxp@hotmail.com>
Message-ID: <3D2C9455.3F99DBE@hotmail.com>
Source record: 138956

Tom Bruhns wrote:
>
> a_g_lyph@hotmail.com (A. Gordon Lyph) wrote in message
news:<f8479612.0207100524.6c64012@posting.google.com>...
> > ... If I remember right, it won't couple to metal,
> > itself or other fields. I wonder how well it would radiate.
>
> Well, if it won't couple to conductors or fields, it sounds to me like
> it won't radiate very well. :-)

Sorta like the proverbial isotropic antenna, eh?
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

815. Re: BACK TO BASICS - EM waves, E and H fields, in phaseorinquadr...

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-10 20:43:43 UTC
From: David Robbins <k1ttt@arrl.net>
Message-ID: <agi6a001n0m@enews1.newsguy.com>
Source record: 138957

"Richard Harrison" <richardharrison@webtv.net> wrote in message
news:4717-3D2BAD80-909@storefull-2393.public.lawson.webtv.net...
> Tom, W8JI wrote:
> "---some people need a clear single-sentence phrase to help them
> understand that the differential mode conditions, including voltage, do
> not have a fixed relation to common mode voltages."
>
> Wrong.
>
> For example, take a 1/2-wave simple horizontal dipole center-fed with
> ladder-line at ordinary height above the earth. Take the feedline off at
> 45/135 degrees, not 90/90 degrees.
>
> We unbalance the feed by lack of the perpendicular, and create a
> common-mode.

the 'common mode' is there even at a 90 degree feed angle, just its
excitation is reduced to near zero by being symetric with respect to the
fields generated by the dipole.

>
> When we transmit, some unbalanced r-f (with respect to earth for Richard
> Clark) is likely to appear at the sender to bite Cecil, should he be
> operating. This energy has made a round-trip, starting as a differential
> signal and returning as a common-mode signal.
>
> We may enjoy the jeopardy and leave things just as they are.
>
> So long as the transmitter output is constant and no physical or
> electrical changes are made, the common-mode energy returned to the
> transmitter will remain the same. The relationship is fixed for this set
> of conditions.
>
> This is like the voltage divider analogy I gave earlier. It can be
> reset, but once set, it can be relied upon to retain its position and
> function.
>
> The common-mode voltage at the sender can be stated as a percentage of
> the transmitter output voltage. Measurement of the voltages is all that
> you need to calculate a percentage.
>
> Best regards, Richard Harrison, KB5WZI

true, and in this particular set of conditions that calculated percentage
will work. however, change the angle to 44 degrees from 45 and the

percentage will change. change the frequency and the percentage will change. change the height above ground and the percentage will change. so yes, you can measure it for one set of operating conditions and determine some value that may be useful for that set of conditions... but you can not generalize that value, or even make predictions about how it changes with varying conditions. about the only thing that probably holds in most cases is that the percentage calculated holds over some reasonable range of power input to the dipole. but that is the only valid relationship between the common mode voltage and the differential voltage. there is no requirement that the common mode voltage be smaller than the differential voltage since the impedance of it's path may be much larger than the differential mode impedance. and there is no generalized formula you can use to compare the two of them as they depend on different characteristics of the system.

this may be 'basic' but that does not mean it is 'simple' or obeys a single law like ohm's or kirchoff's. volumes have been written on calculating impedances and propagation velocities of the many propagation modes on transmission lines, in wave guides, and even on high voltage power lines.

816. Re: A whole new 'back to basics' topic - Monopole fundamentals

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-10 21:27:51 UTC
From: " J. Harvey" <JM002.Harvey_TRIMTHIS_@Sympatico.ca>
Message-ID: <rF1X8.3028$9U1.1277880@news20.bellglobal.com>
Source record: 138958

Richard Clark wrote:
> "So this is where they pencil-whipped themselves?"

"Richard Harrison"
> Yup. Roy posted the correct analysis.
> Terman will do until something better comes along.
> Terman has been so right for so long that it pays to
> be skeptical of new claims that diverge.

Hi Richards,

Can either of you explain what these authors are up to with their "effective area". I had assumed that they were talking about something closely 'related' :-) to Capture Area. Whatever it is that they are talking about, it is divided by 4 (!) for the monopole*; and the monopole* has +3dB more (!) gain.

Thanks.

Jeff

*monopole over an infinite perfect ground plane yadda yadda yadda

817. Re: Public Offer to Scientifically Debate Fractal Antennas

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-10 21:32:59 UTC
From: Jeff Harvey <JM002.Harvey_TRIM_THIS_@Sympatico.ca>
Message-ID: <eK1X8.3033$9U1.1279013@news20.bellglobal.com>
Source record: 138959

"Wayne"
> damned spammer, send us to a crap site like that...
> I get enough crap in my email.
> user blocked now.

User now unblocked - Hi again !

You've got no sense of humour...
...it was a joke.

And it has nothing to do with your e-mail spam problem.

818. Re: Matching coil vs antenna length - mobile antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-10 22:59:06 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <3D2CBC3A.3050809@eznec.com>
Source record: 138960

Thanks very much for the analysis. I went through this exercise
(although manually) several years ago and came to the same conclusion.
And once in a while I encounter a model with EZNEC that illustrates it.
In practice, the points of resonance and minimum SWR are nearly always,
but not always, so close as to seem like the same frequency.

Roy Lewallen, W7EL

David or Jo Anne Ryeburn wrote:
>
> Warning: This is long, but I think no longer than necessary to describe
> what I found. If you don't like mathematics, skip this and read the next
> post after mine.

> . . .

> I'm convinced now that minimum SWR and "resonance" are not necessarily the
> same thing. Whether it matters, is another question.
>
> David, ex-W8EZE, and retired pure mathematician (despite the use of Maple)
>

819. Re: Back To Basics - Antenna Reciprocity

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-10 23:18:58 UTC
From: tdonaly@aol.com
Message-ID: <20020710191858.05277.00002672@mb-mb.aol.com>
Source record: 138961

Cecil wrote,
>
>Dick Carroll wrote:
>>
>> CAM wrote:
>> > Bart has reminded that the reciprocity theorem requires a transmitter
>> > and a receiver connected to those antennas.
>>
>> OK. What that means is the separate transmit and receive *systems*
>> aren't reciprocal unless identically well
matched to the antenna.
>
>Actually, my memory was fuzzy on exactly what reciprocity means. It
>means in (almost) any RF communications system, if the receiver and
>transmitter positions are swapped, the result will be the same.
>--
>cheers, CAM http://www.qsl.net/w5dxp
>
>
>-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
>http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
>-----== Over 80,000 Newsgroups - 16 Different Servers! =-----
>
The following is from "Networks and
Systems" by D. Roy Choudhury:
" If we consider two loops A and B of a
network N and if an ideal voltage source
E in loop A produces a current I in loop
B, then interchanging positions, if an
identical source in loop B produces the
same current I in loop A, the network is
said to be reciprocal.
" The dual is also true.
" A linear network is said to be reciprocal
or bilateral if it remains invariant due to the
interchange of position of cause and effect
in the network."
Later, "A reciprocal network is comprised of linear, time-invariant,
bilateral, passive elements." (This isn't
exactly what he said; I changed it slightly
to correct his language.)
I don't know how the above relates
exactly to antennas. The real-world
atmosphere certainly isn't time-invariant,

but I don't suppose that will stop those who like to use the simplifications of network theory to explain all electrical phenomena.

Tom Donaly KA6RUH

820. Re: A whole new 'back to basics' topic - Monopole fundamentals

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-10 23:21:53 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <3D2CC191.7040304@eznec.com>
Source record: 138963

J. Harvey wrote:
> "Roy Lewallen"
>
>>To answer the original question, this isn't really news.
>>...
>>ANY antenna measured over an infinite ground plane
>>will have twice the field strength (or 3 dB greater gain
>>compared to any single reference antenna) as the
>>counterpart antenna measured in free space.
>>...
>>There's nothing wrong with the NEC and MININEC
>>analysis that gives these results. Any other conclusion
>>would be wrong.
>
>
> Thanks Roy, I was hoping to hear from you...
>
> How about the other report conclusions, do you have any comments about those
> ?
>
> ...2) The effective area of a receive monopole is one-fourth that of a
> dipole.

If an antenna is 100% efficient (a reasonable approximation for the discussion at hand), the effective aperture (or, as hams like to call it, "capture area") is exactly proportional to gain. So the effective aperture of a monopole over ground is exactly twice as large as for a dipole in free space. The effective aperture of a dipole over ground is considerably larger than for a dipole in free space (the amount depending on orientation and direction in which the aperture is measured), and the effective aperture of a ground plane antenna (essentially a monopole) in free space is very nearly the same as for a dipole in free space.

In their paper, Logan and Rockway claim that the monopole over ground has four times the effective area of the dipole in free space, and use their equation 18 as justification. Their equation 18 relates power received, power transmitted, and gains, and shows that the ratio of power received to power transmitted would be four times as great in a system of two monopoles over ground compared to two dipoles in free space. However, you can clearly see from their equation 17 and the gain figures they give that the effective aperture of the monopole over ground is twice, not four times, the effective aperture of the dipole in free space.

Be aware that the effective aperture is different in each direction,
just like the gain.

> ...3) If the monopole and dipole are in identical fields, then the dipole
> will deliver to a matched load four times the power.

If the monopole over ground is immersed in the same field as a dipole in
free space, the monopole will deliver to a matched load twice the amount
of power as the dipole, since it has twice the effective aperture. But a
ground plane (monopole) in free space will deliver very nearly the same
amount of power as a dipole in free space.

>
> Number 2) above was presented in the report as being "news".

Number 2 would indeed be news, if it were correct. But it's not.

It would appear that the purpose of the paper is to promote MININEC
Professional rather than to present new information.

Roy Lewallen, W7EL

821. Re: Matching coil vs antenna length - mobile antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-10 23:30:14 UTC
From: Reg Edwards <g4fgq.regp@btinternet.com>
Message-ID: <agig25$l9b$1@paris.btinternet.com>
Source record: 138964

EVENTUALLY, WHATEVER IS DONE, THE WHOLE SYSTEM MUST, MUST, MUST, BE RESONANT.

WHY ?

BECAUSE THE IMPEDANCE PRESENTED TO THE TRANSMITTER IS A PURE RESISTANCE. USUALLY 50 OHMS.

AND IF THE SYTEM INPUT IMPEDANCE IS A PURE RESISTANCE, THEN, WHATEVER THE RESISTIVE VALUE MIGHT BE, BY DEFINITION THE SYSTEM IS RESONANT.

QED.

It's all so simple you can't believe it. Even ARRL bibles will tell you that. But I'm only a Limey pensioner ! ;o)

Regards to all. Reggie, G4FGQ

822. Re: Matching coil vs antenna length - mobile antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-10 23:30:15 UTC
From: Reg Edwards <g4fgq.regp@btinternet.com>
Message-ID: <agig26$l9b$2@paris.btinternet.com>
Source record: 138965

> > Another minor reason is that Zo is not a pure resistance. It is R+jX.
>
> Also right, but at reasonable frequencies and with reasonable coax, X is
> numerically small compared to R.

==========

Yes, that's why I mentioned "minor".

Do you have an honors degree in the art of repeating the bleeding obvious ?
(With acknowledgements to John Cleese).

;o) ;o) ;o) ;o) ;o) ;o) ;o) ;o)

Reg.

823. AH-4 tuner

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-10 23:38:34 UTC
From: Frank Helsell <fhelsell@mchsi.com>
Message-ID: <_z3X8.475593$cQ3.40472@sccrnsc01>
Source record: 138966

I'm thinking of replacing my vertical with a 52 foot random wire in the attic, coupled to an Icom AH-4 auto-tuner. If anyone has any opinions about the performance of this auto-tuner, I would appreciate hearing from you.
73,
Frank
WMHZ
fhelsell@mchsi.com

824. Re: A whole new 'back to basics' topic - Monopole fundamentals

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-10 23:41:56 UTC
From: "J. Harvey" <JM002.HarveyANTISPAM@Sympatico.ca>
Message-ID: <8D3X8.3079$9U1.1320241@news20.bellglobal.com>
Source record: 138967

"Roy Lewallen" <w7el@eznec.com> wrote
<snippage for brevity - refer to original posting>
>
> > ...2) The effective area of a receive monopole
> > is one-fourth that of a dipole.
>
> Number 2 would indeed be news, if it were correct.
> But it's not.
>
> It would appear that the purpose of the paper is to
> promote MININEC Professional rather than to
> present new information.

Thanks very much for your review and report. I very much appreciate it.

It is 'news' (as far as I'm concerned) that their paper is apparently *not*
correct. These guys are in a position (writing widely-used NEC programs,
writing papers, advising military and government decision makers) where such
errors could be propagated ad infinitum. It could lead to all sorts of
troubles.

825. Re: Back To Basics - Antenna Reciprocity

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-10 23:55:39 UTC
From: klocko@toad.net
Message-ID: <224d9cd4.0207101555.71ec6c49@posting.google.com>
Source record: 138968

CAM <w5dxp@hotmail.com> wrote in message news:<3D2C6B24.464AB651@hotmail.com>...
> Dick Carroll wrote:
> >
> > CAM wrote:
> > > Bart has reminded that the reciprocity theorem requires a transmitter
> > > and a receiver connected to those antennas.
> >
> > OK. What that means is the separate transmit and receive *systems*
> > aren't reciprocal unless identically well matched to the antenna.
>
> Actually, my memory was fuzzy on exactly what reciprocity means. It
> means in (almost) any RF communications system, if the receiver and
> transmitter positions are swapped, the result will be the same.

In addition to that, if reciprocity holds, several important results
follow. First of all, the transmitting and receiving patterns of an
antenna are identical. Then, since directivity depends only on the
shape of the power pattern, the directivity of the antenna when
transmitting is the same as its directivity when receiving. If the
terminal impedance of a transmitting antenna is Zt, then the load
impedance required for max power transfer when receiving is the
complex conjugate Zt*. 73,
Bill N3WK

826. Re: Back To Basics - Antenna Reciprocity

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-11 00:12:06 UTC
From: "J. Harvey" <JM002.HarveyANTISPAM@Sympatico.ca>
Message-ID: <q34X8.3089$9U1.1329895@news20.bellglobal.com>
Source record: 138869

"Bill Klocko"
> In addition to that, if reciprocity holds, several important
> results follow. First of all, the transmitting and receiving
> patterns of an antenna are identical. Then, since directivity
> depends only on the shape of the power pattern, the
> directivity of the antenna when transmitting is the same
> as its directivity when receiving. If the terminal impedance
> of a transmitting antenna is Zt, then the load impedance
> required for max power transfer when receiving is the
> complex conjugate Zt*.

I like the way that you laid that out. Each naturally follows the previous.

The only part that I've yet to understand is why a 'structure' (part of an otherwise ordinary antenna) couldn't be arranged that would distinguish between a *spherical* wavefront being emitted by the transmitting antenna, and a *planer* wavefront arriving at that very same antenna in when in receive mode. I can't think of such a structure, but the wavefront shapes are very different. It 'seems' possible. If such a structure were possible, then one could make a receive-only, or a transmit-only, (non-reciprocal) antenna.

Obviously the burden of proof is on the 'inventor' (sic) to present an example... sigh... Suggestions welcomed.

827. Re: Making a flexable handheld VHF antenna, any ideas?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-11 00:23:17 UTC
From: grant <5@6.7>
Message-ID: <Vd4X8.36450$P%6.2826483@news2.west.cox.net>
Source record: 138870

"Toni" wrote > Follow this link:
>
http://groups.google.com/groups?threadm=b6b4e772.0202010017.32110d46%40posti
ng.google.com
> and look at my answer to Jason. I have used this antenna with my TH-D7
> and I am using it now on an IC-R2 scanner. It performs much better
> than the supplied rubber whips and when you are done you can roll it
> and put it in a pocket.
> Just try it, it is cheap and easy to make.
> Toni
Just get a thin wire of flexible steel from a model toy shop; they use
it in radio controlled planes and similar. Here they call it piano
wire, because apparently it is similar to the wires used to make
pianos. Well, cut it to about .27 wavelength (don't know why .27
instead of 1/4, but most references I found recommended it). Solder it
to the inner pin of the SMA and put it in place. Fill the inside of
the SMA with two component epoxy or other heavy-duty glue. Put
something at the other end of the wire to prevent it from harming you
or others. You have it. You can bent it, allow rain to fall on it, ...
Most important, if the wire is thin enough it acts as a "mechanical
fuse" for your SMA. It will bent before your SMA breaks.

Just another thing: Cut a 1/4 w. thin wire and put and 'eyelet?' on
it, so that you can put it in the SMA before screwing the antenna on
it. It will kind of work as a radial. It DOES make a difference with
any antenna you are using!

Toni,
Is there a way to post a picture if this antenna on the web? And what is
this radial that you are talking about? What is your formula for both .27
and 1/4 wave? Also, I am using a BNC, but I would guess that it would be
similar?
Thanks, Grant

828. Re: A whole new 'back to basics' topic - Monopole fundamentals

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-11 00:26:18 UTC
From: klocko@toad.net
Message-ID: <224d9cd4.0207101626.4e24019@posting.google.com>
Source record: 138871

```
" J. Harvey" <JM002.Harvey_TRIMTHIS_@Sympatico.ca> wrote in message
news:<2pTW8.2709$5i5.1110975@news20.bellglobal.com>...
> "Roy Lewallen"
> > To answer the original question, this isn't really news.
> > ...
> > ANY antenna measured over an infinite ground plane
> > will have twice the field strength (or 3 dB greater gain
> > compared to any single reference antenna) as the
> > counterpart antenna measured in free space.
> > ...
> > There's nothing wrong with the NEC and MININEC
> > analysis that gives these results. Any other conclusion
> > would be wrong.
>
> Thanks Roy, I was hoping to hear from you...
>
> How about the other report conclusions, do you have any comments about those
> ?
>
> ...2) The effective area of a receive monopole is one-fourth that of a
> dipole.

The usual expression for effective area is G(lambda^2/4pi), but in the
report it's (after moving terms around) given as G(lambda^2/16pi).
I've heard the lambda^2/4pi term described as a "universal constant",
so maybe the authors are trying to mess with Mother Nature in their
attempt to resolve discrepancies between measurements and predictions.

Eqn 30 can also be written as (G/4)(lambda^2/4pi), so their effective
gain for the receiving monopole is -0.83 dBi.

In re-freshing my memory concerning reciprocity, the transmitting and
receiving patterns of an antenna are identical, and the directivity is
the same either when transmitting or receiving. So it would seem that
their conclusion violates reciprocity. 73,
Bill N3WK
```

829. Re: horizontal loop revisited

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-11 00:32:52 UTC
From: Larry Gauthier - K8UT <larryg5099@chartermi.net>
Message-ID: <uipkhq2lr1444f@corp.supernews.com>
Source record: 138872

I am running sloping loops on 30 and 40 meters, about 50 feet high at the apex (the feed point) and 30 feet high on the two ends. I find them to be good antennas with surprising directivity. I feed each of them directly with coax - a random length of 50 ohm coax, followed by a 1/4 wave 75 ohm coax matching section. With this arrangement the SWR is low and flat; without the 75 ohm matching section I can't get the SWR under about 3:1.

-larry
K8UT
"N4LQ" <N4LQ@igLou.com> wrote in message news:3d2cac7e_1@news.iglou.com...
> Doc:
> Dave, W0MHS (he has a new call) is the guy who wrote the original Loop
> Skywire article in Nov. 1985 QST. He insisted that nothing but coax was to
> be used for the loop and allowed for RG-62, RG-59 and RG-58. He warned
about
> using baluns because they were "unnecessary". I've seen more recent post
> from him and he still insist on using coax. We would all like for him to
> explain his theory. I think he was some kind of RF engineer. I believe
this
> antenna is also described in the ARRL Handbook and uses coax feed.
> A recent article in QST describing a sloping loop followed Dave's advise,
> specifying coax use. This loop is cut for 40 meters.
>
> --
> Steve Ellington N4LQ.
> "'Doc" <w5lz@icok.net> wrote in message news:3D2C4EF3.319A47C8@icok.net...
> > N4LQ,
> > Not sure who Dave Fischer is, but trying to
> > use coax for the feed line of an 'all band' loop
> > antenna will result in some pretty wild mismatches.
> > I doubt if it would make any difference as far as
> > the radiation pattern goes, but it would make a
> > fairly large difference in the amount of power
> > radiated.
> > The question about a loop being a balanced
> > antenna has already been answered.
> > 'Doc
>
>

830. Re: BACK TO BASICS - EM waves, E and H fields, in phase or inquadr...

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-11 00:47:55 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <3D2CD5BB.7070806@eznec.com>
Source record: 138873

I'm not familiar with this text, but later works (such as Jasik or Johnson) refer to this as the "coupled impedance". The mutual impedance for two elements is defined as follows:

V1 = I1Z11 + I2V12
V2 = I1Z21 + I2Z22

where

V1, V2 are the voltages at antennas 1 and 2
I1, I2 are the currents at antennas 1 and 2
Z11, Z22 are the self impedances of antennas 1 and 2
Z12 = Z21 = the mutual impedance between antennas 1 and 2

V2/I1 = Z12 or Z21 only when I2 = 0, that is, when the second element is open circuited. (See the example on page 263 of Kraus, First Ed., or p. 423 of Kraus, Second Ed.) For other termination conditions, V2/I1, the coupled impedance, isn't equal to Z12 or Z21, the mutual impedance.

The mutual impedance depends only on the physical characteristics of the elements, not to the currents flowing in them. The coupled impedance depends on the currents in the elements and on the mutual impedance.

Roy Lewallen, W7EL

Richard Harrison wrote:
> Tom, W8JI wrote:
> "So you are saying Ohm`s law is the formula for determining mutual
> coupling between common mode and differential mode impedances.
>
> If the differential-mode energy doesn`t exist, neither does the
> common-mode. The only way common mode comes into existance is coupling
> between the circuits where the modes prevail. This coupling has a name
> which is used for its quantification, "mutual impedance".
>
> The mutual impedance formula is found in many texts and is simply an
> extension of Ohm`s law. This is from a WW-2 era Terman`s "Radio
> Engineers` Handbook" page 278:
>
> Mutual impedance = Z12 = -E2 / I1
>
> That`s Z = E/I , or Ohm`s law, where we have voltage in one wire and
> current in another ratioed.
>
> Best regards, Richard Harrison, KB5WZI
>

831. Oliver Heaviside

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-11 00:49:49 UTC
From: Reg Edwards <g4fgq.regp@btinternet.com>
Message-ID: <agiknc$mv3$1@knossos.btinternet.com>
Source record: 138874

> You forgot the Poynting vector. No
> crackpot antenna theory is any good
> without an appeal to the Poynting
> vector.
======================

Who's Poynting ?

Oliver Heaviside has also been forgotten it seems. It was his intellect and self-taught genius which generated the few beautifully simple equations describing electro-magnetic radiation which appear in all the World's engineering textbooks in all languages but are still incorrectly attributed by plagiarists to Maxwell.

Please give credit where credit is due.

Reg, G4FGQ

832. Re: BACK TO BASICS - EM waves, E and H fields, in phase orinquadr...

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-11 00:52:42 UTC
From: 2w8ji@contesting.com
Message-ID: <3d2cd172.83407579@news.akorn.net>
Source record: 138875

On Wed, 10 Jul 2002 17:02:17 GMT, Richard Clark <kb7qhc@attbi.com>
wrote:

>>I have presumed that your examples were coax fed, do these examples
>>lack ground connection, by design, at the fed end?
>should read: lack ground connection, by design, at the antenna feed?

The only two feeds I know of that are ideal are a perfectly balanced
dipole or closed loop with a perfectly balanced feeder, or a vertical
with an infinite ground systems and the feedline leaving below that
ground.

Even though a small vertical like the Hygain, Cushcrafts, or others
might have "grounds", they are very small poor grounds and the
feedline exits the area at a point where the high electric field
excites the cable. The exciting voltage can be MANY times the voltage
across the feedpoint.

The Reversible (or simple Reflection) Beverage has a ground, but
intentionally initiates this same or similar effect through the use of
an auto-transformer or a conventional transformer with a secondary
that feeds the center tap of a primary that is across the two antenna
wires. The antenna wires can be coaxial or balanced construction.

The EH antenna would be another example of an antenna that
intentionally (or accidentally through oversight by the "designers")
excites the feedline in the same manner as the Reversible (or
Reflection) Beverage and nearly as much as the verticals I mentioned.

I'm sure any engineer who has worked on the vertical antennas, or many
users, have learned about the non-fixed relationship between feedpoint
voltage and voltage exciting the feedline in common mode.

Most antenna systems are between the two extremes of a perfect system,
and a totally out-of-whack system like the EH antenna.

Considering these examples, however, will show us that in all but
perfectly balanced systems or perfectly unbalanced system...and with
perfect systems with feedlines leaving at ideal locations....the
simple idea that you can look at the feedpoint "across" voltage to
determine common mode excitation voltage is flawed.

The range is from "no big error" to cases where there is a phenominal
error. That is why it is best to disuade people from assuming the
"across" voltage is what drives the common mode system. The excitation
does not even need be from the same ultimate source, let alone be
related by simple formula (as Harrison attempted to do).

Thinking the differental system is directly tied in some fixed established relationship to the common mode, such as through power formulas, will be in error many times more often than not.

73 Tom

833. Help? Is there significant signal loss with too many outlets???

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-11 00:59:59 UTC
From: mouln@yahoo.com
Message-ID: <30da9028.0207101659.4a5aac7a@posting.google.com>
Source record: 138876
Cross-posted to: rec.radio.amateur.antenna,rec.video

Just moved to a home that was wired for tv.
There are a total of 7 outlets connected to a TV antenna in the
attic.

Some channels come in strong and some are weaker. I want to avoid a
signal amp
because of the video noise they introduce.

2 of the seven outlets have televisions hooked up via RG6 coax.

I have been reading about cable splitters and and the signal loss they
cause. I am wondering if outlets might be diminishing the signal
arriving at each of the seven outlets.

I have also been told that the unused outlets should have terminators
screwed in to the cable jacks that these devices would help get a
stronger signal at the 2 used outlets.

Would appreciate any info from person knowledgable on antenna systems
and signal loss. Thanks
Jim

834. Re: Matching coil vs antenna length - mobile antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-11 01:02:42 UTC
From: 2w8ji@contesting.com
Message-ID: <3d2cd757.84916583@news.akorn.net>
Source record: 138877

On Wed, 10 Jul 2002 11:34:12 +0100, "Ian White, G3SEK"
<G3SEK@ifwtech.co.uk> wrote:

>But in spite of being very common, the "half-wave" dipole is actually a
>special case. Cecil's antenna/feedline system is a better example of the
>way things can be.

But the topic here was a short loaded mobile antenna Ian, not a dipole
or a dipole with a tuned feeder. Sometimes (or almost always) threads
move away from from what was actually asked and responded to.

With a smallish antenna the slope of resistance is gradual, but the
slope of reactance is steep. In that case, resonance is established
within instrument capability as the point of lowest SWR.

If you have a long feedline, especially one with high standing waves
in the system, the (frequency) slope of resistance can be steep
compared to the slope of reactance.

That is why analyzers like the AEA that try to guess the sign of
reactance by observing the increase or decrease in impedance with
frequency make errors in guessing the sign about half the time.

I use a quarter to determine the sign of reactance, heads is inductive
tails is capacitive. It works just as well once an antenna is
involved.

73 Tom

835. Re: BACK TO BASICS - EM waves, E and H fields, in phase or inquadr...

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-11 01:06:35 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <3D2CDA1B.3030104@eznec.com>
Source record: 138878

I was out of town for a few days, and returned to find a somewhat humorous thread. With "BASICS" in the title, a good deal of the discussion seems to revolve around "depends on what you mean by depends".

Let's get back to basics, and consider the currents on the two wires of a twinlead conductor, call them I1 and I2. Define the positive direction of both currents to be the same, say toward the load.

There are two currents and two currents only. The concept of differential and common mode currents are a mathematical convenience which make certain analyses simpler. But I see that it also generates a huge amount of confusion.

The differential current is defined as:

1/2 * (I1 - I2)

and a common mode current as:

1/2 * (I1 + I2)

One of these is simply the average of the two currents. The other is half their difference. (For some uses, the factor of 1/2 is dropped, but this doesn't modify the conclusions.)

If I2 is exactly equal in magnitude to, and opposite in direction of, I1, (I2 = -I1) then the differential current is equal to I1 (or -I2), and the common mode current is zero. If I1 and I2 are equal in magnitude and flowing in the same direction (i.e., are in phase), then the common mode current is equal to I1 (or I2) and the differential current is zero. Any other ratio of I1 and I2 results in some differential and some common mode current.

Depending on the connection of the source, we can modify I1 and I2 together or independently by modifying the loads. For example, suppose that we have a transmission line which has one conductor driven by a voltage source connected between it and ground, and the other conductor driven by another source which is the negative of the first, and connected between the second conductor and ground. If we put a single resistor between the conductors at the load end, we'll have a purely differential current. Or if we put equal resistors from each conductor to ground, we'll have a purely differential current. But if we put unequal resistors from the conductors to ground, I2 won't equal either I1 or -I1, so we'll calculate non-zero differential and common mode currents. (To get a purely common mode current we can put the two sources in phase, then terminate the other end with equal resistors to ground or a resistor between the conductors.)

What's the big deal, and what's all this about one "causing" the other? We have two currents, I1 and I2, period. Their values depend on the nature of the load. And the differential and common mode currents are simply calculated from their values.

That's about as basic as it gets.

Roy Lewallen, W7EL

836. Re: Looking for a ham on Grand Cayman

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-11 01:22:54 UTC
From: Allodoxaphobia <QSB@QRM-QRN.net>
Message-ID: <slrnaipnfd.g7q.QSB@animas.frontier.net>
Source record: 138879

On Wed, 10 Jul 2002 05:11:10 -0300, Bob Cook scribbled:
>
> I am wondering if there are any hams here who live in or will soon be
> visiting Grand Cayman. I would like to seek and try to arrange for some
> assistance to another ham, who is 84 years old, and who lives on Grand
> Cayman. He has a beam antenna he would like to get up.

Just a feller I know from several QSO's on 6M:

http://www.qsl.net/zf1dc/
http://www.qrz.com/detail/ZF1DC

Jonesy
--
| Marvin L Jones | jonz | W3DHJ | OS/2
| Gunnison, Colorado | @ | Jonesy | linux __
| 7,703' -- 2,345m | frontier.net | DM68mn SK

837. MARS antennas

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-11 01:33:27 UTC
From: Terry Sellick <tsellic@attglobal.net>
Message-ID: <3d2ce426_2@news1.prserv.net>
Source record: 138880

I have been thinking about getting into a MARS net.
Can anyone recommend a good antenna for HF MARS?
What's available besides log periodics?

838. Re: Matching coil vs antenna length - mobile antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-11 01:36:07 UTC
From: CAM <w5dxp@hotmail.com>
Message-ID: <3D2CE107.5A0F0C1F@hotmail.com>
Source record: 138881

Reg Edwards wrote:
>
> EVENTUALLY, WHATEVER IS DONE, THE WHOLE SYSTEM MUST, MUST, MUST, BE
> RESONANT.
>
> WHY ?
>
> BECAUSE THE IMPEDANCE PRESENTED TO THE TRANSMITTER IS A PURE RESISTANCE.
> USUALLY 50 OHMS.

Not to pick nits, Reg :-), but most amateur transmitters will output full
power into 50+j35 ohms. Is 50+j35 ohms resonant?
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

839. Re: Help? Is there significant signal loss with too many outlets???

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-11 01:40:45 UTC
From: David Ornee <daveornee@mindspring.com>
Message-ID: <aginshlqv1@slb3.atl.mindspring.net>
Source record: 138882
Cross-posted to: rec.radio.amateur.antenna,rec.video

If you can get to the splitter you can replace it with a 2 way splitter and
pick up some signal. 8-way splitters have about 11 dB insertion loss,
because the "splitting". A 2-way splitter will have about 3.5 dB loss.
Unused ports should be terminated with a 75 Ohm termination for TV.
If you are allowed to put the antenna outside above the top of your roof you
will likely gain more signal.
KQ9W, David Ornee, Western Springs, IL
"victor voul" <mouln@yahoo.com> wrote in message
news:30da9028.0207101659.4a5aac7a@posting.google.com...
> Just moved to a home that was wired for tv.
> There are a total of 7 outlets connected to a TV antenna in the
> attic.
>
> Some channels come in strong and some are weaker. I want to avoid a
> signal amp
> because of the video noise they introduce.
>
> 2 of the seven outlets have televisions hooked up via RG6 coax.
>
> I have been reading about cable splitters and and the signal loss they
> cause. I am wondering if outlets might be diminishing the signal
> arriving at each of the seven outlets.
>
> I have also been told that the unused outlets should have terminators
> screwed in to the cable jacks that these devices would help get a
> stronger signal at the 2 used outlets.
>
> Would appreciate any info from person knowledgable on antenna systems
> and signal loss. Thanks
> Jim

840. Re: BACK TO BASICS - EM waves, E and H fields, in phase or inquadr...

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-11 01:44:14 UTC
From: CAM <w5dxp@hotmail.com>
Message-ID: <3D2CE2EE.A4D1ECC9@hotmail.com>
Source record: 138883

Roy Lewallen wrote:
> What's the big deal, and what's all this about one "causing" the other?
> We have two currents, I1 and I2, period. Their values depend on the
> nature of the load. And the differential and common mode currents are
> simply calculated from their values.

So are common mode conditions related to differential mode conditions? :-)
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

841. Re: Shack resonates at 40M

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-11 01:51:48 UTC
From: David Ornee <daveornee@mindspring.com>
Message-ID: <agioh7$c5s$1@slb6.atl.mindspring.net>
Source record: 138884

You might have some luck with a longer run of coax. There may be some
resonance in the feedline.
You might also have some luck with adding to or changing the RF choke or
balun at the feed point. If you are using a coil of coax at the feedpoint
as your RF choke you might try a large number of ferrite donuts instead.
Try the easiest thing first, like adding a 10' jumper onto the coax to see
if feedline resonance has anything to do with it.
73, KQ9W, David Ornee, Western Springs, IL
"Ken" <cprstn54zz@att.net> wrote in message
news:3d2b72d4.17317968@news-server.optonline.net...
> When I TX on 40M at anything over 50 watts, my smoke detectors set off
> my house alarm. Also, my shack seems to get a little RF hot at 40M.
> This doesn't happen up to and beyond 100 watts on any other band, from
> 160M to 10M. I can measure the field on my Radio Shack field strength
> meter, which deflects full scale at max sensitivity at 1" from the
> mic. I do not get a shock from my mic tho, so it is not all that hot.
>
> I am using a sloping multiband dipole. There is a horizontal 40 ft.
> long metal A/C duct (grounded) pointing at the antenna hub, but 10 ft
> away from it. My RG-8X coax feed line runs along the length of the
> duct and 6" away from it. There is also some electrical wiring
> running parallel to the feed line and 6" away for up to 15 ft.
>
> In addition, there are three vertical steel fireplace flues
> terminating around 2 ft from the dipole hub -- all of them also
> grounded. One is 22 ft long, the second is 30 ft. long and the third
> is 40 ft long (all plus or minus 2 ft). The 30 footer is 1/4
> wavelength at 40M.
>
> I believe I am pumping some RF into the house ground at 40 M through
> the duct, the flues or the electrical wiring. Is my feed line doing
> it, or is the antenna RF lighting up my duct the flues and my house
> ground? BTW, before I bought and installed the antenna the
> manufacturer opined that neither the duct nor the flues would impair
> propagation. I didn't ask him about other possible problems -- like
> the one I am experiencing.
>
> I could relocate the feed line away from the duct, but it would then
> be closer to plumbing lines and other wiring. I could also try
> disconnecting the duct and flues from the house ground or choking the
> lead(s) to the furnaces/fireplaces which effect(s) the grounding.
> Any oher thoughts?
>
> I have seen some postings on solving the smoke detector problem.

> Should I just try to solve that, or is that just a symptom?
>
> Ken KC2JDY
>
>
> ----
> Ken
> (to reply via email
> remove "zz" from address)

842. Re: My 85' dipole is actually 94'!! Another ??

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-11 01:55:27 UTC
From: Bill Nelson <billn@spock.peak.org>
Message-ID: <agioieedd3@quark.scn.rain.com>
Source record: 138885

CAM <w5dxp@hotmail.com> wrote:
>> >
>> Hmm, not at all sure I would agree with that statement. The
>> license manuals had questions that were ~represenative~ of those
>> on the tests, not the exact questions (same for the answers).

> You are saying the same thing I said. Rearranging my words: Even
> if the 1951 ARRL License Manual didn't contain the exact questions,
> it contained exact answers. What good would inexact answers be?

The difference being: On the old tests, you at least had to know which formulas to apply to a given question. You also had to know how to do the calculations. With the modern tests - all that is required is a bit of memorization. There is no need to know how the answer was obtained.

--
Bill Nelson (billn@peak.org)

843. Re: Help? Is there significant signal loss with too many outlets???

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-11 01:56:09 UTC
From: "J. Harvey" <JM002.HarveyANTISPAM@Sympatico.ca>
Message-ID: <YA5X8.3153$9U1.1359275@news20.bellglobal.com>
Source record: 138886
Cross-posted to: rec.radio.amateur.antenna,rec.video

"victor voul"
> [Subject]
> Is there significant signal loss with too many outlets???

Yes, as you describe it.

> Just moved to a home that was wired for TV.
> There are a total of 7 outlets connected to a
> TV antenna in the attic.

Good grief. You can test the attic antenna by connecting it directly (no splitters) to one TV. If it has a weak signal, then you might need an in-line amplifier (or put the antenna outside higher, or both).

> Some channels come in strong and some are weaker.
> I want to avoid a signal amp because of the video noise
> they introduce.

Unless there is something wrong with a particular TV Distribution Amplifier, it will do more *good* than harm. Weak signal is certainly a cause of video noise.

> Two of the seven outlets have televisions hooked up
> via RG6 coax.

Hopefully the other five are connected with RG-59 (as opposed to speaker wire, for example).

> I have been reading about cable splitters and and the
> signal loss they cause. I am wondering if outlets might
> be diminishing the signal arriving at each of the seven
> outlets. I have also been told that the unused outlets
> should have terminators screwed in to the cable jacks
> that these devices would help get a stronger signal at
> the 2 used outlets.

Assuming that you don't have seven TVs connected, and assuming that the seven cables originate at a central location, why not disconnect the unused outlets and use a four way amplified TV distribution amplifier ? Terminate any of the four unused outlets. Ignore the three least likely to be used cable runs (at least until you need them).

Good luck.

844. Re: BACK TO BASICS - EM waves, E and H fields, in phaseorinquadr...

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-11 02:10:04 UTC
From: richardharrison@webtv.net
Message-ID: <13429-3D2CE8FC-116@storefull-2396.public.lawson.webtv.net>
Source record: 138889

David, K1TTT wrote:
This may be "basic but that does not mean it is simple or obeys a single law like ohm`s or kirchoff`s."

Instability, complexity, and diversity of coupling are not contested. Contested is Tom`s statement that the common-mode is unrelated to the differential-mode. That is wrong. There are exceptions. Perfect balance can eliminate coupling. Infinite distance between circuits decouples them. Both extreme balance and distance are rare.

R = E / I , Ohm`s law, is the mutual impedance formula. Another word for formula is: "relation". The word "relation" implies a relationship between the variables.

Mutual impedance is also called coupling. The word "coupling" implies related. Coupled circuits are related by Ohm`s law as defined by their mutual impedance, E2 / I1. We can measure E2 at great distance and observe its fixed relationship (at least for a period of time) to I1. this proves coupling and that the variables are related.

Drive two metal stakes in the earth. Measure the resistance between them. Say it rains and the resistance between the stakes drops. The voltage to current ratio, measures less. This relation, the ohms resistance, has changed but not disappeared. A relationship does not have to be unchanging to exist and endure.

Best regards, Richard Harrison, KB5WZI

845. Re: MFJ-1621 portable antenna- comments ?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-11 02:19:37 UTC
From: jonie <jonie41@shaw.ca>
Message-ID: <ZW5X8.598$2b.180627@news1.calgary.shaw.ca>
Source record: 138887

I think that antenna is very similar if not a re-engineered version of B&W's AP-10....or is it just me?

John, VA7GG

"Mark Korchinski" <bc962@FreeNet.Carleton.CA> wrote in message news:aeoomf$f1p$1@freenet9.carleton.ca...
>
> Re: MFJ 1621 Portable antenna
>
> I don't expect much, but hope it's better than the
> extendable whips available for a FT-817 which generally
> are much more expensive
>
> Any one with experience/comments with this antenna
> for portable/temporary use?
>
> 73
> Mark VA3ZU
>
> --
> Mark K.
>
> <<< I never let my schooling get in the way of my education>>>
> Mark Twain

846. Re: Oliver Heaviside

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-11 02:42:25 UTC
From: tdonaly@aol.com
Message-ID: <20020710224225.01628.00000112@mb-fm.aol.com>
Source record: 138888

>
>> You forgot the Poynting vector. No
>> crackpot antenna theory is any good
>> without an appeal to the Poynting
>> vector.
>=======================
>
>Who's Poynting ?
>
>Oliver Heaviside has also been forgotten it seems. It was his intellect and
>self-taught genius which generated the few beautifully simple equations
>describing electro-magnetic radiation which appear in all the World's
>engineering textbooks in all languages but are still incorrectly attributed
>by plagiarists to Maxwell.
>
>Please give credit where credit is due.
>---
>Reg, G4FGQ
>

If you insist. The following equations were originally called the
Heaviside-Herz equations. They are an expression and distillation
of the work of several people, including Maxwell.

del cross E = dB/dt E is the electric field vector. The d's should be the
type used in partial differential equations
which my
computer can't reproduce. This is an
expression of
Faraday's law. B is also a vector.

del cross H = J + dD/dt This is a generalized expression of Ampere's circuital
law. H, J, and
D are vectors. The dD/dt part is Maxwell's
contribution.

del dot D = rho Gauss' law. D is a vector, rho isn't.

del dot B = 0 This isn't named after anyone, but just
expresses the belief that
there are no isolated magnetic charges.

Heaviside was able, after much work, to come up with these expressions because
of
the work of some nineteenth century mathematicians who invented his math for
him, and

who never get any credit at all. Perhaps you can name them, Reg.

Tom Donaly KA6RUH

847. Re: BACK TO BASICS - EM waves, E and H fields, in phase orinquadr...

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-11 02:44:24 UTC
From: richardharrison@webtv.net
Message-ID: <14261-3D2CF108-112@storefull-2391.public.lawson.webtv.net>
Source record: 138891

Tom, W8JI wrote:
"---or many users, have learned about the non-fixed relationship between feedpoint voltage and voltage exciting the feedline in common mode."

Are you saying there is a non-linear relationship between applied voltage of a given frequency and the voltage appearing as common-mode voltage when the applied magnitude changes?

What would cause that?

In another field, cross-talk always sounded a lot like the signal which instigated the cross-talk regardless of the amount of coupling.

Best regards, Richard Harrison, KB5WZI

848. Re: horizontal loop revisited

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-11 02:44:36 UTC
From: N4LQ <N4LQ@igLou.com>
Message-ID: <3d2b9f75$1_1@news.iglou.com>
Source record: 138984

I agree but it's frustrating when I compare my loop to a dipole and the dipole whips it's tail in the broadside direction. Cebik describes a 44 ft dipole for 40-10m that has a nice broadside pattern on all bands. I've tried this little wire and it works great. He also describes an 88ft dipole for 80-20m with the same pattern. These will beat a loop in their favored direction and are much easier to erect.

I noted that Cebik never mentions the use of coax to feed a multiband loop while Dave Fischer was very adimate about using coax with no balun.

Question: How is the loop a "balanced antenna"? Looks to me like the concept of being balanced doesn't apply as it does a dipole.

--
Steve Ellington N4LQ.
"ARDUJENSKI" <ardujenski@aol.com> wrote in message
news:20020709124223.26799.00003548@mb-da.aol.com...
> I had missed this artilce in LB CEBIK's website but talks about HOHPLs
> (Horizontally Oriented, Horizontally Polarized Large Wire Loop Antennas)
but it
> does address many issues we discussed here
> http://www.cebik.com/atl1.html
> An interesting part of his conclusions is QUOTE:
>
> "For nation-wide and world-wide communications, evenness of pattern may
often
> be more important than the gain of one or more individual lobes. As a
> consequence of this behavior, the advantage of the HOHPL will not show
itself
> in any one contact or in a short period. Satisfaction with the antenna
grows
> with time and changes in the propagation paths, a successful
communications
> almost everywhere shows up in the log" .... LB CEBIK
>
> looks like I need to be planting those poles for the corners (smile)
> Alan KB7MBI
>

849. Magloops

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-11 03:13:29 UTC
From: Mike Coslo <mcoslo@adelphia.net>
Message-ID: <3D2D21FC.10202@adelphia.net>
Source record: 138890

I'm looking to make a portable antenna for 40-10 meters for one of the State QSO parties.

I would be driving to a remote site, setting up my rig and working away.

I have looked at a number of designs, and the Magnetic loop looks pretty interesting. I'd be able to plunk it in the back of my truck and set up on site, then tear down and move to the next county on my list as needed.

Most of the hams I know are using dipoles, inverted V's and some G5RV's.

Is the magloop just so much hokum? Or is it's major drawback the constant tuning, which is no problem AFAIAC?

- Mike KB3EIA -

850. Re: Smith Chart Tutorial

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-11 03:34:45 UTC
From: Dick Carroll <dixie@townsqr.com>
Message-ID: <agiucl$k4d$0@208.206.142.79>
Source record: 138892

CAM wrote:
>
> Dick Carroll wrote:
> > Cecil, maybe this is a good spot to start with the thread on the Smith
> > Chart.
>
> Thanks Dick, but the internet delay strikes again. I posted the first
> installment yesterday. Have you read it?
>

I hadn't found it till now, evidently made it to my news server since I
was last online. I'll take a look.

851. Re: BACK TO BASICS - EM waves, E and H fields, in phase or inquadr...

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-11 03:47:16 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <3D2CFFC4.7050302@eznec.com>
Source record: 138893

Correction: The first equation should read

V1 = I1Z11 + I2Z12

Thanks to Bart Rowlett for bringing the typo to my attention.

Roy Lewallen, W7EL

Roy Lewallen wrote:
> I'm not familiar with this text, but later works (such as Jasik or
> Johnson) refer to this as the "coupled impedance". The mutual impedance
> for two elements is defined as follows:
>
> V1 = I1Z11 + I2V12
> V2 = I1Z21 + I2Z22
>
> where
> . . .

852. Re: BACK TO BASICS - EM waves, E and H fields, in phase or inquadr...

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-11 03:48:28 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <3D2D000C.9090403@eznec.com>
Source record: 138894

CAM wrote:

> So are common mode conditions related to differential mode conditions? :-)

Are antennas related to baluns?

Roy Lewallen, W7EL

853. Re: Matching coil vs antenna length - mobile antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-11 03:55:50 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <3D2D01C6.809@eznec.com>
Source record: 138895

I regularly run my rig into reactive loads (SWR meter indicates, say, 2 or 2.5:1, with impedance unknown and as likely to be reactive as resistive). And you say this system must be resonant? Perhaps it's simple to a Limey pensioner, but do you think you can explain why in simpler terms that a Yank engineer can understand?

Roy Lewallen, W7EL

Reg Edwards wrote:
> EVENTUALLY, WHATEVER IS DONE, THE WHOLE SYSTEM MUST, MUST, MUST, BE
> RESONANT.
>
> WHY ?
>
> BECAUSE THE IMPEDANCE PRESENTED TO THE TRANSMITTER IS A PURE RESISTANCE.
> USUALLY 50 OHMS.
>
> AND IF THE SYTEM INPUT IMPEDANCE IS A PURE RESISTANCE, THEN, WHATEVER THE
> RESISTIVE VALUE MIGHT BE, BY DEFINITION THE SYSTEM IS RESONANT.
>
> QED.
>
> It's all so simple you can't believe it. Even ARRL bibles will tell you
> that. But I'm only a Limey pensioner ! ;o)
> ---
> Regards to all. Reggie, G4FGQ
>
>

854. Re: BACK TO BASICS - EM waves, E and H fields, in phase orinquadr...

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-11 04:06:03 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <or0qiu48vfj3hrii8tc586vnbblkm68fts@4ax.com>
Source record: 138896

On Thu, 11 Jul 2002 00:52:42 GMT, 2w8ji@contesting.com (Tom W8JI)
wrote:

>On Wed, 10 Jul 2002 15:54:42 GMT, Richard Clark <kb7qhc@attbi.com>
>wrote:
>
>>On Wed, 10 Jul 2002 13:10:40 GMT, 2w8ji@contesting.com (Tom W8JI)
>>wrote:
>>
>>>On Wed, 10 Jul 2002 01:29:39 GMT, Richard Clark <kb7qhc@attbi.com>
>>>wrote:
>>>
>>>>On Mon, 08 Jul 2002 22:34:40 GMT, 2w8ji@contesting.com (Tom W8JI)
>>>>wrote:
>>>>
>>>>>The "across" impedance
>>>>
>>>>Hi Tom,
>>>>
>>>>Is this Common or Differential Mode?
>>>
>>>Across would be between the two or more conductor transmission line,
>>>or the differential mode.
>>
>
>On Wed, 10 Jul 2002 17:02:17 GMT, Richard Clark <kb7qhc@attbi.com>
>wrote:
>
>>I have presumed that your examples were coax fed, do these examples
>>lack ground connection, by design, at the antenna feed?
>
snip
>
>Even though a small vertical like the Hygain, Cushcrafts, or others
>might have "grounds", they are very small poor grounds and the
>feedline exits the area at a point where the high electric field
>excites the cable. The exciting voltage can be MANY times the voltage
>across the feedpoint.

So, a ground exists at one side of the feedpoint of the antenna, and
you call this "across" impedance Differential?

73's
Richard Clark, KB7QHC

855. Re: Making a flexable handheld VHF antenna, any ideas?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-11 04:08:29 UTC
From: grant <5@6.7>
Message-ID: <1x7X8.38198$P%6.2891106@news2.west.cox.net>
Source record: 138897

"Bob Headrick" wrote > See http://www.aesham.com/pdf/096-103.pdf, the RD-78 or RD-98 may be what you
> are looking for.
A 2M rubber duck would probably be an adequate match, if not you
> could snip small lengths off the end.
> Regards,
> Bob Headrick

Bob,
Do you know if an antenna like the RD-78 could be tuned better for about 156.800 MHz, by snipping small lenghts off of it?
Grant

856. Re: Matching coil vs antenna length - mobile antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-11 05:05:43 UTC
From: nm5k@wt.net
Message-ID: <25eb70d7.0207102105.708f1d93@posting.google.com>
Source record: 138898

Roy Lewallen <w7el@eznec.com> wrote in message news:<3D2CBC3A.3050809@eznec.com>...
> Thanks very much for the analysis. I went through this exercise
> (although manually) several years ago and came to the same conclusion.
> And once in a while I encounter a model with EZNEC that illustrates it.
> In practice, the points of resonance and minimum SWR are nearly always,
> but not always, so close as to seem like the same frequency.
>
> Roy Lewallen, W7EL

I once did some comparisons when making some mobile coils and
antennas. As a criteria for "resonance" , I assumed maxismum field
strength. When adjusting for maximum F/S, and then comparing the
minimum SWR, I've noticed about a 10-20-30 kc spread.
That was with fairly primitive testing, but thats what I saw. The
difference was not enough to worry about. In fact, I use only a SWR
meter to tune my mobiles, and have never had any trouble. I can tell
where it's at fairly closely just by listening to the noise as I tune
the radio across the band. MK

857. Re: Will paralleled dipoles have smaller Bandwidths?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-11 05:46:09 UTC
From: nm5k@wt.net
Message-ID: <25eb70d7.0207102146.6f985661@posting.google.com>
Source record: 138899

StarGazer <pti@capnet.com> wrote in message news:<3D2C51BB.10AA4200@capnet.com>...
> Compared with individual dipoles.

If they are at right angles, and little to no coupling, than the
bandwidth should be about the same. Only if you have some coupling
between elements are you likely to see a big change. And it would
almost always be to the higher band dipole or dipole's. Usually, you
will see reduction of bandwidth in that case, depending on the amount
of coupling. Even still , the bandwidth should be quite usable. MK

858. Re: MARS antennas

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-11 05:47:48 UTC
From: nm5k@wt.net
Message-ID: <25eb70d7.0207102147.3c1d2930@posting.google.com>
Source record: 138900

"Terry Sellick" <tsellic@attglobal.net> wrote in message
news:<3d2ce426_2@news1.prserv.net>...
> I have been thinking about getting into a MARS net.
> Can anyone recommend a good antenna for HF MARS?
> What's available besides log periodics?

A dipole? MK

859. Re: Shack resonates at 40M

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-11 06:40:31 UTC
From: cprstn54zz@att.net
Message-ID: <3d2d2634.128774234@news-server.optonline.net>
Source record: 138901

On Wed, 10 Jul 2002 20:51:48 -0500, "David Ornee"
<daveornee@mindspring.com> wrote:
>If you are using a coil of coax at the feedpoint
>as your RF choke you might try a large number of ferrite donuts instead.

I have a substantial 2" ferrite toroid with ten turns of coax at the
feed point. Although the feed line is a little hot, it is not as hot
as the household AC wiring that runs near the antenna end of my house.

I have an extra toroid and could add it to my feed line, but the
closest I can now get to my feed point (not counting all the turns on
the first toroid) is around 8 ft. away. I can also put a second
toroid anywhere else along the feed line right up to the antenna
switch in my shack.

I will be putting similar toroids into the two AC lines that run the
closest to the legs of the dipole and are the hottest, and in all the
smoke detector lines.

Ken KC2JDY

Ken
(to reply via email
remove "zz" from address)

860. Re: Matching coil vs antenna length - mobile antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-11 06:48:10 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <3D2D2A2A.40804@eznec.com>
Source record: 138902

Why would the maximum field strength occur at resonance?

Roy Lewallen, W7EL

Mark Keith wrote:
>
> I once did some comparisons when making some mobile coils and
> antennas. As a criteria for "resonance" , I assumed maxismum field
> strength. When adjusting for maximum F/S, and then comparing the
> minimum SWR, I've noticed about a 10-20-30 kc spread.
> That was with fairly primitive testing, but thats what I saw. The
> difference was not enough to worry about. In fact, I use only a SWR
> meter to tune my mobiles, and have never had any trouble. I can tell
> where it's at fairly closely just by listening to the noise as I tune
> the radio across the band. MK

861. Re: Shack resonates at 40M

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-11 06:52:37 UTC
From: Bill Nelson <billn@spock.peak.org>
Message-ID: <agj9vldbv7@quark.scn.rain.com>
Source record: 138903

Ken <cprstn54zz@att.net> wrote:

> So, I appear to have what must be a typical problem for anyone who
> has his dipole attached to his house: common mode RF picked up by
> house wiring near the antenna.

If it is picked up from the antenna, then it is not common mode current.

> Any suggestions of where I should start my research into solving this
> will be appreciated.

RF chokes on the smoke detectors and other devices being affected will probably help. A few ferrite beads may be all that are needed.

There are texts written on rf interference suppression. It would not hurt for you to do some studying.

--
Bill Nelson (billn@peak.org)

862. Re: Z of Loop?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-11 06:56:52 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <3D2D2C34.40903@eznec.com>
Source record: 138904

Without looking closely at the model, it appears from the impedances that you're near parallel resonance. At that point, the impedance can vary rather dramatically with very small changes in element length or loop circumference, and with small changes in source placement. This is often the reason for differences in results between programs -- MININEC based programs places sources at segment junctions, while NEC based programs distribute the source over a segment. Some programs do automatic segmentation, and differing segmentation can move sources and otherwise affect results in situations where small changes have a large effect. If a very small change in the model does cause a large change in results, expect to do some tweaking on a real antenna after designing it with the help of a model.

Roy Lewallen, W7EL

Mark Keith wrote:
>
> Dunno, I used a modeling program also. And I did indeed use 10.120
> mhz. I also checked the 40m specs as a comparison. I tried a different
> program and got different results. "About an appx 450-500 ohm feed on
> 30m". I may have made a mistake on the first one. So I tried yet
> another program and got about the same answer as you did. "about
> 4000-5000 ohms". I'm not sure why the differences yet...I'll have to
> look into that. All the antennas were about the same, and at the same
> height , etc. Three programs, three different answers... Something
> seems weird there...May have been a mistake on my end somewhere, but I
> haven't seen what yet. All were corner fed, over "real" ground, at
> about 40 ft. Dunno, I'd have to look into it, but as a gut hunch, I'd
> say the 2nd program was the most accurate. "appx 500 ohms". 4000-5000
> ohms seems a tad high to me for some reason. MK
>
> http://web.wt.net/~nm5k/

863. Re: Matching coil vs antenna length - mobile antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-11 06:58:07 UTC
From: "Ian White, G3SEK" <G3SEK@ifwtech.co.uk>
Message-ID: <7phklfE$xSL9EAgd@ifwtech.co.uk>
Source record: 138911

Tom W8JI wrote:
>On Wed, 10 Jul 2002 11:34:12 +0100, "Ian White, G3SEK"
><G3SEK@ifwtech.co.uk> wrote:
>
>>But in spite of being very common, the "half-wave" dipole is actually a
>>special case. Cecil's antenna/feedline system is a better example of the
>>way things can be.
>
>
>But the topic here was a short loaded mobile antenna Ian, not a dipole
>or a dipole with a tuned feeder. Sometimes (or almost always) threads
>move away from from what was actually asked and responded to.
>
At the point I joined in, the question had already moved on to "What's happening with Cecil's antenna?"

>With a smallish antenna the slope of resistance is gradual, but the
>slope of reactance is steep. In that case, resonance is established
>within instrument capability as the point of lowest SWR.
>
>If you have a long feedline, especially one with high standing waves
>in the system, the (frequency) slope of resistance can be steep
>compared to the slope of reactance.
>
The point I was trying to make was that both cases can happen. Unless people understand that there's more than one possibility, they jump to totally false conclusions, like "The MFJ-259B doesn't work".

>That is why analyzers like the AEA that try to guess the sign of
>reactance by observing the increase or decrease in impedance with
>frequency make errors in guessing the sign about half the time.
>
The last AEA-CIA I saw couldn't make its mind up - the displayed sign dithered as you looked at it. For certain other impedances the displayed X value would suddenly jump from say +30 (correct) and stick at zero over a wide frequency range... which cannot ever be a true reading. I had wanted to review it for a magazine, but it was just too flakey.

In contrast the MFJ-269 sailed through the same tests, and worse ones. Accuracy was really quite good, especially for the moderate values of both R and X such as you often find for antennas. The accuracy is less good for very high or very low values of R and X, but these extreme impedances will make any bridge-based instrument sweat, and at least the accuracy falls off in an understandable way. I can live with that.

I get a lot of antenna questions from readers of my monthly magazine column. This isn't the first instance where there was doubt about the readings from an MFJ, but the readings proved to be quite correct. The real problem was about understanding antennas, or understanding what SWR is.

>I use a quarter to determine the sign of reactance, heads is inductive
>tails is capacitive. It works just as well once an antenna is
>involved.

Fortunately I know you don't really mean that 'flip' remark.

Antennas *are* understandable.

--
73 from Ian G3SEK Editor, 'The VHF/UHF DX Book'
'In Practice' columnist for RadCom (RSGB)

864. Re: MARS antennas

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-11 08:50:17 UTC
From: Dan/W4NTI <w4nti@mindspringnospam.com>
Message-ID: <agjgsc$1ea$1@slb0.atl.mindspring.net>
Source record: 138905

You will find that a simple dipole is adequate. In fact unless you need to/
want to operate in nets that are way out of the ham bands you will be able
to use a ham antenna just fine.

You will be required to put in 'X' amount of time on the assigned network.
AF needs 12 hours per quarter. I use my 75 meter dipole with a internal
tuner on the MP to operate way above 75 meters without any problem at all.

The only time a LP will/would be needed is if you get into phone patch or
long haul traffic nets. Assuming you can find any traffic that is.

Dan/W4NTI

"Terry Sellick" <tsellic@attglobal.net> wrote in message
news:3d2ce426_2@news1.prserv.net...
> I have been thinking about getting into a MARS net.
> Can anyone recommend a good antenna for HF MARS?
> What's available besides log periodics?
>
>

865. Re: BACK TO BASICS - EM waves, E and H fields, in phase orinquadr...

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-11 09:40:34 UTC
From: 2w8ji@contesting.com
Message-ID: <3d2d4e9c.115454123@news.akorn.net>
Source record: 138906

One more example showing how people get in trouble by thinking the voltage across the feedpoint equals the voltage that drives the common mode impedance of the feedline.

Model an off-center fed dipole 1/2 wl long (in space) and hang a wire down it, and look at the voltage across a balun to force current to zero on the hanging wire.

A model of a 130 foot dipole offset fed with a 100 volt voltage source 50 feet from one end and a 1/4 wl feeder hanging perfectly vertical shows the voltage to null current to zero on that hanging wire, at the connection to the antenna, is about 255 volts.

Just by offsetting the feeder about 24% of antenna length, a balun on a 1/4 wl feeder hanging perfectly vertical from the dipole has to hold off about 255 volts of voltage when the voltage across the feedpoint of the antenna is only 100 volts!

This helps show how the simplistic view Harrison and others use is incorrect, and demonstrate why I say the voltage driving the common mode impedance of the feedline is not directly related to the across voltage of the feedpoint. The common mode impedance of the systems are also not related.

73 Tom

866. Re: Back To Basics - Antenna Reciprocity

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-11 10:50:30 UTC
From: Andy Cowley <andy.cowley@uwe.ac.uk>
Message-ID: <3D2D6586.E7336008@uwe.ac.uk>
Source record: 138907

CAM wrote:
>
> " J. Harvey" wrote:
> > Does anyone have a simple proof (or even an indication) that antennas must
> > be reciprocal ?
>
> What if the driving impedance of the transmitter is a lot different
> than the impedance across the transmission line during receive, e.g.
> the transmission line acting like a shorted stub during transmit
> and like an open stub during receive?

Then you are using a _different _ antenna system for receive and
transmit and reciprocity is irrelevant.

vy 73

Andy, M3ABC

867. Re: Back To Basics - Antenna Reciprocity

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-11 11:06:36 UTC
From: Andy Cowley <andy.cowley@uwe.ac.uk>
Message-ID: <3D2D694C.1DA718DE@uwe.ac.uk>
Source record: 138908

'Doc wrote:
>
> CAM,
> Then, answer this. Since when is the feed line
> and transmitter/receiver part of the antenna?
> 'Doc

1885. When Heinrich Hertz started it all? ;-)
The distinction between antenna and antenna system
seems arbitrary unless ideal components are used,
hence Hertz and not Maxwell.

Unless of course you can prevent a real feedline
from radiating at all?

vy 73

Andy, M3ABC

868. Re: Matching coil vs antenna length - mobile antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-11 11:28:51 UTC
From: Reg Edwards <g4fgq.regp@btinternet.com>
Message-ID: <agjq5ipjh1@helle.btinternet.com>
Source record: 138909

Dear Roy,

It's not like you to be deliberately obtuse.

As that USA tennis champion says "You can't be serious".

Reg.

869. Re: Matching coil vs antenna length - mobile antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-11 11:28:52 UTC
From: Reg Edwards <g4fgq.regp@btinternet.com>
Message-ID: <agjq5jpjh2@helle.btinternet.com>
Source record: 138910

Cecil asked [rhetorically] -
> Is 50+j35 ohms resonant?

==========

No Cecil. But that's a characteristic of poor, ill-treated, abused, life-shortened, ALC-moderated transmitters and careless operators, not the antenna system.

In an attempt to dispel any confusion which may have been caused to other readers of these walls by your amusing response, I can only repeat that the input impedance of a tuned circuit (tuner+feedline+antenna) when at resonance, is purely resistive.

(To find the resonant frequency(ies) differentiate the impedance function with respect to frequency and equate to zero. Insert the resonant frequency(ies) back into the impedance function and it will be found, as near as dammit is to swearing, the series reactive component(s) of impedance is/are negligible.)

Regards, Reg, G4FGQ

870. Can twin feeder be put underground??

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-11 12:01:31 UTC
From: Chris Bartlett <Bartty@v21mail.co.uk>
Message-ID: <3d2d73a4$1_1@news.greennet.net>
Source record: 138824

I have just run a 2 " conduit down my garden, about 20 yards to a convenient tree. The feeder from my G5RV is near this tree, I have run the coax and there is an excess of twin feeder from the G5 that can touch the ground unless I support it back up in the tree a bit as I am doing now. I have tried pulling the coax back towards the house and allowing the start of the feeder to go inside the plastic pipe. I find that I can tune across the HF frequencies using my MFJ 941 E getting low SWR on each band.

I understand it is best to keep twin feeder away from metallic objects as I had great difficulty when the feeder ran near a scaffold pole, it seems to be fine in the conduit under ground though.

I would be pleased to see any comments anyone might have on this. Constructive or helpful ones preferably.

Thanks in advance,

Chris.

871. WTB-19" RACK MOUNT SHELVES

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-11 12:40:48 UTC
From: n2ion@aol.com
Message-ID: <20020711084048.01664.00000229@mb-fp.aol.com>
Source record: 138912

HI,
I'M LOOKING TO BUY A FEW 19" RACK MOUNTABLE SHELVES ON SLIDERS. I NEED
SOMETHING THAT CAN SLIDE IN & OUT OF THE RACK.
IF YOU HAVE ANY OF THESE PLEASE EMAIL WITH THE DETAILS & PRICE.

THANKS IN ADVANCE.

872. Re: Shack resonates at 40M

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-11 12:56:44 UTC
From: CAM <w5dxp@hotmail.com>
Message-ID: <3D2D808C.335B76A8@hotmail.com>
Source record: 138913

Ken wrote:
> I have an extra toroid and could add it to my feed line, but the
> closest I can now get to my feed point (not counting all the turns on
> the first toroid) is around 8 ft. away. I can also put a second
> toroid anywhere else along the feed line right up to the antenna
> switch in my shack.

Spacing two chokes 1/4WL apart (~234/f) is often effective.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

873. Re: BACK TO BASICS - EM waves, E and H fields, in phase orinquadr...

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-11 13:17:05 UTC
From: richardharrison@webtv.net
Message-ID: <14261-3D2D8551-164@storefull-2391.public.lawson.webtv.net>
Source record: 138916

Tom, W8JI wrote:
"Just by ofsetting the feeder about 24% of antenna length, a balun on a 1/4 wl feeder hanging perfectly vertical from the dipole has to hold off about 255 volts of voltage when the voltage across the feedpoint is only 100 volts."

Tom now introduces a new topic to divert attention and behold, a balun has a voltage drop, antenna impedance is a function of position, and an off-center-fed antenna is unbalanced.

The argument is and has been:
Is the common-mode voltage on the feedline related to the differential-mode voltage between the feedline conductors?

In Tom`s new example, does reducing the transmitter output reduce the common-mode voltage?

Does increasing the transmitter output increase the common-mode voltage?

A yes answer to the two questions above indicates that, yes there is a relationship between differential and common modes.

Best regards, Richard Harrison, KB5WZI

874. Re: BACK TO BASICS - EM waves, E and H fields, in phase orinquadr...

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-11 13:32:49 UTC
From: CAM <w5dxp@hotmail.com>
Message-ID: <3D2D8901.3120B7EA@hotmail.com>
Source record: 138914

Tom W8JI wrote:
> This helps show how the simplistic view Harrison and others use is
> incorrect, and demonstrate why I say the voltage driving the common
> mode impedance of the feedline is not directly related to the across
> voltage of the feedpoint. The common mode impedance of the systems are
> also not related.

Tom, if you choose two resistor values at random and install them in
the same circuit, are those resistors related? Of course they are.
Their random relationship disappears when you install them in the
same circuit. You apparently continue to be ignorant of the definition
of "related" even though I have published it more than once in the past
few days.

Even though the common mode impedance may be unknown, it is in the same
circuit as the differential mode impedance and therefore, is related.
Again, from Webster's:

"related - connected by reason of an established or discoverable relation."

The established relation is a common power source and that they appear in
the same inter-related circuit. The discoverable relation is that common mode
conditions can be measured. You continue to choose to use an incorrect word
to say what you are trying to say. The result continues to be a false statement.
Repeating it 1000 times will not make it true.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
------== Over 80,000 Newsgroups - 16 Different Servers! =-----

875. Re: Solving a problem with the Smith Chart

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-11 13:37:11 UTC
From: Dick Carroll <dixie@townsqr.com>
Message-ID: <agk1m7$9rn$0@208.207.71.171>
Source record: 138915

CAM wrote:
>
> Time for a checkpoint. Normalize the following seven values of
> resistance and plot them on the horizontal line on a Smith Chart
> normalized to Z0=300.

20+j0 ohms, .066

50+j0 ohms, .166

100+j0 ohms, .333

300+j0 ohms, 1.0

600+j0 ohms, 2.0

1200+j0 ohms, 4.0

3000+j0 ohms 10.0

I'm beginning to see how this thing works. Without the "normalizing"
you can't get started. Normalizing makes the chart useful at any Zo,
makes it a universal tool. One must keep the frame of reference for each
solution (Zo=300 in this case) to know where you're at.

Dick

876. Re: Making a flexable handheld VHF antenna, any ideas?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-11 13:46:57 UTC
From: ted.culin@gte.net
Message-ID: <3d2d8b95.41788568@news.verizon.net>
Source record: 138917

>Hello,
>I am interested in finding out how to possibly build flexible handheld VHF
>antennas.
>
Take a look at www.htantennas.com, they are well made and tuned and
work very well. They come in a variety of styles.

Building your own would be fun, but? Might think of a 1/4 wave using
an old piece of metal measuring tape. SHould be able to find that at
a garage sale of 50 cents, look for the thin ones and make sure you
get the plastic coating off before you solder it on :)

877. Re: Matching coil vs antenna length - mobile antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-11 13:47:11 UTC
From: CAM <w5dxp@hotmail.com>
Message-ID: <3D2D8C5F.838BC8C9@hotmail.com>
Source record: 138918

Reg Edwards wrote:
>
> Cecil asked [rhetorically] -
> > Is 50+j35 ohms resonant?
>
> ==========
>
> No Cecil. But that's a characteristic of poor, ill-treated, abused,
> life-shortened, ALC-moderated transmitters and careless operators, not the
> antenna system.

I didn't use an antenna tuner, Reg, so I had to settle for impedances like
50-j10 as the minimum SWR point. The SWR was 1.2:1 indicating non-resonance.
Is an SWR of 1.2:1 enough of a mismatch to worry about?

> In an attempt to dispel any confusion which may have been caused to other
> readers of these walls by your amusing response, I can only repeat that the
> input impedance of a tuned circuit (tuner+feedline+antenna) when at
> resonance, is purely resistive.

We weren't disagreeing with the correct part of your statement, Reg.
We were disagreeing with the incorrect part:

> EVENTUALLY, WHATEVER IS DONE, THE WHOLE SYSTEM MUST, MUST, MUST, BE
> RESONANT.

Sounds like hyperbole to me, Reg. :-)
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
------== Over 80,000 Newsgroups - 16 Different Servers! =-----

878. Re: Shack resonates at 40M

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-11 13:56:41 UTC
From: Dick Carroll <dixie@townsqr.com>
Message-ID: <agk2qp$c46$0@208.207.71.171>
Source record: 138819

Ken wrote:

> Any suggestions of where I should start my research into solving this
> will be appreciated.
>

Yep. Move your antenna away from the house at least 30-40 feet. Works wonders.

I always had RFI problems when I had antennas close to the house. They induce RF into the house wiring and it goes all over the house working its magic in the many susceptible houshold devices. My solution was to move the antennas. Haven't had RFI since.

Dick

879. Re: W5QJR Loop Antenna Book - lost

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-11 13:59:29 UTC
From: Dick Carroll <dixie@townsqr.com>
Message-ID: <agk301$c46$1@208.207.71.171>
Source record: 138820

Douglas Snowden wrote:
>
> I seem to have lost my copy of W5QJR book on
> small loops. I remember it had a orange or red cover.
> Been looking for a long time. Anyone have one they
> can spare (for a fee of course). I doubt it is still
> available anywhere.

If you come up with two I sure would like to have the spare.

Dick

880. Re: BACK TO BASICS - EM waves, E and H fields, in phase orinquadr...

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-11 14:08:49 UTC
From: Dick Carroll <dixie@townsqr.com>
Message-ID: <agk3hhdec0@208.207.71.171>
Source record: 138821

Richard Clark wrote:
>
> this relates to the nature of knowing the Common of the Common Mode in
> that the Common is not always "fixed" to earth (and has no need to be,
>

Yup. An airliner at 30,000 feet would have a particularly long ground lead with many resonances. But I bet there are still common mode currents aboard to be dealt with.

Dick

881. Re: Magloops

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-11 14:13:05 UTC
From: me <me@nowwhere.com>
Message-ID: <3D2D9271.1D87C18F@nowwhere.com>
Source record: 138822

Mike Coslo wrote:

> I'm looking to make a portable antenna for 40-10 meters for one of the
> State QSO parties.
>
> I would be driving to a remote site, setting up my rig and working away.
>
> I have looked at a number of designs, and the Magnetic loop looks pretty
> interesting. I'd be able to plunk it in the back of my truck and set up
> on site, then tear down and move to the next county on my list as needed.
>
> Most of the hams I know are using dipoles, inverted V's and some G5RV's.
>
> Is the magloop just so much hokum? Or is it's major drawback the constant
> tuning, which is no problem AFAIAC?
>
> - Mike KB3EIA -

mag loops work well. but they have to be constantly retuned, there are lethal
voltages present
on them when running them with very much power, so physical contact is a big no no.
because of the high voltages that are present, the tuning capacitors can be very
expensive
if you purchase them. do a google search on loop antennas, there is a ton of infor
available.

kd5foy

882. Re: Solving a problem with the Smith Chart

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-11 14:21:50 UTC
From: CAM <w5dxp@hotmail.com>
Message-ID: <3D2D947E.BFDD6639@hotmail.com>
Source record: 138823

Dick Carroll wrote:
>
> CAM wrote:
> >
> > Time for a checkpoint. Normalize the following seven values of
> > resistance and plot them on the horizontal line on a Smith Chart
> > normalized to Z0=300.
>
>
> 20+j0 ohms, .066
>
> 50+j0 ohms, .166
>
> 100+j0 ohms, .333
>
> 300+j0 ohms, 1.0
>
> 600+j0 ohms, 2.0
>
> 1200+j0 ohms, 4.0
>
> 3000+j0 ohms 10.0
>
> I'm beginning to see how this thing works. Without the "normalizing"
> you can't get started. Normalizing makes the chart useful at any Zo,
> makes it a universal tool. One must keep the frame of reference for each
> solution (Zo=300 in this case) to know where you're at.

Exactly, we are dealing with a characteristic impedance of 300 ohms so the 1.0+j0 in the center of the Smith Chart equals 300 ohms. As you calculated above, 50 ohms appears at 0.166(7) on the horizontal line. If we were dealing with a characteristic impedance of 50 ohms, 1.0+j0 would represent 50 ohms and 300+j0 would appear at the 6.0+j0 point on the horizontal line.

Did you plot the above points on the Smith Chart? Except for the uneven spacing, it is just like plotting points on the 'X' axis of a normal X/Y graph. The Smith Chart has gone through a transformation that causes the 'X' axis and 'Y' axis to be curved. The first installment showed how to locate a resistance point. Tonight I will post an installment that shows how to locate the reactance point along with the resistance point on the two-dimensional Smith Chart graph. Knowing how to normalize and locate points on the Smith Chart is the first step toward turning a Smith Chart into a very useful tool. The thing I find most useful about it is that it is a math model of transmission lines that I can carry around in my head and use in my thought processes. later ...

--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
------== Over 80,000 Newsgroups - 16 Different Servers! =-----

883. Re: Solving a problem with the Smith Chart

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-11 15:22:14 UTC
From: Dick Carroll <dixie@townsqr.com>
Message-ID: <agk7r6$m1c$0@208.207.71.171>
Source record: 138825

CAM wrote:
>
> 20+j0 ohms, 50+j0 ohms, 100+j0 ohms, 300+j0 ohms,
>
> 600+j0 ohms, 1200+j0 ohms, 3000+j0 ohms
>

Cecil I noticed something odd while plotting the normalized impedances on the resistance line. Those to the left of 1.0 don't correspond exactly to the SWR results before normalization, that is in the case of 20+j normalized to 1/.06 yields SWR of 16.666 instead of the result of dividing 300/20 = 15. Is that significant?

Those to the right of the 1.0 point seem to almost all correspond with the exact SWR before normalization. Maybe that's all a mathematical anomoly, of no significance?

Oops, I see the problem. It's the result of rounding off the decimal, ie originally was .06666666666 instead of .06. It's not significant, that's as close as one can chart it.

Dick

884. Re: Matching coil vs antenna length - mobile antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-11 15:29:33 UTC
From: Reg Edwards <g4fgq.regp@btinternet.com>
Message-ID: <agk88sgqr1@helle.btinternet.com>
Source record: 138826

Cecil asked -
>Is an SWR of 1.2:1 enough of a >mismatch to worry about?
==========
Cecil, it is unreasonable to expect me to know what sort of SWR your transmitter worries about. Telepathy does not extend over a 5,000 mile path.

Have you tried asking the long-suffering poor thing yourself?
==========
>
> > In an attempt to dispel any confusion which may have been caused to other
> > readers of these walls by your amusing response, I can only repeat that the
> > input impedance of a tuned circuit (tuner+feedline+antenna) when at
> > resonance, is purely resistive.
>
> We weren't disagreeing with the correct part of your statement, Reg.
==========
We ? Who's We ? You and your transmitter ?

Cecil, with all the abuse it receives from your tuning system I'm surprised it has sufficient humor to remain on speaking terms.
==========
> We were disagreeing with the incorrect part:
>
> > EVENTUALLY, WHATEVER IS DONE, THE WHOLE SYSTEM MUST, MUST, MUST, BE
> > RESONANT.
>
> Sounds like hyperbole to me, Reg. :-)
==========
But Cecil, if you think it is not intended to be taken literally, why disagree with it.

As you (in the plural) are fully aware, the condition associated with "Must, must must" is that the input impedance must be purely resistive.

It is NOT associated with the condition that an untrained operator must have changed bands and omitted to readjust the tuner.

Just for once Cecil would you do me a favour by allowing me to win this argument.

Yours Reg. G4FGQ

885. Re: Solving a problem with the Smith Chart

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-11 15:46:58 UTC
From: Allodoxaphobia <QSB@QRM-QRN.net>
Message-ID: <slrnaira3h.8q8.QSB@animas.frontier.net>
Source record: 138827

On 11 Jul 2002 15:22:14 GMT, Dick Carroll scribbled:
>
> Oops, I see the problem. It's the result of rounding off the decimal,
> ie originally was .06666666666 instead of .06. It's not significant,

That's not "rounding off", that's truncating. If you wish
to round off to 2 decimal places, it's .07, and the error - tho'
still there -- will be less (and to "the other side".)

Jonesy
--
| Marvin L Jones | jonz | W3DHJ | OS/2
| Gunnison, Colorado | @ | Jonesy | linux __
| 7,703' -- 2,345m | frontier.net | DM68mn SK

886. Re: Shack resonates at 40M

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-11 15:50:32 UTC
From: Allodoxaphobia <QSB@QRM-QRN.net>
Message-ID: <slrnairaa7.8q8.QSB@animas.frontier.net>
Source record: 138828

On 11 Jul 2002 13:56:41 GMT, Dick Carroll scribbled:
> Ken wrote:
>
>> Any suggestions of where I should start my research into solving this
>> will be appreciated.
>
> Yep. Move your antenna away from the house at least 30-40 feet. Works
> wonders.

Also, re-roofing with a metal roof versus asphalt shingles will work.
Tho' I often wonder what 'interesting' effect that's had on my
radiation patterns. HI!HI!

Jonesy
--
| Marvin L Jones | jonz | W3DHJ | OS/2
| Gunnison, Colorado | @ | Jonesy | linux __
| 7,703' -- 2,345m | frontier.net | DM68mn SK

887. Re: Can twin feeder be put underground??

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-11 16:47:20 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <addrius35kgi0s3rifd44065i2e4n5luql@4ax.com>
Source record: 138829

On Thu, 11 Jul 2002 13:01:31 +0100, "Chris Bartlett"
<Bartty@v21mail.co.uk> wrote:

>I have just run a 2 " conduit down my garden, about 20 yards to a convenient
>tree. The feeder from my G5RV is near this tree, I have run the coax and
>there is an excess of twin feeder from the G5 that can touch the ground
>unless I support it back up in the tree a bit as I am doing now. I have
>tried pulling the coax back towards the house and allowing the start of the
>feeder to go inside the plastic pipe. I find that I can tune across the HF
>frequencies using my MFJ 941 E getting low SWR on each band.
>
>I understand it is best to keep twin feeder away from metallic objects as I
>had great difficulty when the feeder ran near a scaffold pole, it seems to
>be fine in the conduit under ground though.
>
>I would be pleased to see any comments anyone might have on this.
>Constructive or helpful ones preferably.
>
>Thanks in advance,
>
>Chris.
>

Hi Chris,

The simple way would be to measure the range of SWR's offered and
compare them to the published values of others. If yours show a close
correlation - keep on truckin'. If yours don't and you've got
excellent matches where others fail - something is spooky. If yours
don't and nothing improves after you cinch up the antenna into the
tree - take your choice and keep on truckin'.

73's
Richard Clark, KB7QHC

888. Re: Solving a problem with the Smith Chart

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-11 17:09:34 UTC
From: CAM <w5dxp@hotmail.com>
Message-ID: <3D2DBBCE.642DE1BA@hotmail.com>
Source record: 138830

Dick Carroll wrote:
> Those to the right of the 1.0 point seem to almost all correspond with
> the exact SWR before normalization. Maybe that's all a mathematical
> anomoly, of no significance?

That was going to be posting #3 but you have discovered one of the
handiest things about using a Smith Chart for ham antenna systems.
It is a mathematical function of great significance.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

889. Re: Matching coil vs antenna length - mobile antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-11 17:13:20 UTC
From: CAM <w5dxp@hotmail.com>
Message-ID: <3D2DBCB0.FAC5C719@hotmail.com>
Source record: 138832

Reg Edwards wrote:
>
> CAM wrote:
> > We weren't disagreeing with the correct part of your statement, Reg.
> ======================
> We ? Who's We ? You and your transmitter ?

I and whoever else responded to your posting. Offhand, I don't remember
who it was but someone else had the same objection that I did.

> Just for once Cecil would you do me a favour by allowing me to win this
> argument.

I never argue with anyone who is right, Reg. :-)
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
------== Over 80,000 Newsgroups - 16 Different Servers! =-----

890. Re: Can twin feeder be put underground??

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-11 17:15:53 UTC
From: Eric Fairbank <fairbank@iamdigex.net>
Message-ID: <d3jX8.153$675.80745@dca1-nnrp2.news.algx.net>
Source record: 138831

While I can't provide an answer as to whether or not it is acceptable to operate with twin feeder that close to ground, I do have a comment on "antenna tuners". The only thing a "tuner" that is located at the transciever does is provide an impedance match to the end of the feeder and tune out any reactance there. It does nothing to change the swr between the antenna and the "tuner". If you have 10:1 swr at the antenna and then place a "tuner" in the line and tune for 1:1 swr as indicated on the "tuner's" swr meter, you will still have 10:1 at the antenna. I prefer to call them a transmatch as that is there function and they work well to optimize your transciever output by tricking it into "seeing" a well matched load. In this situation, high swr (up to a point) is not a problem if your feeder losses are low, as the reflected power will make it's way back to the antenna.

Eric

"Chris Bartlett" <Bartty@v21mail.co.uk> wrote in message
news:3d2d73a4$1_1@news.greennet.net...
> I have just run a 2 " conduit down my garden, about 20 yards to a
convenient
> tree. The feeder from my G5RV is near this tree, I have run the coax and
> there is an excess of twin feeder from the G5 that can touch the ground
> unless I support it back up in the tree a bit as I am doing now. I have
> tried pulling the coax back towards the house and allowing the start of
the
> feeder to go inside the plastic pipe. I find that I can tune across the HF
> frequencies using my MFJ 941 E getting low SWR on each band.
>
> I understand it is best to keep twin feeder away from metallic objects as
I
> had great difficulty when the feeder ran near a scaffold pole, it seems to
> be fine in the conduit under ground though.
>
> I would be pleased to see any comments anyone might have on this.
> Constructive or helpful ones preferably.
>
> Thanks in advance,
>
> Chris.
>
>

891. Re: Solving a problem with the Smith Chart

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-11 19:08:06 UTC
From: CAM <w5dxp@hotmail.com>
Message-ID: <3D2DD796.A961A707@hotmail.com>
Source record: 138833

Dick Carroll wrote:
> I'm beginning to see how this thing works.

It's not all that difficult to understand. It's sorta like Morse code. Once you use it you might like it. :-)

We have learned how to plot a pure resistance on a zero reactance line, i.e. the purely resistive horizontal line across the middle of the Smith Chart. The Smith Chart is a two-dimensional graph, similar to the standard X/Y graph that you did in high school. The difference is that the 'X' axies are bent into arcs of circles and the 'Y' axies are bent into circles. When we locate an impedance point, we will normally find the resistance value on the horizontal straight line and go up and to the right to locate an inductive reactance (sign is positive) and go down and to the right to locate a capacitive reactance (sign is negative). So this exercise is to locate the following impedance points on the Smith Chart. Remember we are dealing with a 300 ohm characteristic impedance so we normalize all our impedances to 300 ohms.

Normalize and locate the following impedance points on a Z0=300 ohm Smith Chart.

300+j0 (You've already done that one), 300+j50, 300+j150, 300+j300,

300+j600, 300+j1500, 300-j50, 300-j150, 300-j300, 300-j600, 300-j1500

where +j indicates inductive reactance and -j indicates capacitive reactance.

Hint: All of these points will lie on the R=1.0 circle. Each circle is an equi-resistance circle and each arc is an equi-reactance arc.
--
cheers, CAM, W5DXP

----------== Posted via Newsfeed.Com - Uncensored Usenet News ==----------
http://www.newsfeed.com The #1 Newsgroup Service in the World!
-----= Over 100,000 Newsgroups - Unlimited Fast Downloads - 19 Servers =-----

892. Re: Back To Basics - Antenna Reciprocity

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-11 19:38:48 UTC
From: "Peter O. Brackett" <ab4bc@ix.netcom.com>
Message-ID: <agkn2q$eq9$1@slb5.atl.mindspring.net>
Source record: 138834

[snip]

>"Richard Harrison" <richardharrison@webtv.net> wrote in message
news:18728-3D2C5727-11@storefull-2395.public.lawson.webtv.net...
> Dick Carroll wrote:
> "OK. What that means is the separate transmit and receive "systems"
> aren`t reciprocal unless identically well matched to the antenna."
>
> Yeah. A joker earlier asked: "What if I stick a ferrite circulator in
> your waveguide?"
>
> Best regards, Richard Harrison, KB5WZI
[snip]

Or... indeed an electronic circulator in your coax or twinlead.

--Peter K1PO
Indialantic By-the-Sea, FL.

893. Re: Will paralleled dipoles have smaller Bandwidths?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-11 20:16:22 UTC
From: John <my-callsign@qsl.net>
Message-ID: <FIIX8.165$cY5.37782@news8-gui.server.ntli.net>
Source record: 138835

I can vouch for this. I use 5 parallel dipoles for 20mtrs through to 10mtrs.
Whilst the bandwidth is completely acceptable for the 20 to 12 mtr dipoles,
the 10mtr dipole only covers about 200Khz for an SWR < 2:1. I am sure its
something to do with coupling.

73, John
G4IRN.

"Mark Keith" <nm5k@wt.net> wrote in message
news:25eb70d7.0207102146.6f985661@posting.google.com...
> StarGazer <pti@capnet.com> wrote in message
news:<3D2C51BB.10AA4200@capnet.com>...
> > Compared with individual dipoles.
>
> If they are at right angles, and little to no coupling, than the
> bandwidth should be about the same. Only if you have some coupling
> between elements are you likely to see a big change. And it would
> almost always be to the higher band dipole or dipole's. Usually, you
> will see reduction of bandwidth in that case, depending on the amount
> of coupling. Even still , the bandwidth should be quite usable. MK

894. Re: Will paralleled dipoles have smaller Bandwidths?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-11 21:02:59 UTC
From: Gary Wescom <wescom@digitalputty.com>
Message-ID: <3d2df222@phoenix.digitalputty.com>
Source record: 138836

There is actually a fairly simple reason why there is a narrower bandwidth with parallel conductor, common feed multiband dipoles. It took only a few minutes playing with EXNEC to see why. Let's take the case of a parallel 80 and 40 meter dipole set. The 40 meter dipole consists of two (approximately) quarter wave long wires paralleling the 80 meter dipole wires. The 40 meter wire will typically resonate as an open quarter wave transmission line a little below the transmitting resonant frequency. The antenna feed point impedance at the quarter wave transmission line mode resonance is way different than what you would see with a 40 meter dipole by itself. This is the reason for the rapid rise in SWR at the low end of bands with paralleled dipoles.

Gary N0GW

"John" <my-callsign@qsl.net> wrote in message
news:FIlX8.165$cY5.37782@news8-gui.server.ntli.net...
> I can vouch for this. I use 5 parallel dipoles for 20mtrs through to
10mtrs.
> Whilst the bandwidth is completely acceptable for the 20 to 12 mtr
dipoles,
> the 10mtr dipole only covers about 200Khz for an SWR < 2:1. I am sure its
> something to do with coupling.
>
> 73, John
> G4IRN.
>
>
>
> "Mark Keith" <nm5k@wt.net> wrote in message
> news:25eb70d7.0207102146.6f985661@posting.google.com...
> > StarGazer <pti@capnet.com> wrote in message
> news:<3D2C51BB.10AA4200@capnet.com>...
> > > Compared with individual dipoles.
> >
> > If they are at right angles, and little to no coupling, than the
> > bandwidth should be about the same. Only if you have some coupling
> > between elements are you likely to see a big change. And it would
> > almost always be to the higher band dipole or dipole's. Usually, you
> > will see reduction of bandwidth in that case, depending on the amount
> > of coupling. Even still , the bandwidth should be quite usable. MK
>
>

895. Re: Can twin feeder be put underground??

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-11 21:16:36 UTC
From: k7itm@aol.com
Message-ID: <3200347.0207111316.19b006fc@posting.google.com>
Source record: 138837

I didn't see a mention whether the conduit is metal or plastic. I
assume it's plastic.

The fields around two-wire line fall off pretty quickly. I'd say if
you can keep it spaced at least as far from external conductors as the
line's wire spacing, you'll be OK if not optimum. Perhaps, of you're
not running other things in this conduit, you can find some of the
resiliant foam packing material and make some "donuts" from it to
more-or-less center the parallel wire line in the conduit. You can
probably even just cut discs of the material and make a slit in them
to just past the center, and slip them over the line at intervals.

Cheers,
Tom

"Chris Bartlett" <Bartty@v21mail.co.uk> wrote in message
news:<3d2d73a4$1_1@news.greennet.net>...
> I have just run a 2 " conduit down my garden, about 20 yards to a convenient
> tree. The feeder from my G5RV is near this tree, I have run the coax and
> there is an excess of twin feeder from the G5 that can touch the ground
> unless I support it back up in the tree a bit as I am doing now. I have
> tried pulling the coax back towards the house and allowing the start of the
> feeder to go inside the plastic pipe. I find that I can tune across the HF
> frequencies using my MFJ 941 E getting low SWR on each band.
>
> I understand it is best to keep twin feeder away from metallic objects as I
> had great difficulty when the feeder ran near a scaffold pole, it seems to
> be fine in the conduit under ground though.
>
> I would be pleased to see any comments anyone might have on this.
> Constructive or helpful ones preferably.
>
> Thanks in advance,
>
> Chris.

896. Re: Magloops

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-11 21:16:53 UTC
From: ZOOM <robert931@sympatico.ca>
Message-ID: <cBmX8.1684$He7.391114@news20.bellglobal.com>
Source record: 138838

I have built several Loops. I also built my own HV capacitor for it as well. Cost is pretty cheap when you build things yourself with readily available materials. I'd be happy to share details if your interested.

Cheers,
Robert
VE3RPF

"Mike Coslo" <mcoslo@adelphia.net> wrote in message news:3D2D21FC.10202@adelphia.net...
> I'm looking to make a portable antenna for 40-10 meters for one of the
> State QSO parties.
>
> I would be driving to a remote site, setting up my rig and working away.
>
> I have looked at a number of designs, and the Magnetic loop looks pretty
> interesting. I'd be able to plunk it in the back of my truck and set up
> on site, then tear down and move to the next county on my list as needed.
>
> Most of the hams I know are using dipoles, inverted V's and some G5RV's.
>
> Is the magloop just so much hokum? Or is it's major drawback the constant
> tuning, which is no problem AFAIAC?
>
> - Mike KB3EIA -
>

897. Re: antenna (relay) switch?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-11 21:19:22 UTC
From: ZOOM <robert931@sympatico.ca>
Message-ID: <wDmX8.1687$He7.391674@news20.bellglobal.com>
Source record: 138839

Are you sure the loss in SWR is due to your switch or your dummy load?

"David E Allen" <davea@mse13.cos.agilent.com> wrote in message
news:1026240511.848645@goodnews.cos.agilent.com...
> Hi, all.
> I am trying to build a relay-operated antenna switch for HF.
> I threw together one in a 4x4x1" box with 2 so-239 connectors on
> one side, a bnc (for the common) on an adjacent side, and a "mini" relay
> from radio shack to do the switching.
>
> I wanted the unused antenna grounded, so I'm using a DPDT relay.
>
> The swr through the switch into a dummy load is around 1.3:1 to 1.4:1
> (on 20m). My ts-850 starts limiting output around 1.5:1, so that doesn't
> leave much room for swr in the antennas.
>
> How can I design / build a switch that has a lower swr? I know the relay
> adds some, but even hooking an so-239 directly to the bnc gives me about
> 1.2:1, so hopefully I can design the box better.
>
> Would I have better results with an older-style open-frame relay?
>
> Thanks for your ideas.
>
> 73, dave, wb0taq

898. Re: Solving a problem with the Smith Chart

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-11 21:32:19 UTC
From: k7itm@aol.com
Message-ID: <3200347.0207111332.104c755b@posting.google.com>
Source record: 138840

There's Smith chart software that will do the normalization for you,
and in fact read impedances directly off the chart. I use WinSmith
which goes for a price, but there's also a freeware one that
originated with Motorola, and some other freeware and demo versions as
well. Have a look at http://www.sss-mag.com/smith.html and subpages
(a tutorial there as well!), or pick the Moto one up via
http://rf.rfglobalnet.com/software_modeling/software/25/452.htm (and
lots of other software there if you go back up the tree a ways...)

With the software, I get the nice visualization of the chart along
with the accuracy of compter calculations. (The WinSmith one, for
example, allows you to specify the attenuation of sections of
transmission line used in a feed system, and properly accounts for the
loss.) I haven't looked at all the others available...you may find a
free one that has pretty much all the capabilities of WinSmith.

Cheers,
Tom

Dick Carroll <dixie@townsqr.com> wrote in message news:<agk1m7$9rn$0@208.207.71.171>...
> CAM wrote:
> >
> > Time for a checkpoint. Normalize the following seven values of
> > resistance and plot them on the horizontal line on a Smith Chart
> > normalized to Z0=300.
>
>
> 20+j0 ohms, .066
>
> 50+j0 ohms, .166
>
> 100+j0 ohms, .333
>
> 300+j0 ohms, 1.0
>
> 600+j0 ohms, 2.0
>
> 1200+j0 ohms, 4.0
>
> 3000+j0 ohms 10.0
>
>
> I'm beginning to see how this thing works. Without the "normalizing"
> you can't get started. Normalizing makes the chart useful at any Zo,
> makes it a universal tool. One must keep the frame of reference for each

> solution (Zo=300 in this case) to know where you're at.
>
> Dick

899. Multi-band roof-mounted vertical fed with 450 ohm ladderline

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-11 21:33:02 UTC
From: Nico Vertriest <Nico.Vertriest@pandora.be>
Message-ID: <iQmX8.744$8o4.222@afrodite.telenet-ops.be>
Source record: 138841

Hello,

I would like to put a 5m vertical on my roof (10m high) and to feed it with 450 ohm ladderline. I would like to use it as a multiband antenna with a balanced line tuner. As radials I would put several lines of rotor cable having a length of 5 meters (6 lines, each having 8 conductors). I wondered what is the most efficient situation for the radials. Is it best to cut separate radials to resonance for the 20,17,15 and 10 m bands ? Or can I just use several radials 5 meter long, and count on the tuner for resonance ?

Thanks in advance.
73,
Nico
on4civ

900. Re: W5QJR Loop Antenna Book - lost

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-11 21:43:35 UTC
From: jgboyles@aol.com
Message-ID: <20020711174335.08316.00000059@mb-fl.aol.com>
Source record: 138842

>I seem to have lost my copy of W5QJR book on
>> small loops.

The Antennex online Magazine has them for sale. Click on "shopping", and then
"books"
73 Gary N4AST

901. Re: Matching coil vs antenna length - mobile antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-11 21:45:20 UTC
From: k7itm@aol.com
Message-ID: <3200347.0207111345.7dddc307@posting.google.com>
Source record: 138843

Well, Reg, I disagree with what seems to be your definition of
"resonant." Even though a (theoretical) 50 ohm resistor presents no
reactance, I do not consider it to be "resonant." In addition, a
system of a number of coupled resonators driving a load likely will
present a pure-resistive load at its input terminals at a number of
frequencies, but again I don't consider the system to necessarily be
"resonant" at those particular frequencies.

Cheers,
Tom

"Reg Edwards" <g4fgq.regp@btinternet.com> wrote in message
news:<agig25$l9b$1@paris.btinternet.com>...
> EVENTUALLY, WHATEVER IS DONE, THE WHOLE SYSTEM MUST, MUST, MUST, BE
> RESONANT.
>
> WHY ?
>
> BECAUSE THE IMPEDANCE PRESENTED TO THE TRANSMITTER IS A PURE RESISTANCE.
> USUALLY 50 OHMS.
>
> AND IF THE SYTEM INPUT IMPEDANCE IS A PURE RESISTANCE, THEN, WHATEVER THE
> RESISTIVE VALUE MIGHT BE, BY DEFINITION THE SYSTEM IS RESONANT.
>
> QED.
>
> It's all so simple you can't believe it. Even ARRL bibles will tell you
> that. But I'm only a Limey pensioner ! ;o)
> ---
> Regards to all. Reggie, G4FGQ

902. Re: Magloops

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-11 21:46:37 UTC
From: Irv Finkleman <finkirv@shaw.ca>
Message-ID: <3D2DFCBA.C6E28694@shaw.ca>
Source record: 138844

ZOOM wrote:
>
> I have built several Loops. I also built my own HV capacitor for it as
> well. Cost is pretty cheap when you build things yourself with readily
> available materials. I'd be happy to share details if your interested.
>
> Cheers,
> Robert
> VE3RPF
>
> "Mike Coslo" <mcoslo@adelphia.net> wrote in message
> news:3D2D21FC.10202@adelphia.net...
> > I'm looking to make a portable antenna for 40-10 meters for one of the
> > State QSO parties.
> >
> > I would be driving to a remote site, setting up my rig and working away.
> >
> > I have looked at a number of designs, and the Magnetic loop looks pretty
> > interesting. I'd be able to plunk it in the back of my truck and set up
> > on site, then tear down and move to the next county on my list as needed.
> >
> > Most of the hams I know are using dipoles, inverted V's and some G5RV's.
> >
> > Is the magloop just so much hokum? Or is it's major drawback the constant
> > tuning, which is no problem AFAIAC?
> >
> > - Mike KB3EIA -
> >

Robert,
I'd be interested in the details of your
capacitor construction. Thanks in advance...

Irv VE6BP
--
Diagnosed Type II Diabetes March 5 2001
Beating it with diet and exercise!
297/215/210 (to be revised lower)
58"/43"(!)/44" (already lower too!)

Visit my FINALLY UPDATED website at
http://members.shaw.ca/finkirv/

Irv Finkleman,
Grampa/Ex-Navy/Old Fart/Ham Radio VE6BP

Calgary, Alberta, Canada

903. Re: horizontal loop revisited

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-11 21:52:29 UTC
From: N4LQ <N4LQ@igLou.com>
Message-ID: <3d2cac7e_1@news.iglou.com>
Source record: 138962

Doc:
Dave, W0MHS (he has a new call) is the guy who wrote the original Loop
Skywire article in Nov. 1985 QST. He insisted that nothing but coax was to
be used for the loop and allowed for RG-62, RG-59 and RG-58. He warned about
using baluns because they were "unnecessary". I've seen more recent post
from him and he still insist on using coax. We would all like for him to
explain his theory. I think he was some kind of RF engineer. I believe this
antenna is also described in the ARRL Handbook and uses coax feed.
A recent article in QST describing a sloping loop followed Dave's advise,
specifying coax use. This loop is cut for 40 meters.

--
Steve Ellington N4LQ.
"'Doc" <w5lz@icok.net> wrote in message news:3D2C4EF3.319A47C8@icok.net...
> N4LQ,
> Not sure who Dave Fischer is, but trying to
> use coax for the feed line of an 'all band' loop
> antenna will result in some pretty wild mismatches.
> I doubt if it would make any difference as far as
> the radiation pattern goes, but it would make a
> fairly large difference in the amount of power
> radiated.
> The question about a loop being a balanced
> antenna has already been answered.
> 'Doc

904. Re: Matching coil vs antenna length - mobile antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-11 22:08:57 UTC
From: k7itm@aol.com
Message-ID: <3200347.0207111408.2d28c4f9@posting.google.com>
Source record: 138845

Hi Cecil,

Well, gosh, I'm not sure here what's conventional wisdom and what's not. I have seen over the years a strong tendency of hams to want to cut their dipole (or whatever) so it's resonant all by itself. I'm just saying that radiation does not depend on resonance. If a .386 wavelength doublet gives you the radiation pattern you want and you can arrange to feed power to it efficiently, don't worry about "resonance". I guess Reg would define "feeding power to it efficiently" (matching it to your transmitter) to be "resonance" (of the overall system absorbing power from your transmitter). I don't happen to agree with that language, but I think the result is just the same.

I'd just like people to not get hung up on trimming antenna lengths, when they can accomplish the desired goals in simpler ways. In fact, I've seen you post some things in the past that address just the same thing: your ideas about putting capacitors across balanced lines at the right places to get a good match.

In summary, I _hope_ the conventional wisdom is swinging toward the understanding that the antenna structure's feedpoint impedance doesn't necessarily have to provide a good match to the feedline you're using to get an efficient antenna system with the radiation pattern you want. You can divide the problem into separate pieces that may interact some but can be addressed in a logical manner. That doesn't mean it's a piece of cake...getting acceptable broadband performance can be quite a challenge for instance. But I think there has been a tendence to over-constrain the problem by asking the antenna structure to do not only the radiating but the matching as well, or worse, to be "resonant" when that really doesn't matter directly. I _KNOW_ YOU know that from many of the things I've seen you post, but suspect many still don't.

Certainly your 40m antenna example isn't surprising to me...dunno if it goes against "conventional wisdom" or not. :-) (It's fun to look at all the off-center loops you get from a moderately complex antenna/matching system if you plot input impedance versus frequency on a Smith chart...)

Cheers,
Tom

CAM <w5dxp@hotmail.com> wrote in message news:<3D2C9417.12DBD7D2@hotmail.com>...
> Tom Bruhns wrote:
> > But I think the vswr versus frequency is a red herring. Design the

> > antenna to have the radiation pattern you want, and a feedpoint
> > impedance you can deal with over the frequency range of interest, and
> > then design the coupling to that feedpoint impedance and the
> > decoupling of the feedline from the antenna fields. There's no need
> > to assume anything has to be "resonant," though that may be convenient
> > in some cases.
>
> Tom, are you giving us conventional wisdom here or are you going against
> conventional wisdom?
>
> I have a one wavelength dipole on 40m fed by 3/4WL of ladder-line. The
> difference between the "resonant" frequency and the minimun 50 ohm SWR
> frequency seems to be about 250 kHz. Does that fly in the face of
> conventional wisdom or agree with it?

905. Re: Can twin feeder be put underground??

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-11 22:20:30 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <3D2E04AE.3060102@eznec.com>
Source record: 138846

I'd really worry about loss if I ran an open wire line for some distance when spaced that close to ground. This isn't the same situation at all as having the open wire line get close to, say, a rain gutter or other good conductor. And people generally use an open wire line only when very low loss is important. I suggest making some good loss measurements of your transmission line. What I'd do is to make a couple of 9:1 transformers on ferrite cores, and first measuring the loss of just the transformers back-to-back. You could use a wattmeter (like the Bird, or the QRP directional wattmeter that was in QST and the ARRL Handbook some years ago and appears from time to time in compendia) or the MFJ antenna analyzer. Then insert your feedline between the transformers and remeasure the loss.

Without the loss measurement, you might think the transmission line is working just fine -- your antennas will be nice and broadbanded, and quiet. And you might be discovering, without realizing it, how many stations you can work with QRP.

Roy Lewallen, W7EL

Tom Bruhns wrote:
> I didn't see a mention whether the conduit is metal or plastic. I
> assume it's plastic.
>
> The fields around two-wire line fall off pretty quickly. I'd say if
> you can keep it spaced at least as far from external conductors as the
> line's wire spacing, you'll be OK if not optimum. Perhaps, of you're
> not running other things in this conduit, you can find some of the
> resiliant foam packing material and make some "donuts" from it to
> more-or-less center the parallel wire line in the conduit. You can
> probably even just cut discs of the material and make a slit in them
> to just past the center, and slip them over the line at intervals.
>
> Cheers,
> Tom
>
> "Chris Bartlett" <Bartty@v21mail.co.uk> wrote in message
news:<3d2d73a4$1_1@news.greennet.net>...
>
>>I have just run a 2 " conduit down my garden, about 20 yards to a convenient
>>tree. The feeder from my G5RV is near this tree, I have run the coax and
>>there is an excess of twin feeder from the G5 that can touch the ground
>>unless I support it back up in the tree a bit as I am doing now. I have
>>tried pulling the coax back towards the house and allowing the start of the
>>feeder to go inside the plastic pipe. I find that I can tune across the HF

>>frequencies using my MFJ 941 E getting low SWR on each band.
>>
>>I understand it is best to keep twin feeder away from metallic objects as I
>>had great difficulty when the feeder ran near a scaffold pole, it seems to
>>be fine in the conduit under ground though.
>>
>>I would be pleased to see any comments anyone might have on this.
>>Constructive or helpful ones preferably.
>>
>>Thanks in advance,
>>
>>Chris.
>

906. Re: Matching coil vs antenna length - mobile antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-11 22:25:49 UTC
From: Bill Nelson <billn@spock.peak.org>
Message-ID: <agl0ld$b8n$4@quark.scn.rain.com>
Source record: 138847

Roy Lewallen <w7el@eznec.com> wrote:
> Why would the maximum field strength occur at resonance?

There is no guarantee that it will. That is why an SWR meter should not
be relied upon to determine the best tuning for the antenna.

--
Bill Nelson (billn@peak.org)

907. Re: Matching coil vs antenna length - mobile antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-11 23:03:19 UTC
From: nm5k@wt.net
Message-ID: <25eb70d7.0207111503.7117cf8b@posting.google.com>
Source record: 138848

Roy Lewallen <w7el@eznec.com> wrote in message news:<3D2D2A2A.40804@eznec.com>...
> Why would the maximum field strength occur at resonance?

In my case it's kind of hard to tell being all I used was a F/S meter and the SWR meter in the rig. Resonance of the antenna would be when the input impedance is purely resistive. At that time, I assumed max F/S from the mast/coil/whip would occur at the same point of tuning. But in comparing F/S to minimum SWR "including the matching device", I usually noticed a slight spread of a few kc's. Not enough to worry about, but not exactly the same freq though. But, like I said I used just garden variety tools, so it may have been a fluke in measuring. I think I also tried it without a matching device with low power and got the same slight difference. That was quite a few years ago, so my memory fades on it..I haven't tried it recently. The thing is, it's hard for me to tell which point of the two tuning methods was the point of pure resistance. I don't have an antenna testing gizmo.. MK

908. Re: Magloops

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-11 23:16:05 UTC
From: nm5k@wt.net
Message-ID: <25eb70d7.0207111516.666b0bd@posting.google.com>
Source record: 138849

Mike Coslo <mcoslo@adelphia.net> wrote in message news:<3D2D21FC.10202@adelphia.net>...
> I'm looking to make a portable antenna for 40-10 meters for one of the
> State QSO parties.
>
> I would be driving to a remote site, setting up my rig and working away.
>
> I have looked at a number of designs, and the Magnetic loop looks pretty
> interesting. I'd be able to plunk it in the back of my truck and set up
> on site, then tear down and move to the next county on my list as needed.
>
> Most of the hams I know are using dipoles, inverted V's and some G5RV's.

Smart people they are...
>
> Is the magloop just so much hokum? Or is it's major drawback the constant
> tuning, which is no problem AFAIAC?

It can work, but a dipole strung between a couple of trees, or hung
off a short mast would be a good bit better. Use a tuner and ladder
line for 40-10 use. I've been building some loops, but all for
receiving purposes on the low bands. I built a indoor rotatable
circular 16 inch MW loop for my 706mk2g. Works like a champ and makes
my 706 act like a transoceanic. I'm getting 30-40 db nulls. Some
stations, usually groundwave, I can totally null out. Works from 500
to 2000 kc with the variable cap I have. My next plan is for a big 4
ft or so loop for mainly LF and low MW. I used Reg's rjeloop3, and it
came out fairly close as far as comparisons to the real thing. I had
to guestimate being I used a circle. His program uses straight
sides... MK

909. Re: Want copyrighted mag article.

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-11 23:17:12 UTC
From: fazamy@aol.com
Message-ID: <20020711191712.00759.00000108@mb-mg.aol.com>
Source record: 138850

>I've heard that the NSA monitors email for copyrighted material, and
>automatically deletes it.

What does NSA stand for? Is this a US or Canadian governmental agency?

73,
KB2AMY

910. Re: Matching coil vs antenna length - mobile antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-11 23:22:44 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <3D2E1344.7090506@eznec.com>
Source record: 138851

If you apply a fixed amount of power to an antenna, there's no reason that the field strength should be greater at resonance than at any other fairly nearby frequency. (The pattern, therefore the field strength, will change with frequency. But there's no peak or other anomaly at resonance.) Modern rigs, however, deliver their maximum power into a 50 ohm resistive load, and the delivered power drops off if the impedance is any different from that, even for SWRs that are too low to cause the normal dramatic decrease. So that would be the likely explanation of field strength that apparently peaks at resonance, although the peak would really be at the point of minimum SWR as seen by the rig, not necessarily at resonance (although the two are usually too close together to distinguish). I just want to make sure that people understand that there's nothing about an antenna itself that makes its radiation characteristics different at resonance.

Roy Lewallen, W7EL

Mark Keith wrote:
> Roy Lewallen <w7el@eznec.com> wrote in message news:<3D2D2A2A.40804@eznec.com>...
>
>>Why would the maximum field strength occur at resonance?
>
>
> In my case it's kind of hard to tell being all I used was a F/S meter
> and the SWR meter in the rig. Resonance of the antenna would be when
> the input impedance is purely resistive. At that time, I assumed max
> F/S from the mast/coil/whip would occur at the same point of tuning.
> But in comparing F/S to minimum SWR "including the matching device", I
> usually noticed a slight spread of a few kc's. Not enough to worry
> about, but not exactly the same freq though. But, like I said I used
> just garden variety tools, so it may have been a fluke in measuring. I
> think I also tried it without a matching device with low power and got
> the same slight difference. That was quite a few years ago, so my
> memory fades on it..I haven't tried it recently. The thing is, it's
> hard for me to tell which point of the two tuning methods was the
> point of pure resistance. I don't have an antenna testing gizmo.. MK

911. Re: Solving a problem with the Smith Chart

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-11 23:23:10 UTC
From: Dick Carroll <dixie@townsqr.com>
Message-ID: <agl40u$hr8$0@208.206.142.89>
Source record: 138852

```
Allodoxaphobia wrote:
>
> On 11 Jul 2002 15:22:14 GMT, Dick Carroll scribbled:
> >
> > Oops, I see the problem. It's the result of rounding off the decimal,
> > ie originally was .06666666666 instead of .06. It's not significant,
>
> That's not "rounding off", that's truncating. If you wish
> to round off to 2 decimal places, it's .07, and the error - tho'
> still there -- will be less (and to "the other side".)
>

Right. My incorrect choice of terminology.
```

912. Re: Magloops

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-11 23:26:13 UTC
From: Dick Carroll <dixie@townsqr.com>
Message-ID: <agl46l$hr8$1@208.206.142.89>
Source record: 138853

Hey Robert, if you send Mike that info please cut me in for a copy
too, if you will. I plan to whip up one for portable use. Tnx.

Dick

ZOOM wrote:
>
> I have built several Loops. I also built my own HV capacitor for it as
> well. Cost is pretty cheap when you build things yourself with readily
> available materials. I'd be happy to share details if your interested.
>
> Cheers,
> Robert
> VE3RPF
> "Mike Coslo" <mcoslo@adelphia.net> wrote in message
> news:3D2D21FC.10202@adelphia.net...
> > I'm looking to make a portable antenna for 40-10 meters for one of the
> > State QSO parties.
> >
> > I would be driving to a remote site, setting up my rig and working away.
> >
> > I have looked at a number of designs, and the Magnetic loop looks pretty
> > interesting.

913. Re: MARS antennas

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-11 23:35:49 UTC
From: G Blair <gblair@sympatico.ca>
Message-ID: <3D2E1655.62EBD89F@sympatico.ca>
Source record: 138854

Terry Sellick wrote:
>
> I have been thinking about getting into a MARS net.
> Can anyone recommend a good antenna for HF MARS?
> What's available besides log periodics?

Track down Rick WB6LNH. He ran a giant rhombic cut for 20 meters for the Marine Corp from a base in W6 land. It was pointed at Vietnam. It always gave a good signal. I understand even VOA came and took measurements. Everyone talks about giant rhombics, but as far as I know, Rick was the only to actually build one: 1000 ft on each leg.

I think he is active MM. Try wb6lnh@winlink.org.

Cheers Greg, ve0acr.

914. Re: Shack resonates at 40M

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-11 23:41:41 UTC
From: cprstn54zz@att.net
Message-ID: <3d2e15e7.47711843@news-server.optonline.net>
Source record: 138860

On Wed, 10 Jul 2002 14:14:55 GMT, cprstn54zz@att.net (Ken) wrote:

Moving the dipole any distance away from the house is not an option.
In 20 years, though, some of my trees might be high and sturdy
enough. If I am still alive then, I will move it.

I find surprises as I walk around with the field strength meter.
Celing fans within 25 ft of the antenna are the hottest items in the
house. Are they radiating RF fed to them by the wiring? Or are they
concentrating the field and one of the entry points?

Ken KC2JDY

Ken
(to reply via email
remove "zz" from address)

915. Re: Multi-band roof-mounted vertical fed with 450 ohm ladderline

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-12 00:14:01 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <do7siuglrgsgfvblom13cs6ah0rdthqemf@4ax.com>
Source record: 138855

On Thu, 11 Jul 2002 21:33:02 GMT, "Nico Vertriest"
<Nico.Vertriest@pandora.be> wrote:

>Hello,
>
>I would like to put a 5m vertical on my roof (10m high) and to feed it with
>450 ohm ladderline. I would like to use it as a multiband antenna with a
>balanced line tuner. As radials I would put several lines of rotor cable
>having a length of 5 meters (6 lines, each having 8 conductors). I
>wondered what is the most efficient situation for the radials. Is it best
>to cut separate radials to resonance for the 20,17,15 and 10 m bands ? Or
>can I just use several radials 5 meter long, and count on the tuner for
>resonance ?
>
>Thanks in advance.
>73,
>Nico
>on4civ
>

Hi Nico,

Spread the wire out (split it out of the bundle 1/3 from far end);
use a tuner.

73's
Richard Clark, KB7QHC

916. Re: Want copyrighted mag article.

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-12 00:22:15 UTC
From: Irv Finkleman <finkirv@shaw.ca>
Message-ID: <3D2E2133.A26738EA@shaw.ca>
Source record: 138856

FAZAMY wrote:
>
> >I've heard that the NSA monitors email for copyrighted material, and
> >automatically deletes it.
>
> What does NSA stand for? Is this a US or Canadian governmental agency?
>
> 73,
> KB2AMY

National Security Agency -- USA
--
Diagnosed Type II Diabetes March 5 2001
Beating it with diet and exercise!
297/215/210 (to be revised lower)
58"/43"(!)/44" (already lower too!)

Visit my FINALLY UPDATED website at
http://members.shaw.ca/finkirv/

Irv Finkleman,
Grampa/Ex-Navy/Old Fart/Ham Radio VE6BP
Calgary, Alberta, Canada

917. Re: Want copyrighted mag article.

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-12 00:27:30 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <a08siuoortibjtf4s3c78sa5j8fvknd6v1@4ax.com>
Source record: 138857

On 11 Jul 2002 23:17:12 GMT, fazamy@aol.com (FAZAMY) wrote:

>>I've heard that the NSA monitors email for copyrighted material, and
>>automatically deletes it.
>
>What does NSA stand for? Is this a US or Canadian governmental agency?
>
>73,
>KB2AMY

Hi OM,

US National Security Agency (remember the adventures of Ollie and Fawn?). This is an intelligence office for the White House reporting to the president. They don't give a damn about copyright, the copyright law has no enforcement law in it, simply compensation law (means you have to chase down the miscreants yourself).

The e-mail reading program is called Condor. E-mail is no security at all - more akin to a message floating in a bottle. Would we all be blessed as to have such a system you describe in a world where spam had to be copyrighted? ;-)

73's
Richard Clark, KB7QHC

918. Mobile antennae a safety hazard?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-12 00:29:29 UTC
From: Alan Beagley <abeagley@optonline.net>
Message-ID: <3D2E22E9.6030403@optonline.net>
Source record: 138861

Are there any studies showing that antennae (whether amateur, business, law enforcement, or whatever) mounted on motor vehicles are a factor in the injuries people sustain in accidents? I can imagine somebody being thrown through the air and getting impaled on one of those Hustler HF antennae, or somebeody getting an eye poked out by a HamStick, but has anybody studied the issue?

-=-
Alan, AB2OS

919. Re: Magloops + Simple Variable capacitor

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-12 01:30:29 UTC
From: ZOOM <robert931@sympatico.ca>
Message-ID: <XiqX8.3768$9U1.1645091@news20.bellglobal.com>
Source record: 138858

Building a variable capacitor for your loop antenna is easier than most may think.

See Pic: http://valveman.tripod.ca/Simplecap.jpg

First off go to your local dollar stor and buy a picture frame about 5X7 or there abouts.

Take out the glass since you will use it as your dielectric for your capacitor.

Next get two pieces of sheet aluminium 4X4. You can either have your local sheet metal shop cut them for you or get a pair of snips and do it yourself.

Adhere one piece of aluminium to the glass so it covers from an edge of the glass outwards. Use goop or similar glue. The tabs in the aluminium are for electrical connection and drive for the upper plate.

Find some wooden stir sticks and lay a row as shown in the pic. The top row will be placed so it creates a channel for the upper aluminium sheet to track. Again use goop or similar glue to make them pernament. Ensure you round the corners of the sliding aluminium sheet so it does not catch when moving in the track.

The top sheet will have a two holes in it. One for electrical connection of a wire and the other to tap in a brass threaded rod for the drive.

Although not shown, the drive is a brass rod connected to an old electric screwdriver. Limit switches can be put in but you can also make a mechanical stop by adding a spring to each end of the rod and taking down the threads on each end. When the cap reaches max or min the motor will still turn but the cap will not. The springs are used to push the plate into the threads to recatch when direction is reversed.

The capacitance has a great range as measured on my very accurate cap meter. Measured approx 10-200pF

You can of course make the capacitor as large as you like to give more capacitance if desired.

Since glass is the dielectric, the capacitor is very similar to a vacuum variable in voltage rating. And can easily handle 100W.

If you have further questions send me an e-mail.

robert931@sympatico.ca

I hope you found this helpful

Robert
VE3RPF

920. Re: Oliver Heaviside

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-12 01:44:09 UTC
From: "Peter O. Brackett" <ab4bc@ix.netcom.com>
Message-ID: <aglc94ift1@slb6.atl.mindspring.net>
Source record: 138859

Reg et al:

Oliver Heaviside is also one of my heros. An engineer's engineer no doubt about it!

Heaviside *invented* what is now known as the LaPlace Transform method of solving systems of ordinary differential equations.

After he first introduced his technique, it came to be known as Heaviside's p-transform. [p = d(.)/dt]

Apparently all of the *mathematicians* of the day, *poo pooed* Heaviside's technique saying it was without merit, incorrect, etc...

Apparently Heaviside's answer to the critiques of the mainstream *mathematicians* of the day was that he knew his p-transform was correct since it always gave the *right* answers. Oliver was never impressed by the self-important high priests of mathematics who themselves couldn't solve real world problems.

And indeed as anyone familiar with LaPlace Transform techniques can readily appreciate, his p-transform method not only gave the correct answers, but it did so with a whole lot less effort than the methods promoted by the mathematicians of the day.

Heaviside, either just couldn't *prove* that his technique was correct with a classical mathematical proof, or more likely... he just didn't care to do so.

The difference was that Heaviside was a *user* of mathematics, and not a mathematician. Sort of like today's scientists and engineers who are users of computers not computer scientists. Just as an earlier generation of engineers and scientists were users of slide rules. And come to think of it... back then we didn't need *slide rule scientists*. Why do we need computer scientists today?

IMHO... one of the biggest problems facing engineers and applied scientists today is the bullsxxxx being promulgated by *some* modern computer scientists who have presented the world with the *gift* of object oriented programming and all the bloatware, arcane terminology, and obfuscation, associated with that particular cult and its' high priests. What ever happened to *plain programming* like Fortran, etc...? Now we have folks who want to re-write perfectly good scientific/engineering software in object oriented languages, because it is the *correct* way to do it. Often when this is done, the software no longer gives the correct answers! Heh, heh... Most engineers and designers just want to use computers, they do not become blackmailed by the high priests who worship at the shrine of the digital

computer! Heh, heh...

If Heaviside were alive today, I'll bet he would not be using object oriented techniques!

Though my admiration for Heaviside extends beyond the p-transform it is one of the reasons that I choose to use the symbol "p" for the LaPlace Transform variable in any of my own design work, etc... rather than the *modern* symbol "s" introduced by the *mathematicians* once they had finally *legitimized* Heaviside's techniques. To be fair, LaPlace, certainly a theoretical physicist and mathematician to be respected, had foreseen Heaviside, but at the time I believe that LaPlace's technique was considered to be a curiosity by most "mainstream" mathematicians of the day and hence had remained inaccessible to most of the world of engineering.

Hail Oliver Heaviside, an engineer extraordinaire!

--Peter K1PO
Indialantic By-the-Sea, FL.

"Reg Edwards" <g4fgq.regp@btinternet.com> wrote in message news:agiknc$mv3$1@knossos.btinternet.com...
> > You forgot the Poynting vector. No
> > crackpot antenna theory is any good
> > without an appeal to the Poynting
> > vector.
> ======================
>
> Who's Poynting ?
>
> Oliver Heaviside has also been forgotten it seems. It was his intellect and
> self-taught genius which generated the few beautifully simple equations
> describing electro-magnetic radiation which appear in all the World's
> engineering textbooks in all languages but are still incorrectly attributed
> by plagiarists to Maxwell.
>
> Please give credit where credit is due.
> ---
> Reg, G4FGQ
>
>
>

921. 80M Mod for the DX77?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-12 01:58:01 UTC
From: vintageve3@yahoo.com
Message-ID: <46663c11.0207111758.1b767ba4@posting.google.com>
Source record: 138862

HI,

Has anyone every tried 80M on the DX77A antenna? Is there a mod for
adding 80M to the 10M-40M line-up?

Thanks
Cliff
VE3CFE

922. Re: Want copyrighted mag article.

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-12 01:58:08 UTC
From: richardharrison@webtv.net
Message-ID: <3293-3D2E37B0-252@storefull-2392.public.lawson.webtv.net>
Source record: 138863

Richard Clark wrote:
"The e-mail reading program is called Condor."

I`ve heard several complaints, mostly foreign, complain about a U.S. intelligence internet and telecommunications snooping program called "Carnivore".

Seems to me it would be more aptly called "Omnivore".

Best regards, Richard Harrison, KB5WZI

923. Re: Will paralleled dipoles have smaller Bandwidths?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-12 02:36:39 UTC
From: KAZeringue <kazeringue@aol.com>
Message-ID: <3D2E4334.2040606@aol.com>
Source record: 138864

Hmmm. "Parallel dipoles" describes Yagi-Uda's too.

Trade bandwidth for gain? Lots of folks do it every day.

Sorry, I had to go there. :)

73,
W4KAZ

924. Re: Help? Is there significant signal loss with too many outlets???

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-12 02:40:30 UTC
From: tmgroatatpeakpeakdotcom
Message-ID: <3d2e3b76.1390374@news.peakpeak.com>
Source record: 138865
Cross-posted to: rec.radio.amateur.antenna,rec.video

On Wed, 10 Jul 2002 21:56:09 -0400, "J. Harvey"
<JM002.HarveyANTISPAM@Sympatico.ca> wrote:

>Unless there is something wrong with a particular TV Distribution Amplifier,
>it will do more *good* than harm. Weak signal is certainly a cause of video
>noise.
>

When "some channels come in strong" and "other channels are weak", the
amplifier is prone to cause problems related to front-end overload in
the receivers. The amplifiers often have too much gain, overdriving
the receiver mixer while making only 9-12dB improvement in the noise
floor (by overcoming losses in the 8-way splitter and distribution
cables). With modern sets the noise figure of the TV is likely to be
just as good as the pre-amp, so compensating for the splitter and coax
losses is all the improvement you can expect from a quality pre-amp.

This is the best case scenario, which assumes the pre-amp has a low
noise figure, adequate dynamic range, and no parasitic oscillations.
If you buy a cheap preamp, the odds are against it on all counts.

Use only as many splitter ports as you have TV sets. Next install a
good antenna outside, up high and in the clear. If the stations are
not all in the same compass direction, add an antenna rotator to your
shopping list. Use the pre-amp only as the last resort, not the first
line of attack.

--KR0U

-- Tim Groat

To reply by e-mail, change the quoted words to
the corresponding punctuation marks.

925. Re: Can twin feeder be put underground??

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-12 02:48:01 UTC
From: tmgroatatpeakpeakdotcom
Message-ID: <3d2e4215.3086011@news.peakpeak.com>
Source record: 138866

I'd be more concerned about the safety aspects of twin line feeders at ground level. They should be out of reach, just like the power line running to your house. Convert to coax (or two coax cables in "push-pull") before coming to ground level. Or keep the entire feedline safely out of reach.

--KR0U

-- Tim Groat

To reply by e-mail, change the quoted words to the corresponding punctuation marks.

926. Re: Help? Is there significant signal loss with too many outlets???

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-12 03:16:18 UTC
From: "J. Harvey" <JM002.HarveyANTISPAM@Sympatico.ca>
Message-ID: <ORrX8.2984$c_2.1587477@news20.bellglobal.com>
Source record: 138868
Cross-posted to: rec.radio.amateur.antenna,rec.video

"J. Harvey"
> Unless there is something wrong with a
> particular TV Distribution Amplifier,
> it will do more *good* than harm.
> Weak signal is certainly a cause of
> video noise.

Tim Groat wrote
> ...the amplifier is prone to cause problems
> related to front-end overload in the
> receivers. The amplifiers often have too
> much gain...

The TV Distribution Amplifiers available at your local Radio Shack typically have 10 to 20 dB gain and four outputs. In other words, not too far from 'gain neutral'. Their slightly more expensive model (around Cdn$40, or US$25) even has adjustable gain. It is hardly as doom and gloom as your posting indicates.

> ...install a good antenna outside, up high
> and in the clear. If the stations are not all
> in the same compass direction, add an
> antenna rotator to your shopping list.
> Use the pre-amp only as the last resort,
> not the first line of attack.

I see your confusion. I didn't recommend a "pre-amp". I recommended a "TV Distribution Amplifier". Your concerns towards a 30dB gain pre-amplifier (Radio Shack sells those too...) are certainly justified, but that isn't what I recommended.

927. Re: ALL BAND ANT EXPERIMENT?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-12 03:21:15 UTC
From: Dick Carroll <dixie@townsqr.com>
Message-ID: <aglhvbhlb0@208.207.71.151>
Source record: 138867

"R.Wilhelm" wrote:
>
> here in Germany, a commercially made OCF dipole named FD4 has been on the
> market for more than 25 years. It covers 80/40/20/10 mtrs and the idea to
> extend it to 15 mtrs by adding a second OCF dipole at the feedpoint was
> promoted by a DJ2 (I guess suffix was EY but not sure) in the mid
> seventies. There are two more articles in cq DL magazine (one in '83 and
> one in '84) by DL1BBC et al that cover the idea to double the length of
> the 15 mtrs OCF in order to cover 30 mtrs as well. I turned out that the
> antenna is resonant with good swr on 17 and 12 mtrs as well. The '84
> article covers doubling the length of the original 41.5 mtrs FD4 part in
> order to add 160 mtrs as well.
>
> If you model the FD4 with the 30/15 mtrs OCF added, you discover that the
> approx 10 mtr long part of the added OCF is quarter wave resonant on 40
> mtrs and the 5 mtrs long part is approx resonant on 20 mtrs, so that the
> current distribution will change from the original FD4. What I found when
> trying this idea (with antenna in the attic in a kind of loop) was that my
> 20 mtrs resonance moved down to less than 13.5 MHz, but SWR on 20 wasn't
> above 2.0. All resonance are broad, so this effect isn't important
> (actually it is seen in the graphs in the cqDL article, but the antenna
> described there is only 8 mtrs above ground and even closer to a nearby
> roof).
>
> There are two versions of the FD4 on the market which differ slightly in
> length (41.5 vs 40.7 mtrs) and in power rating (500 vs 2kW PA input). The
> high power version uses what they call a duplex balun. It symmetrizes in
> one step and transforms 1:6 in a second step, while the old balun in the
> 500 W version is a voltage transformer and was said to be responsible for
> TVI due to current on the outer conductor of the coax.

Hi Ralf,

Very interesting. Could you further describe the OCF antenna, the FD4?
I'm curious about how many elements it uses and their approximate length
in terms of wavelength. Does it use elements cut a percentage of a
wavelength off that which would be the center of the band, or what
scheme is used? Do some elements work on multiple bands?
That antenna might be useful for lots of hams who have to use
unobtrusive or hidden antennas but who want to work multiple bands.

73, Dick W0EX ex-DL4RQ at Pirmasens '63-'64

928. Re: Solving a problem with the Smith Chart

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-12 03:35:09 UTC
From: Dick Carroll <dixie@townsqr.com>
Message-ID: <aglipd$j6a$0@208.207.71.151>
Source record: 138770

CAM wrote:
>
> Dick Carroll wrote:
> > Those to the right of the 1.0 point seem to almost all correspond with
> > the exact SWR before normalization. Maybe that's all a mathematical
> > anomoly, of no significance?
>
> That was going to be posting #3 but you have discovered one of the
> handiest things about using a Smith Chart for ham antenna systems.
> It is a mathematical function of great significance.

My reference to "insignificant" was to the decimal impedances plotted
to the left of 1 on the resistance line which I referred to as "rounded"
and Jonesy correctly noted were, instead, truncated.

Dick

929. Re: W5QJR Loop Antenna Book - lost

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-12 03:36:46 UTC
From: cooperjim@aol.com
Message-ID: <20020711233646.03715.00000133@mb-bg.aol.com>
Source record: 138771

Hi Doug

The W5QJR book is available on the Antennex website in their "shop".

www.antennex.com

It is a great book and I really like my loops.

73
Jim Cooper NE6O

>Book - lost
>From: "Douglas Snowden" snowden@peoplepc.com
>I seem to have lost my copy of W5QJR book on
>small loops. I remember it had a orange or red cover.
>Been looking for a long time. Anyone have one they
>can spare (for a fee of course). I doubt it is still
>available anywhere.
>
>
>Doug N4IJ

930. Re: Mobile antennae a safety hazard?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-12 03:47:23 UTC
From: "J. Harvey" <JM002.HarveyANTISPAM@Sympatico.ca>
Message-ID: <XisX8.2996$c_2.1598618@news20.bellglobal.com>
Source record: 138772

"Alan Beagley"
> Are there any studies showing that antennas ...
> mounted on motor vehicles are a factor in the
> injuries people sustain in accidents?

One of the great urban legends:

Gresham, OR, Aug 1996 -- The Portland Oregonian states a man wound up in the hospital, but didn't know exactly what happened to him -- He was talking with friend, then turned to leave, and "the next thing he knew the antenna on his 1984 Pontiac Fiero was up his nose." The article states that the antenna "pierced his nasal membrane, his sinus membrane and entered his brain cavity, where it destroyed his pituitary gland."

References:
www.google.com/search?q=1984+fiero+pituitary

My car has no external antennas. They're all embedded. I feel much safer that way.

931. lightningbolt 2 element quad

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-12 04:31:46 UTC
From: Matt Patterson <mattpatt@1starnet.com>
Message-ID: <SYsX8.53084$Bt1.2895098@bin5.nnrp.aus1.giganews.com>
Source record: 138773

Hi,

Have a question about the Lightning Bolt 2 Element 5 Band Quad. For those of you who own this antenna, does it have 5 feedpoints (i.e one for each band) or does it have one feedpoint for all 5 bands. I have a friend who has one of these quads and his has seperate feedpoints for each band but his was destroyed in a ice storm and had to rebuild it and I think when he rebuilt it he made some modifiactions to it. Lightningbolts website doesn't give that much info on it. I suppose I could call them tomorrow and ask. But I thought I'd ask here first.

Thanks,

Matt
KC5YTV

932. Re: Solving a problem with the Smith Chart

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-12 04:51:55 UTC
From: "n7ws at arrl net"
Message-ID: <3d2e5f6e.51033091@news.triconet.org>
Source record: 138775

On 11 Jul 2002 14:32:19 -0700, k7itm@aol.com (Tom Bruhns) wrote:

|There's Smith chart software that will do the normalization for you,
|and in fact read impedances directly off the chart. I use WinSmith
|which goes for a price, but there's also a freeware one that
|originated with Motorola, and some other freeware and demo versions as
|well. Have a look at http://www.sss-mag.com/smith.html and subpages
|(a tutorial there as well!), or pick the Moto one up via
|http://rf.rfglobalnet.com/software_modeling/software/25/452.htm (and
|lots of other software there if you go back up the tree a ways...)
|
|With the software, I get the nice visualization of the chart along
|with the accuracy of compter calculations. (The WinSmith one, for
|example, allows you to specify the attenuation of sections of
|transmission line used in a feed system, and properly accounts for the
|loss.) I haven't looked at all the others available...you may find a
|free one that has pretty much all the capabilities of WinSmith.
|
|Cheers,
|Tom

You guys have gotta check out Dan's (AC6LA) freeware.

www.qsl.net/ac6la

933. Re: MARS antennas

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-12 04:53:21 UTC
From: Dick Carroll <dixie@townsqr.com>
Message-ID: <aglnc1$sa0$0@208.207.71.151>
Source record: 138774

G Blair wrote:
>

Everyone talks about giant rhombics, but as far as I
> know, Rick was the only to actually build one: 1000 ft on each leg.
>

Rhombics are truly awesome in the direction they're pointed. The old
Signal Corps version atop 75 foot utility poles was even awesome to
view.
I still have memories of the one at the club station at Fort Monmouth
(directed W/SW from the New Jersey coast) in the early 60's.
So far nothing I've used compares.

Dick

934. Re: Mobile antennae a safety hazard?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-12 04:57:58 UTC
From: Fred Hambrecht <w4jle@charter.net>
Message-ID: <uisoep8disihc9@corp.supernews.com>
Source record: 138776

Just finishing law school Alan? I have only been a ham for 46 years and to date have heard no mobile antenna horror stories. Next week on Jerry Springer, people who have had a loved one killed by an amateur radio mobile antenna...

"Alan Beagley" <abeagley@optonline.net> wrote in message news:3D2E22E9.6030403@optonline.net...
> Are there any studies showing that antennae (whether amateur, business, law enforcement, or whatever) mounted on motor vehicles are a factor in the injuries people sustain in accidents? I can imagine somebody being thrown through the air and getting impaled on one of those Hustler HF antennae, or somebeody getting an eye poked out by a HamStick, but has anybody studied the issue?
>
> -=-
> Alan, AB2OS
>

935. Re: 6meter end fed wire?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-12 05:28:52 UTC
From: mensch90249@yahoo.com
Message-ID: <jtosiukpktqauc7ic0a9tq5669agpibt8g@4ax.com>
Source record: 138777

Yes, try it without the balun and see if it improves. When I got on 6
I put up a dipole with a commerical balun (can't remember which one)
and just could not get it to play well, likewise with a direct feed
from the coax. Just could not get a respectable VSWR on either one
and my signal was just not getting out well. Ended up using a 1/4 wave
matching stub as shown in the ARRL Antenna Book, 17th edition, chapter
26 figure 11A. This ended up working best for me, yes - there most
definitely are factors beyond the balun that can affect what happened,
this was not a laboratory environment. I guess that my point is for
you to pull the balun and experiment: you probably have enough coax
laying around to make a stub so check out the referenced book and give
it a try. Worst case is you are no further ahead - best case is that
your issue is resolved and you spent no more $$$.

Good luck & 73,
Howard KE6MAK
On Tue, 09 Jul 2002 02:58:56 GMT, "KC8SSG" <kc8ssg@qsl.net> wrote:

>I said we weren't going the wife route haha I've had her for 15 years and
>she's put up with alot of my crap so I'm keeping her.As for the dipole I
>have one up there with a Hi-Q balun and it doesn't seem to work very
>good.Should I just delete the Hi-Q?Don't ask me what it is I don't know it
>was at Universal Radio when I wanted one. Maybe the balun was my
>problem?I'll delete it and see how it works out.Thanks all!
>"K0bg" <k0bg@aol.com> wrote in message
>news:20020708104445.16358.00003541@mb-fz.aol.com...
>> My first thought? Get another wife! Since you don't necessarily want to do
>> that, why not use a dipole? What ever you use, 6 meters has a tendency to
>make
>> life hard on nearby TV sets, even those hooked to cable. The use of
>high-pass
>> filters is a given. Good Luck.
>>
>> Alan, Kï¿½BG
>

936. Re: Mobile antennae a safety hazard?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-12 06:00:17 UTC
From: Alan Beagley <abeagley@optonline.net>
Message-ID: <3D2E7071.4070809@optonline.net>
Source record: 138782

No, never had a day of law school or even a single law class, but it occurred to me that when even some of the old and famous hood ornaments have either been discontinued or modified to make them less hazardous in the event of an accident (e.g., by making them spring-loaded so they move out of the way instead of penetrating someone's body), these long, rigid, somewhat pointy things that many of us atttach to our cars could prove very attractive to ambulance-chasing lawyers.

If a car came from the factory with a Hustler or some kind of bug-catcher, would it comply with the safety regulations? I don't know; I am asking.

-=-
Alan

Fred Hambrecht wrote:
> Just finishing law school Alan? I have only been a ham for 46 years and to
> date have heard no mobile antenna horror stories. Next week on Jerry
> Springer, people who have had a loved one killed by an amateur radio mobile
> antenna...
>
> "Alan Beagley" <abeagley@optonline.net> wrote in message
> news:3D2E22E9.6030403@optonline.net...
>
>>Are there any studies showing that antennae (whether amateur, business,
>
> law enforcement, or whatever) mounted on motor vehicles are a factor in the
> injuries people sustain in accidents? I can imagine somebody being thrown
> through the air and getting impaled on one of those Hustler HF antennae, or
> somebeody getting an eye poked out by a HamStick, but has anybody studied
> the issue?

937. Re: lightningbolt 2 element quad

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-12 06:30:40 UTC
From: W6DKN <w6dkn@qsl.net>
Message-ID: <kluX8.10347$aL6.930@nwrddc03.gnilink.net>
Source record: 138778

You *could* build it either way, but it comes with a single feedline
junction box.

73 de W6DKN

"Matt Patterson" <mattpatt@1starnet.com> wrote in message
news:SYsX8.53084$Bt1.2895098@bin5.nnrp.aus1.giganews.com...
> Hi,
>
> Have a question about the Lightning Bolt 2 Element 5 Band Quad. For
those
> of you who own this antenna, does it have 5 feedpoints (i.e one for each
> band) or does it have one feedpoint for all 5 bands. I have a friend who
> has one of these quads and his has seperate feedpoints for each band but
his
> was destroyed in a ice storm and had to rebuild it and I think when he
> rebuilt it he made some modifiactions to it. Lightningbolts website
doesn't
> give that much info on it. I suppose I could call them tomorrow and ask.
> But I thought I'd ask here first.
>
> Thanks,
>
> Matt
> KC5YTV
>
>

938. Re: A whole new 'back to basics' topic - Monopole fundamentals

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-12 06:37:11 UTC
From: dennis@wawa.juniper.net
Message-ID: <aglten$2ion$1@heap.juniper.net>
Source record: 138780

Roy Lewallen <w7el@eznec.com> wrote:
>J. Harvey wrote:
>> ...3) If the monopole and dipole are in identical fields, then the dipole
>> will deliver to a matched load four times the power.
>
>If the monopole over ground is immersed in the same field as a dipole in
>free space, the monopole will deliver to a matched load twice the amount
>of power as the dipole, since it has twice the effective aperture. But a
>ground plane (monopole) in free space will deliver very nearly the same
>amount of power as a dipole in free space.

Imagine you have two dipoles parallel to each other in free space, with
a transmitter connected to one and a receiver connected to the other. The
transmitter applies some amount of power to the terminals of the dipole it
is connected to. An EM field forms around the dipole. The other dipole
takes some amount of power from the field and delivers it to the receiver
attached to its terminals. Since the second antenna is receiving power
from the EM field, the field is changed by its presence.

Now suppose you remove the bottom half of the dipoles and instead
replace them with a perfect ground plane. We know about this analogy,
in particular we know we should be able to reproduce the same fields
in the upper hemisphere which existed when the free-space dipoles
were present, by imagining that the monopoles and everything we do
to them in the upper hemisphere is reflected 180 degrees out of phase
in the lower hemisphere. What transmitter and receiver powers are required
to reproduce that field?

To reproduce the field due to the transmitting antenna which existed
in the hemisphere the transmitter needs to apply only half the power
to the monopole, now worked against ground, that the dipole's transmitter
supplied. The analogy to free space dipoles says the monopole only
requires half the power to produce the field as there is a virtual
reflection of the transmitter supplying the other half of the power
to the other (virtual) reflected half of the free space dipole. In
any case, as it takes half the power to produce the same field in the
hemisphere, the gain of the transmitting monopole is 3 db higher than
the free space dipole. Everyone seems in agreement about this.

As for the receiver, the analogy to the free space dipoles says that
whatever happens between this monopole's terminal and ground is also
happening to the virtual reflected half of the dipole. This means
that whatever power the dipole's receiver was receiving from the field,
the monopole's receiver will be receiving half of that. That is, to
reproduce the field above the monopole's ground plane which existed in

that hemisphere between the free-space dipoles, both the transmitted
and received powers for the monopoles will be half that of the analogous
free-space dipoles, and the ratio of received to transmitted power
for the monopoles will be the same as that of the analogous free space
dipoles as is necessary for energy conservation if the field is
to be identical. And if I'm understanding how they define transmission
gain in the paper, I think the paper says that Mininec agrees with this
result (as do actual measurements?).

If we used the formula for effective area you are applying above, however,
we get a different result. We still can reproduce the transmitted field
over the ground with half the power applied to the transmitting monopole,
compared to the dipole, but the formula you are using says that since the
monopole has twice the gain and is in the same field as the free-space
dipole, the monopole's receiver will receive twice the power from the
field as the free-space dipole and the ratio of received to transmitted
power will be 4 times higher for the monopoles than for the analogous
free-space dipoles. This is 6 dB more then is predicted by NEC, according
to the paper, and would be expected by applying the reflected free-space
dipole analogy to the monopoles over ground. I believe this is the 6 dB
problem the paper is worried about.

The implication is not only that the conventional formula for effective
area when applied to monopoles over ground disagrees with Mininec, but
also that monopoles over perfect ground *do* *not* reproduce the fields
in the hemisphere that would be generated by the analogous reflected
free-space dipoles. Since I don't believe NEC and the reflection
analogy for perfect ground could both be wrong (the latter is in all the
books which reproduce the effective aperture formula), I think the
paper's assertion that the standard formula for effective aperture
does not work for monopoles over ground is probably correct.

After looking at the derivation of this formula, I think I too
believe it doesn't work for monopoles over ground. The formula
implies that the effective aperture of an antenna depends solely
on the antenna's gain and the wavelength being received, and
hence has no dependence on antenna's geometry or surroundings, but the
derivations of the formula in the books I have are all based on
considerations of free-space dipoles and just seem to assume it
works that way for all antennas. I don't think that assumption
is justified, and I think the paper's addition of a fudge factor of
4 to make the results match the values for monopoles over perfect
grounds is probably correct, if not all that useful since it leaves
one to wonder what the effective aperture of other antennas in other
environments might be.

>> Number 2) above was presented in the report as being "news".
>
>Number 2 would indeed be news, if it were correct. But it's not.
>
>It would appear that the purpose of the paper is to promote MININEC

>Professional rather than to present new information.

I don't think this is a wonderful paper, given the amount of work it took to guess what they where talking about, and I think there were better ways to prove their point than by comparing theory to Mininec. I do, however, think the paper is correct that the conventional formula for effective aperture does not apply to monopoles over perfect ground (it overestimates their effective area by a factor of 4), and I suspect it may not be correct for anything but dipoles. If you disagree with this I'd be very curious how you get the analogy between monopoles over perfect ground and equivalent dipoles in free space to work out, since it seems to me that either that formula or this analogy is broken.

Dennis Ferguson

939. Re: Magloops + Simple Variable capacitor

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-12 06:56:46 UTC
From: remove_ok1sip@atlas.cz
Message-ID: <5f5159fa.0207112256.61f4150e@posting.google.com>
Source record: 138779

"ZOOM" <robert931@sympatico.ca> wrote in message
news:<XiqX8.3768$9U1.1645091@news20.bellglobal.com>...
> Building a variable capacitor for your loop antenna is easier than most may
> think.
>
> See Pic: http://valveman.tripod.ca/Simplecap.jpg

Another construction is at http://www.antennex.com/hws/ws0302/varcap.html

73 de Ivan

940. Re: BACK TO BASICS - EM waves, E and H fields, in phase orinquadr...

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-12 07:17:26 UTC
From: 2w8ji@contesting.com
Message-ID: <3d2e808b.67633034@news.akorn.net>
Source record: 138781

On Thu, 11 Jul 2002 08:17:05 -0500 (CDT), richardharrison@webtv.net
(Richard Harrison) wrote:

>In Tom`s new example, does reducing the transmitter output reduce the
>common-mode voltage?
>
>Does increasing the transmitter output increase the common-mode voltage?
>
>A yes answer to the two questions above indicates that, yes there is a
>relationship between differential and common modes.

It also indicates I was correct when I said the following:

>Tom, W8JI wrote:
>"That`s probably why you can`t give correct technical responses using
>Ohm`s law."

and Harrison was totally incorrect when he said the following:

>I challenged Tom to show his work. Instead he reposted mine.

>Ohm says; P = E squared over R.
>Tom specified "several hundred volts"
>I picked a resistance of 50 ohms as most transmitters are designed for
>this load.
>300 volts qualifies as "several hundred volts".
>P = 1800 watts, hardly QRP.
>Tom should show how he would get a different answer.
>Best regards, Richard Harrison, KB5WZI

Really Richard, it is OK to not like someone but at some point you
need to put that aside and try to learn something useful, besides how
to drool on your own shirt!

941. Re: Multi-band roof-mounted vertical fed with 450 ohm ladderline

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-12 08:25:33 UTC
From: 'Doc <w5lz@icok.net>
Message-ID: <3D2E926F.85BE0C26@icok.net>
Source record: 138783

Nico,
I think it work either way. Clumping several
radials together in a 'cable' isn't as effective as
spreding them out, but should still work.
'Doc

942. Re: Multi-band roof-mounted vertical fed with 450 ohm ladderline

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-12 08:25:55 UTC
From: 'Doc <w5lz@icok.net>
Message-ID: <3D2E927C.58418CE0@icok.net>
Source record: 138784

Nico,
I think it work either way. Clumping several
radials together in a 'cable' isn't as effective as
spreading them out, but should still work.
'Doc

943. Re: lightningbolt 2 element quad

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-12 11:22:22 UTC
From: Matt Patterson <mattpatt@1starnet.com>
Message-ID: <OZyX8.59009$Bt1.3087187@bin5.nnrp.aus1.giganews.com>
Source record: 138785

I was reading on eham.net that someone used 72 ohm coax for a proper match when he made his seperate feedlines for the quad. Here is the quote.

"Lightning Bolt provides a balun for matching; all driven element wires are tied together then attached to the balun, which has a coax fitting. This is nice because there is no antenna switching necessary and it works fairly well except SWR is a little high and I am from the old school so I feed each element separately via an Ameritron antenna switch using 72 ohm matching coax quarter wave stubs."

Is this necessary?

Thanks,

Matt
KC5YTV

"W6DKN" <w6dkn@qsl.net> wrote in message
news:kIuX8.10347$aL6.930@nwrddc03.gnilink.net...
> You *could* build it either way, but it comes with a single feedline
> junction box.
>
> 73 de W6DKN
>
> "Matt Patterson" <mattpatt@1starnet.com> wrote in message
> news:SYsX8.53084$Bt1.2895098@bin5.nnrp.aus1.giganews.com...
> > Hi,
> >
> > Have a question about the Lightning Bolt 2 Element 5 Band Quad. For
> those
> > of you who own this antenna, does it have 5 feedpoints (i.e one for each
> > band) or does it have one feedpoint for all 5 bands. I have a friend
who
> > has one of these quads and his has seperate feedpoints for each band but
> his
> > was destroyed in a ice storm and had to rebuild it and I think when he
> > rebuilt it he made some modifiactions to it. Lightningbolts website
> doesn't
> > give that much info on it. I suppose I could call them tomorrow and
ask.
> > But I thought I'd ask here first.
> >
> > Thanks,
> >
> > Matt
> > KC5YTV

> >
> >
>
>

944. Re: MARS antennas

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-12 12:15:39 UTC
From: hasan schiers <schiers@netins.net>
Message-ID: <agmh9i$mtlhq$1@ID-52642.news.dfncis.de>
Source record: 138786

Me too, Dick...I was there from '67-68 at the signal school and operated the ham station, k2usa, most evenings. Nice layout! Then I was fortunate enought to get sent to Korea, right outside of downtown Seoul on the Yeungson compound. The ham shack for HL9US was about 100 yds from my hooch and I got to use it every evening as well.

I got very used to the approximate 12 hour time difference between Seoul and the mid-USA. 20m was lotsa fun. No Rhombics there, of course, but they had a TA-36 up about 70' that did a fine job for us. About two miles away on the hill, the local "sniffer" people had a monster LP up that I always wanted to get my pinkies on....but we couldn't even get through the gate <g>

73,
--
hasan schiers, N0AN

schiers@netins.net
or use amsat.org or arrl.net remailer
"Dick Carroll" <dixie@townsqr.com> wrote in message
news:aglnc1$sa0$0@208.207.71.151...
>
>
>>
> Rhombics are truly awesome in the direction they're pointed. The old
> Signal Corps version atop 75 foot utility poles was even awesome to
> view.
> I still have memories of the one at the club station at Fort Monmouth
> (directed W/SW from the New Jersey coast) in the early 60's.
> So far nothing I've used compares.
>
> Dick

945. Re: lightningbolt 2 element quad

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-12 12:35:40 UTC
From: Fred Hambrecht <w4jle@charter.net>
Message-ID: <uitj8ug161fff2@corp.supernews.com>
Source record: 138787

Only if you are one of the folks that enjoys picking fly crap out of
pepper...

"Matt Patterson" <mattpatt@1starnet.com> wrote in message
news:OZyX8.59009$Bt1.3087187@bin5.nnrp.aus1.giganews.com...
> I was reading on eham.net that someone used 72 ohm coax for a proper match
> when he made his seperate feedlines for the quad. Here is the quote.
>
> "Lightning Bolt provides a balun for matching; all driven element wires
are
> tied together then attached to the balun, which has a coax fitting. This
is
> nice because there is no antenna switching necessary and it works fairly
> well except SWR is a little high and I am from the old school so I feed
each
> element separately via an Ameritron antenna switch using 72 ohm matching
> coax quarter wave stubs."
>
>
> Is this necessary?
>
>
> Thanks,
>
> Matt
> KC5YTV
>
> "W6DKN" <w6dkn@qsl.net> wrote in message
> news:kIuX8.10347$aL6.930@nwrddc03.gnilink.net...
> > You *could* build it either way, but it comes with a single feedline
> > junction box.
> >
> > 73 de W6DKN
> >
> > "Matt Patterson" <mattpatt@1starnet.com> wrote in message
> > news:SYsX8.53084$Bt1.2895098@bin5.nnrp.aus1.giganews.com...
> > > Hi,
> > >
> > > Have a question about the Lightning Bolt 2 Element 5 Band Quad. For
> > those
> > > of you who own this antenna, does it have 5 feedpoints (i.e one for
each
> > > band) or does it have one feedpoint for all 5 bands. I have a friend
> who

> > > has one of these quads and his has seperate feedpoints for each band
but
> > his
> > > was destroyed in a ice storm and had to rebuild it and I think when he
> > > rebuilt it he made some modifiactions to it. Lightningbolts website
> > doesn't
> > > give that much info on it. I suppose I could call them tomorrow and
> ask.
> > > But I thought I'd ask here first.
> > >
> > > Thanks,
> > >
> > > Matt
> > > KC5YTV
> > >
> > >
> >
> >
>
>

946. Re: MARS antennas

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-12 12:44:49 UTC
From: John K Scoggin <aat3bf@conectiv.com>
Message-ID: <agmito0186q@enews4.newsguy.com>
Source record: 138791

That Ft Monmouth station was what gave me the bug! My uncle was stationed
at Ft Monmouth
in the mid-60's. He took me to K2USA and I watched the ops in action and
was hooked! :-)

john
N3SKO/AAT3BF/AAM3O/AAA9AC

"hasan schiers" <schiers@netins.net> wrote in message
news:agmh9i$mtlhq$1@ID-52642.news.dfncis.de...
> Me too, Dick...I was there from '67-68 at the signal school and operated
the
> ham station, k2usa, most evenings. Nice layout! Then I was fortunate
> enought to get sent to Korea, right outside of downtown Seoul on the
> Yeungson compound. The ham shack for HL9US was about 100 yds from my hooch
> and I got to use it every evening as well.
>
> I got very used to the approximate 12 hour time difference between Seoul
and
> the mid-USA. 20m was lotsa fun. No Rhombics there, of course, but they had
a
> TA-36 up about 70' that did a fine job for us. About two miles away on the
> hill, the local "sniffer" people had a monster LP up that I always wanted
to
> get my pinkies on....but we couldn't even get through the gate <g>
>
> 73,
> --
> hasan schiers, N0AN
>
> schiers@netins.net
> or use amsat.org or arrl.net remailer
> "Dick Carroll" <dixie@townsqr.com> wrote in message
> news:aglnc1$sa0$0@208.207.71.151...
> >
> >
> >>
> > Rhombics are truly awesome in the direction they're pointed. The old
> > Signal Corps version atop 75 foot utility poles was even awesome to
> > view.
> > I still have memories of the one at the club station at Fort Monmouth
> > (directed W/SW from the New Jersey coast) in the early 60's.
> > So far nothing I've used compares.
> >
> > Dick

>
>

947. Re: MARS antennas

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-12 12:48:27 UTC
From: 2w8ji@contesting.com
Message-ID: <3d2ecca2.87115041@news.akorn.net>
Source record: 138788

On 12 Jul 2002 04:53:21 GMT, Dick Carroll <dixie@townsqr.com> wrote:

>
> Rhombics are truly awesome in the direction they're pointed. The old
>Signal Corps version atop 75 foot utility poles was even awesome to
>view.

Rhombics sure are pretty, the physical area they cover makes them look awesome. They have the advantage of being simple to construct. They also have about the same input impedance over a wide range of frequencies, and the main lobe is in the same general direction.

On the other hand Rhombics have lower gain than we would expect for a certain beamwidth. They are somewhat inefficient antennas (often less than 50%), have low gain per acre of space compared to other antenna designs (like curtains or multiple yagis or logs), and have multiple strong spurious lobes that waste power compared to cleaner pattern antennas. They also gain-limit at about 3.5 wl per leg when mounted a wavelength or two high over real earth because of the inability to force significant current out to the ends due to radiation losses and ground losses below the antenna.

Log periodics are the choice now for lower gain applications, and curtains are the choice for higher gain or narrow patterns, when bandwidth is a concern.

73 Tom

948. Re: Mobile antennae a safety hazard?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-12 12:55:27 UTC
From: 2w8ji@contesting.com
Message-ID: <3d2ed03c.88037016@news.akorn.net>
Source record: 138789

>"Alan Beagley" <abeagley@optonline.net> wrote in message
>news:3D2E22E9.6030403@optonline.net...
>> Are there any studies showing that antennae (whether amateur, business,
>law enforcement, or whatever) mounted on motor vehicles are a factor in the
>injuries people sustain in accidents? I can imagine somebody being thrown
>through the air and getting impaled on one of those Hustler HF antennae, or
>somebeody getting an eye poked out by a HamStick, but has anybody studied
>the issue?
>>
>> -=-
>> Alan, AB2OS

Alan,

My Aunt Tenna poked her husband in the eye for studying a copy of
Hustler, and they actually slapped a Ham Stick on it to help the
swelling and black and blue marks go down.

By the, you find "antennae" on bugs. You find "antennas" on cars.
While it looks fancy to say Hustler antennae, that would only be true
if it were mounted on a Bug. On a Caddilac or a Escort, they are
antennas.

73 Tom

949. Re: Oliver Heaviside

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-12 13:04:26 UTC
From: Reg Edwards <g4fgq.regp@btinternet.com>
Message-ID: <agmk4m$ck1$1@venus.btinternet.com>
Source record: 138768

Peter's descriptive use of the English language is better then mine but here are a few extra comments -

Under the general heading of "More Quotations" there's a short note about Heaviside in my website. http://www.g4fgq.com

Heaviside's 'calculus' was publicly ridiculed by the English university academics of the 1870's and 80's because, in their eyes, it lacked foundation. It was a new sort of mathematics. It introduced new symbols. It could not be traced back to Pythagorus so it lacked rigor. It was therefore not to be used.

Heaviside KNEW from a practical viewpoint that it gave the correct solutions to important engineering problems of the day. He had no great incentive to provide rigorous proofs of his work just to keep the academics happy and gain their recognition. He had better things to do.

His response to criticism was "Shall I refuse to eat my dinner because I do not fully understand the processes of digestion?".

And the academics of the period, secure in their comfortable ivory towers, had no ideas to offer on the subject or the capacity for original thought.

It was American engineers and practical mathematicians, early in the 20th century (there are several well-known names), who discovered the proof of Heaviside's correct reasoning. The proof was deeply embedded in the century-old work of Laplace, the Napoleonic theoretical mathematician who, of course, had never heard of the electric telegraph let alone radar, TV and RG-58.

Heaviside's calculus was first known as the "Symbolic Calculus" from his invention of the symbol p = di/dt which means the rate of change of electric current, or anything else, at any instant of time. The academics were baffle-gabbed when Heaviside began tossing p around just like any other ordinary algebraic number. It was a veritable revolution in mathematics.

Heaviside used his sound intuition to write down such mind-boggling equations as -

A*p^3 + B*p^2 + C*p + D = 0

the physical meaning of which defies the imagination but which nevertheless has easily calculable roots. But how can such a monstrocity possibly be justified except on the grounds that it provides the right answers every time?

With a lot of juggling this is where Laplace enters the scene.

The symbol p, for the want of a better word, became known as an "Operator". Heaviside's calculus then became known as "The Operational Calculus".

In more recent years, to satisfy the academics, it has become known as "The Laplace Transform Method" which of course is misleading. These days it is even used by investment bankers in the field of the worrying ups-and-downs versus time and sudden shocks of economics.

Reg, G4FGQ

==========

"Peter O. Brackett" wrote
> Reg et al:
>
> Oliver Heaviside is also one of my heros. An engineer's engineer no doubt
> about it!
>
> Heaviside *invented* what is now known as the LaPlace Transform method of
> solving systems of ordinary differential equations.
>
> After he first introduced his technique, it came to be known as
Heaviside's
> p-transform. [p = d(.)/dt]
>
> Apparently all of the *mathematicians* of the day, *poo pooed* Heaviside's
> technique saying it was without merit, incorrect, etc...
>
> Apparently Heaviside's answer to the critiques of the mainstream
> *mathematicians* of the day was that he knew his p-transform was correct
> since it always gave the *right* answers. Oliver was never impressed by
the
> self-important high priests of mathematics who themselves couldn't solve
> real world problems.
>
> And indeed as anyone familiar with LaPlace Transform techniques can
readily
> appreciate, his p-transform method not only gave the correct answers, but
it
> did so with a whole lot less effort than the methods promoted by the
> mathematicians of the day.
>
> Heaviside, either just couldn't *prove* that his technique was correct
with
> a classical mathematical proof, or more likely... he just didn't care to
do
> so.
>
> The difference was that Heaviside was a *user* of mathematics, and not a
> mathematician. Sort of like today's scientists and engineers who are
users
> of computers not computer scientists. Just as an earlier generation of

> engineers and scientists were users of slide rules. And come to think of
> it... back then we didn't need *slide rule scientists*. Why do we need
> computer scientists today?
>
> IMHO... one of the biggest problems facing engineers and applied
scientists
> today is the bullsxxxx being promulgated by *some* modern computer
> scientists who have presented the world with the *gift* of object oriented
> programming and all the bloatware, arcane terminology, and obfuscation,
> associated with that particular cult and its' high priests. What ever
> happened to *plain programming* like Fortran, etc...? Now we have folks
who
> want to re-write perfectly good scientific/engineering software in object
> oriented languages, because it is the *correct* way to do it. Often when
> this is done, the software no longer gives the correct answers! Heh,
heh...
> Most engineers and designers just want to use computers, they do not
become
> blackmailed by the high priests who worship at the shrine of the digital
> computer! Heh, heh...
>
> If Heaviside were alive today, I'll bet he would not be using object
> oriented techniques!
>
> Though my admiration for Heaviside extends beyond the p-transform it is
one
> of the reasons that I choose to use the symbol "p" for the LaPlace
Transform
> variable in any of my own design work, etc... rather than the *modern*
> symbol "s" introduced by the *mathematicians* once they had finally
> *legitimized* Heaviside's techniques. To be fair, LaPlace, certainly a
> theoretical physicist and mathematician to be respected, had foreseen
> Heaviside, but at the time I believe that LaPlace's technique was
considered
> to be a curiosity by most "mainstream" mathematicians of the day and hence
> had remained inaccessible to most of the world of engineering.
>
> Hail Oliver Heaviside, an engineer extraordinaire!
>
> --Peter K1PO
> Indialantic By-the-Sea, FL.

950. Re: Mobile antennae a safety hazard?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-12 13:04:27 UTC
From: Bob Miller <bamiller@texas.net>
Message-ID: <A9MuPbVQ15hpDwm1nhfuybWkPDr9@4ax.com>
Source record: 138790

Alan Beagley <abeagley@optonline.net> wrote:

>No, never had a day of law school or even a single law class, but it occurred to me that when even some of the old and famous hood ornaments have either been discontinued or modified to make them less hazardous in the event of an accident (e.g., by making them spring-loaded so they move out of the way instead of penetrating someone's body), these long, rigid, somewhat pointy things that many of us atttach to our cars could prove very attractive to ambulance-chasing lawyers.

I guess the folks who drive those fancy Land Rovae with the big, metal cattle guards on the front aren't too worried about attornae comin' after 'em :-)

Bob
k5qwg

>
>If a car came from the factory with a Hustler or some kind of bug-catcher, would it comply with the safety regulations? I don't know; I am asking.
>
>-=-
>Alan
>
>
>Fred Hambrecht wrote:
>> Just finishing law school Alan? I have only been a ham for 46 years and to
>> date have heard no mobile antenna horror stories. Next week on Jerry
>> Springer, people who have had a loved one killed by an amateur radio mobile
>> antenna...
>>
>> "Alan Beagley" <abeagley@optonline.net> wrote in message
>> news:3D2E22E9.6030403@optonline.net...
>>
>>>Are there any studies showing that antennae (whether amateur, business,
>>
>> law enforcement, or whatever) mounted on motor vehicles are a factor in the
>> injuries people sustain in accidents? I can imagine somebody being thrown
>> through the air and getting impaled on one of those Hustler HF antennae, or
>> somebeody getting an eye poked out by a HamStick, but has anybody studied
>> the issue?

951. Re: CAM?? Comments and More Questions

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-12 13:14:02 UTC
From: Janice and Ed <eseniors@earthlink.net>
Message-ID: <uCAX8.7780$Kx3.3469@newsread1.prod.itd.earthlink.net>
Source record: 138792

Hi - Glad to have the book title sorted out. As for definitions,
I'll go for the first three paragraphs under the heading of
"Matching the Line to the Transmitter," Chapter 25, same book.
(It even gives a clue to the origins of "Transmatch!")

...73, Ed

"CAM" <w5dxp@hotmail.com> wrote in message
news:3D2A6211.BE4A0E69@hotmail.com...
> Janice and Ed wrote:
> > "Some folks" searched the 2002 Handbook quite diligently looking for a
> > formal definition of "antenna tuner" and/or "Transmatch," but found
none.
>
> It's in "The ARRL Antenna Book" glossary. Transmatch = antenna tuner
> "a device containing variable reactances (and perhaps a balun). It is
> connected between the transmitter and the feedpoint of an antenna system,
> and adjusted to 'tune' or resonate the system to the operating frequency."
> --
> cheers, CAM http://www.qsl.net/w5dxp
>
>
> -----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
> http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
> -----== Over 80,000 Newsgroups - 16 Different Servers! =-----
>

952. Re: Solving a problem with the Smith Chart

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-12 13:16:20 UTC
From: Dick Carroll <dixie@townsqr.com>
Message-ID: <agmkr4rbo0@208.206.142.69>
Source record: 138793

TNX Wes. Will do.

Dick

Wes Stewart wrote:

>
> You guys have gotta check out Dan's (AC6LA) freeware.
>
> www.qsl.net/ac6la

953. Re: Multi-band roof-mounted vertical fed with 450 ohm ladderline

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-12 13:26:39 UTC
From: Dan Richardson <k6mhe@mendolink.com>
Message-ID: <hpltiug3m67qllp370g9t9vi13q6s4hg2k@4ax.com>
Source record: 138794

Nico,

I suggest you make the radials the same length as the monopole. At a minimum I would use two, but four even spaced radials will produce a better omni-directional pattern with the antenna system that close to ground.

Although you will be feeding an unbalanced antenna with balanced line maintaining the same lenght for all the elements (vertical and radial) should result in lower level of common mode current on the transmission line.

The antenna will work fine. Go for it!

73
Danny, K6MHE

On Thu, 11 Jul 2002 21:33:02 GMT, "Nico Vertriest"
<Nico.Vertriest@pandora.be> wrote:

>Hello,
>
>I would like to put a 5m vertical on my roof (10m high) and to feed it with
>450 ohm ladderline. I would like to use it as a multiband antenna with a
>balanced line tuner. As radials I would put several lines of rotor cable
>having a length of 5 meters (6 lines, each having 8 conductors). I
>wondered what is the most efficient situation for the radials. Is it best
>to cut separate radials to resonance for the 20,17,15 and 10 m bands ? Or
>can I just use several radials 5 meter long, and count on the tuner for
>resonance ?
>
>Thanks in advance.
>73,
>Nico
>on4civ
>

954. Re: BACK TO BASICS - EM waves, E and H fields, in phase orinquadr...

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-12 13:53:35 UTC
From: richardharrison@webtv.net
Message-ID: <13056-3D2EDF5F-268@storefull-2397.public.lawson.webtv.net>
Source record: 138795

Tom, W8JI again wrote:
"That`s probably why you can`t give correct technical responses using Ohm`s law."

Coupling between circuits can be measured.
Coupling between circuits is stated as an Ohm`s Law ratio.

All Ohm`s law relations can have any number of E & I values with the same ratio. The numerator and the denominator are just multiples of the same number. This value of the ratio remains constant.

Coupling between circuits is determinable and can be written. It is a fixed value for at least an instant in time.

Best regards, Richard Harrison, KB5WZI

955. Re: Mobile antennae a safety hazard?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-12 14:30:36 UTC
From: Alan Beagley <abeagley@optonline.net>
Message-ID: <3D2EE80C.3060804@optonline.net>
Source record: 138796

I wasn't trying to be fancy. I grew up in England, where these signal-gethering and radiating conductors were called "aerials," so the only plural of "antenna" I ever encountered was "antennae." On checking, I find that my son's Webster's agrees with you that "antennas" is correct for the devices under discussion. I have learned something.

-=-
Alan

Tom W8JI wrote:
>>"Alan Beagley" <abeagley@optonline.net> wrote in message

> By the, you find "antennae" on bugs. You find "antennas" on cars.
> While it looks fancy to say Hustler antennae, that would only be true
> if it were mounted on a Bug. On a Caddilac or a Escort, they are
> antennas.

956. Re: Shack resonates at 40M

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-12 14:46:02 UTC
From: cprstn54zz@att.net
Message-ID: <3d2ee9e0.101977500@news-server.optonline.net>
Source record: 138797

On Thu, 11 Jul 2002 06:52:37 +0000 (UTC), Bill Nelson
<billn@spock.peak.org> wrote:
>If it is picked up from the antenna, then it is not common mode current.

Why do you say that? According to the ARRL Handbook, "Common-mode
signals" are defined as "signals that are in phase on both (or
several) conductors in a system."

If my 3-wire A/C wiring is picking up the RF from the antenna, why
would one wire be doing something different than the others as regards
RF? The hot (black) and neutral (white), at least, are the same
length. The ground wire (green), if the electricians could be
bothered, might have a longer effective length.

In any event, it appears that the most cost effective means of dealing
with the problem is to wrap the electrical wiring bifilar-style
(trifilar?) around a ferrite toroid -- which ought to choke off RF in
all three wires.

Ken KC2JDY

Ken
(to reply via email
remove "zz" from address)

957. Re: Want copyrighted mag article.

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-12 15:31:47 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <n5ttiu8idne84ie9rkgo8ctgnjrr9r04ec@4ax.com>
Source record: 138798

On Thu, 11 Jul 2002 20:58:08 -0500 (CDT), richardharrison@webtv.net
(Richard Harrison) wrote:

>Richard Clark wrote:
>"The e-mail reading program is called Condor."
>
>I`ve heard several complaints, mostly foreign, complain about a U.S.
>intelligence internet and telecommunications snooping program called
>"Carnivore".
>
>Seems to me it would be more aptly called "Omnivore".
>
>Best regards, Richard Harrison, KB5WZI

Hi All,

Richard correctly identifies the e-mail spook program, Carnivore.

E-mail is no more secure than posts to this newsgroup. Remember,
e-mail is the primary vector of infection. However, if you were to
encrypt the contents (and accept they may be lost in transit),
Carnivore would starve.

73's
Richard Clark, KB7QHC

958. Re: BACK TO BASICS - EM waves, E and H fields, in phaseorinquadr...

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-12 15:35:31 UTC
From: richardharrison@webtv.net
Message-ID: <27202-3D2EF743-245@storefull-2394.public.lawson.webtv.net>
Source record: 138799

I wrote:
R = E / I , Ohm`s law is the mutual impedance formula. I was being too restrictive.
Z = E / I is also true as mutual coupling can be complex or resistive.

Best regards, Richard Harrison, KB5WZI

959. Re: BACK TO BASICS - EM waves, E and H fields, in phase orinquadr...

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-12 16:12:21 UTC
From: richardharrison@webtv.net
Message-ID: <3066-3D2EFFE5-281@storefull-2398.public.lawson.webtv.net>
Source record: 138801

Tom, W8JI wrote:
"and Harrison was totally incorrect when he said the following:

I challenged Tom to show his work. Instead he reposted mine.

Ohm says: P = E squared over R.
True oor false, Tom?

Tom specified "several hundred volts"
True or False, Tom?

I picked a resistance of 50 ohms as most transmitters are designed for
this load.
True or false, Tom?

300 volts qualifies as "several hundred volts".
True or false, Tom?

P = 1800 watts, hardly ORP.
True or false, Tom?

Tom should show how he would get a different answer.
True or false, Tom?

Dog eat your homework, Tom?

Best regards, Richard Harrison, KB5WZI

960. Re: Mobile antennae a safety hazard?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-12 16:33:14 UTC
From: Jerry Oxendine <joxendi@bellsouth.net>
Message-ID: <uBDX8.93245$wj4.8007582@e3500-atl2.usenetserver.com>
Source record: 138800

Alan Beagley <abeagley@optonline.net> wrote in message
news:3D2E7071.4070809@optonline.net...
> No, never had a day of law school or even a single law class, but it occurred to me that when even some of the old and famous hood ornaments have either been discontinued or modified to make them less hazardous in the event of an accident (e.g., by making them spring-loaded so they move out of the way instead of penetrating someone's body), these long, rigid, somewhat pointy things that many of us atttach to our cars could prove very attractive to ambulance-chasing lawyers.
>
> If a car came from the factory with a Hustler or some kind of bug-catcher, would it comply with the safety regulations? I don't know; I am asking.
>
Well,

One could assume that a ham/cb antenna, particularly an HF whip would be too long for such a thing to happen. Also, most communications antennas are more flexible than that of a broadcast antenna and, unless the static ball is missing, less
likely to do as much damage. In all my years of fooling with radio, I have never
heard of such a thing happening until now. Even short VHF antennas (5/8 wave,
etc) are too long for someone to get the thing up their nose, and, again, if the
static ball was in place, the guy that was injured must've made some helluva turn
to do all that damage. I am having difficulty visualizing someone penetrating the
nasal membranes with a static ball. One quarter wave VHF antennas are usually
somewhat flimsy and would be too SHORT for this to happen if mounted on the deck like the AM/FM antenna. I don't say it didn't happen, or couldn't, but I have
never run into such a thing. This does, however, point out the need for us to be very safety-conscious with our mounts, braces, and hardware to insure that none of
it has protruding parts or sharp edges. Top hats should be above head level. Braces should be rounded off so there are no edges for someone to get cut on in a tight parking lot. I dont know about you guys, but I make sure to round off and remove all burrs on my installations. I worry more about that than I do of some-one closely "sniffing" my whip!

73

Jerry
K4KWH
>

961. Re: BACK TO BASICS - EM waves, E and H fields, in phase or inquadr...

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-12 16:39:46 UTC
From: richardharrison@webtv.net
Message-ID: <18727-3D2F0652-330@storefull-2395.public.lawson.webtv.net>
Source record: 138802

Richard Clark wrote:
"---if you have no way of determination, how is it that you can make an assertion in the first place?" (Cecil had said the relationship might be unknown or difficult to determine.)

Can`t and Can`t hardly, aren`t the same.

The relationship between differential and common modes is determinable by measuring coupling between the modes.

Best regards, Richard Harrison, KB5WZI

962. Re: ALL BAND ANT EXPERIMENT?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-12 17:03:59 UTC
From: "R.Wilhelm" <nhbiwilh@rrzn-user.uni-hannover.de>
Message-ID: <Pine.GSO.4.44.0207121902110.29393-100000@unics>
Source record: 138803

On Wed, 10 Jul 2002, R.Wilhelm wrote:

>... promoted by a DJ2 (I guess suffix was EY but not sure) in the mid
> seventies....
>
The article is written by DJ2kY and appeared in german "QRV" magazine in
'71.

73

Ralf

==========
Ralf Wilhelm
DL 6 OAP

==========
Hannover, Germany, where mankind's first motorized flight took place:
Karl Jatho, August 18th 1903, 4 months before the Wright Bros.
(When will history notice this ?)
==========

963. Re: Solving a problem with the Smith Chart

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-12 17:08:13 UTC
From: k7itm@aol.com
Message-ID: <3200347.0207120908.2be9921e@posting.google.com>
Source record: 138804

n7ws at arrl net (Wes Stewart) wrote in message
news:<3d2e5f6e.51033091@news.triconet.org>...

> You guys have gotta check out Dan's (AC6LA) freeware.

Yep, XLZIZL is a good one, so long as you have Excel. For quick, I
still like WinSmith, but it's not free.

Cheers,
Tom

964. Re: Want copyrighted mag article.

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-12 17:57:37 UTC
From: richardharrison@webtv.net
Message-ID: <18727-3D2F1891-335@storefull-2395.public.lawson.webtv.net>
Source record: 138807

Richard Clark, KB7QHC wrote:
"E-mail is no more secure than posts to this newsgroup."

Post 9-11, courts should have ordered limited suspension of snooping inhibitions. As the terrorism war has no end in sight, our rights should not be suspended forever. Only court-ordered time and purpose limited suspensions of our basic rights and rules should be allowed. Abusers of court orders should face prosecution and be subjected to defined penalties for violation of court order limits. Our rights are precious.

Best regards, Richard Harrison, KB5WZI

965. Re: Want copyrighted mag article.

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-12 17:59:50 UTC
From: tdonaly@aol.com
Message-ID: <20020712135950.12787.00000200@mb-fz.aol.com>
Source record: 138805

Richard Clark wrote,
>
>On Thu, 11 Jul 2002 20:58:08 -0500 (CDT), richardharrison@webtv.net
>(Richard Harrison) wrote:
>
>>Richard Clark wrote:
>>"The e-mail reading program is called Condor."
>>
>>I`ve heard several complaints, mostly foreign, complain about a U.S.
>>intelligence internet and telecommunications snooping program called
>>"Carnivore".
>>
>>Seems to me it would be more aptly called "Omnivore".
>>
>>Best regards, Richard Harrison, KB5WZI
>
>Hi All,
>
>Richard correctly identifies the e-mail spook program, Carnivore.
>
>E-mail is no more secure than posts to this newsgroup. Remember,
>e-mail is the primary vector of infection. However, if you were to
>encrypt the contents (and accept they may be lost in transit),
>Carnivore would starve.
>
>73's
>Richard Clark, KB7QHC
>

Hi Richard,
my emails are too boring to
be of any interest to the government.

Tom Donaly KA6RUH

966. Re: antenna (relay) switch?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-12 18:08:47 UTC
From: Dave Allen <david_e_allen@agilent.com>
Message-ID: <3D2F1B2F.92302056@agilent.com>
Source record: 138806

The dummy load is a cantenna and is 1:1 without the switch.

I made the box out of double-sided (un-etched) PC board material. Have I introduced some weird capacitance or ground currents using that material?

Thanks.
dave, wb0taq

ZOOM wrote:

> Are you sure the loss in SWR is due to your switch or your dummy load?

967. Re: Mobile antennae a safety hazard?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-12 18:45:20 UTC
From: "H. Adam Stevens" <solo@totalaccess.net>
Message-ID: <uiu900o99jpe08@corp.supernews.com>
Source record: 138808

Isn't it a wonderful language we (sort of) share? **** ** **** **
;^)
H.
NQ5H
And no I've not heard of such an injurious event.
I have worried about RF burns to pederstrians in shopping mall parking lots
(but not much).
=]8-O

"Alan Beagley" <abeagley@optonline.net> wrote in message
news:3D2EE80C.3060804@optonline.net...
> I wasn't trying to be fancy. I grew up in England, where these
signal-gethering and radiating conductors were called "aerials," so the only
plural of "antenna" I ever encountered was "antennae." On checking, I find
that my son's Webster's agrees with you that "antennas" is correct for the
devices under discussion. I have learned something.
>
> -=-
> Alan
>
>
> Tom W8JI wrote:
> >>"Alan Beagley" <abeagley@optonline.net> wrote in message
>
> > By the, you find "antennae" on bugs. You find "antennas" on cars.
> > While it looks fancy to say Hustler antennae, that would only be true
> > if it were mounted on a Bug. On a Caddilac or a Escort, they are
> > antennas.
>

968. Re: Shack resonates at 40M

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-12 18:53:19 UTC
From: "H. Adam Stevens" <solo@totalaccess.net>
Message-ID: <uiu9f1i2ev1df6@corp.supernews.com>
Source record: 138810

Does the RF vary if the fans are on or off?
Try a rubber duck on some coax into your receiver for a test probe;
I've found it useful looking for localized RF sources.
Are they Hunter fans? What motor type?
Some ferrite, especially at the right place, can be useful.
H.
NQ5H

"Ken" <cprstn54zz@att.net> wrote in message
news:3d2e15e7.47711843@news-server.optonline.net...
> On Wed, 10 Jul 2002 14:14:55 GMT, cprstn54zz@att.net (Ken) wrote:
>
> Moving the dipole any distance away from the house is not an option.
> In 20 years, though, some of my trees might be high and sturdy
> enough. If I am still alive then, I will move it.
>
> I find surprises as I walk around with the field strength meter.
> Celing fans within 25 ft of the antenna are the hottest items in the
> house. Are they radiating RF fed to them by the wiring? Or are they
> concentrating the field and one of the entry points?
>
> Ken KC2JDY
>
> -----
> Ken
> (to reply via email
> remove "zz" from address)

969. Re: Mobile antennae a safety hazard?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-12 18:55:10 UTC
From: k0bg@aol.com
Message-ID: <20020712145510.07643.00000251@mb-da.aol.com>
Source record: 138809

Oh everybody trying to be a card and never really answering the question. Yes, there are two studies.

The first one of internest has more to do with the dangers of RF from cell phone, two-way radio, antennas, and of all things, GPS antennas. You can do a search of the EPA site for this one. If my memory serves me correctly, it was 1997.

The "OLD" commerce commission did a study in the mid 50s as two way radio and car phones were just getting popular with the business sector. The original white paper was published in the Congressinal Record, so someone out there should be able to pin it down. Whether or not it speaks of impalation I can't say.

Once upon a time early in my career, I was a cop for about 5 or so years. In those days, AM radio antennas were usually tubular, not stainless steel rods like they are today. I recall a pedestrian who got her arm severed by one, but the nucklehead that hit her was going over 80 at the time.

I've been mobile for over 30 years, and I don't know of any cases other than the one I cited.

Alan, Kï¿½BG

970. Re: Multi-band roof-mounted vertical fed with 450 ohm ladderline

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-12 19:02:08 UTC
From: k0bg@aol.com
Message-ID: <20020712150208.07643.00000253@mb-da.aol.com>
Source record: 138811

I guess I'm different. Why not feed the thing with coax? The losses at any reasonable length are not that great, and you wouldn't have the balun to worry about, which if not designed specifically for 6 M could be a great source of loss.

Secondly, verticals are great "IF" you can get a good ground plane under them (and a dozen or so wires isn't a ground plane). If I needed a 6 M antenna, I'd put up a halo, or a stacked pair of halos. No ground plane needed, and they work well, even on an automobile. Cheap too.

Alan, Kï¿½BG

971. Re: Can twin feeder be put underground??

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-12 19:14:11 UTC
From: k0bg@aol.com
Message-ID: <20020712151411.07643.00000255@mb-da.aol.com>
Source record: 138812

Roy gave you the best solution to measure the loss, but Roy would agree, not all hams have the necessary "tools" to do this job correctly. One respondent also talked about the losses in the tuner/coax feeding the antenna, and he's correct as well.

However, the G5RV is usually close to resonance on most bands so the VSWR really isn't that high, and the additional losses in the coax not that great. But like Roy stated, you don't know what additional losses you have laying the ladder line on or near the ground, and it's what you don't know that gets you every time.

If for no other reason, you need to get the line away from surrounding objects, and where some one can't touch it.

Alan, Kï¿½BG

972. Re: Mobile antennae a safety hazard?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-12 19:25:47 UTC
From: Vito <vito@crosslink.net>
Message-ID: <3D2F2D3B.89EA2A95@crosslink.net>
Source record: 138813

Alan Beagley wrote:
>
> Are there any studies showing that antennae...on motor vehicles are a factor in the injuries people sustain in accidents? I can imagine somebody being thrown through the air and getting impaled on one of those Hustler HF antennae, or somebeody getting an eye poked out by a HamStick, but has anybody studied the issue?
>

No, but I heard that out worst threat was being killed by a meteorite.
Prolly came from Chicken Little :o)
K3DWW

973. Re: Multi-band roof-mounted vertical fed with 450 ohm ladderline

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-12 19:40:13 UTC
From: Dan Richardson <k6mhe@mendolink.com>
Message-ID: <mabuiucvapvbkvf5caqciihfoadp7o7e5g@4ax.com>
Source record: 138815

On 12 Jul 2002 19:02:08 GMT, k0bg@aol.com (K0bg) wrote:

>I guess I'm different. Why not feed the thing with coax? The losses at any
>reasonable length are not that great, and you wouldn't have the balun to worry
>about, which if not designed specifically for 6 M could be a great source of
>loss.

Modeling a five-meter monopole using four five meter long evenly
spaced radials with base height of 10 above ground. The following are
VSWR values reported by NEC for 50-Ohm coax.

MHz. VSWR

14 2.4
18 4.7
21 8.3
25 11.3
28 11.2

It would appear that 21 MHz and above could have substantial losses if
coax was used - depending upon the length and loss specifications for
the line.

>
>Secondly, verticals are great "IF" you can get a good ground plane under them
>(and a dozen or so wires isn't a ground plane).

That may be true for ground mounted momopoles, but for base heights of
ï¿½-wavelength or greater above ground four radials are enough.

Danny, K6MHE

974. F/S Hustler 5BTV Vertical

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-12 19:45:48 UTC
From: radiohaven <radiohaven@aol.com>
Message-ID: <MlGX8.121631$uk2.47684784@twister.nyroc.rr.com>
Source record: 138814
Cross-posted to: alt.ham-radio.marketplace,rec.ham-radio.swap,rec.radio.amateur.antenna,rec.radio.swap

F/S
Hustler 5BTV Vertical 5 band 80-10 Meters in EXCELLENT condition, only up for a few weeks, Complete ready to go, Manual Original Box.$110.00 Shipped lower 48 via UPS

email radiohaven@aol.com

975. Re: lightningbolt 2 element quad

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-12 20:10:40 UTC
From: 'Doc <w5lz@icok.net>
Message-ID: <3D2F37B6.1D06E24A@icok.net>
Source record: 138816

Matt,
It can be fed either way, although a common
feed point for a 5 band antenna can cuase some
problems. For instance, the 20 and 10 meter
elements will interact, so will the 30 and 15
meter elements.
If I had to make a choice I would use a seperate
feed line for each driven element. Maybe use a
remote switch to keep the long runs to a minimum.
You would only need a short feed line from the
feed point to the switch.
'Doc

976. Re: Can twin feeder be put underground??

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-12 20:19:21 UTC
From: richardharrison@webtv.net
Message-ID: <14261-3D2F39C9-369@storefull-2391.public.lawson.webtv.net>
Source record: 138818

Chris wrote:
"It (the twin feeder) seems to be fine in the conduit under ground
though."

Don`t bury your signal.

We needed a dummy load for 50KW and 100 KW transmitters. Did not have enough stainless steel for a traditional dissipation line. Instead, we built a knee-high copper open-wire line, width adjusted to maintain 600-ohms at such a low height. We didn`t have to run too many yards (metres) of that trip-wire to soak up most of the 100 KW at h-f. It was a real earth warmer and worm turner.

Best regards, Richard Harrison, KB5WZI

977. Re: Mobile antennae a safety hazard?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-12 20:43:08 UTC
From: 2w8ji@contesting.com
Message-ID: <3d2f3f07.116404414@news.akorn.net>
Source record: 138817

On Fri, 12 Jul 2002 10:30:36 -0400, Alan Beagley
<abeagley@optonline.net> wrote:

>I wasn't trying to be fancy.

I was trying to be funny, but it sure didn't work very well.

978. Re: Magloops + Simple Variable capacitor

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-12 20:50:20 UTC
From: 2w8ji@contesting.com
Message-ID: <3d2f3fa4.116561864@news.akorn.net>
Source record: 138719

On 11 Jul 2002 23:56:46 -0700, remove_ok1sip@atlas.cz (OK1SIP) wrote:

>"ZOOM" <robert931@sympatico.ca> wrote in message
news:<XiqX8.3768$9U1.1645091@news20.bellglobal.com>...
>> Building a variable capacitor for your loop antenna is easier than most may
>> think.
>

Building a capacitor that has very high Q, high voltage breakdown, and
a wide tuning range, necessary for high efficiency and wide frequency
coverage, is much more difficult than people might realize.

I tried sliding plates and flapper plates without sucess, as well as
coaxial capacitors. I'm sure a multi-layer coaxial capacitor would be
effective, but it is a bitch to build.

The capacitor is probably the most difficult part of the system,
because of the high voltages and high currents in an efficient loop. I
used butterfly plates and dual welded stators in a boxey shaped
capacitor.

73 Tom

979. Bobtail Curtain Feed Information

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-12 20:51:16 UTC
From: DANIEL M HAUSER <djhauser@prodigy.net>
Message-ID: <8jHX8.5274$x06.275316874@newssvr17.news.prodigy.com>
Source record: 138724

Most of the articles on the Bobtail Curtain suggest a feed point at the bottom of the center vertical element. Since the bottom of this element is quite some distance above ground, and the shield of the coax is to be grounded, what is the best method for attaching a ground at the feed point of the antenna?

I have also found a corner feed method, but have the same question regarding the shielded part of the coax to ground.

Thanks for any help.

980. Re: Multi-band roof-mounted vertical fed with 450 ohm ladderline

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-12 20:57:30 UTC
From: 2w8ji@contesting.com
Message-ID: <3d2f40fd.116906562@news.akorn.net>
Source record: 138720

On Fri, 12 Jul 2002 06:26:39 -0700, Dan Richardson
<k6mhe@mendolink.com> wrote:

>Nico,
>
>I suggest you make the radials the same length as the monopole. At a
>minimum I would use two, but four even spaced radials will produce a
>better omni-directional pattern with the antenna system that close to
>ground.
>
>Although you will be feeding an unbalanced antenna with balanced line
>maintaining the same lenght for all the elements (vertical and radial)
>should result in lower level of common mode current on the
>transmission line.

Why would equal length radials and vertical result in lowest common
mode excitation Dan?

The common mode excitation of a zepp antenna at resonance is not
extremely high when one terminal of the feedline is hanging open.

Think of his antenna as a J-pole, and it will help you find a
solution.

I would expect shorter radials and a longer element would be better in
most cases, because the most difficult goal is to have equal voltages
on each terminal of the antenna, with respect to the path the ladder
line takes, along with equal and opposite currents in each conductor.

The ladder line, in such a system, almost always radiates
significantly unless you pick a "sweet length" of ladder line.

73 Tom

981. Re: A whole new 'back to basics' topic - Monopole fundamentals

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-12 21:01:11 UTC
From: klocko@toad.net
Message-ID: <224d9cd4.0207121301.6a3e4601@posting.google.com>
Source record: 138721

dennis@wawa.juniper.net (Dennis Ferguson) wrote in message
news:<aglten$2ion$1@heap.juniper.net>...
> Imagine you have two dipoles parallel to each other in free space, with
> a transmitter connected to one and a receiver connected to the other. The
> transmitter applies some amount of power to the terminals of the dipole it
> is connected to. An EM field forms around the dipole. The other dipole
> takes some amount of power from the field and delivers it to the receiver
> attached to its terminals. Since the second antenna is receiving power
> from the EM field, the field is changed by its presence.
>
> Now suppose you remove the bottom half of the dipoles and instead
> replace them with a perfect ground plane. We know about this analogy,
> in particular we know we should be able to reproduce the same fields
> in the upper hemisphere which existed when the free-space dipoles
> were present, by imagining that the monopoles and everything we do
> to them in the upper hemisphere is reflected 180 degrees out of phase
> in the lower hemisphere. What transmitter and receiver powers are required
> to reproduce that field?
>
> To reproduce the field due to the transmitting antenna which existed
> in the hemisphere the transmitter needs to apply only half the power
> to the monopole, now worked against ground, that the dipole's transmitter
> supplied. The analogy to free space dipoles says the monopole only
> requires half the power to produce the field as there is a virtual
> reflection of the transmitter supplying the other half of the power
> to the other (virtual) reflected half of the free space dipole. In
> any case, as it takes half the power to produce the same field in the
> hemisphere, the gain of the transmitting monopole is 3 db higher than
> the free space dipole. Everyone seems in agreement about this.

Using a ray approach, rays can be visualized as emanating from each
point on the monopole. At any point in space, field contributions from
2 rays will add as long as their phases are about the same. From image
theory, the ray reflected from the ground plane can be visualized as
emanating from the virtual half of the dipole in the lower hemisphere.
For identical current, each segment of the transmitting
monopole radiates twice as much field as the dipole. Or to get the
same field,
half the power is needed. The result is that the transmitting monopole
gets to
take advantage of the ground plane reflections and gets a higher gain
value.
We're agreeing here - this is only a re-statement of your analogy.

> As for the receiver, the analogy to the free space dipoles says that
> whatever happens between this monopole's terminal and ground is also
> happening to the virtual reflected half of the dipole. This means
> that whatever power the dipole's receiver was receiving from the field,
> the monopole's receiver will be receiving half of that.

I was OK with the analogy up to this point. But why wouldn't the
receiving
monopole also get to take advantage of the ground plane reflections
and also
have a higher gain value? In effect, each point on the monopole can
receive
in-phase contributions emanating from one point but arriving from
different
directions, i.e., the direct ray and the reflected ray? Looking at it
this way,
the monopole with twice the gain would receive twice the power.

That is, to
> reproduce the field above the monopole's ground plane which existed in
> that hemisphere between the free-space dipoles, both the transmitted
> and received powers for the monopoles will be half that of the analogous
> free-space dipoles, and the ratio of received to transmitted power
> for the monopoles will be the same as that of the analogous free space
> dipoles as is necessary for energy conservation if the field is
> to be identical. And if I'm understanding how they define transmission
> gain in the paper, I think the paper says that Mininec agrees with this
> result (as do actual measurements?).

It's not clear from their paper how exactly they did their modeling to
get the transmission loss. Did they do the excitation in the
monopole-monopole case so that the incident field is identical to the
field in the dipole-dipole case? Or did they keep the excitations the
same and get higher incident field? They didn't say. They also didn't
compare the theory to measurements which apparently was what caused
the discrepancy in the first place.

> The implication is not only that the conventional formula for effective
> area when applied to monopoles over ground disagrees with Mininec, but
> also that monopoles over perfect ground *do* *not* reproduce the fields
> in the hemisphere that would be generated by the analogous reflected
> free-space dipoles. Since I don't believe NEC and the reflection
> analogy for perfect ground could both be wrong (the latter is in all the
> books which reproduce the effective aperture formula), I think the
> paper's assertion that the standard formula for effective aperture
> does not work for monopoles over ground is probably correct.
>
> After looking at the derivation of this formula, I think I too
> believe it doesn't work for monopoles over ground. The formula
> implies that the effective aperture of an antenna depends solely
> on the antenna's gain and the wavelength being received, and
> hence has no dependence on antenna's geometry or surroundings, but the

> derivations of the formula in the books I have are all based on
> considerations of free-space dipoles and just seem to assume it
> works that way for all antennas. I don't think that assumption
> is justified, and I think the paper's addition of a fudge factor of
> 4 to make the results match the values for monopoles over perfect
> grounds is probably correct, if not all that useful since it leaves
> one to wonder what the effective aperture of other antennas in other
> environments might be.

Apparently, what they're doing is trying to use the Friis free space equation to
compute the received power for various antenna combinations, and that's why
they're using MiniNec to verify theory (usually it's the other way around).
I've seen other studies with a similar goal, and good agreement between
measurements and predictions is found when a gain of 2.14 dBi for each
monopole is used. Maybe this is one case where the free space equation is not
applicable.

73,
Bill N3WK

982. Re: Multi-band roof-mounted vertical fed with 450 ohm ladderline

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-12 21:30:44 UTC
From: 2w8ji@contesting.com
Message-ID: <3d2f47a3.118609179@news.akorn.net>
Source record: 138722

On Thu, 11 Jul 2002 21:33:02 GMT, "Nico Vertriest"
<Nico.Vertriest@pandora.be> wrote:

>Hello,
>
>I would like to put a 5m vertical on my roof (10m high) and to feed it with
>450 ohm ladderline. I would like to use it as a multiband antenna with a
>balanced line tuner. As radials I would put several lines of rotor cable
>having a length of 5 meters (6 lines, each having 8 conductors). I
>wondered what is the most efficient situation for the radials. Is it best
>to cut separate radials to resonance for the 20,17,15 and 10 m bands ? Or
>can I just use several radials 5 meter long, and count on the tuner for
>resonance ?

Nico,

Even antenna systems that are not perfect can make us very happy, so
it might be worth a try.

Fiorst, if the radials are in a closed tight bundle like a cable they
will not behave like their individual lengths. You might or might not
get into trouble depending on the way the wires interact with each
other.

The fortunate thing is the feedline and antenna will both radiate, and
you may not need much of a radial system at all anyway. The
unfortunate thing is you might have RFI problems with the system.

Why not try it, and see how it works??

If it works, you are a winner.

If it does not work, then some question and suggestions might help
you.

73 Tom

983. WHERE CAN I GET A LONG WHIP

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-12 21:49:49 UTC
From: jder8745@aol.com
Message-ID: <20020712174949.02005.00000074@mb-fv.aol.com>
Source record: 138723

Howdy,

I would like to obtain a telescoping or collapsing whipantenna that can be mounted on a travel trailer and has a minimum length of 30 feet.

Before you get all excited I don't intend to drive down the road with it extended.

Is there such an antenna available? Where?

Tnx es 73 de Jack, K9CUN

984. HRO-500 parts

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-12 21:59:32 UTC
From: jermyrauto@att.net
Message-ID: <a6b63f0e.0207121359.3fff206e@posting.google.com>
Source record: 138725

Am selling a variety of HRO-500 factory fresh (if you will)
parts,bought at the forced liquidation of National a few yrs back. All
parts were new stock waiting to be used in mfg. Check out "jerrymyr"
at e-Bay. Everything is a for a single piece,even though it may be
shown with others. Thanks...Jerry

985. Re: Multi-band roof-mounted vertical fed with 450 ohm ladderline

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-12 22:04:42 UTC
From: CAM <w5dxp@hotmail.com>
Message-ID: <3D2F527A.C09AE1B8@hotmail.com>
Source record: 138726

Tom W8JI wrote:
> The ladder line, in such a system, almost always radiates
> significantly unless you pick a "sweet length" of ladder line.

If common mode conditons are unrelated to anything else and are
completely random, how can there possibly be a "sweet length"
of ladder-line? :-)
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

986. Re: WHERE CAN I GET A LONG WHIP

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-12 22:07:32 UTC
From: John <my-callsign@qsl.net>
Message-ID: <FqIX8.3394$SM5.177972@newsfep1-win.server.ntli.net>
Source record: 138738

I use the DK9SQ fibreglass telescoping mast. You could easily fasten a wire to it. Its 33ft long (ideal quarter wave on 40m) and telescopes down to about 4ft. I'm sure you can get it in the states (Kanga USA??), try a search on DK9SQ. Ideal for portable work - I've bought two.

"JDer8745" <jder8745@aol.com> wrote in message
news:20020712174949.02005.00000074@mb-fv.aol.com...
> Howdy,
>
> I would like to obtain a telescoping or collapsing whipantenna that can
be
> mounted on a travel trailer and has a minimum length of 30 feet.
>
> Before you get all excited I don't intend to drive down the road with it
> extended.
>
> Is there such an antenna available? Where?
>
> Tnx es 73 de Jack, K9CUN

987. Magnetic field at 13.5Mhz with a dipole ?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-12 22:09:01 UTC
From: lepton@sympatico.ca
Message-ID: <399debb7.0207121409.490576e4@posting.google.com>
Source record: 138727

Hi

At 13.5 Mhz, what can be the needed power to produce a magnetic field
of 42dBuA/m at a distance of 10 meter with a dipole.
I know this is far field and i have no software to help me on that.
At the same time, what can be use to compute the needed power for a
dipole, and a ground plane ?

Any help will be welcome.

Thanks a lot for your collaboration

Gilles

988. Re: BACK TO BASICS - EM waves, E and H fields, in phase orinquadr...

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-12 22:14:00 UTC
From: 2w8ji@contesting.com
Message-ID: <3d2f4e6a.120344553@news.akorn.net>
Source record: 138728

On Fri, 12 Jul 2002 11:12:21 -0500 (CDT), richardharrison@webtv.net (Richard Harrison) wrote:

>Tom, W8JI wrote:
>"and Harrison was totally incorrect when he said the following:
>
>I challenged Tom to show his work. Instead he reposted mine.

I already answered it. As a matter of fact, the reason you gave an incorrect conclusion is at the root of what I am saying.

Your calculations may be fine, but your results or conclusions are incorrect as a general answer. You (like many people) incorrectly assume differential voltage **across** the feedpoint, or the differential impedance of the system at that point, is directly related to the voltage driving the common mode impedance of the system.

I gave several examples showing where the common mode voltage can be several times the differential mode voltage of the system.

The fact Ohm's law works does not mean we can incorrectly apply it to a system and the answer is correct. The common mode impedance is NOT directly related to the differential mode impedance, and so the voltages are also unrelated based on the differential mode impedance alone.

Let me try one more example, in general terms.

I can have a feedpoint **differential mode** impedance of 100 ohms, and apply 100 watts. According to your (incorrect) application of Ohms law and the formula for power to the example I gave, you would conclude voltage driving the common mode impedance of the transmission line would be 100 volts or less. In a perfectly balanced case with a balanced line, you assumed each antenna terminal would have 50 volts, and common mode problems would be minimal.

In truth, the actual voltage from each respective antenna terminal to "ground", or more properly to the transmission line systems common mode impedance, can be anything from zero volts to any amount of voltage up to whatever impedance limits the system has.

A system could easily have 10,000 volts between each terminal and "ground" (or some other reference point for the feeder's common mode impedance) or a very low voltage, the voltage you gave is only correct in one set of very limited conditions..not as a general rule.

There are many antennas that have problems like this. These are the systems that trip people up, and make them think they don't need much of a balun when the system..in fact...has a huge problem.

If you want a more specific example, I can give one. But only if you are willing to listen and learn how these systens actually work, and not argue nonsense. I think it is important that people understand this, because it is thinking like yours that causes people to assume a low differential mode impedance always makes life for a choke or current balun "easy".

Since you have elected to follow me around from thread to thread and give incorrect responses, I have only two choices. I can show you how you are incorrect, or I can ignore you and hope you find something better to do than bother me.

73 Tom

989. Re: Mobile antennae a safety hazard?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-12 22:22:27 UTC
From: 'Doc <w5lz@icok.net>
Message-ID: <3D2F5699.B129F7B3@icok.net>
Source record: 138729

If I find someone trying to put MY antenna
up their nose, they'll be lucky if I don't put
something else up their 'other' end.
'Doc

PS - I've had 'crappy' radios before, but never a
snotty antenna.

990. Re: BACK TO BASICS - EM waves, E and H fields, in phase orinquadr...

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-12 22:25:39 UTC
From: CAM <w5dxp@hotmail.com>
Message-ID: <3D2F5763.6B860E8F@hotmail.com>
Source record: 138730

Tom W8JI wrote:
> Your calculations may be fine, but your results or conclusions are
> incorrect as a general answer. You (like many people) incorrectly
> assume differential voltage **across** the feedpoint, or the
> differential impedance of the system at that point, is directly
> related to the voltage driving the common mode impedance of the
> system.

So is Roy's article, "Baluns: What They Do And How They Do It",
wrong? Seems the differential current emerging from the inside
of the coax braid has two paths it can take, one toward the differential
load and one down the outside of the coax braid toward the common mode
load. One would think those two currents would be related to those
two impedances by something like Ohm's law or Kirchhoff's law.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
------== Over 80,000 Newsgroups - 16 Different Servers! =-----

991. Re: Bobtail Curtain Feed Information

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-12 22:41:40 UTC
From: ":-) Bill" <therealexray@netscape.net>
Message-ID: <3D2F5B24.441192BF@netscape.net>
Source record: 138731

DANIEL M HAUSER wrote:
>
> Most of the articles on the Bobtail Curtain suggest a feed point at the
> bottom of the center vertical element. Since the bottom of this element is
> quite some distance above ground, and the shield of the coax is to be
> grounded, what is the best method for attaching a ground at the feed point
> of the antenna?
>
> I have also found a corner feed method, but have the same question regarding
> the shielded part of the coax to ground.
>
> Thanks for any help.

I built a 40 meter version once and the feedpoint was about 8 feet above
ground. The feedpoint was 'suspended' in mid-air and I ran a ground
wire directly down to the ground. It wasn't a permanent installation
and it worked like gangbusters...in its favored direction.
-WX4A

992. Re: Bobtail Curtain Feed Information

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-12 23:14:36 UTC
From: Bart Rowlett <BHRowlett@raytheon.com>
Message-ID: <3D2F62DC.325320D1@raytheon.com>
Source record: 138733

DANIEL M HAUSER wrote:
>
> Most of the articles on the Bobtail Curtain suggest a feed point at the
> bottom of the center vertical element. Since the bottom of this element is
> quite some distance above ground, and the shield of the coax is to be
> grounded, what is the best method for attaching a ground at the feed point
> of the antenna?

Probably the most common feed method is to extend the center element down to the matching unit located at ground level. The matching unit is usually a parallel tuned LC tank with the 'cold' end grounded via a ground rod or small counterpoise system. This feed method is simple and works reasonably well as long as the bottom of the vertical elements is less than approx. 1/8 wavelength above ground level.

A better way is to elevate the matching unit to the bottom of the center element and provide a low impedance return for feed currents by using a balanced counterpoise. Two counterpoise elements are usually sufficient, and ideally should run perpendicular to the plane of the curtain in order to minimize the horizontally polarized far field radiation components. Various strategies are available for minimizing pattern disruption arising from feedline common mode currents. One good method is to have the counterpoise wires carefully balanced and approximately 3/8 wavelength in length. The feedline should be link coupled to the LC tank for maximum common mode impedance.

Choosing the length and number of counterpoise wires is a tradeoff between minimizing common mode excitation of the feedline, insuring minimal horizontally polarized radiation and cost/asthetics. Minimum common mode excitation of the feedline is achieved when the voltage difference between the counterpoise system (at the 'cold' end of the matching unit), and ground is minimized. For any number of counterpoise wires this situation occurs at quarter wave resonance. The problem is that the amplitude and phase angle of the counterpoise currents are most sensitive to small variations in length at resonance. Unless you are able to measure radial current amplitude and phase, it is usually better to shorten the radials a bit in the interest of maintaining balance, at the expense of higher common mode excitation.

Another variation is to replace the counterpoise wires with shorted quarter wave stubs of open wire transmission line. This is a symmetric version of the classic Zepp (Jpole) feed system. Coupling to the feedline is accomplished by an inductive link at the shorted end of a stub. Usually the link takes the form of a small loop taped to

the open wire line.

> I have also found a corner feed method, but have the same question regarding
> the shielded part of the coax to ground.

What is the corner feed method?

bart
wb6hqk

993. eh antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-12 23:14:47 UTC
From: wzzzzz@xs4all.nl
Message-ID: <422d46e7.0207121514.22f21b1a@posting.google.com>
Source record: 138732

I'm a amateur, no sci, not legal, nothing to lose

If the EH antenna is a hoax, it's fun to work with !

I've seen a LOT of threats about the EH from people without testing
it.....
Tom and a other guy(I don't care), they do the testing of some strange
stuff on a computer, They don't do field stuff anymore, if they
already did that anyway !!!!
Testing a antenna on a computer ?????, they never work !, I know !
A antenna must be build and correct, otherwise they don't work
The 160Mb antenna was't correcly build, every body can see that !, a
sloppy job !
Of course it wouldn't work !

What computers say and the books is right ??????
2002 years ago a guy is nailt to a cross for his beliefs.......
So you know what is right??????

I've tested the EH antenna, I think is working great (I don't know
why, but it is !), not "sci".
Maybe it's a short dipole, I don't care, it works great !

Because I'm a pirate, I can't do anything wrong, and must have a
pretty good transmitter (No broadband amp.) (no EMI, LFI)
I allways testing my signal with a spec. amd osc. for harmonics and
modulation.
not 100% perfect it goes down !

The EH antenna works for me, the same as a dipole on 6.4Mhz, I don't
care why it does !

Everybody who says it a hoax hasn't build one to test it and aren't
amateur but "paper guys", only what the computer says is good ??????

For a couple of euro's you can buils it your self and test it !!!!

Or a you scared to do something (with your "ford perfect") to test
something new ??????

No :, computers are a fun thing, don't believe them

Hoppa!!!
Wille,m

994. Re: BACK TO BASICS - EM waves, E and H fields, in phase orinquadr...

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-12 23:38:57 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <3D2F6891.4060908@eznec.com>
Source record: 138734

Please read the article again. It's the current on the inside of the outer conductor, not "the differential current" which has two paths it can take. One is to one side of the dipole (or other antenna), not "the differential load" and the other is down the outside of the coax braid. It is true that the current on the outside of the braid is a purely common mode current.

There are three currents on a coax feedline: one on the outside of the inner conductor, one on the inside of the outer conductor, and one on the outside of the outer conductor. The two inside currents are purely differential, i.e., equal and opposite. The outside current is purely common mode -- there is no other current which creates a field that can cancel the field it generates. The outside current can be modified without any appreciable effect on the inside currents.

A twinlead feedline has two currents: one on each conductor. Common mode and differential currents are mathematical combinations of these, as I detailed in an earlier posting.

Roy Lewallen, W7EL

CAM wrote:
> Tom W8JI wrote:
>
>>Your calculations may be fine, but your results or conclusions are
>>incorrect as a general answer. You (like many people) incorrectly
>>assume differential voltage **across** the feedpoint, or the
>>differential impedance of the system at that point, is directly
>>related to the voltage driving the common mode impedance of the
>>system.
>
>
> So is Roy's article, "Baluns: What They Do And How They Do It",
> wrong? Seems the differential current emerging from the inside
> of the coax braid has two paths it can take, one toward the differential
> load and one down the outside of the coax braid toward the common mode
> load. One would think those two currents would be related to those
> two impedances by something like Ohm's law or Kirchhoff's law.

995. Re: eh antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-12 23:43:18 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <j7quiu4a2je8t1civpedhrbq51rvc6le33@4ax.com>
Source record: 138735

On 12 Jul 2002 16:14:47 -0700, wzzzzz@xs4all.nl (willem) wrote:

>I'm a amateur
>I've seen a LOT of threats
>I know !
>I've tested
> I think
>I don't know
>I don't care
>I'm a pirate,
>I can't do anything
>I allways testing
>I don't care
>

Hi Stefano,

Style tells all - especially when facts go missing.

73's
Richard Clark, KB7QHC

996. Re: Multi-band roof-mounted vertical fed with 450 ohm ladderline

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-12 23:56:09 UTC
From: Dan Richardson <k6mhe@mendolink.com>
Message-ID: <o8quiuoektlmq4sobokttk00v8eair2gkd@4ax.com>
Source record: 138737

On Fri, 12 Jul 2002 20:57:30 GMT, 2w8ji@contesting.com (Tom W8JI)
wrote:

>On Fri, 12 Jul 2002 06:26:39 -0700, Dan Richardson
><k6mhe@mendolink.com> wrote:
>
>>Nico,
>>
>>I suggest you make the radials the same length as the monopole. At a
>>minimum I would use two, but four even spaced radials will produce a
>>better omni-directional pattern with the antenna system that close to
>>ground.
>>
>>Although you will be feeding an unbalanced antenna with balanced line
>>maintaining the same lenght for all the elements (vertical and radial)
>>should result in lower level of common mode current on the
>>transmission line.
>
>Why would equal length radials and vertical result in lowest common
>mode excitation Dan?

Hi Tom,

Well, my thinking was along the lines of say using an example of "L"
antenna with both elements lengths the same and feeding at the 90ï¿½
junction. That seemed somewhat more balanced to me that having the
elements different lengths to me. (I know it won't be exact due to the
elements relationship to ground.) Next added an additional three
elements (the same length) at the base forming a radial system - still
seemed (current wise) to be somewhat more balanced than if the lengths
varied. I would think that say if 1 amp at the feed point at base of
the monopole and +/-0.25 amps in each of four radials again at the
feed point at the base current should be more balanced for feeding
with ladder line.

I was also assuming that the antenna system was raised where the base
of the monopole was 10 meters above ground.

So where did I go wrong?

BYW: I did say "should" <grin>

Danny

997. Re: Bobtail Curtain Feed Information

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-12 23:58:01 UTC
From: Bart Rowlett <BHRowlett@raytheon.com>
Message-ID: <3D2F6D09.4A621086@raytheon.com>
Source record: 138736

Bart Rowlett wrote:
>
> DANIEL M HAUSER wrote:
> >
> > Most of the articles on the Bobtail Curtain suggest a feed point at the
> > bottom of the center vertical element. Since the bottom of this element is
> > quite some distance above ground, and the shield of the coax is to be
> > grounded, what is the best method for attaching a ground at the feed point
> > of the antenna?
>
> Probably the most common feed method is to extend the center element
> down to the matching unit located at ground level. The matching unit
> is usually a parallel tuned LC tank with the 'cold' end grounded via a
> ground rod or small counterpoise system. This feed method is simple
> and works reasonably well as long as the bottom of the vertical
> elements is less than approx. 1/8 wavelength above ground level.
>

This method can be improved considerably by inserting a series
capacitor of approximately 750 - 900 ohms reactance in the center
element. This capacitor is positioned such that the impedance of the
center element looking 'upward' through the capacitance is
approximately 800 ohms resistive. The wire extending from the
capacitor down to the ground then acts as a single wire feedline
terminated in it's approximate characteristic impedance. The current
in the feedline still contributes to the vertically polarized field,
but careful selection of parameters can result in very nearly the same
total field generated by the center vertical element as in the ideal
binomial case. The impedance of the single wire feedline will be
around 800 ohms resistive and can be matched either with an LC circuit
or broadband transformer. This method works reasonable well with a
small buried counterpoise or ground rod and has the practical
advantage of greatly reduced voltage present at ground level.

bart
wb6hqk

998. Re: eh antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-13 00:33:54 UTC
From: Reg Edwards <g4fgq.regp@btinternet.com>
Message-ID: <agnshh$m52$1@helle.btinternet.com>
Source record: 138626

Hi Willem,

Anything will work. The question is - how well does it work?

Please tell the world about your test results, the sort of site, the date
and other relevant info.

How were the tests made, instruments used etc. In the absence of expensive
commercial equipment, home-made gear will be quite acceptable.

Elementary methods will suffice. You don't need to be a rocket scientest to
be convincing.

Just provide some numbers and a page of text describing how they were
obtained.

I guess a week would be sufficient to produce a report.

Yours in anticipation.

Reg G4FGQ

==========

"willem" wrote > I'm a amateur, no sci, not legal, nothing to lose
>
> If the EH antenna is a hoax, it's fun to work with !
>
> I've seen a LOT of threats about the EH from people without testing
> it.....
> Tom and a other guy(I don't care), they do the testing of some strange
> stuff on a computer, They don't do field stuff anymore, if they
> already did that anyway !!!!
> Testing a antenna on a computer ?????, they never work !, I know !
> A antenna must be build and correct, otherwise they don't work
> The 160Mb antenna was't correcly build, every body can see that !, a
> sloppy job !
> Of course it wouldn't work !
>
> What computers say and the books is right ??????
> 2002 years ago a guy is nailt to a cross for his beliefs.......
> So you know what is right??????
>
> I've tested the EH antenna, I think is working great (I don't know
> why, but it is !), not "sci".
> Maybe it's a short dipole, I don't care, it works great !
>

> Because I'm a pirate, I can't do anything wrong, and must have a
> pretty good transmitter (No broadband amp.) (no EMI, LFI)
> I allways testing my signal with a spec. amd osc. for harmonics and
> modulation.
> not 100% perfect it goes down !
>
> The EH antenna works for me, the same as a dipole on 6.4Mhz, I don't
> care why it does !
>
> Everybody who says it a hoax hasn't build one to test it and aren't
> amateur but "paper guys", only what the computer says is good ??????
>
> For a couple of euro's you can buils it your self and test it !!!!
>
> Or a you scared to do something (with your "ford perfect") to test
> something new ??????
>
> No :, computers are a fun thing, don't believe them
>
>
> Hoppa!!!
> Wille,m

999. Re: eh antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-13 00:57:09 UTC
From: Irv Finkleman <finkirv@shaw.ca>
Message-ID: <3D2F7ADF.C873E59D@shaw.ca>
Source record: 138739

willem wrote:
>
> I'm a amateur, no sci, not legal, nothing to lose...
> Wille,m

EH?
--
Diagnosed Type II Diabetes March 5 2001
Beating it with diet and exercise!
297/215/210 (to be revised lower)
58"/43"(!)/44" (already lower too!)

Visit my FINALLY UPDATED website at
http://members.shaw.ca/finkirv/

Irv Finkleman,
Grampa/Ex-Navy/Old Fart/Ham Radio VE6BP
Calgary, Alberta, Canada

1000. Re: BACK TO BASICS - EM waves, E and H fields, in phase orinquadr...

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-13 01:18:46 UTC
From: richardharrison@webtv.net
Message-ID: <3294-3D2F7FF6-129@storefull-2392.public.lawson.webtv.net>
Source record: 138740

Roy Lewallen wrote:
"The outside (of the coax shield) current can be modified without any appreciable effect on the inside current."

Energy to the outside of the shield comes from the same place that the energy to the so named antenna comes from.

Where is the return path of the current on the outside of the shield? Answer, there is none unless there is an unbalanced antenna connected to the coax even if the coax itself makes part of the antenna.

Since all power inside the coax is differential and this power includes that supplied to the common-mode, the total power taken from the coax can`t change and not change current inside the coax.

Another analogy: A river splits into two outlets flowing into the sea. One outlet can`t be blocked without affecting current in the mainstream and the remaining outlet.

Common-mode current isn`t blocked or altered without affecting differential-mode current in a given system.

Concocting a system to change the common-mode without changing the differential-mode would be an oddity.

I won`t say it`s impossible because with impedance transformations we can have various currents that represent the same power. But that is outside the connections in this thread.

Best regards, Richard Harrison, KB5WZI

1001. Re: BACK TO BASICS - EM waves, E and H fields, in phase orinquadr...

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-13 01:52:25 UTC
From: richardharrison@webtv.net
Message-ID: <3294-3D2F87D9-132@storefull-2392.public.lawson.webtv.net>
Source record: 138741

Roy Lewallen wrote:
"It`s the current on the inside of the outer conductor, not "the differential current" which has two paths it can take."

Then, Roy Lewallen wrote:
"The two inside currents are purely differential, i.e., equal and opposite."

How then is current on the inside of the outer conductor not "the differential current"?

Best regards, Richard Harrison, KB5WZI

1002. Re: eh antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-13 02:14:36 UTC
From: Fred Hambrecht <w4jle@charter.net>
Message-ID: <uiv38g73iv2u86@corp.supernews.com>
Source record: 138742

Fraudtenna once again assumes his broken english counterpart.... Boring!
zzzzzzzzzzzz

"willem" <wzzzzz@xs4all.nl> wrote in message
news:422d46e7.0207121514.22f21b1a@posting.google.com...
> I'm a amateur, no sci, not legal, nothing to lose
>
> If the EH antenna is a hoax, it's fun to work with !
>
> I've seen a LOT of threats about the EH from people without testing
> it.....
> Tom and a other guy(I don't care), they do the testing of some strange
> stuff on a computer, They don't do field stuff anymore, if they
> already did that anyway !!!!
> Testing a antenna on a computer ?????, they never work !, I know !
> A antenna must be build and correct, otherwise they don't work
> The 160Mb antenna was't correcly build, every body can see that !, a
> sloppy job !
> Of course it wouldn't work !
>
> What computers say and the books is right ??????
> 2002 years ago a guy is nailt to a cross for his beliefs.......
> So you know what is right??????
>
> I've tested the EH antenna, I think is working great (I don't know
> why, but it is !), not "sci".
> Maybe it's a short dipole, I don't care, it works great !
>
> Because I'm a pirate, I can't do anything wrong, and must have a
> pretty good transmitter (No broadband amp.) (no EMI, LFI)
> I allways testing my signal with a spec. amd osc. for harmonics and
> modulation.
> not 100% perfect it goes down !
>
> The EH antenna works for me, the same as a dipole on 6.4Mhz, I don't
> care why it does !
>
> Everybody who says it a hoax hasn't build one to test it and aren't
> amateur but "paper guys", only what the computer says is good ??????
>
> For a couple of euro's you can buils it your self and test it !!!!
>
> Or a you scared to do something (with your "ford perfect") to test
> something new ??????

>
> No :, computers are a fun thing, don't believe them
>
>
> Hoppa!!!
> Wille,m

1003. Re: BACK TO BASICS - EM waves, E and H fields, in phase orinquadr...

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-13 02:31:19 UTC
From: richardharrison@webtv.net
Message-ID: <13432-3D2F90F7-40@storefull-2396.public.lawson.webtv.net>
Source record: 138743

Tom, W8JI wrote:
"I can have a "differential mode" impedance of 100 ohms and apply 100 watts.---you would conclude voltage driving the common mode impedance of the transmission line would be 100 volts or less."

I won`t speculate what the driving voltage might be. You may have a 100-ohm transmission line 100 miles long for all I know.

I will say that 100 watts into 100 ohms practically limits your voltage at the load to 100 volts maximum as you have no other power source. You may have a tuned circuit with a Q of 100, and it is just a high impedance at its resonant frequency shunted in some way across your parallel 100-ohm load. At resonance, at least a parallel resonant circuit of high Q, won`t sap the source much.

Best regards, Richard Harrison, KB5WZI

1004. Re: Mobile antennae a safety hazard?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-13 02:38:15 UTC
From: N4LQ <N4LQ@igLou.com>
Message-ID: <3d2e40f7_3@news.iglou.com>
Source record: 138769

I suggest using the kw rated loading coil on Hustler antennas to reduce total impalement. However, the extra weight of this coil has been know to cause SUVs to flip over while parked.
As for eye poking HamSticks, car radio antennas appear to be a great threat, especially the retractable type of which some victims had been injured while setting over the hidden antenna while the driver turns on the radio.
.
"Alan Beagley" <abeagley@optonline.net> wrote in message news:3D2E22E9.6030403@optonline.net...
> Are there any studies showing that antennae (whether amateur, business, law enforcement, or whatever) mounted on motor vehicles are a factor in the injuries people sustain in accidents? I can imagine somebody being thrown through the air and getting impaled on one of those Hustler HF antennae, or somebeody getting an eye poked out by a HamStick, but has anybody studied the issue?
>
> -=-
> Alan, AB2OS
>

1005. Re: BACK TO BASICS - EM waves, E and H fields, in phase orinquadr...

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-13 02:51:35 UTC
From: CAM <w5dxp@hotmail.com>
Message-ID: <3D2F95B7.E1555EAA@hotmail.com>
Source record: 138744

Roy Lewallen wrote:
>
> Please read the article again. It's the current on the inside of the
> outer conductor, not "the differential current" which has two paths it
> can take. One is to one side of the dipole (or other antenna), not "the
> differential load" and the other is down the outside of the coax braid.
> It is true that the current on the outside of the braid is a purely
> common mode current.

The current on the inside of the coax braid is not the differential
current? One side of the dipole is not part of the differential load?
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
------== Over 80,000 Newsgroups - 16 Different Servers! =-----

1006. Re: BACK TO BASICS - EM waves, E and H fields, in phase orinquadr...

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-13 03:13:55 UTC
From: richardharrison@webtv.net
Message-ID: <13429-3D2F9AF3-438@storefull-2396.public.lawson.webtv.net>
Source record: 138749

Tom, W8JI wrote:
"A system could easily have 10,000 volts between each terminal and
"ground", (or some other reference point to the feeder`s common mode
impedance) or a very low voltage---.

Maybe if it were struck by lightning.

So much mis-information, so little time!

My example calculated 1800 watts from 300 volts across 50 ohms. You have no voltage multiplier. High impedance only limits the current accepted. The only voltage source is your transmitter. There is no Tesla coil anywhere.

The most a transmission line can do is to double the voltage at the end of an open-circuited line. That`s because the only place for the H-field energy to go when the circuit is interrupted is into the E-field for a short distance.

2 x 300V = 600V. That could happen at the end of an open transmission line, using 300V as the incident voltage on a lossless line.

Best regards, Richard Harrison, KB5WZI

1007. Re: MARS antennas

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-13 03:17:37 UTC
From: Dick Carroll <dixie@townsqr.com>
Message-ID: <ago64h$7lf$0@208.207.71.133>
Source record: 138745

Tom W8JI wrote:
>
>
> Log periodics are the choice now for lower gain applications, and
> curtains are the choice for higher gain or narrow patterns, when
> bandwidth is a concern.
>

Yeah, but the *size* of the 75 & 40 meter versions! :-)

1008. Re: MARS antennas

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-13 03:22:32 UTC
From: Dick Carroll <dixie@townsqr.com>
Message-ID: <ago6do$92j$0@208.207.71.133>
Source record: 138746

John K Scoggin wrote:
>
> That Ft Monmouth station was what gave me the bug! My uncle was stationed
> at Ft Monmouth
> in the mid-60's. He took me to K2USA and I watched the ops in action and
> was hooked! :-)

What an impressive first look at ham radio! I still have a K2USA QSL card here that I brought home with me. I was fun being stationed there at the Signal School for a year and a half. I would have liked to have stayed but Uncle Sam came up with other plans.

Dick W0EX

1009. Re: Magloops

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-13 03:43:52 UTC
From: Mike Coslo <mcoslo@adelphia.net>
Message-ID: <3D2FCC1D.6000004@adelphia.net>
Source record: 138747

ZOOM wrote:

> I have built several Loops. I also built my own HV capacitor for it as
> well. Cost is pretty cheap when you build things yourself with readily
> available materials. I'd be happy to share details if your interested.

Definitely, Robert! I'd like to try one, and the cap seems to be the
tough part.

- Mike KB3EIA -

1010. Re: Help? Is there significant signal loss with too many outlets???

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-13 03:45:34 UTC
From: tmgroatatpeakpeakdotcom
Message-ID: <3d2f9d06.2378592@news.peakpeak.com>
Source record: 138748
Cross-posted to: rec.radio.amateur.antenna,rec.video

On Thu, 11 Jul 2002 23:16:18 -0400, "J. Harvey"
<JM002.HarveyANTISPAM@Sympatico.ca> wrote:
>
>The TV Distribution Amplifiers available at your local Radio Shack typically
>have 10 to 20 dB gain and four outputs. In other words, not too far from
>'gain neutral'. Their slightly more expensive model (around Cdn$40, or
>US$25) even has adjustable gain. It is hardly as doom and gloom as your
>posting indicates.
>
Your point about gain-neutral distribution is right on target!
>
>I see your confusion. I didn't recommend a "pre-amp". I recommended a "TV
>Distribution Amplifier". Your concerns towards a 30dB gain pre-amplifier
>(Radio Shack sells those too...) are certainly justified, but that isn't
>what I recommended.
>
I did assume a typical in-line pre-amp. A good quality distribution
amplifier is much better suited for the job.

But it's essential to have adequate signal at the amplifier input. No
amplifier can do better than the S/N ratio at its input. That's why I
suggest upgrading the antenna before adding RF gain.

-- Tim Groat

To reply by e-mail, change the quoted words to
the corresponding punctuation marks.

1011. Re: BACK TO BASICS - EM waves, E and H fields, in phase orinquadr...

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-13 04:02:01 UTC
From: 2w8ji@contesting.com
Message-ID: <3d2fa1e6.141719082@news.akorn.net>
Source record: 138750

On Fri, 12 Jul 2002 17:25:39 -0500, CAM <w5dxp@hotmail.com> wrote:

>So is Roy's article, "Baluns: What They Do And How They Do It",
>wrong? Seems the differential current emerging from the inside
>of the coax braid has two paths it can take, one toward the differential
>load and one down the outside of the coax braid toward the common mode
>load. One would think those two currents would be related to those
>two impedances by something like Ohm's law or Kirchhoff's law.

Why are you going back to current Cecil, when I am talking about
impedance and voltage and that is what Richard responded to??

I don't think currents have ever been in dispute, nor have I mentioned
them. Why dredge them up??

The balun must allow a certain terminal **voltage** to appear at each
load terminal, otherwise common mode current will appear in the
system. Even small amounts of common mode current can cause big
problems elsewhere in the system. For example, only a few hundred mA
of common mode current will cook a bead balun.

The voltage and impedances can have any relationship (which to me is
the same as saying they are "unrelated"). This is the fact people miss
when they assume (as Harrison did) a 100-volt (or whatever)
across-the-feedpoint voltage means only 100 volts are available
across the choke balun.

We see this problem time after time. People only worry about
differential mode impedance or voltages, and it fools them into
thinking a balun has an easy job when the common mode excitation
voltage is very high despite having a low differential mode voltage.

It isn't that difficult, draw it on paper or model it.

73 Tom

1012. Re: Magloops + Simple Variable capacitor

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-13 04:03:39 UTC
From: Mike Coslo <mcoslo@adelphia.net>
Message-ID: <3D2FD0BF.2080004@adelphia.net>
Source record: 138751

Tom W8JI wrote:

> The capacitor is probably the most difficult part of the system,
> because of the high voltages and high currents in an efficient loop. I
> used butterfly plates and dual welded stators in a boxey shaped
> capacitor.

Definitely! And thanks everyone for the sites and insights! 8^)

I'm going to build one of these. And I have one more question.

Of what importance is the solder vs one continuous length argument? I can get long lengths of copper tubing, and fashion a home made bender to work it into a circular shape, but a soldered octoloop would be simpler and quicker to construct. Does the resistance of the solder joints really make that much difference?

TIA, - Mike KB3EIA -

1013. Re: Multi-band roof-mounted vertical fed with 450 ohm ladderline

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-13 04:17:49 UTC
From: 2w8ji@contesting.com
Message-ID: <3d2fa621.142802241@news.akorn.net>
Source record: 138752

On Fri, 12 Jul 2002 16:56:09 -0700, Dan Richardson
<k6mhe@mendolink.com> wrote:

>Well, my thinking was along the lines of say using an example of "L"
>antenna with both elements lengths the same and feeding at the 90°
>junction. That seemed somewhat more balanced to me that having the
>elements different lengths to me. (I know it won't be exact due to the

What you would want is the antenna system to have the same terminal voltage on each terminal, along with equal and exactly opposite currents in the feedline.

Using a large ground system insures one wire of the balanced line has a very low common mode impedance, while the other feeds the antenna that can (on some bands) have several hundred ohms or more. Unbalance would occur because of that, unless you used a choke balun at the feedpoint.

>elements relationship to ground.) Next added an additional three
>elements (the same length) at the base forming a radial system - still
>seemed (current wise) to be somewhat more balanced than if the lengths
>varied. I would think that say if 1 amp at the feed point at base of
>the monopole and +/-0.25 amps in each of four radials again at the
>feed point at the base current should be more balanced for feeding
>with ladder line.

Go back to a J-pole, a Zepp antenna, or even a dipole.

Would a dipole fed with a balanced line be more balanced if we made one half have four wires on one side instead of one in-line wire the same length as the wire on the opposite side?

What is better balanced, an Inverted Vee Dipole with one wire on each leg or an Inverted Vee dipole with four fanned out wires on one leg and a single wire on the other?

What about a J-pole? Is it better balanced when we install a large groundplane below the 1/2 wl element base and feed it with a balanced feed below that point?

Verticals with large ground systems are almost perfectly UNbalanced antennas. Verticals with small ground systems (like 30 feet up and 30 feet out on one radial) are much better balanced!

I'd certainly use a large ground system with a coax-fed vertical, but if I used open wire I'd want a balanced antenna...even if it was a bit bent! The better the ground system, the more the open wire line would

radiate for a given common mode impedance of open wire line.

I hope you see what I mean.

73 Tom

1014. Re: Multi-band roof-mounted vertical fed with 450 ohm ladderline

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-13 04:20:29 UTC
From: 2w8ji@contesting.com
Message-ID: <3d2fa9ec.143773366@news.akorn.net>
Source record: 138753

By the way, my server is having weird problems with newsgroups so I miss an unknown number of responses. I notice you answered my post even though I never saw my post appear. Pretty weird.

1015. Re: Magloops + Simple Variable capacitor

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-13 04:27:19 UTC
From: Juerg Tschirren <juerg-tschirren@uiowa.edu>
Message-ID: <F_NX8.19068$uw.11587@rwcrnsc51.ops.asp.att.net>
Source record: 138754

Mike Coslo wrote:

> Tom W8JI wrote:
>
>
>> The capacitor is probably the most difficult part of the system,
>> because of the high voltages and high currents in an efficient loop. I
>> used butterfly plates and dual welded stators in a boxey shaped
>> capacitor.
>
>
> Definitely! And thanks everyone for the sites and insights! 8^)
>
> I'm going to build one of these. And I have one more question.
>
>
> Of what importance is the solder vs one continuous length argument? I
> can get long lengths of copper tubing, and fashion a home made bender to
> work it into a circular shape, but a soldered octoloop would be
> simpler and quicker to construct. Does the resistance of the solder
> joints really make that much difference?
>
> TIA, - Mike KB3EIA -

from http://www.antennex.com/hws/ws0302/varcap.html (cited by OK1SIP
earlier in this thread):

"...Most magnetic antennas will have a radiation resistance of some 100
milliohms. That means that every milliohm caused by a poor contact
will cost you one percent efficiency. ..."

so it looks like it realy does matter!

Juerg
AB0WH

1016. Re: Multi-band roof-mounted vertical fed with 450 ohm ladderline

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-13 04:29:37 UTC
From: Dan Richardson <k6mhe@mendolink.com>
Message-ID: <fvaviugb41g9r1ht0ncgo7mser101bpv7s@4ax.com>
Source record: 138755

On Sat, 13 Jul 2002 04:17:49 GMT, 2w8ji@contesting.com (Tom W8JI)
wrote:

>On Fri, 12 Jul 2002 16:56:09 -0700, Dan Richardson
><k6mhe@mendolink.com> wrote:
>
>>Well, my thinking was along the lines of say using an example of "L"
>>antenna with both elements lengths the same and feeding at the 90ï¿½
>>junction. That seemed somewhat more balanced to me that having the
>>elements different lengths to me. (I know it won't be exact due to the
>
>What you would want is the antenna system to have the same terminal
>voltage on each terminal, along with equal and exactly opposite
>currents in the feedline.
>
>Using a large ground system insures one wire of the balanced line has
>a very low common mode impedance, while the other feeds the antenna
>that can (on some bands) have several hundred ohms or more. Unbalance
>would occur because of that, unless you used a choke balun at the
>feedpoint.
>
>>elements relationship to ground.) Next added an additional three
>>elements (the same length) at the base forming a radial system - still
>>seemed (current wise) to be somewhat more balanced than if the lengths
>>varied. I would think that say if 1 amp at the feed point at base of
>>the monopole and +/-0.25 amps in each of four radials again at the
>>feed point at the base current should be more balanced for feeding
>>with ladder line.
>
>Go back to a J-pole, a Zepp antenna, or even a dipole.
>
>Would a dipole fed with a balanced line be more balanced if we made
>one half have four wires on one side instead of one in-line wire the
>same length as the wire on the opposite side?
>
>What is better balanced, an Inverted Vee Dipole with one wire on each
>leg or an Inverted Vee dipole with four fanned out wires on one leg
>and a single wire on the other?
>
>What about a J-pole? Is it better balanced when we install a large
>groundplane below the 1/2 wl element base and feed it with a balanced
>feed below that point?
>
>Verticals with large ground systems are almost perfectly UNbalanced

>antennas. Verticals with small ground systems (like 30 feet up and 30
>feet out on one radial) are much better balanced!
>
>I'd certainly use a large ground system with a coax-fed vertical, but
>if I used open wire I'd want a balanced antenna...even if it was a bit
>bent! The better the ground system, the more the open wire line would
>radiate for a given common mode impedance of open wire line.
>
>I hope you see what I mean.
>
>73 Tom

Okay let me ask one.

Which is better blanced fed point a ground-plane where the monopole's
length and the radials length are the same or one where the radials
are only ï¿½ the length of the antenna element?

73 Danny

1017. Re: Want copyrighted mag article.

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-13 05:24:17 UTC
From: Bill Nelson <billn@spock.peak.org>
Message-ID: <agodi1mup5@quark.scn.rain.com>
Source record: 138756

FAZAMY <fazamy@aol.com> wrote:
>>I've heard that the NSA monitors email for copyrighted material, and
>>automatically deletes it.

> What does NSA stand for? Is this a US or Canadian governmental agency?

The National Security Agency - a US governmental organization. It is the
local "spy on the citizens" group.

--
Bill Nelson (billn@peak.org)

1018. Re: Want copyrighted mag article.

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-13 05:31:31 UTC
From: iedmaker@aol.com
Message-ID: <20020713013131.11668.00000269@mb-mu.aol.com>
Source record: 138757

pre carnivore is echelon. good stuff ied

1019. Re: Shack resonates at 40M

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-13 05:34:40 UTC
From: Bill Nelson <billn@spock.peak.org>
Message-ID: <agoe5gmup6@quark.scn.rain.com>
Source record: 138758

Ken <cprstn54zz@att.net> wrote:
> On Thu, 11 Jul 2002 06:52:37 +0000 (UTC), Bill Nelson
> <billn@spock.peak.org> wrote:
>>If it is picked up from the antenna, then it is not common mode current.

> Why do you say that? According to the ARRL Handbook, "Common-mode
> signals" are defined as "signals that are in phase on both (or
> several) conductors in a system."

My apologies, the statement may be a bit confusing.

As far as I know, an antenna does not carry "common mode currents"
and the claim was that wiring could pick up common mode currents from
the antenna.

It is certainy true that house wiring can "generate" common mode
currents from the energy in the signal generated by the antenna.

--
Bill Nelson (billn@peak.org)

1020. Re: Want copyrighted mag article.

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-13 05:42:40 UTC
From: ":-) Bill" <therealexray@netscape.net>
Message-ID: <3D2FBDD0.1A911F6@netscape.net>
Source record: 138759

Bill Nelson wrote:
>
> FAZAMY <fazamy@aol.com> wrote:
> >>I've heard that the NSA monitors email for copyrighted material, and
> >>automatically deletes it.
>
> > What does NSA stand for? Is this a US or Canadian governmental agency?
>
> The National Security Agency - a US governmental organization. It is the
> local "spy on the citizens" group.
>
> --
> Bill Nelson (billn@peak.org)

They really should use a secret organization to "spy on citizens".
Thats kinda like having undercover cops wearing uniforms and badges.
-BM
"Paranoia strikes deep...into your life it will creep....it starts when
you're always afraid...step out of line, the man come and take you away"
-Stephen Stills 1966

1021. Re: Magloops + Simple Variable capacitor

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-13 07:10:38 UTC
From: Adam <digipoint@hotmail.com>
Message-ID: <agoju8$f62$1@news.kabelfoon.nl>
Source record: 138760

> "...Most magnetic antennas will have a radiation resistance of some 100
> milliohms. That means that every milliohm caused by a poor contact
> will cost you one percent efficiency. ..."
>
> so it looks like it realy does matter!
>
> Juerg
> AB0WH
>

You are right about the resistive losses that should be avoided.
I wouldn't worry too much about the exact effectiveness of the loop. I use a MFJ 1788 and on 40 meters it must have an effectiveness of about 25% which is only 1 s-unit less signal than a 100 % effective full size dipole antenna... And it's difficult as well to get a 100 % effective 40 Meterband dipole antenna as it requires at least a distance of 20 meters over the ground in free space. The resistive losses in dipole antenna's and in the traps and in baluns isn't making them any better either. And because the magnetic loop is very quiet it can hear things that are lost in the noise on other type antenna's. I get very strong signals (s9++) on my loop antenna's despite all the resistive losses and low effectiveness on the lower bands.

For transmitting it's slightly an other story. Because the maximum RF power (about 100 Watts) one can use in an average Magnetic loop. The effective radiated power on my MFJ loop on 40 Meter is only about 25 Watts when using 100 Watt output from the rig . That isn't too much to compete with QRO stations on this crowded band. But using my old AEA isoloop for 10-20 meter I can make intercontinental SSB QSO's from my country here in Europe, using 40-100 Watts from the rig. The effectiveness of the Isoloop is about 50% on 20 meter (half an s-unit under a full size dipole) so it's no problem to DX eventhough the antenna isn't perfect.

I even used the MFJ loop with my FT-817 QRP set with two and a half Watts and made several contact inside Europe on 20 meter. I use my loops in vertical position which works best here because I'm close to the ground on the 1st floor of an apartment building.

I have seen many beautiful designs of loops. One that inspired me when it comes to designing a high voltage capacitor was the following site (Acrobat reader required):

www.elecraft.com/TechNotes/loop_ant/wd8puoloop.pdf

Everything needed for the capacitor is available in the hardware store. I have no idea about the resistive losses in this kind of capacitor.

Any comment on this copper-tube design is welcome. Does anyone here has experience with this kind of capacitor?

73s, Adam

1022. Re: BACK TO BASICS - EM waves, E and H fields, in phase orinquadr...

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-13 07:35:53 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <3D2FD859.4030606@eznec.com>
Source record: 138761

Richard Harrison wrote:
> Roy Lewallen wrote:
> "It`s the current on the inside of the outer conductor, not "the
> differential current" which has two paths it can take."
>
> Then, Roy Lewallen wrote:
> "The two inside currents are purely differential, i.e., equal and
> opposite."
>
> How then is current on the inside of the outer conductor not "the
> differential current"?
>
> Best regards, Richard Harrison, KB5WZI
>

As follows: The differential current is 1/2 the difference of the current on the outside of the inner conductor and the inside of the outer conductor. It is not the same as one of the constituent currents.

That is, if the two currents are I1 and I2, the differential current is 1/2 (I1 - I2). This is clearly not equal to I1 -- unless I2 is zero, which it's not.

Roy Lewallen, W7EL

1023. Re: BACK TO BASICS - EM waves, E and H fields, in phase orinquadr...

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-13 07:42:40 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <3D2FD9F0.2050907@eznec.com>
Source record: 138762

That sounds pretty complicated. But it's really pretty simple.

Richard Harrison wrote:
> Roy Lewallen wrote:
> "The outside (of the coax shield) current can be modified without any
> appreciable effect on the inside current."
>
> Energy to the outside of the shield comes from the same place that the
> energy to the so named antenna comes from.
>
> Where is the return path of the current on the outside of the shield?

The current on the outside of the shield flows between the inside of the shield (at the antenna) to ground.

> Answer, there is none unless there is an unbalanced antenna connected to
> the coax even if the coax itself makes part of the antenna.

This can, and does, happen when the coax is connected to a so-called balanced antenna like a dipole.

> Since all power inside the coax is differential and this power includes
> that supplied to the common-mode, the total power taken from the coax
> can`t change and not change current inside the coax.

When a dipole is fed with coax, the current on the inside of the shield splits between two paths. One is the dipole half it's connected to. The other is the path along the outside of the coax shield to ground. The current can be steered from one path to the other in any ratio without affecting the vector sum, which is the current on the inside of the shield.

> Another analogy: A river splits into two outlets flowing into the sea.
> One outlet can`t be blocked without affecting current in the mainstream
> and the remaining outlet.
>
> Common-mode current isn`t blocked or altered without affecting
> differential-mode current in a given system.

Sorry, this simply isn't true. See my previous paragraph.

> Concocting a system to change the common-mode without changing the
> differential-mode would be an oddity.

A balun can be such a system. When a current balun (common mode choke) is placed on the outside of the coax, the differential impedance can increase, decrease, or remain the same. It depends on the impedances of the two paths the current on the inside of the shield can take.

> I won`t say it`s impossible because with impedance transformations we
> can have various currents that represent the same power. But that is
> outside the connections in this thread.
>
> Best regards, Richard Harrison, KB5WZI
>

Roy Lewallen, W7EL

1024. Re: BACK TO BASICS - EM waves, E and H fields, in phase orinquadr...

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-13 07:44:24 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <3D2FDA58.1090306@eznec.com>
Source record: 138763

Please see my response to Richard Harrison. 1/2 (I1 - I2) is not I1.

One side of the dipole is part of the differential load. It's also part
of the common mode load.

Roy Lewallen, W7EL

CAM wrote:
> Roy Lewallen wrote:
>
>>Please read the article again. It's the current on the inside of the
>>outer conductor, not "the differential current" which has two paths it
>>can take. One is to one side of the dipole (or other antenna), not "the
>>differential load" and the other is down the outside of the coax braid.
>>It is true that the current on the outside of the braid is a purely
>>common mode current.
>
>
> The current on the inside of the coax braid is not the differential
> current? One side of the dipole is not part of the differential load?

1025. Re: BACK TO BASICS - EM waves, E and H fields, in phase orinquadr...

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-13 07:58:42 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <3D2FDDB2.5050800@eznec.com>
Source record: 138764

Richard Harrison wrote:
> . . .

> So much mis-information, so little time!

> . . .

> The most a transmission line can do is to double the voltage at the end
> of an open-circuited line. That`s because the only place for the H-field
> energy to go when the circuit is interrupted is into the E-field for a
> short distance.

Mis-information indeed. A little manipulation of the equations in
Reference Data for Radio Engineers or any other transmission line text
gives, for a lossless line:

V2 = V1 / (cos(theta) + j (Z0/ZL * sin(theta)))

where

V2 is the voltage at the load end of the line
V1 is the voltage at the input end of the line
Z0 is the line's characteristic impedance
ZL is the load impedance
theta is the electrical length of the line

So let's take an example, say a 100 ohm quarter wave line driven with
100 volts at the input and terminated with 10,000 volts.

V2 = 100 / (0 + j (Z0/ZL) * 1) = -j10,000 volts

The magnitude of this is 10,000 volts, or 100 times the input voltage.
Or did I do the arithmetic wrong?

Roy Lewallen, W7EL

1026. Re: Magloops + Simple Variable capacitor

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-13 08:40:43 UTC
From: Reg Edwards <g4fgq.regp@btinternet.com>
Message-ID: <agop2b$gk8$1@knossos.btinternet.com>
Source record: 138628

Does the resistance of the solder
> joints really make that much difference?
==========
Only to old wives.

Soldered-together copper pipes obey ohms law just like any other resistances
in series.

A few little micro-ohms in series with 10's of milliohms don't make much
difference.

Reg, G4FGQ

1027. Re: Bobtail Curtain Feed Information

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-13 09:22:56 UTC
From: 'Doc <w5lz@icok.net>
Message-ID: <3D2FF164.3326199A@icok.net>
Source record: 138766

DANIEL M HAUSER wrote:
>
>" what is the best method for attaching a ground at the feed point
> of the antenna? "

With this type of antenna, the better the ground system,
the better the performance. The 'best' way to connect the
braid to the ground system is by soldering it.
(the first sentence means more than the second sentence, but
both are true.)
'Doc

1028. Re: Multi-band roof-mounted vertical fed with 450 ohm ladderline

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-13 09:30:44 UTC
From: 'Doc <w5lz@icok.net>
Message-ID: <3D2FF338.610BEC16@icok.net>
Source record: 138765

CAM & Dan,
I wonder why you don't answer the man's question
instead of bounding off into the blue on some tangent
that has nothing to do with the subject?
Please, stop showing us how brilliant you are and
just answer the question....
'Doc

1029. Re: BACK TO BASICS - EM waves, E and H fields, in phase orinquadr...

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-13 11:32:33 UTC
From: "Ian White, G3SEK" <G3SEK@ifwtech.co.uk>
Message-ID: <DatapEDR$AM9EA8S@ifwtech.co.uk>
Source record: 138767

This thread has moved a long way from its origins. I'd like to
contribute to that by picking up just one aspect of what Roy Lewallen
wrote:

>> Where is the return path of the current on the outside of the
>>shield?
>
>The current on the outside of the shield flows between the inside of
>the shield (at the antenna) to ground.
>
>> Answer, there is none unless there is an unbalanced antenna connected to
>> the coax even if the coax itself makes part of the antenna.
>
>This can, and does, happen when the coax is connected to a so-called
>balanced antenna like a dipole.
>

Yes, indeed - it can, does and <always will> happen. Even in an
idealized symmetrical environment, a "balanced" dipole automatically
becomes UNbalanced whenever a coax feedline is connected directly to it.
That is because, contrary to some books, a so-called "symmetrical"
coax-fed dipole is <never> "balanced" - and never can be.

Why? Because it's fundamentally, irretrievably asymmetrical! One leg of
the dipole is connected only to one conductor (coax inner) but the other
leg is connected to two - the inside and outside of the shield, which
operate as two independent conductors because of the skin effect.

Immediately you connect the coax, current flows on to the outside of the
shield and it becomes part of the radiating system - just as if you'd
connected another wire to that side of the feedpoint.

Need more detailed proof? Imagine this:

Step 1: A perfectly symmetrical horizontal dipole above horizontal,
flat, infinite ground, and surrounded by a perfectly symmetrical
environment. Center-feed it by a tiny battery-powered transmitter
hanging at the feedpoint. Is this system balanced? Yes, because it's
perfectly symmetrical.

Step 2: Attach a wire to one terminal of the transmitter, and trail it
away towards ground. Is this system balanced? Of course not, because it
isn't symmetrical. Even if you run the wire away at right-angles to the
antenna, the system still isn't symmetrical, because one terminal of the
transmitter has two wires attached, while the other terminal has only
one... an asymmetry which is impossible to ignore.

Step 3: Replace the new wire with coax, following the same route. Attach only the shield to the antenna, where the wire was attached in Step 2. Is this system balanced? No, it's as asymmetrical and unbalanced as before.

Step 4: Remove the transmitter and connect the center conductor of the coax to the free terminal of the antenna. (The outer shield of the coax is already connected to the other antenna terminal.) Re-connect the transmitter at the far end of the coax. Now this is the system that some books - and readers - claim is "balanced". But is it? No - it's the same as Steps 2 or 3 which we just agreed were unbalanced. All we did was move the RF source.

It follows that <any> coax-fed antenna can never be truly balanced. Some outer-shield current will <always> flow - it can never be truly zero. In some situations this current may be so small that you can ignore it ("I don't need no stinking balun"). In other situations it's large enough to cause problems, so you need to reduce it with a feedline choke. But in all situations, <some> outer-shield current is <always> there.

This myth of the "balanced coax-fed dipole" is just like the story of the Emperor's New Clothes. I confess to getting sucked into the myth for a long time, and wish I could call back some of the things I've written in years past. But not any more.

Another part of this prevalent myth is that in a "balanced coax-fed dipole" the outer-shield current somehow "wants" to be zero, and will tend towards zero if you let it. But that's not true either - the current always "wants" to be finite, and flowing.

--
73 from Ian G3SEK Editor, 'The VHF/UHF DX Book'
'In Practice' columnist for RadCom (RSGB)

1030. Re: Multi-band roof-mounted vertical fed with 450 ohm ladderline

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-13 12:10:06 UTC
From: Dan Richardson <k6mhe@mendolink.com>
Message-ID: <jj50jusgsiit3m4s1vn17in8uco96og4ge@4ax.com>
Source record: 138619

For the exception of my response to Tom's comments. Can you show me where I did address the two questions that were ask.

You never include the posting you are responding to (proper news group etiquette). Possibliy if you had I would know what you are talking about.

If, on the other hand you just wish to engage in flaming then put it where the sun doesn't shine.

Danny

On Sat, 13 Jul 2002 09:30:44 GMT, 'Doc <w5lz@icok.net> wrote:

>
>
>CAM & Dan,
> I wonder why you don't answer the man's question
>instead of bounding off into the blue on some tangent
>that has nothing to do with the subject?
> Please, stop showing us how brilliant you are and
>just answer the question....
> 'Doc

1031. Re: BACK TO BASICS - EM waves, E and H fields, in phase orinquadr...

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-13 12:56:18 UTC
From: CAM <w5dxp@hotmail.com>
Message-ID: <3D302372.A003E0A9@hotmail.com>
Source record: 138620

Tom W8JI wrote:
>
> CAM <w5dxp@hotmail.com> wrote:
> >So is Roy's article, "Baluns: What They Do And How They Do It",
> >wrong? Seems the differential current emerging from the inside
> >of the coax braid has two paths it can take, one toward the differential
> >load and one down the outside of the coax braid toward the common mode
> >load. One would think those two currents would be related to those
> >two impedances by something like Ohm's law or Kirchhoff's law.
>
> Why are you going back to current Cecil, when I am talking about
> impedance and voltage and that is what Richard responded to??

Why are you answering a question with a question, Tom? Last time I checked,
I = E/Z. Are you saying Ohm was wrong? Current *IS* the relationship
between "impedance and voltage".

> I don't think currents have ever been in dispute, nor have I mentioned
> them. Why dredge them up??

Current is part of the "conditions" that you said were not related.
Current is related to "impedance and voltage", is it not?

> The voltage and impedances can have any relationship (which to me is
> the same as saying they are "unrelated").

You contradict yourself. If they can have any *relationship*, then they
cannot possibly be *unrelated*, now can they? You admit they have some
relationship and then you say they are unrelated. You simply cannot have
it both ways. If they can have any relationship, then they are related
through that relationship, whatever it might be. Your ignorance of the
exact relationship doesn't change reality to make them unrelated.

Crack open a dictionary, Tom. You obviously do not know the definition
of "related". The relationship that voltage has to impedance *is* current.
Two resistors chosen at random can have any relationship. But when you
put them in the same circuit, they become related through Ohm's law
and Kirchhoff's law. Once chosen, the relationship of their ratio is fixed,
i.e. related. That fact has to be obvious to you yet you refuse to give up
on your false statements.

What is the difference between saying 1000 times that a 75m Isotron will
beat a 75m dipole and saying 1000 times that voltage and impedance are
unrelated? You are doing exactly what you condemn others for doing.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
------== Over 80,000 Newsgroups - 16 Different Servers! =-----

1032. Re: Magloops + Simple Variable capacitor

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-13 12:56:19 UTC
From: ZOOM <robert931@sympatico.ca>
Message-ID: <YrVX8.1212$WF6.297750@news20.bellglobal.com>
Source record: 138622

Not really. My loop is built in the same fashion. Works fine. Octagonal loop.

"Mike Coslo" <mcoslo@adelphia.net> wrote in message news:3D2FD0BF.2080004@adelphia.net...
> Tom W8JI wrote:
>
>
> > > The capacitor is probably the most difficult part of the system,
> > > because of the high voltages and high currents in an efficient loop. I
> > > used butterfly plates and dual welded stators in a boxey shaped
> > > capacitor.
>
>
> Definitely! And thanks everyone for the sites and insights! 8^)
>
> I'm going to build one of these. And I have one more question.
>
>
> Of what importance is the solder vs one continuous length argument? I
> can get long lengths of copper tubing, and fashion a home made bender to
> work it into a circular shape, but a soldered octoloop would be
> simpler and quicker to construct. Does the resistance of the solder
> joints really make that much difference?
>
> TIA, - Mike KB3EIA -
>
>
>

1033. Re: BACK TO BASICS - EM waves, E and H fields, in phase

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-13 12:58:53 UTC
From: k1bqt@aol.com
Message-ID: <20020713085853.07026.00000208@mb-cr.aol.com>
Source record: 138621

>Maybe if it were struck by lightning.<

Can you say, "autotransformer"?

Rick K1BQT

1034. Re: Magloops + Simple Variable capacitor

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-13 12:59:20 UTC
From: ZOOM <robert931@sympatico.ca>
Message-ID: <OuVX8.1215$WF6.298449@news20.bellglobal.com>
Source record: 138623

100 mohms 1%?
Please quote your source. I have never heard of this and would like to see where this spec came from since every loop is different, I can't see how this can generalize into a 1% loss in efficiency per every 100mohms of resistance. Now just because I never heard of it doen't mean it's not true but I would find it an interesting read to discover how they came up with this measurement.

Robert
VE3RPF

"Adam" <digipoint@hotmail.com> wrote in message
news:agoju8$f62$1@news.kabelfoon.nl...
>
>
> > "...Most magnetic antennas will have a radiation resistance of some
100
> > milliohms. That means that every milliohm caused by a poor
contact
> > will cost you one percent efficiency. ..."
> >
> > so it looks like it realy does matter!
> >
> > Juerg
> > AB0WH
> >
>
> You are right about the resistive losses that should be avoided.
> I wouldn't worry too much about the exact effectiveness of the loop. I
use
> a MFJ 1788 and on 40 meters it must have an effectiveness of about 25%
which
> is only 1 s-unit less signal than a 100 % effective full size dipole
> antenna... And it's difficult as well to get a 100 % effective 40
Meterband
> dipole antenna as it requires at least a distance of 20 meters over the
> ground in free space. The resistive losses in dipole antenna's and in the
> traps and in baluns isn't making them any better either. And because the
> magnetic loop is very quiet it can hear things that are lost in the noise
on
> other type antenna's. I get very strong signals (s9++) on my loop
antenna's
> despite all the resistive losses and low effectiveness on the lower bands.
>
> For transmitting it's slightly an other story. Because the maximum RF

power
> (about 100 Watts) one can use in an average Magnetic loop. The effective
> radiated power on my MFJ loop on 40 Meter is only about 25 Watts when
using
> 100 Watt output from the rig . That isn't too much to compete with QRO
> stations on this crowded band. But using my old AEA isoloop for 10-20
meter
> I can make intercontinental SSB QSO's from my country here in Europe,
> using 40-100 Watts from the rig. The effectiveness of the Isoloop is
> about 50% on 20 meter (half an s-unit under a full size dipole) so it's
> no problem to DX eventhough the antenna isn't perfect.
>
> I even used the MFJ loop with my FT-817 QRP set with two and a half Watts
> and made several contact inside Europe on 20 meter. I use my loops in
> vertical position which works best here because I'm close to the ground on
> the 1st floor of an apartment building.
>
> I have seen many beautiful designs of loops. One that inspired me when it
> comes to designing a high voltage capacitor was the following site
(Acrobat
> reader required):
>
> www.elecraft.com/TechNotes/loop_ant/wd8puoloop.pdf
>
> Everything needed for the capacitor is available in the hardware store. I
> have no idea about the resistive losses in this kind of capacitor.
>
> Any comment on this copper-tube design is welcome. Does anyone here
> has experience with this kind of capacitor?
>
> 73s, Adam
>
>
>
>
>
>
>
>
>
>
>
>
>
>
>

1035. Re: Shack resonates at 40M

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-13 13:05:44 UTC
From: CAM <w5dxp@hotmail.com>
Message-ID: <3D3025A8.F06804E8@hotmail.com>
Source record: 138625

Bill Nelson wrote:
> As far as I know, an antenna does not carry "common mode currents" ...

If we allow a "group" of one conductor, all the voltages on an antenna
are common mode, by definition. :-)

From the IEEE dictionary: "common-mode voltage - The voltage common to
all conductors of a group as measured between that group at a given
location and an arbitrary reference (usually earth)."
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
------== Over 80,000 Newsgroups - 16 Different Servers! =-----

1036. Re: BACK TO BASICS - EM waves, E and H fields, in phase orinquadr...

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-13 13:09:05 UTC
From: 2w8ji@contesting.com
Message-ID: <3d30232d.174819624@news.akorn.net>
Source record: 138624

On Mon, 08 Jul 2002 17:55:37 -0500, CAM <w5dxp@hotmail.com> wrote:

>Trouble is, they are sometimes related as they are in my well balanced
>dipole system. When I made my measurements, I was amazed at just how
>related they can be in a well-balanced tunerless antenna system fed at
>a choked differential current maximum point.

Since the common mode velocity factor and impedance of the
transmission line is not directly related to the differential mode
impedance, what you observed can and certainly does change in OTHER
well-balanced tunerless systems.

It is a **mistake** to assume that selecting a low feed impedance
means common mode problems are minimized, or that a choke balun has an
"easier time" doing its job.

That is my only point.

>I can't speak for Richard, but I would be satisfied with "often unpredictable"
>or "usually unknown". I thought we had settled this topic a week ago.

Taking threads totally off topic with *incorrect* examples of how they
are "related" doesn't help anything or anyone. very often in technical
language, some liberty is b given from Websters. The most important
point is that people trying to learn get a feel for what is happening
in the system, not in Websters Dictionary.

73 Tom

1037. Re: BACK TO BASICS - EM waves, E and H fields, in phase orinquadr...

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-13 13:27:13 UTC
From: 2w8ji@contesting.com
Message-ID: <3d30265a.175632182@news.akorn.net>
Source record: 138627

On Fri, 12 Jul 2002 21:31:19 -0500 (CDT), richardharrison@webtv.net (Richard Harrison) wrote:

>I will say that 100 watts into 100 ohms practically limits your voltage >at the load to 100 volts maximum as you have no other power source. You >may have a tuned circuit with a Q of 100, and it is just a high >impedance at its resonant frequency shunted in some way across your >parallel 100-ohm load. At resonance, at least a parallel resonant >circuit of high Q, won`t sap the source much.

That is where you are wrong Richard. The differential mode voltage is not directly related to the common mode voltage exciting the line, and thinking it is will get you in trouble in nearly every real-world antenna system used.

Model a half-wave antenna with a source, and hang a vertical 1/4 wl wire from that antenna as you would with a feedline to model common mode currents. Place a very high impedance load or a source set to zero current in series with that wire. The source feeding the half-wave wire would be the differential mode impedance of the antenna and would give you the differential mode voltage. The wiring hanging and the zero-current source (or nearly infinite load) in series with it would represent the balun and the ultimate voltage it must hold off to do its job.

You'll see at any point where the "feedline" and differential source is offset the voltage ratios of the two are NOT equal or even similar. The balun might be required to hold off several times the differential voltage.

This can be the case even with a perfectly symmetrical feed location. As a matter of fact, intentionally trying to obtain a perfectly symmetrical feed location or a low feedpoint impedance can make many systems worse.

Hence my choice of the words the common mode voltages or impedances of a system are not related to the differential mode. You seem to think they are directly tied together, as do many other people, and that will get you into trouble all the time.

Especially when you are using that incorrect idea or concept to be critical of someone else in public.

73 Tom

1038. Re: BACK TO BASICS - EM waves, E and H fields, in phase orinquadr...

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-13 13:34:45 UTC
From: CAM <w5dxp@hotmail.com>
Message-ID: <3D302C75.262C2374@hotmail.com>
Source record: 138629

Roy Lewallen wrote:
> As follows: The differential current is 1/2 the difference of the
> current on the outside of the inner conductor and the inside of the
> outer conductor. It is not the same as one of the constituent currents.

It has been previously reported here on r.r.a.a that the field structure of coax forces the current on the outside of the inner conductor and the current on the inside of the outer conductor to be equal in magnitude and opposite in phase. Was that a false statement?

It has been previously reported here on r.r.a.a that when the inner conductor of coax is shorted to the outer conductor of coax and the resulting cable is used for RF grounding, that the inner conductor carries virtually none of the RF because of skin effect. Was that a false statement?
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
------== Over 80,000 Newsgroups - 16 Different Servers! =-----

1039. Re: Multi-band roof-mounted vertical fed with 450 ohm ladderline

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-13 13:39:22 UTC
From: 2w8ji@contesting.com
Message-ID: <3d302b3b.176881684@news.akorn.net>
Source record: 138630

On Fri, 12 Jul 2002 21:29:37 -0700, Dan Richardson
<k6mhe@mendolink.com> wrote:

>Which is better blanced fed point a ground-plane where the monopole's
>length and the radials length are the same or one where the radials
>are only ½ the length of the antenna element?

I don't know, but it would be easy to find out in a model or by
building one.

I'm sure best balance for open wire would occur when the multiple
radials are shorter than the radiator. If the radiator was a thin 1/2
wl long radiator, best balance would occur with almost no ground
screen at the end of the feeders second wire. Like a Zepp or J-pole
feed.

The better the ground system, the more the system "wants" to be fed by
coax.

As a matter of fact, coax feeding a groundplane can radiate a
considerable amount if the ground system is only four or less radials,
and there is no balun at the feedpoint!!! Less than perfect grounds on
verticals fed with coax are one of the things that causes people to
think altering the feedline length of a 50 ohm cable changes 50 ohm
referenced SWR.

Most antennas are nether pefectly balanced or perfectly unbalanced,
and many are not even close to what we think.

73 Tom

1040. Re: Multi-band roof-mounted vertical fed with 450 ohm ladderline

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-13 13:40:55 UTC
From: CAM <w5dxp@hotmail.com>
Message-ID: <3D302DE7.913F9507@hotmail.com>
Source record: 138631

'Doc wrote:
>
> CAM & Dan,
> I wonder why you don't answer the man's question
> instead of bounding off into the blue on some tangent
> that has nothing to do with the subject?
> Please, stop showing us how brilliant you are and
> just answer the question....

The question was aimed at Dan based on something Dan said.
I just couldn't resist pointing out a contradiction. If common
mode conditions were as unrelated as Tom says, he couldn't
possibly know very much about them.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

1041. Re: Multi-band roof-mounted vertical fed with 450 ohm ladderline

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-13 13:48:53 UTC
From: Dan Richardson <k6mhe@mendolink.com>
Message-ID: <jpa0ju4vu0t19jj19mjnb831pi3jdi933a@4ax.com>
Source record: 138635

On Sat, 13 Jul 2002 04:17:49 GMT, 2w8ji@contesting.com (Tom W8JI)
wrote:

>On Fri, 12 Jul 2002 16:56:09 -0700, Dan Richardson
><k6mhe@mendolink.com> wrote:
>
>>Well, my thinking was along the lines of say using an example of "L"
>>antenna with both elements lengths the same and feeding at the 90ï¿½
>>junction. That seemed somewhat more balanced to me that having the
>>elements different lengths to me. (I know it won't be exact due to the
>
>What you would want is the antenna system to have the same terminal
>voltage on each terminal, along with equal and exactly opposite
>currents in the feedline.
>
>Using a large ground system insures one wire of the balanced line has
>a very low common mode impedance, while the other feeds the antenna
>that can (on some bands) have several hundred ohms or more. Unbalance
>would occur because of that, unless you used a choke balun at the
>feedpoint.
>[snip]

Tom,

I went back and modeled the antenna using the dimensions as described,
with four evenly space radials the same length as the monopole and
feeding it with a parallel transmission line with 1" spacing. Then
checked the transmission line currents at the antenna's feed point for
20 and 15 meter operation. I used heavy segmentation and the only
thing I changed was the frequency.

On 20-meters the current magnitudes were within about 3ï¿½% and the
phase differential at 178ï¿½ - really not too bad.

However at 15 meters the current magnitudes varied by 43% and the
phase differential as only 82ï¿½ï¿½. Ugh, lousy!

Neat thing about modeling; you can check things out if you take the
time to do it.

So I was in error. Making the radial elements the same length as the
monopole will not necessary produce a more "balanced" feed point for
ladder line.

Oh well, if you're going to screw up you might as well do it front of
God and everybody.

73
Danny

1042. Re: Magloops + Simple Variable capacitor

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-13 13:50:01 UTC
From: 2w8ji@contesting.com
Message-ID: <3d302d73.177449426@news.akorn.net>
Source record: 138632

On Sat, 13 Jul 2002 04:03:39 GMT, Mike Coslo <mcoslo@adelphia.net>
wrote:

>Of what importance is the solder vs one continuous length argument? I
>can get long lengths of copper tubing, and fashion a home made bender to
> work it into a circular shape, but a soldered octoloop would be
>simpler and quicker to construct. Does the resistance of the solder
>joints really make that much difference?

You can certainly obtain very low resistance solder joints compared to
the resistance of the antenna and capacitor, so I would not worry much
about soldering as long as the joints are in LARGE tubing like one
inch or larger copper.

The feed system is also not critical, and does not need to be fancy or
have any efforts made to use fancy "baluns". It can just be a simple
small loop of wire. I would avoid gamma matches or any other dircect
feed, however!

The single most critical part is the capacitor, and how you make
connections to the capacitor. I've watched efficiency change from a
few percent to 50% or more just by changing from a flat-plate
capacitor with a teflon dielectric to an air dielectric cap that is
"boxy" with welded stator plate connections.

Make the loop as large as possible, and it saves you headaches. Do NOT
expect to actually get the efficiencies most articles or books claim.
many of them just don't realize how much ESR the tuning capacitor has.
Even a very inefficient antenna can still be very useful and fun!

73 Tom

1043. Re: eh antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-13 14:00:32 UTC
From: johan <j.blaak@home.nl>
Message-ID: <koWX8.239305$3g4.20083552@zwoll1.home.nl>
Source record: 138633

where can i get the specs for that antenna?
oftewel
kan je me de gegevens mailen?
grtz johan
"willem" <wzzzzz@xs4all.nl> schreef in bericht
news:422d46e7.0207121514.22f21b1a@posting.google.com...
> I'm a amateur, no sci, not legal, nothing to lose
>
> If the EH antenna is a hoax, it's fun to work with !
>
> I've seen a LOT of threats about the EH from people without testing
> it.....
> Tom and a other guy(I don't care), they do the testing of some strange
> stuff on a computer, They don't do field stuff anymore, if they
> already did that anyway !!!!
> Testing a antenna on a computer ?????, they never work !, I know !
> A antenna must be build and correct, otherwise they don't work
> The 160Mb antenna was't correcly build, every body can see that !, a
> sloppy job !
> Of course it wouldn't work !
>
> What computers say and the books is right ??????
> 2002 years ago a guy is nailt to a cross for his beliefs.......
> So you know what is right??????
>
> I've tested the EH antenna, I think is working great (I don't know
> why, but it is !), not "sci".
> Maybe it's a short dipole, I don't care, it works great !
>
> Because I'm a pirate, I can't do anything wrong, and must have a
> pretty good transmitter (No broadband amp.) (no EMI, LFI)
> I allways testing my signal with a spec. amd osc. for harmonics and
> modulation.
> not 100% perfect it goes down !
>
> The EH antenna works for me, the same as a dipole on 6.4Mhz, I don't
> care why it does !
>
> Everybody who says it a hoax hasn't build one to test it and aren't
> amateur but "paper guys", only what the computer says is good ??????
>
> For a couple of euro's you can buils it your self and test it !!!!
>
> Or a you scared to do something (with your "ford perfect") to test

> something new ??????
>
> No :, computers are a fun thing, don't believe them
>
>
> Hoppa!!!
> Wille,m

1044. Re: Magloops + Simple Variable capacitor

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-13 14:01:32 UTC
From: 2w8ji@contesting.com
Message-ID: <3d302fe6.178076429@news.akorn.net>
Source record: 138634

On Sat, 13 Jul 2002 04:27:19 GMT, Juerg Tschirren
<juerg-tschirren@uiowa.edu> wrote:

>M
> "...Most magnetic antennas will have a radiation resistance of some 100
> milliohms. That means that every milliohm caused by a poor contact
> will cost you one percent efficiency. ..."
>
>so it looks like it realy does matter!

I'd still use the least numer of soldered connections, but the
resistance of wide surface area tight fitting well-soldered
connections like between clean tight-fitted large copper tubing is
very low compared to the rest of the system.

The capacitor and connections to the capacitor almost always would
dominate the system loss resistances by a large margin, making effects
of soldering unnoticable if done properly.

What we really must avoid at all costs are pressure connections of any
type that carry current, unless it is a multilayer high pressure
bolted connection. We also should avoid long large-area capacitors,
and use a part that is a "boxey" and compact as possible.

73 Tom

1045. Re: eh antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-13 14:16:07 UTC
From: 2w8ji@contesting.com
Message-ID: <3d3032c1.178807861@news.akorn.net>
Source record: 138636

"willem" <wzzzzz@xs4all.nl> wrote in message
news:422d46e7.0207121514.22f21b1a@posting.google.com...

>> Because I'm a pirate, I can't do anything wrong, and must have a
>> pretty good transmitter (No broadband amp.) (no EMI, LFI)
>> I allways testing my signal with a spec. amd osc. for harmonics and
>> modulation.
>> not 100% perfect it goes down !

I hope all illegal and dishonest pirate scum use EH antennas. That
would solve the problem of them causing so much interference to
others. Next best thing to a dummy load.

Notice how birds of a feather flock together? Pretend theory works for
pretend radio stations.

1046. Re: BACK TO BASICS - EM waves, E and H fields, in phase orinquadr...

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-13 14:26:11 UTC
From: CAM <w5dxp@hotmail.com>
Message-ID: <3D303883.20606CBA@hotmail.com>
Source record: 138637

Tom W8JI wrote:
> Since the common mode velocity factor and impedance of the
> transmission line is not directly related to the differential mode
> impedance, what you observed can and certainly does change in OTHER
> well-balanced tunerless systems.

I have never said it doesn't, Tom. You are the one who has been on the rail, not I. You are the one who has been using words that exclude any other possibilities, e.g. "NOT related", "always", and "never". For your absolute railing statements, all it takes is one example to prove that you are wrong. Please get off the rail and the problem will disappear.

> It is a **mistake** to assume that selecting a low feed impedance
> means common mode problems are minimized, or that a choke balun has an
> "easier time" doing its job.
>
> That is my only point.

If that is your only point, then you have certainly been engaging in hyperbole with your absolute, all-encompassing railing statements. Is it too much to ask for you to include a "usually" or "often" or "sometimes" in your otherwise absolute statements? "NOT related" means never a relationship of any kind and is an absolutely ridiculous thing to say about conditions that share a common power source.

> >I can't speak for Richard, but I would be satisfied with "often unpredictable"
> >or "usually unknown". I thought we had settled this topic a week ago.
>
> The most important
> point is that people trying to learn get a feel for what is happening
> in the system, not in Websters Dictionary.

I am amazed at your capacities for mealy-mouthing, Tom. You simply cannot willy-nilly invent new definitions for words like "unrelated". You contradict yourself when you admit that something can have "any relationship" yet is still "unrelated". "Unrelated" is absolutely NO relationship. You have wasted an immense amount of energy defending an indefensible position apparently for the purpose of covering up a mistake as simple as not knowing what the definition of "unrelated" is. Trying to twist definitions into something they are not is simply foolish. Without common definitions for words, communications is impossible. Is that what you really want?
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
------== Over 80,000 Newsgroups - 16 Different Servers! =-----

1047. Re: MARS antennas

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-13 14:31:05 UTC
From: "J. McLaughlin" <JCM@Power-Net.Net>
Message-ID: <uj0edalsddo737@corp.supernews.com>
Source record: 138638

From studies of rhombic antennas of long ago, I add one item to Tom's
good summery:

The effective bandwidth of a rhombic is about 2:1. They will accept
power with low VSWR (if designed with any care at all) over a much wider
bandwidth.

As Tom has said, in almost all settings, better choices exist.
73 Mac N8TT
--
J. Mc Laughlin - Michigan USA
Home: JCM@Power-Net.Net
Office: JCM@McLMcL.Com
"Tom W8JI" <2w8ji@contesting.com> wrote in message
news:3d2ecca2.87115041@news.akorn.net...
> On 12 Jul 2002 04:53:21 GMT, Dick Carroll <dixie@townsqr.com> wrote:
>
> >
> > Rhombics are truly awesome in the direction they're pointed. The old
> >Signal Corps version atop 75 foot utility poles was even awesome to
> >view.
>
> Rhombics sure are pretty, the physical area they cover makes them
> look awesome. They have the advantage of being simple to construct.
> They also have about the same input impedance over a wide range of
> frequencies, and the main lobe is in the same general direction.
>
> On the other hand Rhombics have lower gain than we would expect for a
> certain beamwidth. They are somewhat inefficient antennas (often less
> than 50%), have low gain per acre of space compared to other antenna
> designs (like curtains or multiple yagis or logs), and have multiple
> strong spurious lobes that waste power compared to cleaner pattern
> antennas. They also gain-limit at about 3.5 wl per leg when mounted a
> wavelength or two high over real earth because of the inability to
> force significant current out to the ends due to radiation losses and
> ground losses below the antenna.
>
> Log periodics are the choice now for lower gain applications, and
> curtains are the choice for higher gain or narrow patterns, when
> bandwidth is a concern.
>
> 73 Tom

1048. Re: BACK TO BASICS - EM waves, E and H fields, in phase orinquadr...

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-13 14:31:54 UTC
From: CAM <w5dxp@hotmail.com>
Message-ID: <3D3039DA.F76C6472@hotmail.com>
Source record: 138639

Tom W8JI wrote:
> Hence my choice of the words the common mode voltages or impedances of
> a system are not related to the differential mode. You seem to think
> they are directly tied together, ...

One rail is "not related". The other rail is "directly tied together".
The gigantic middle ground is "indirectly tied together" or "related
in an unpredictable manner". Both rails are wrong, as rails usually are.

Your logical diversion is obvious. I have said my motorcycle is not
black. You turn around and accuse me of saying my motorcycle is white.
Old trick, doesn't work.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
------== Over 80,000 Newsgroups - 16 Different Servers! =-----

1049. Re: Shack resonates at 40M

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-13 14:41:08 UTC
From: Mike Luther <mike.luther@ziplog.com>
Message-ID: <3D303C04.B48CA137@ziplog.com>
Source record: 138640

Ken ..

I hate to start another war of opinions on this ... but, grin ..

Ken wrote:

> On Wed, 10 Jul 2002 14:14:55 GMT, cprstn54zz@att.net (Ken) wrote:
>
> Moving the dipole any distance away from the house is not an option.
> In 20 years, though, some of my trees might be high and sturdy
> enough. If I am still alive then, I will move it.
>
>

Have you, by chance, thought about changing to a good vertical? Yes I know the argument will start about radials and all that, but a good Cushcraft or Titan or something like that could work wonders for a person caught like you with their grounds down!

Sometimes you can't fix the problem! So you fix the symptom. And then you find something wonderful you had been missing all along! Other times you don't, but the deal you don't investigate is the one you lose!

1050. Re: eh antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-13 14:43:45 UTC
From: CAM <w5dxp@hotmail.com>
Message-ID: <3D303CA1.4CAB517A@hotmail.com>
Source record: 138641

Tom W8JI wrote:
> I hope all illegal and dishonest pirate scum use EH antennas.

And I hope that they all believe that common mode conditions
are not related to differential mode conditions. :-)
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

1051. Re: eh antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-13 15:16:19 UTC
From: Reg Edwards <g4fgq.regp@btinternet.com>
Message-ID: <agpg82$sp6$1@knossos.btinternet.com>
Source record: 138658

Don't be cruel. Give the poor guy a chance.

==========

message news:3D303CA1.4CAB517A@hotmail.com...
> Tom W8JI wrote:
> > I hope all illegal and dishonest pirate scum use EH antennas.
>
> And I hope that they all believe that common mode conditions
> are not related to differential mode conditions. :-)
> --
> cheers, CAM http://www.qsl.net/w5dxp
>
>
> -----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
> http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
> -----== Over 80,000 Newsgroups - 16 Different Servers! =-----

1052. Re: BACK TO BASICS - EM waves, E and H fields, in phase orinquadr...

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-13 15:16:32 UTC
From: richardharrison@webtv.net
Message-ID: <9159-3D304450-39@storefull-2398.public.lawson.webtv.net>
Source record: 138643

Roy Lewallen wrote:
"A balun can be such a system. When a current balun (common mode choke) is placed on the outside of the coax, the differential impedance can increase, decrease, or remain the same."

True. That is because the common-mode is related to the differential-mode by imbalance in the system. When common-mode impedance is increased by adding inductance to the coax exterior, the coax exterior takes less energy from the coax`s interior. When common-mode impedance is reduced by adding inductance to the coax exterior, the coax takes more energy from the coax interior. These interactions occur because the common-mode is related to the differential mode. When adding inductance to the coax exterior has no effect on the differential-mode, system balance has removed coupling and no common-mode current exists on the coax exterior.

The complex mutual impedance between the differential-mode and the common-mode can be measured, making behavior of the system predictable. Or, you can cut and try.

Best regards, Richard Harrison, KB5WZI

1053. Re: BACK TO BASICS - EM waves, E and H fields, in phase orinquadr...

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-13 15:21:17 UTC
From: Reg Edwards <g4fgq.regp@btinternet.com>
Message-ID: <agpghdktv1@paris.btinternet.com>
Source record: 138657

> I have said my motorcycle is not
> black.

==========

Come on Cecil, don't keep it a secret. What colour is it.

1054. building a 170 mhz yagi

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-13 15:41:38 UTC
From: jasonporter@sympatico.ca
Message-ID: <a592a30a.0207130741.654fe921@posting.google.com>
Source record: 138642

Hi all,

I'm a sound recordist in TV and film, and I use wireless mics for a lot of my work. I want to improve the reception of my wireless receivers (in the 170 mhz area) by using a yagi antenna. Does anyone know where I can get plans to build one? I have good knowledge of contruction, but not the math.

Thanks,

-Jason

1055. Re: BACK TO BASICS - EM waves, E and H fields, in phase orinquadr...

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-13 15:44:43 UTC
From: richardharrison@webtv.net
Message-ID: <26039-3D304AEB-16@storefull-2393.public.lawson.webtv.net>
Source record: 138646

Roy Lewallen wrote:
"So let`s take an example, say a 100 ohm quarter wave line driven with 100 volts at the input and terminated with 10,000 volts."

Can`t argue with that!

If you have a zero-impedance 100V source, at the end of a 1/4-wave line segment, you have a virtual open-circuit at the 10,000-volt application point. A shorted 1/4-wave stub is also called a "metallic insulator". The 100V source is only 1% of the 10,000V so is inconsequential. So, at the 10,000V end of the stub, the voltage is approximately 10,000V.

What`s the price of eggs in China today?

Best regards, Richard Harrison, KB5WZI

1056. need a schematicof a 2m/70cm yagi

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-13 16:08:36 UTC
From: Vince & Vanessa <vcl@sympatico.ca>
Message-ID: <5gYX8.1257$WF6.347371@news20.bellglobal.com>
Source record: 138644

hi there guys i am looking for a schematic for a 2m/70cm yagi antenna if anyone has one please email it to me at (ve3elb@hotmail.com) thanks

vince ve3elb

1057. Re: BACK TO BASICS - EM waves, E and H fields, in phase orinquadr...

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-13 16:10:50 UTC
From: "William E. Sabin" <sabinw@mwci-news>
Message-ID: <3D30510A.7000609@mwci-news>
Source record: 138645

Ian White, G3SEK wrote:

>
>
> Why? Because it's fundamentally, irretrievably asymmetrical! One leg of
> the dipole is connected only to one conductor (coax inner) but the other
> leg is connected to two - the inside and outside of the shield, which
> operate as two independent conductors because of the skin effect.
>
> Immediately you connect the coax, current flows on to the outside of the
> shield and it becomes part of the radiating system - just as if you'd
> connected another wire to that side of the feedpoint.

Imagine a coax with a resistor connected across the far end. The current will return via the inner surface of the shield, regardless of the impedance of the outer surface of the shield.

Reason: Maxwell's equation curl H = J (neglect the dE/dt as irrelevant within the shield). This law says in a roundabout way that in order for the H field to be zero within the shield the magnetic flux linkages at the inner surface due to the center wire and the magnetic flux linkages due to the return current on the inner surface must be equal and in opposite directions. See also Terman 1955 page 22, which states (equivalently) that "the general principle is that current flows where it is encircled by the smallest number of flux lines". This can be true only if the current returns via the inner surface.

The idea that the division of current is according to the impedance of the outside surface of the braid, is basically and fundamentally incorrect. There is more than just Ohm's law involved here. Intuitions fail in this situation.

The current on the outside is due entirely to electromagnetic coupling from the antenna elements.

Furthermore, another Maxwell equation says that the divergence of B = zero, which leads to the conclusion that current flows only in closed paths. This means that the common mode current that flows into a ground connection must find its

way back to the antenna by some means, usually by electromagnetic induction (transformer action). If the antenna is highly isolated from "ground", as in space, there is no common mode current into a "ground" connection, and only the generator platform, transmission line and antenna are the closed path for common mode current.

The example above referred to a resistor across the end of the coax. The situation for the dipole is no different, if electromagnetic coupling from dipole elements to coax outer surface is treated separately (superposition applies).

Bill W0IYH

1058. Re: Magloops + Simple Variable capacitor

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-13 16:57:08 UTC
From: Mike Coslo <mcoslo@adelphia.net>
Message-ID: <3D3085FB.7080804@adelphia.net>
Source record: 138647

Reg Edwards wrote:

> Does the resistance of the solder
>
>>joints really make that much difference?
>>
> ==========
> Only to old wives.
>
> Soldered-together copper pipes obey ohms law just like any other resistances
> in series.
>
> A few little micro-ohms in series with 10's of milliohms don't make much
> difference.

That is pretty much what I was thinking. So for at least my first loop,
I'll go the soldered route. Now for the decision on the Capacitor.

- Mike KB3EIA -

1059. Re: BACK TO BASICS - EM waves, E and H fields, in phase orinquadr...

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-13 16:59:44 UTC
From: richardharrison@webtv.net
Message-ID: <9159-3D305C80-72@storefull-2398.public.lawson.webtv.net>
Source record: 138650

A posting from Tom, W8JI dated Sun,Jul 7,2002, 2:36am, arrived on my screen a few minutes ago. Mysterious cyber processing!

Tom says: "---someone stuck a balun at a point with low differential impedance, and where everyone concluded the balun should have an effect or be effective."

The feedline acting as an unbalanced antenna has a feedpoint impedance. It has a radiation-resistance and usually reactance too. It takes most power when matched to its source. Adding the inductance of a common-mode choke balun could offset some of the capacitive reactance of a too-short length for increased current input and increased radiation. Indiscriminate application of a choke balun is no panacea for feedline radiation.

If the characteristics of an antenna feedline are unknown as a radiator, you can measure or experiment to determine the action required for reduced feedline radiation.

It is not likely possible to explain the interactions between antennas and feedlines satisfactorily in one sentence. You might start by saying they are usually detrimentally coupled.

Best regards, Richard Harrison, KB5WZI

1060. Re: BACK TO BASICS - EM waves, E and H fields, in phase orinquadr...

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-13 17:00:13 UTC
From: CAM <w5dxp@hotmail.com>
Message-ID: <3D305C9D.2B066A2@hotmail.com>
Source record: 138648

"William E. Sabin" wrote:
> The current on the outside is due entirely to
> electromagnetic coupling from the antenna elements.

Suppose we loop the coax back so the load can be located close to the transmitter ground. Suppose our load is a Z0 resistor that is off-center tapped to ground. "Electromagnetic coupling" does cover a lot of bases but in this new example, wouldn't there be some conducted common mode currents on the outside because the Z0 load resistor is not floating with respect to ground?
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

1061. Re: BACK TO BASICS - EM waves, E and H fields, in phase orinquadr...

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-13 17:03:59 UTC
From: Gene Fuller <W4SZzzzzz@att.net>
Message-ID: <3D305DC6.86F5A85E@att.net>
Source record: 138649

CAM wrote:
.
.
> "NOT related" means never a relationship of any kind
.
.
> "Unrelated" is absolutely NO relationship.

Hmmmm,

I am curious how this works out in practice.

In many other messages it has been said that once measurements are made of two different systems or components or other entities then we can say the entities are "related", even if we do not fully understand the nature of the correlation or any possible cause-effect behavior.

Fair enough; I won't argue the semantic distinctions.

The question becomes, however, can ANY set of measurable systems EVER be "unrelated"?

Are there any examples of measurable systems that are unrelated using the all-inclusive definition above?

If not, it seems that the absolutism in this thread is useful only for philosophers, not technologists.

73,
Gene
W4SZ

1062. Phase discriminator

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-13 17:08:51 UTC
From: ON4JA <ON4JA@wanadoo.be>
Message-ID: <agpo2a$1adh1$1@sinclair.be.wanadoo.com>
Source record: 138652
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.homebrew

ON4JA

is looking for a Collins Phase Discriminator CV 587 UR ,
a Directional Coupler CU 987 and a Coupler 180S-1

Thanks for help .

Emile
ON4JA@wanadoo.be

1063. Re: BACK TO BASICS - EM waves, E and H fields, in phase orinquadr...

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-13 17:18:32 UTC
From: CAM <w5dxp@hotmail.com>
Message-ID: <3D3060E8.76B9C1D6@hotmail.com>
Source record: 138651

Gene Fuller wrote:
> Are there any examples of measurable systems that are unrelated using
> the all-inclusive definition above?

Sure, I would agree that the primary (measurable) common mode currents in my antenna system during transmit are unrelated to the primary (measurable) differential mode currents in your antenna system during transmit assuming you are in the '4' call area and I am in the '5' call area. I can have common mode currents while you are transmitting or not transmitting. My primary (measurable) common mode currents occur *only* while I am transmitting. To try to maintain that common mode conditions are unrelated to differential mode conditions during transmit from a common power source is ridiculous and getting more ridiculous all the time.

There is a one-to-one correspondence between the movement of the meter needle on my differential power meter and the movement of the meter needle on my common mode current detector. Both of them correspond to key-down during CW operation. To assert that they are unrelated after observing the relationship on the meters would be an outright lie.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
------== Over 80,000 Newsgroups - 16 Different Servers! =-----

1064. Re: BACK TO BASICS - EM waves, E and H fields, in phase orinquadr...

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-13 17:42:44 UTC
From: richardharrison@webtv.net
Message-ID: <16906-3D306694-17@storefull-2397.public.lawson.webtv.net>
Source record: 138653

Bill, W0IYH wrote:
"Imagine a coax with a resistor connected across the far end. The
current will return via the inner surface of the shield, regardless of
the impedance of the outer surface of the shield.

Reason: Maxwell`s equation curl H = J
(neglect the dE/dt as irrelevant within the shield).

Yes, and it doesn`t hurt that the load resistor is a balanced load.
There may be an explanation for those not properly introduced to
Maxwell.

The current on the outside of the coax needs a complete return path. It
isn`t available in the coax differential mode. It also isn`t available
in balanced excitation fields from the antenna. There must be an
imbalance in the displacement current from the antenna, in which the
coax exterior is likely complicit, to produce a return path for the
common-mode current so there is a complete circuit and the feedline can
radiate.

Best regards, Richard Harrison, KB5WZI

1065. Re: Magloops + Simple Variable capacitor

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-13 18:15:54 UTC
From: Reg Edwards <g4fgq.regp@btinternet.com>
Message-ID: <agpqop$9eo$1@paris.btinternet.com>
Source record: 138662

"Mike Coslo" wrote
> Reg Edwards wrote:
>
> > Does the resistance of the solder
> > joints really make that much difference?
> >>
> > ============================
> > Only to old wives.
> >
> > Soldered-together copper pipes obey ohms law just like any other
resistances
> > in series.
> >
> > A few little micro-ohms in series with 10's of milliohms don't make much
> > difference.
>
==============================

> That is pretty much what I was thinking. So for at least my first loop,
> I'll go the soldered route. Now for the decision on the Capacitor.

==============================

Wiping capacitor contacts of good design don't cause much loss either.

There are two rotating disks, one mounted near each end of the rotor shaft.
Bearing on each disk are two, fixed, short, fairly strong leaf springs.
There can be 12 or more sliding contacts all in parallel, 6 near each end of
the shaft. The two sets of spring forces tending to move the shaft along its
axis balance each other out. But friction by leaf springs on the disks
require a stronger drive motor.

Reg, G4FGQ

1066. Re: BACK TO BASICS - EM waves, E and H fields, in phase orinquadr...

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-13 18:20:24 UTC
From: richardharrison@webtv.net
Message-ID: <16905-3D306F68-37@storefull-2397.public.lawson.webtv.net>
Source record: 138655

Tom, W8JI wrote:
"The differential mode voltage is not directly related to the common mode voltage exciting the line---."

Mutually coupled circuits are just that. Perturb one circuit and the perturbation is sensed in the other circuit.
The circuits we have discussed are mutually coupled circuits. The only exception is at perfect balance when coupling is zero. In this unique instance there is no signal in one of the circuits to discuss anyway. We are discussing single signal source arrangements.

In the arrangements discussed, the common-mode signal is a product of the differential mode signal. When changing one voltage causes another to change, they are related by most reasonable definitions.

Best regards, Richard Harrison, KB5WZI

1067. Re: Magloops + Simple Variable capacitor

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-13 18:39:03 UTC
From: aunwin@fgi.net
Message-ID: <c4becf19.0207131039.2e993d4f@posting.google.com>
Source record: 138654

2w8ji@contesting.com (Tom W8JI) wrote in message
news:<3d302d73.177449426@news.akorn.net>...
> On Sat, 13 Jul 2002 04:03:39 GMT, Mike Coslo <mcoslo@adelphia.net>
> wrote:
>
> >Of what importance is the solder vs one continuous length argument? I
> >can get long lengths of copper tubing, and fashion a home made bender to
> > work it into a circular shape, but a soldered octoloop would be
> >simpler and quicker to construct. Does the resistance of the solder
> >joints really make that much difference?
>
> You can certainly obtain very low resistance solder joints compared to
> the resistance of the antenna and capacitor, so I would not worry much
> about soldering as long as the joints are in LARGE tubing like one
> inch or larger copper.
>
> The feed system is also not critical, and does not need to be fancy or
> have any efforts made to use fancy "baluns". It can just be a simple
> small loop of wire. I would avoid gamma matches or any other dircect
> feed, however!
>
> The single most critical part is the capacitor, and how you make
> connections to the capacitor. I've watched efficiency change from a
> few percent to 50% or more just by changing from a flat-plate
> capacitor with a teflon dielectric to an air dielectric cap that is
> "boxy" with welded stator plate connections.
>
> Make the loop as large as possible, and it saves you headaches. Do NOT
> expect to actually get the efficiencies most articles or books claim.
> many of them just don't realize how much ESR the tuning capacitor has.
> Even a very inefficient antenna can still be very useful and fun!
>
> 73 Tom

Tom,
Instead of struggling with the losses created by the capacitor,
joints e.t.c, why not concentrate on increasing the impedance
of the antenna so that connection losses become some what
inconsequential ? It appears to me that the low impedance of
the loop antenna which creates low efficiencies, overcome all the
advantages touted by the mutiband atributes of variable frequency.
If one modifies the loop by placing at the center of a dipole,
or its equivalent, the antenna impedances rise and with it higher
efficiences without the the losses imposed by the imposition of

'connection' losses.

I have provided but one example where changing the 'focus' removes the majority of the loop and capacitor problems (please correct me if I am wrong) and I am sure that the knowledgable could provide other examples, fractal (loaded)shaped dipole, if they would only open their minds and look away from the 'basic' design of the loop and incorporate the capacitor driven variable frequences that it offers to a more efficient and user friendly antenna.

I have the feeling that the original claims of high efficiencies and its subsequent 'debunking' have locked most hams to the pursuit of removing losses of the original design to validate original claims, instead of building on it's attributes by increasing the antennas impedance.

1068. Re: lightningbolt 2 element quad

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-13 19:14:48 UTC
From: kg4ggx@aol.com
Message-ID: <20020713151448.14924.00000452@mb-mc.aol.com>
Source record: 138656

Hi Matt
I have recently put up the "Lightning Bolt" 5 band Quad. I elected to use the supplied balun for now and keep it simple until I got it all working good. Well it has a 1.5 to 1, or less, match on all the 5 bands(10,12,15,17,and 20). It covers all the band on each within the 2 to 1 SWR points, except for 10 meters. 10 meters has so much band to cover it does not cover all of it. I have mine adjusted so it covers 28.000 to 28.6 something within the 2 to 1 SWR curve. It performance is absolutely fantastic! I really don't see how seperate feed lines could make a big difference. I can't ask for this beam to work any better. It's quieter than my dipoles by a significant amount. It's quiet nature makes it possible to copy weak signal that are lost in the noise on my dipoles, and copy them well. Most of the time an S-3 signal on the dipole is S-9, or more, on the quad. Not always, but there is not any antenna that will always be best. Honestly though, the quad is always equal to or most of the time much better than the dipole. Not mentioning the noise difference. So with all this taken into account, and doing a little research on the web, I see no reason to go to the extra expense and trouble to make 1/4 wave matching sections for each band, and putting up the needed remote antenna switch. From a purists point of view it would be better. From a realistic point of view, in my opinion it won't make enough difference to matter. If, and this is a big if, it gained you 2 or 3 dB of effective radiated power, no one would be able to see much difference on the receive end. As 3 dB is 1/2 an S unit. And propagation can make that a mute point. If the bands all give a good swr match over all, or most of the band with good performance, then whats to be gained to make it worth while. Plus you'll have more stuff up in the air to maintain. If you'd like I can give you a web site to look at some info on the differences in a balun fed quad compared to one with 1/4 wave matching sections. I'd give it to you now. but I will have to look it up in my files . Hope this helps. I don't think this antenna will dissapoint you and I don't think it will dissapoint you fed with the balun and one feed line.
73 Rob K4MAU

1069. Re: BACK TO BASICS - EM waves, E and H fields, in phase orinquadr...

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-13 19:30:23 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <3D307FCF.108@eznec.com>
Source record: 138659

Both statements are true.

Roy Lewallen, W7EL

CAM wrote:
> Roy Lewallen wrote:
>
>>As follows: The differential current is 1/2 the difference of the
>>current on the outside of the inner conductor and the inside of the
>>outer conductor. It is not the same as one of the constituent currents.
>
>
> It has been previously reported here on r.r.a.a that the field structure
> of coax forces the current on the outside of the inner conductor and the
> current on the inside of the outer conductor to be equal in magnitude and
> opposite in phase. Was that a false statement?
>
> It has been previously reported here on r.r.a.a that when the inner conductor
> of coax is shorted to the outer conductor of coax and the resulting cable is
> used for RF grounding, that the inner conductor carries virtually none of the
> RF because of skin effect. Was that a false statement?

1070. Re: Magloops + Simple Variable capacitor

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-13 19:37:17 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <3D30816D.4040300@eznec.com>
Source record: 138661

Tom, do you have any feel for what the loss mechanisms are for the air dielectric capacitor?

Roy Lewallen, W7EL

Tom W8JI wrote:
> . . .
> The single most critical part is the capacitor, and how you make
> connections to the capacitor. I've watched efficiency change from a
> few percent to 50% or more just by changing from a flat-plate
> capacitor with a teflon dielectric to an air dielectric cap that is
> "boxy" with welded stator plate connections.
> . . .

1071. Re: BACK TO BASICS - EM waves, E and H fields, in phase orinquadr...

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-13 22:24:18 UTC
From: CAM <w5dxp@hotmail.com>
Message-ID: <3D30A892.6EB7B34E@hotmail.com>
Source record: 138663

Roy Lewallen wrote:
> Both statements are true.

> W5DXP wrote:
> > It has been previously reported here on r.r.a.a that the field structure
> > of coax forces the current on the outside of the inner conductor and the
> > current on the inside of the outer conductor to be equal in magnitude and
> > opposite in phase. Was that a false statement?
> >
> > It has been previously reported here on r.r.a.a that when the inner conductor
> > of coax is shorted to the outer conductor of coax and the resulting cable is
> > used for RF grounding, that the inner conductor carries virtually none of the
> > RF because of skin effect. Was that a false statement?

Roy said earlier:
> The differential current is 1/2 the difference of the
> current on the outside of the inner conductor and the inside of the
> outer conductor. It is not the same as one of the constituent currents.

> That is, if the two currents are I1 and I2, the differential current is
> 1/2 (I1 - I2). This is clearly not equal to I1 -- unless I2 is zero,
> which it's not.

If I1 is the current on the outside of the inner conductor and I2 is the
current on the inside of the outer conductor, then doesn't I1 equal I2 in
magnitude and opposite in phase so that differential current equals I1?
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

1072. Re: BACK TO BASICS - EM waves, E and H fields, in phase orinquadr...

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-13 22:33:54 UTC
From: CAM <w5dxp@hotmail.com>
Message-ID: <3D30AAD2.E692A250@hotmail.com>
Source record: 138664

Reg Edwards wrote:
> > I have said my motorcycle is not black.
>
> Come on Cecil, don't keep it a secret. What colour is it.

Fightin' Texas Aggie maroon.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
------== Over 80,000 Newsgroups - 16 Different Servers! =-----

1073. Re: BACK TO BASICS - EM waves, E and H fields, in phase orinquadr...

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-13 23:02:51 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <3D30B19B.7060209@eznec.com>
Source record: 138665

CAM wrote:
>
> If I1 is the current on the outside of the inner conductor and I2 is the
> current on the inside of the outer conductor, then doesn't I1 equal I2 in
> magnitude and opposite in phase so that differential current equals I1?

Yes. They're equal in value, but they're not the same current. I1 is the current on the outside of the inner conductor. The differential current is composed of both I1 and I2.

Roy Lewallen, W7EL

1074. Re: Shack resonates at 40M

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-13 23:55:53 UTC
From: cprstn54zz@att.net
Message-ID: <3d30bbce.221255375@news-server.optonline.net>
Source record: 138666

On Sat, 13 Jul 2002 14:41:08 +0000, Mike Luther
<mike.luther@ziplog.com> wrote:
>Have you, by chance, thought about changing to a good vertical?

The 160M-10M dipole with its four loading coils was pushing it with
the xyl. It is held up in the middle with a block & tackle, so I can
take it down in 10 minutes should the social occasion require it.

If I retire to the country (from the burbs) and have a few acres, I
will put up a 50' tower and go to town.

BTW, what wideband vertical do you like?

Ken KC2JDY

Ken
(to reply via email
remove "zz" from address)

1075. Re: BACK TO BASICS - EM waves, E and H fields, in phase orinquadr...

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-14 00:00:12 UTC
From: "Ian White, G3SEK" <G3SEK@ifwtech.co.uk>
Message-ID: <eD6Nf9KM8LM9EAua@ifwtech.co.uk>
Source record: 138667

William E. Sabin wrote:
>Ian White, G3SEK wrote:
>
>> Why? Because it's fundamentally, irretrievably asymmetrical! One
>>leg of the dipole is connected only to one conductor (coax inner) but
>>the other leg is connected to two - the inside and outside of the
>>shield, which operate as two independent conductors because of the
>>skin effect.
>> Immediately you connect the coax, current flows on to the outside of
>>the shield and it becomes part of the radiating system - just as if
>>you'd connected another wire to that side of the feedpoint.
>
>
>
>Imagine a coax with a resistor connected across the far end. The
>current will return via the inner surface of the shield, regardless of
>the impedance of the outer surface of the shield.
>
>Reason: Maxwell's equation curl H = J (neglect the dE/dt as irrelevant
>within the shield). This law says in a roundabout way that in order for
>the H field to be zero within the shield the magnetic flux linkages at
>the inner surface due to the center wire and the magnetic flux linkages
>due to the return current on the inner surface must be equal and in
>opposite directions. See also Terman 1955 page 22, which states
>(equivalently) that "the general principle is that current flows where
>it is encircled by the smallest number of flux lines". This can be true
>only if the current returns via the inner surface.
>
>The idea that the division of current is according to the impedance of
>the outside surface of the braid, is basically and fundamentally
>incorrect. There is more than just Ohm's law involved here. Intuitions
>fail in this situation.
>
It wasn't intuition I was applying there, but Kirchhoff's current law:
that the algebraic sum of currents flowing into and out of a given point
in a circuit is zero. That law of physics is based on simple counting of
electrons (aka conservation of charge) and it cannot be arbitrarily set
aside.

I am also assuming that the inner and outer surfaces of the shield act
as independent conductors, thanks to the skin effect - but I have very
good support for that [1].

Ohm's law will then dictate how the currents divide.

>The current on the outside is due entirely to electromagnetic coupling
>from the antenna elements.
>
I don't have the background to try conclusions with Bill about EM theory, but I have total confidence that a correct and complete application of Maxwell's equations to this problem will show that both of our approaches are correct.

The currents created by electromagnetic coupling between the antenna elements and to the outer surface of the coax (acting as an independent conductor) will in turn create certain current conditions at the feedpoint. If Bill's EM approach is worked out in detail, it will provide the following information:

1. The currents on the center conductor and the inside of the coax shield are equal and opposite (as Bill said).

2. The current distributions on the two halves of the dipole are known in full numerical detail, and they are not quite equal.

3. There will be a small current on the outer of the coax shield, and again its distribution along the length of the feedline is known in full numerical detail.

4. The three currents at the top of the shield (where the inner surface, the outer surface and one side of the dipole all join) will sum to zero, within the limits of error in calculating each current.

But I can also approach the problem a different way:

1. Bill and Maxwell tell me that the currents on the center conductor and the inside of the coax shield will be equal and opposite. I can take this as a given.

2. The inner and outer surfaces of the shield act as independent conductors, thanks to the skin effect [1]. I'll assume that the shield is conductive enough and thick enough to allow negligible interaction between the two current sheets.

3. Because the system is not symmetrical (one side of the dipole also has the outer of the shield connected to it) the currents on the antenna arms cannot be exactly equal.

4. Kirchhoff's law dictates that three currents at the top of the shield (where the inner surface, the outer surface and one side of the dipole all join) must sum exactly to zero. No approximation, no room for argument.

5. Therefore a small current will be launched from the feedpoint onto the outer of the shield. I don't know how large that current will be, but the lack of symmetry proves that it must be non-zero.

Bill's approach offers much more information, and deeper numerical insights, but I choose a simpler approach that gives me a qualitative picture of what's happening at the feedpoint. It doesn't tell me

anything about the current distributions farther away from the feedpoint, but that wasn't part of the original question.

To take another example, Bill said:
>Imagine a coax with a resistor connected across the far end. The
>current will return via the inner surface of the shield, regardless of
>the impedance of the outer surface of the shield.
>
My approach would be that since the currents on the center conductor and the inside of the coax shield are equal and opposite, Kirchhoff's law tells me that no current is available to flow on the outer surface. We reach the same conclusion by different routes. Both approaches are valid.

>Furthermore, another Maxwell equation says that the divergence of B =
>zero, which leads to the conclusion that current flows only in closed
>paths. This means that the common mode current that flows into a ground
>connection must find its way back to the antenna by some means, usually
>by electromagnetic induction (transformer action).

The requirement for every current to have its return path is certainly true, but I don't see how that is a counter-argument. It does not contradict the validity of Kirchhoff's and/or Ohms law at any point in the system.

>If the antenna is highly isolated from "ground", as in space, there is
>no common mode current into a "ground" connection, and only the
>generator platform, transmission line and antenna are the closed path
>for common mode current.
>
Not true - a ground is not necessary in order to create a common-mode current at the feedpoint. In any practical system, the feedline length is a significant fraction of a wavelength, so the outer surface radiates and has its own current distribution along its length.

If you take the systems I described in Steps 1-4 in the previous posting and move them away from ground and into free space, as a "T" shape with the battery-powered transmitter at the far end of the coax, the general behavior is quite similar. Even when the coax runs away from the center-fed dipole exactly at right-angles, the system is still not symmetrical at the feedpoint, so there will be some current launched onto the outer surface of the coax.

Given this situation at the feedpoint, and the dimensions and thicknesses of the three conductors, the current distributions on all three can be worked out in the usual way. Grounding the bottom end of the feedline shield (or providing a partial ground by capacitance) will of course alter the common-mode current at the feedpoint, but it won't alter the fundamental conclusion that this current has to be non-zero due to the asymmetry.

To sum up, I stand by what I said:

>>... the inside and outside of the shield ... operate as two
>>independent conductors because of the skin effect.
>>
>> Immediately you connect the coax, current flows on to the outside of
>>the shield and it becomes part of the radiating system - just as if
>>you'd connected another wire to that side of the feedpoint.
>

[1] This topic has been coming around again and again, for a long time. Some years ago I sent Bill a copy of some pages from a textbook containing a very neat derivation of the skin effect. Unlike most textbook proofs, it doesn't make any assumptions about the type of circuit or conductor involved. It simply assumes an RF current flowing over a conducting surface, no reason given or required. It then uses Faraday's law and Ampere's theorem (both of which were unified by Maxwell's equations) to prove that the skin effect will happen, and to derive all the relevant equations.

Come to think, those scanned pages are still on my site from a previous round of this same discussion, at:
www.ifwtech.co.uk/g3sek/misc/skin.htm

Note again that it is not necessary to know <why> the RF current is flowing. I take that to mean that it is valid to use the existence of skin effect as a starting-point for explaining circuit behavior - because if there are RF currents, there will always be a skin effect. That means opposite surfaces of the same conductor will behave as if they are independent, provided only that the material is conductive enough and thick enough to allow negligible interaction between the different current sheets.

--
73 from Ian G3SEK Editor, 'The VHF/UHF DX Book'
'In Practice' columnist for RadCom (RSGB)

1076. Re: Shack resonates at 40M

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-14 00:39:10 UTC
From: Mike Luther <mike.luther@ziplog.com>
Message-ID: <3D30C82E.CF920ED2@ziplog.com>
Source record: 138668

Ken ..

Ken wrote:If I retire to the country (from the burbs) and have a few acres, I

> will put up a 50' tower and go to town.
>
> BTW, what wideband vertical do you like?
>
> Ken KC2JDY

The only one I've ever personally worked with is the Butternut 80-upwards creature. I'm a low band enthusist and only use full sized separate stalks for 80 and 40 at the fixed site. I did help set up one for a friend years ago and we used one for Field Day about five years ago. It worked very well. Friends who have used both that brand and also the Gap stuff for no-room basis yards have been pleased. One local fellow WA5OMD here is up to 300+ confirmed all bands with a GAP that's elevated with a base up about 24 feet. That's a decent testimonial I would think.

W5TC, ex-ARRL Director Tom Comstock here in College Station, had a Hy-Gain self-supporting 18AVQ in his back yard plus only a good tribander. He's the only one I ever knew who had a collection of all the cards from all the deleted countries! Must be a reason this stuff works, eh?

I held a complete solid week's schedules for research purposes on gray line between my W5WQN site and HZ0ZAA a number of years back on 40 CW between my 4 square and his R4 up about 30 feet to prove a point or two. Absolute success every time, every day that week, and only 100 watts at his end right on schedule. Others here can offer you actual data on an as-normally used basis for these things. But I can't give you an experience-line on them based on months or years worth of use as compared with the usual low dipoles etc.

Frankly, take a single band, say 40 or 30. Throw up a wire element job from a tree if you can just to play with it if you can. Won't cost you much of anything that way. If you are pleased, you should have your answer and will have likely had a lot of fun doing it. You can hint that, "If it works, I may be able to reduce this whole mess to xxxx!"

;)

It's sorta like the recent Del Taco commercials! Just think outside the box!

1077. Re: Magloops + Simple Variable capacitor

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-14 01:04:58 UTC
From: Reg Edwards <g4fgq.regp@btinternet.com>
Message-ID: <agqino$f14$1@venus.btinternet.com>
Source record: 138669

Mike, for a fairly complete analysis of performance of magloops download program MAGLOOP4 from website below.

An similar earlier program RJELOOP1, still available, computes both radiation resistance and conductor HF resistance.

Both programs cover loop shapes from triangular to circular.

Between them they should overide the old-wives waffle which is going on in this and other threads.

Q of the tuning capacitor is much greater than Q of the loop conductor itself and can be ignored in comparison. That should be obvious by considering the lengths and surface areas of these two principal components.

The loss resistances are so small and the Q's are so large of these components they are well beyond direct measurents. They can be accurately obtained only by calculations from basic electrical principles.

In practice, of course, 1 or 2 dB don't matter very much. Not worth having a riot about!

Download in a few seconds. No unzipping inconvenience involved. Run immediately. User-friendly.

========================
Regards from Reg G4FGQ
Free Radio Design Software
Go to http://www.g4fgq.com
========================

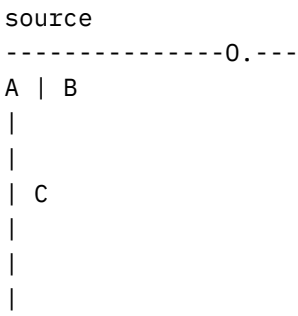
"Mike Coslo" wrote -
> Reg Edwards wrote:
>
> > Does the resistance of the solder
> >
> >>joints really make that much difference?
> >>
> > ==========================
> > Only to old wives.
> >
> > Soldered-together copper pipes obey ohms law just like any other
resistances
> > in series.
> >
> > A few little micro-ohms in series with 10's of milliohms don't make much
> > difference.

>
>
> That is pretty much what I was thinking. So for at least my first loop,
> I'll go the soldered route. Now for the decision on the Capacitor.
>
> - Mike KB3EIA -
>

1078. Re: BACK TO BASICS - EM waves, E and H fields, in phase orinquadr...

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-14 01:08:05 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <3D30CEF5.5010702@eznec.com>
Source record: 138670

Ian's recent posting prompts me to correct a statement I made earlier, that the current flowing down the outside of the coax is flowing to ground. As Ian pointed out, a ground connection isn't at all necessary. Imagine an antenna in free space made by starting with a dipole, then adding a second quarter wave wire. I try to avoid ASCII art, but need something to describe this. You'll need a fixed-width font to see this correctly:



I've just added a third quarter wave wire C to the dipole made from A and B. At the feedpoint, both wires B and C present a relatively low impedance to current, so current flows in both of them. For both wires, the current is maximum at the feedpoint, and drops to zero at the ends. No connections to ground or anything else are necessary. This is the situation you'd have if you hung a dipole fed with a quarter wave coax line high above the ground, and dangled a battery-powered transmitter from the bottom end of the quarter wave line. Wire C represents the outside of the coax. This situation is easy to model with EZNEC or other program. Just like the current on wire B, the current on wire C is generating a field which radiates, so we can continue driving current and power into the wire without the necessity of it exiting anywhere except in the form of radiation.

Roy Lewallen, W7EL

1079. Re: Oliver Heaviside

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-14 02:25:41 UTC
From: N9ECR@webtv.net
Message-ID: <21472-3D30E125-112@storefull-2354.public.lawson.webtv.net>
Source record: 138672

Reg,
I Like this quote about heaviside: Such unorthodox techniques did not make it easy to follow Heaviside's mental processes, and to one scientist who protested that his papers were very difficult to read he made the now classic retort: "That may well be but they were much more difficult to write."
Scott

1080. Re: Magloops + Simple Variable capacitor

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-14 02:44:01 UTC
From: kelly@dvol.com
Message-ID: <d22b54c3.0207131844.7d5d9f17@posting.google.com>
Source record: 138671

Mike Coslo <mcoslo@adelphia.net> wrote in message news:<3D2FD0BF.2080004@adelphia.net>...
> Tom W8JI wrote:
>
>
>
>
> Of what importance is the solder vs one continuous length argument? I
> can get long lengths of copper tubing, and fashion a home made bender to
> work it into a circular shape, but a soldered octoloop would be
> simpler and quicker to construct. Does the resistance of the solder
> joints really make that much difference?
>
> TIA, - Mike KB3EIA -
>
>
Silver solder the joints instead of lead/tin soldering them. Would
reqire the use of a MAPP gas or similar torch but the resistance of
the joint would be lower than the copper tubing.
>
>
w3rv

1081. Re: BACK TO BASICS - EM waves, E and H fields, in phase orinquadr...

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-14 02:57:25 UTC
From: richardharrison@webtv.net
Message-ID: <19145-3D30E895-70@storefull-2391.public.lawson.webtv.net>
Source record: 138675

Roy Lewallen wrote:
"Sorry, this simply isn`t true. See my previous paragraph."
The paragraph:
"When a dipole is fed with coax, the current on the inside of the shield splits between two paths. One is the dipole half that it is connected to. The other is the path along the outside of the coax shield to ground. The current can be steered in any ratio without affecting the vector sum which is the current on the inside of the shield."

The vector sum is a limited resource. Steer more or less current to either path and current in the other path changes. Since one path is the differential-mode load and the other path is the common-mode these modes are related by this teeter-totter that Roy has described.

My analogy that Roy has called untrue, said that if you blocked one of two river outlets to the sea, current in the mainstream and the unblocked outlet would be affected. Almost all analogies are faulty but some are useful in spite of their faults.

One reason the vector sum is a limited resource, but not necessarily a constant sum, is that the coax will deliver maximum power only into a conjugate match. If you have such a match, changing the impedance of either pathload changes their sum, and the amount of the power delivered as a "vector sum". Even if you don`t have a match, it changes whatever match existed.

My characterization was true enough. Roy`s response is more testimony, although unintended, that the differential and common modes are truly related.

Best regards, Richard Harrison, KB5WZI

1082. Re: WHERE CAN I GET A LONG WHIP

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-14 02:59:37 UTC
From: ZOOM <robert931@sympatico.ca>
Message-ID: <gO5Y8.8322$c_2.2132685@news20.bellglobal.com>
Source record: 138673

Military surplus antenna mast collapeses to about 7' and extents to
28-30feet. I have one and you can probably find one either on E-bay or at
your local army surplus store.
"JDer8745" <jder8745@aol.com> wrote in message
news:20020712174949.02005.00000074@mb-fv.aol.com...
> Howdy,
>
> I would like to obtain a telescoping or collapsing whipantenna that can
be
> mounted on a travel trailer and has a minimum length of 30 feet.
>
> Before you get all excited I don't intend to drive down the road with it
> extended.
>
> Is there such an antenna available? Where?
>
> Tnx es 73 de Jack, K9CUN

1083. Re: BACK TO BASICS - EM waves, E and H fields, in phase orinquadr...

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-14 03:09:02 UTC
From: CAM <w5dxp@hotmail.com>
Message-ID: <3D30EB4E.1FFFF57B@hotmail.com>
Source record: 138674

Roy Lewallen wrote:
>
> CAM wrote:
> > If I1 is the current on the outside of the inner conductor and I2 is the
> > current on the inside of the outer conductor, then doesn't I1 equal I2 in
> > magnitude and opposite in phase so that differential current equals I1?
>
> Yes. They're equal in value, but they're not the same current.

Aren't I1 and I2 in series?

```
+--------------------------I1->-----------------------+
| |
Source Load
| |
+-------------------------<-I2-------------------------+
```

--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
------== Over 80,000 Newsgroups - 16 Different Servers! =-----

1084. Re: BACK TO BASICS - EM waves, E and H fields, in phase orinquadr...

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-14 03:36:18 UTC
From: richardharrison@webtv.net
Message-ID: <17989-3D30F1B2-26@storefull-2396.public.lawson.webtv.net>
Source record: 138676

Roy Lewallen wrote:
"As Ian pointed out, a ground connection isn`t necessary."

The radiating coax transmission line differs from an upside-down ground-plane. The currents at the upside-down "base" of the radiating coax are flowing toward the "base" on one "radial" and away from the "base" on another "radial". In the ground-plane, currents all flow toward or away from the base in-step on all radials.

Imbalance in the coax upside-down ground-plane "radials" enables its radiation. The more it mimics a true ground-plane, the better it radiates.

Best regards, Richard Harrison, KB5WZI

1085. Re: BACK TO BASICS - EM waves, E and H fields, in phase orinquadr...

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-14 04:05:42 UTC
From: richardharrison@webtv.net
Message-ID: <17988-3D30F896-94@storefull-2396.public.lawson.webtv.net>
Source record: 138677

CAM, W5DXP wrote:
"Aren`t I1 and I2 in series?"

There is an arithmetic principle as Cecil knows, that says that things equal to the same thing are equal to each other. In the case of currents in the two wires of a transmission line, the line`s behavior makes the current identical in magnitude.

So, it`s fair enough to sum the absolute values of I1 and I2 then divide by two. Their average is also identical to the current in either wire.

This was just a sideshow conducted at the main circus.

Best regards, Richard Harrison, KB5WZI

1086. Re: need a schematicof a 2m/70cm yagi

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-14 04:28:36 UTC
From: Adam Alicajic <alicajic.adam@pu.hinet.hr>
Message-ID: <agpuvg$7knv$1@as201.hinet.hr>
Source record: 138660

Check the DK7ZB web site or WA5VJB cheap yagis
GL, Adam

"Vince & Vanessa" <vcl@sympatico.ca> wrote in message
news:5gYX8.1257$WF6.347371@news20.bellglobal.com...
> hi there guys i am looking for a schematic for a 2m/70cm yagi antenna if
> anyone has one please email it to me at (ve3elb@hotmail.com) thanks
>
> vince ve3elb
>
>
>
>
>
>
>
>
>
>
>

1087. Re: Magloops + Simple Variable capacitor

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-14 04:35:18 UTC
From: Mike Coslo <mcoslo@adelphia.net>
Message-ID: <3D3129AA.2050409@adelphia.net>
Source record: 138678

Reg Edwards wrote:

> Mike, for a fairly complete analysis of performance of magloops download
> program MAGLOOP4 from website below.

Wonderful! I've downloaded it and am having fun with it right now. TNX a lot, Reg.

- Mike KB3EIA -

1088. Re: Magloops + Simple Variable capacitor

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-14 04:36:47 UTC
From: Mike Coslo <mcoslo@adelphia.net>
Message-ID: <3D312A04.6050605@adelphia.net>
Source record: 138679

Brian Kelly wrote:

> Silver solder the joints instead of lead/tin soldering them. Would
> reqire the use of a MAPP gas or similar torch but the resistance of
> the joint would be lower than the copper tubing.

Which makes me wonder if anyone has ever made a loop out of silver? 8^)

- Mike KB3EIA -

1089. Re: Multi-band roof-mounted vertical fed with 450 ohm ladderline

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-14 04:48:59 UTC
From: 'Doc <w5lz@icok.net>
Message-ID: <3D3102AE.9614137E@icok.net>
Source record: 138680

CAM,
And exactly what does that have to do with the
question asked? Nothing. And that 'proves' my point.
'Doc

1090. Re: Multi-band roof-mounted vertical fed with 450 ohm ladderline

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-14 04:54:07 UTC
From: 'Doc <w5lz@icok.net>
Message-ID: <3D3103E1.6F9D41AB@icok.net>
Source record: 138681

Dan,
No, I don't usually enclude the original, or post in question. I try not to 'clutter up' and waste the band-width. If you see a post in the same thread, I would naturally assume that it it pertinent to that thread. Wouldn't you? I don't think you should have any problem in figuring out what I was/am talking about.
As to 'where the sun don't shine' suggestion. I do consider the source when taking suggestions. I'll have to pass on yours.
'Doc

1091. Re: BACK TO BASICS - EM waves, E and H fields, in phase orinquadr...

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-14 05:26:43 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <3D310B93.7090402@eznec.com>
Source record: 138682

CAM wrote:
> Roy Lewallen wrote:
>
>>CAM wrote:
>>
>>>If I1 is the current on the outside of the inner conductor and I2 is the
>>>current on the inside of the outer conductor, then doesn't I1 equal I2 in
>>>magnitude and opposite in phase so that differential current equals I1?
>>
>>Yes. They're equal in value, but they're not the same current.
>
>
> Aren't I1 and I2 in series?
>
> +---------------------------I1->-----------------------+
> | |
> Source Load
> | |
> +-------------------------<-I2-------------------------+

No, not in the accepted sense of the term. Why?

You realize, of course, that your diagram doesn't include all the loads.

Roy Lewallen, W7EL

1092. Re: BACK TO BASICS - EM waves, E and H fields, in phase orinquadr...

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-14 05:32:46 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <3D310CFE.1050201@eznec.com>
Source record: 138683

This doesn't make sense to me. But I see it's not possible for me to communicate the fact that the differential and common mode currents are simply mathematical derivations of individual currents flowing on conductors -- there's too much of a desire to complicate matters by invoking coupled modes, conjugate matches, and the like, while it's really a simple problem that can be adequately and completely analyzed with nothing more than Ohm's and Kirchoff's laws. If it's not clear by this time, I doubt that anything else I can write will help.

Roy Lewallen, W7EL

Richard Harrison wrote:
> Roy Lewallen wrote:
> "Sorry, this simply isn`t true. See my previous paragraph."
> The paragraph:
> "When a dipole is fed with coax, the current on the inside of the shield
> splits between two paths. One is the dipole half that it is connected
> to. The other is the path along the outside of the coax shield to
> ground. The current can be steered in any ratio without affecting the
> vector sum which is the current on the inside of the shield."
>
> The vector sum is a limited resource. Steer more or less current to
> either path and current in the other path changes. Since one path is the
> differential-mode load and the other path is the common-mode these modes
> are related by this teeter-totter that Roy has described.
>
> My analogy that Roy has called untrue, said that if you blocked one of
> two river outlets to the sea, current in the mainstream and the
> unblocked outlet would be affected. Almost all analogies are faulty but
> some are useful in spite of their faults.
>
> One reason the vector sum is a limited resource, but not necessarily a
> constant sum, is that the coax will deliver maximum power only into a
> conjugate match. If you have such a match, changing the impedance of
> either pathload changes their sum, and the amount of the power delivered
> as a "vector sum". Even if you don`t have a match, it changes whatever
> match existed.
>
> My characterization was true enough. Roy`s response is more testimony,
> although unintended, that the differential and common modes are truly
> related.
>
> Best regards, Richard Harrison, KB5WZI
>

1093. Re: Oliver Heaviside

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-14 06:01:58 UTC
From: tdonaly@aol.com
Message-ID: <20020714020158.12825.00000662@mb-fy.aol.com>
Source record: 138684

>
>Reg,
>I Like this quote about heaviside: Such unorthodox techniques did not
>make it easy to follow Heaviside's mental processes, and to one
>scientist who protested that his papers were very difficult to read he
>made the now classic retort: "That may well be but they were much more
>difficult to write."
>Scott
>

Heaviside was a genius. A genius is just a crackpot who's right. Despite Heavisides undoubted contributions to physical theory, you won't find his name taking up much space in the mathematical history books.

Tom Donaly KA6RUH

1094. How To Measure Antenna Impedance?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-14 06:09:24 UTC
From: bytebird@yahoo.com
Message-ID: <af0d9f14.0207132209.27ad6847@posting.google.com>
Source record: 138685

I'm building an antenna (helix) and I need to measure its impedance
(freq < or = 900 Mhz).

How do I do this? I don't need a lot of accuracy (< or = 10%). Plus
I'm willing to use an instrument that isn't an impedance bridge, say a
grid-dip meter or Q meter

Thank you

Steve

1095. Re: building a 170 mhz yagi

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-14 07:01:22 UTC
From: nm5k@wt.net
Message-ID: <25eb70d7.0207132301.bbef6cb@posting.google.com>
Source record: 138686

jasonporter@sympatico.ca (Jason Porter) wrote in message
news:<a592a30a.0207130741.654fe921@posting.google.com>...
> Hi all,
>
> I'm a sound recordist in TV and film, and I use wireless mics for a
> lot of my work. I want to improve the reception of my wireless
> receivers (in the 170 mhz area) by using a yagi antenna. Does anyone
> know where I can get plans to build one? I have good knowledge of
> contruction, but not the math.
>
> Thanks,
>
> -Jason

You could download a modeling program such as the eznec demo and convert the existing NBS yagi to 170 mhz. I doubt there will be many plans for a yagi that frequency. Myself, I once built a 4 el yagi for exactly 170 mhz to listen to a local NASA feed from JSC. I ran the 3 el NBS converted to 170 mhz.
The reflector would be 33.89 inches.
The driven element would be 32.34 inches.
The director would be 32.01 inches.
From the reflector to driven element, the spacing would be 13.9 inches.
From the reflector to the director, the spacing would be 27.8 inches.
Feed with whatever matching device you desire. I usually use gamma matches as they are simple, and I haven't had any problems with them. 1/4 inch rod would be a good match to those dimensions. You could make the whole thing welded as one piece out of copper tubing if you have a torch. I built a 50 mhz 3 el yagi that way.

MK

1096. Re: building a 170 mhz yagi

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-14 09:20:27 UTC
From: k7itm@aol.com
Message-ID: <3200347.0207140120.6cee3b45@posting.google.com>
Source record: 138687

If you do a web search for something like "2 meter yagi design" you should get lots of hits. Just scale all the dimensions by the ratio of design-frequency/your-frequency. For ratios near unity, you shouldn't have to worry about the element diameters, just scale the lengths and spacings.

Here's one of the hits I got:
http://home.att.net/~dale.keller/ham/antenna/yagi3.htm

Cheers,
Tom

jasonporter@sympatico.ca (Jason Porter) wrote in message news:<a592a30a.0207130741.654fe921@posting.google.com>...
> Hi all,
>
> I'm a sound recordist in TV and film, and I use wireless mics for a
> lot of my work. I want to improve the reception of my wireless
> receivers (in the 170 mhz area) by using a yagi antenna. Does anyone
> know where I can get plans to build one? I have good knowledge of
> contruction, but not the math.
>
> Thanks,
>
> -Jason

1097. Re: Magloops + Simple Variable capacitor

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-14 09:39:53 UTC
From: Reg Edwards <g4fgq.regp@btinternet.com>
Message-ID: <agrgt8$of6$1@paris.btinternet.com>
Source record: 138688

> Would
> reqire the use of a MAPP gas or similar torch but the resistance of
> the joint would be lower than the copper tubing.
==========

How much lower ? Approximate ohms.
Reg.

1098. Re: BACK TO BASICS - EM waves, E and H fields, in phase orinquadr...

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-14 10:46:30 UTC
From: 2w8ji@contesting.com
Message-ID: <3d31555f.253217755@news.akorn.net>
Source record: 138689

On Sat, 13 Jul 2002 11:59:44 -0500 (CDT), richardharrison@webtv.net
(Richard Harrison) wrote:

>A posting from Tom, W8JI dated Sun,Jul 7,2002, 2:36am, arrived on my
>screen a few minutes ago. Mysterious cyber processing!

My server is really messed up. I don't get half the usenet messages
for many days, while some appear right away.

Maybe it is a system wide problem.

>The feedline acting as an unbalanced antenna has a feedpoint impedance.
>It has a radiation-resistance and usually reactance too. It takes most
>power when matched to its source. Adding the inductance of a common-mode
>choke balun could offset some of the capacitive reactance of a too-short
>length for increased current input and increased radiation.
>Indiscriminate application of a choke balun is no panacea for feedline
>radiation.

Which is my point all along. What you do to the differential system is
totally different than the effects on the common mode system.

That is why your Ohms Law and power formulas used to calculate common
mode voltage exciting the balun won't work.

73 Tom

1099. Re: BACK TO BASICS - EM waves, E and H fields, in phase orinquadr...

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-14 10:49:26 UTC
From: 2w8ji@contesting.com
Message-ID: <3d315665.253479269@news.akorn.net>
Source record: 138690

On Sat, 13 Jul 2002 13:20:24 -0500 (CDT), richardharrison@webtv.net
(Richard Harrison) wrote:

>In the arrangements discussed, the common-mode signal is a product of
>the differential mode signal. When changing one voltage causes another
>to change, they are related by most reasonable definitions.
>
>Best regards, Richard Harrison, KB5WZI

That logic gets you in trouble. That is why you calculated the WRONG
answer using formulas than can't be applied to the system, even
through the formulas are correct by themselves.

73 Tom

1100. Re: BACK TO BASICS - EM waves, E and H fields, in phase orinquadr...

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-14 11:06:45 UTC
From: 2w8ji@contesting.com
Message-ID: <3d3157ec.253870759@news.akorn.net>
Source record: 138691

On Sat, 13 Jul 2002 22:26:43 -0700, Roy Lewallen <w7el@eznec.com>
wrote:
>
>No, not in the accepted sense of the term. Why?
>
>You realize, of course, that your diagram doesn't include all the loads.
>
>Roy Lewallen, W7EL

I have no more time for this Roy and Ian, but I appreciate your input.
I've come to the following conclusion.

Some of us realize there is no need for a physical path to ground
through a conductor to excite a feedline with common mode, some of us
won't even get to that point and think a dipole or other antennas can
be *perfectly* balanced or *perfectly* unbalanced without extreme
measures when in fact virtually all antenna systems are someplace well
between the two extremes.

My point was only that the common mode impedance and voltage in a
system is not related (or directly related if you prefer) to the
differential mode impedance and voltage, to which some others take
great exception despite mountains of examples where it can be shown
changing one might move the other in the opposite direction, the same
direction, or might not change the other at all!

In my mind, when the effects are such we are better off to start from
the view the effects are not related, than to start making wrong
assumptions that changing one always changes the other is a
predictable manner. Since some people refuse to believe that despite
direct examples, because they can think of ONE or even a few cases
where something seems to happen the way they want.

I've concluded it a lot like convincing my wife the wipers on my truck
are NOT swinging in time to the music on the radio and are not
related, while she argues that if I remove the battery or turn off the
key they both quit and that proves they are.

73 Tom

1101. Re: Multi-band roof-mounted vertical fed with 450 ohm ladderline

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-14 11:11:24 UTC
From: 2w8ji@contesting.com
Message-ID: <3d315b6b.254765949@news.akorn.net>
Source record: 138692

On Sun, 14 Jul 2002 04:48:59 GMT, 'Doc <w5lz@icok.net> wrote:

>
>
>CAM,
> And exactly what does that have to do with the
>question asked? Nothing. And that 'proves' my point.
> 'Doc

Dr. Webster likes to disrupt threads, because the main goal here is to
not help people but to start arguments about verbage.

I'm afraid the days of giving a simple answer or having a technical
converstion are over....unless we all get out our copies of Websters.

73 Tom

1102. Re: Multi-band roof-mounted vertical fed with 450 ohm ladderline

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-14 11:20:20 UTC
From: 2w8ji@contesting.com
Message-ID: <3d315c31.254963861@news.akorn.net>
Source record: 138693

On Sat, 13 Jul 2002 06:48:53 -0700, Dan Richardson
<k6mhe@mendolink.com> wrote:

>However at 15 meters the current magnitudes varied by 43% and the
>phase differential as only 82��. Ugh, lousy!
>
>Neat thing about modeling; you can check things out if you take the
>time to do it.

.....and if we vary the feedline length you can move the problem
around also.

The only balanced antenna on all bands is a perfectly balanced dipole
with a balanced feedline leaving for a long distance at exact right
angles at the antenna center, fed by a balanced source.

The other extreme is a perfectly unbalanced antenna, like a monopole
over an infinite groundplane with an unbalanced feedline extending
below the groundplane.

What often helps me is to think of the two extremes, and try to stay
as close to the desired one as possible.

Think about all the people who go around telling others that a
groundplane only needs two radials, when a groundplane even with four
radials can have significant common mode current on the feedline if we
aren't careful. We have to be careful because these systems are really
more complex than they appear.

73 Tom

1103. Re: Magloops + Simple Variable capacitor

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-14 11:30:39 UTC
From: 2w8ji@contesting.com
Message-ID: <3d315e7e.255552911@news.akorn.net>
Source record: 138694

On Sat, 13 Jul 2002 18:15:54 +0000 (UTC), "Reg Edwards"
<g4fgq.regp@btinternet.com> wrote:

>
>Wiping capacitor contacts of good design don't cause much loss either.

Having actually measured loops, I disagree with that totally.

You will play hell finding a low ESR air variable capacitor, and have
an even worse time homebrewing one unless you know what you are doing.

The capacitor must have a very short length of current path, and have
the multiple plates in parallel so the resistance and inductance of
the plates are minimized. Also, most wipers in most capacitors are
pathetic in series connection resistance. While they are OK at a few
amperes normally found in high power amplifiers with modest Q tank
circuits, they are not adequate in circuits carrying dozens or
hundereds of amperes.

>There are two rotating disks, one mounted near each end of the rotor shaft.
>Bearing on each disk are two, fixed, short, fairly strong leaf springs.
>There can be 12 or more sliding contacts all in parallel, 6 near each end of
>the shaft. The two sets of spring forces tending to move the shaft along its
>axis balance each other out.

Multiple sliding contacts with considerable pressure are certainly OK,
but a single disc for each plate is generally not a good idea unless
you hardly need any capacitance. Single band loops are very forgiving
for capacitor design if you make they large enough, but multiband
loops require a large specially designed component if reasonable
low-end efficiency is to be expected.

73 Tom

1104. Re: Magloops + Simple Variable capacitor

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-14 11:45:33 UTC
From: 2w8ji@contesting.com
Message-ID: <3d3160bf.256129874@news.akorn.net>
Source record: 138695

On Sat, 13 Jul 2002 12:37:17 -0700, Roy Lewallen <w7el@eznec.com>
wrote:

>Tom, do you have any feel for what the loss mechanisms are for the air
>dielectric capacitor?
>
>Roy Lewallen, W7EL

Partially.

I have melted connections and turned bearings blue in nomal air
variables at fairly low power (100 watts in a three foot diameter loop
on 14 MHz). While this might not indicate a large percentage of power
is initially lost in that area, it does cause the system to stop
working.

Swaping in different capacitors, field strength increases while feed
impedance and bandwidth decrease when the capacitor is more "square"
or compact in physical area without long rotor and stator shafts.

I've seen a general trend that the longer and thinner the capacitor of
a given construction, the worse they behave. I assume that is because
we are adding series inductance as well as resistance. It is a double
hit!!

I liken it to the difference between a multilayer chip capacitor with
a Q of 50,000 or more, and a ceramic door knob with a Q of several
hundred. Same materials, different physical layouts.

A capacitor tester I constructed actually was just a small loop in a
shielded box made from PC board material. Loops are great for testing
capacitors!

73 Tom

1105. Re: Magloops + Simple Variable capacitor

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-14 12:00:55 UTC
From: kelly@dvol.com
Message-ID: <d22b54c3.0207140400.38027c11@posting.google.com>
Source record: 138696

Mike Coslo <mcoslo@adelphia.net> wrote in message news:<3D312A04.6050605@adelphia.net>...
> Brian Kelly wrote:
>
>
> > Silver solder the joints instead of lead/tin soldering them. Would
> > reqire the use of a MAPP gas or similar torch but the resistance of
> > the joint would be lower than the copper tubing.
>
> Which makes me wonder if anyone has ever made a loop out of silver? 8^)
>
> - Mike KB3EIA -
>
>
All the copper loop components can be silver plated before they're
fabricated into an antenna then the joints can be silver soldered
(sometimes called silver brazed). Since RF only flows on the surfaces
of conductors the net effect would be the same as using solid silver
components - at a huge cost savings.
>
>
The other advantage of silver being that as time goes on and antenna
surface oxidation creeps into the picture silver oxide is a good
conductor whereas copper oxides are not. This advantage of silver is
far more useful in reducing losses over the life of an antenna and
it's tuning cap parts than is the small increment of additional
conductance of silver vs. copper.
>
>
There is nothing new about any of it. There were a lot of
silver-plated components in the WW2 surplus radios I used to kick off
my ham career. Many of the old-time hams silver-plated the tank coils
of their big homebrewed amps. Particularly at vhf/uhf freqs where the
"layer of RF" is very thin on the conductors.
>
>
Setting up a basement silver plating tank is not a difficult task.
>
>
w3rv

1106. Re: Magloops + Simple Variable capacitor

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-14 12:02:50 UTC
From: 2w8ji@contesting.com
Message-ID: <3d31641a.256988944@news.akorn.net>
Source record: 138697

On Sun, 14 Jul 2002 04:36:47 GMT, Mike Coslo <mcoslo@adelphia.net>
wrote:

>Brian Kelly wrote:
>
>
>> Silver solder the joints instead of lead/tin soldering them. Would
>> reqire the use of a MAPP gas or similar torch but the resistance of
>> the joint would be lower than the copper tubing.
>
> Which makes me wonder if anyone has ever made a loop out of silver? 8^)

The resistance difference between silver solder and lead-tin solder is
negligable, there is very little silver in most silver solder.

Even if it was all silver, the connection current path LENGTH is so
short it does not matter at all.

The thing to keep in mind Mike is everything should be looked at as a
percentage of the overall system resistance in the loop element. As in
mobile antennas, you sometimes chase problems around. Most important,
there are limits as to how much you need to worry about each
component.

For example, you see large copper tubing coils on some mobiles on 75
meters. But the ground resistance, in series with that system, is in
the order of several ohms or higher. A number ten wire would not have
a discernable difference in a mobile antenna, because the SYSTEM loss
resistanbce is so high it swamps out the ESR change in the coil.

In your small loop, the two primary concerns are conductor current
area in the LONG loop itself, and the capacitor. With even a
reasonable sized conductor like 1/2 inch aluminum, the capacitor
becomes the main problem in a small loop. Improve the capacitor, and
then the conductor can be the problem...but it is mostly a surface
area issue rather than a material issue (unless you use something
silly like steel tubing).

Use a smooth large-diameter round conductor that you can work with (I
use aluminum because I can weld it, you might want copper because you
can solder it), and pick a good capacitor. You might look for a
surplus vacuum variable capacitor, if you can build a very good clamp
for connections.

Keep the loop as large as possible, and problems with resistance will
be less important!

Actually if you want to work only one band, a short loaded diople is much easier to make more efficient than a similar size loop.

73 Tom

1107. Re: eh antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-14 12:04:54 UTC
From: 2w8ji@contesting.com
Message-ID: <3d31685c.258079369@news.akorn.net>
Source record: 138698

On Sat, 13 Jul 2002 09:43:45 -0500, CAM <w5dxp@hotmail.com> wrote:

>Tom W8JI wrote:
>> I hope all illegal and dishonest pirate scum use EH antennas.
>
>And I hope that they all believe that common mode conditions
>are not related to differential mode conditions. :-)
>--

I know you are a horse's ass Cecil. You don't need to keep showing it
off.

1108. Re: Multi-band roof-mounted vertical fed with 450 ohm ladderline

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-14 12:09:42 UTC
From: CAM <w5dxp@hotmail.com>
Message-ID: <3D316A06.1E40889F@hotmail.com>
Source record: 138699

'Doc wrote:
>
> CAM, And exactly what does that have to do with the
> question asked? Nothing. And that 'proves' my point.

Well, exactly what does your posting have to do with the
question asked? :-)
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
------== Over 80,000 Newsgroups - 16 Different Servers! =-----

1109. LQQING for article on Bobtail

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-14 12:35:59 UTC
From: ardujenski@aol.com
Message-ID: <20020714083559.01942.00000389@mb-mq.aol.com>
Source record: 138700

Can someoneprovide me with a copy of an article (I will reimburse) or let me know where I can get a copy:

"Rotate the Bobtail Curtain"; Jerrold A. Swank, W8HXR; 73, May 1985, p.48
(A clever method of switching the half square's pattern to end fire using a quarter wave stub)

Thanks Alan KB7MBI in Woodinville, WA

1110. Re: BACK TO BASICS - EM waves, E and H fields, in phase orinquadr...

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-14 12:42:26 UTC
From: CAM <w5dxp@hotmail.com>
Message-ID: <3D3171B2.FE691870@hotmail.com>
Source record: 138701

Roy Lewallen wrote:
>
> CAM wrote:
> > Aren't I1 and I2 in series?
> >
> > +---I1->-+
> > | |
> > Source differential Load
> > | |
> > +---<-I2-+ X
|
-----------------------------<-I3-+

> No, not in the accepted sense of the term. Why?

With the source placed at the load, the currents in and out of the source
and in and out of the load seem to be in series. Add a transmission
line, and the currents in and out are no longer in series?

> You realize, of course, that your diagram doesn't include all the loads.

It includes the conceptual differential load for the conceptual differential
currents. I added the I3 current path above. How can I1 equal I2 in magnitude
with opposite phase and also satisfy the equation I1 = I2 + I3?
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

1111. Re: BACK TO BASICS - EM waves, E and H fields, in phase orinquadr...

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-14 12:52:10 UTC
From: richardharrison@webtv.net
Message-ID: <19145-3D3173FA-120@storefull-2391.public.lawson.webtv.net>
Source record: 138704

Roy Lewallen, W7EL wrote:
"(Aren`t I1 and I2 in series?) No, not in the accepted sense. Why? You realize, of course, that your diagram doesn`t include all the loads."

Roy, Cecil`s diagram framed his question. The answer is yes. The currents are differential, not common-mode. Common-mode currents have the same direction in both wires.

Best regards, Richard Harrison, KB5WZI

1112. Re: BACK TO BASICS - EM waves, E and H fields, in phase orinquadr...

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-14 13:05:44 UTC
From: CAM <w5dxp@hotmail.com>
Message-ID: <3D317728.FC711BC@hotmail.com>
Source record: 138702

Tom W8JI wrote:
> In my mind, when the effects are such we are better off to start from
> the view the effects are not related, than to start making wrong
> assumptions that changing one always changes the other is a
> predictable manner.

Uhhhhhh, Tom, assuming the effects are not related *IS* a wrong
assumption.

There you go railing again. I have never said that changing one
always changes the other. I have better sense than to use the word
"always" in a sentence like that. What you have tried to tell us
is that changing one never changes the other which would be a true
statement if they were truly unrelated. But you and I both know
that changing one often changes the other which proves that they are
related in some manner. That you are sometimes ignorant of the
exact relationship doesn't mean that they are unrelated. It just
means that you are ignorant.

What you are saying is that you would rather start off in error
and correct your error along the way. That's one approach but
please don't try to convince us that your error is really not
an error. If you were correct, common mode conditions would be
unrelated to differential mode conditions and it wouldn't be
possible to make any improvements since they are unrelated. If
they were really unrelated, you couldn't possibly be a common
mode expert, now could you?
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
------== Over 80,000 Newsgroups - 16 Different Servers! =-----

1113. Re: Multi-band roof-mounted vertical fed with 450 ohm ladderline

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-14 13:11:59 UTC
From: 'Doc <w5lz@icok.net>
Message-ID: <3D317890.5310B6E8@icok.net>
Source record: 138703

CAM,
Which one? The one where I tried to answer the
question? Or the ones after that one where I ask
you and Dan to at least stick to the topic?
And I think we've all wasted enough time and
bandwidth on this.
'Doc

PS - Tom, I think you're right.

1114. Re: Multi-band roof-mounted vertical fed with 450 ohm ladderline

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-14 13:13:46 UTC
From: CAM <w5dxp@hotmail.com>
Message-ID: <3D31790A.34B16B65@hotmail.com>
Source record: 138705

Tom W8JI wrote:
> I'm afraid the days of giving a simple answer or having a technical
> converstion are over....unless we all get out our copies of Websters.

What good does it do to have a technical conversation using erroneous
definitions? Erroneous conclusions would be the only possible outcome.
God already confounded the languages once. He doesn't need any help
from you.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

1115. Re: eh antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-14 13:26:56 UTC
From: CAM <w5dxp@hotmail.com>
Message-ID: <3D317C20.D671D92@hotmail.com>
Source record: 138706

Tom W8JI wrote:
>
> On Sat, 13 Jul 2002 09:43:45 -0500, CAM <w5dxp@hotmail.com> wrote:
>
> >Tom W8JI wrote:
> >> I hope all illegal and dishonest pirate scum use EH antennas.
> >
> >And I hope that they all believe that common mode conditions
> >are not related to differential mode conditions. :-)
>
> I know you are a horse's ass Cecil. You don't need to keep showing it
> off.

Got any idea what :-) means, Tom? Your statements differ only in
degree, not kind, from the EH antenna statements, and trying to cover
up an error is another error.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
------== Over 80,000 Newsgroups - 16 Different Servers! =-----

1116. Radial/Ground Plate

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-14 13:34:50 UTC
From: Gary Boyer <gboyer@columbus.rr.com>
Message-ID: <_5fY8.164513$%U3.4925614@twister.columbus.rr.com>
Source record: 138707

Does anyone have any suggestions on a ground plate that you can attach your radials....the plate would be used to tie the radials to a hustler 6btv vertical..tnx...Gary..K8BY

1117. Re: Radial/Ground Plate

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-14 13:57:35 UTC
From: CAM <w5dxp@hotmail.com>
Message-ID: <3D31834F.53DF2C55@hotmail.com>
Source record: 138708

Gary Boyer wrote:
> Does anyone have any suggestions on a ground plate that you can attach your
> radials....the plate would be used to tie the radials to a hustler 6btv
> vertical..tnx...Gary..K8BY

I don't use a plate, per se, just a loop of large copper wire to which I
can solder radials and the coax shield.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

1118. Re: Magloops + Simple Variable capacitor

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-14 14:18:01 UTC
From: "Ian White, G3SEK" <G3SEK@ifwtech.co.uk>
Message-ID: <BDPKPwGZgYM9EAc5@ifwtech.co.uk>
Source record: 138709

Reg Edwards wrote:
> Does the resistance of the solder
>> joints really make that much difference?
>==========
>Only to old wives.
>
>Soldered-together copper pipes obey ohms law just like any other resistances
>in series.
>
>A few little micro-ohms in series with 10's of milliohms don't make much
>difference.

Quite right - the resistivity of solder is about 10 times that of copper, but the amount of solder surface is only about one percent of the total circumference (unless someone is making very messy joints).

Alternatively, why not look for some scrap offcuts of large semi-rigid coax? The outer is corrugated solid copper, very easy to bend into the size of loop you want, and then almost self-supporting. It's also vinyl jacketed to keep the copper clean and bright.

With so much cellular base station installation going on, there are lots of scrap ends going straight into the dumpster, so you should be able to get it for nothing. This is usually the "seven-eighths" size, which is actually about 1.2in overall diameter.

Ignore the inside, and treat it as cheap, flexible copper tubing.

--
73 from Ian G3SEK Editor, 'The VHF/UHF DX Book'
'In Practice' columnist for RadCom (RSGB)

1119. Re: BACK TO BASICS - EM waves, E and H fields, in phase orinquadr...

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-14 16:12:47 UTC
From: "William E. Sabin" <sabinw@mwci-news>
Message-ID: <3D31A2FF.8080006@mwci-news>
Source record: 138710

William E. Sabin wrote:

> Ian White, G3SEK wrote:
>
>>
>>
>> Why? Because it's fundamentally, irretrievably asymmetrical! One leg
>> of the dipole is connected only to one conductor (coax inner) but the
>> other leg is connected to two - the inside and outside of the shield,
>> which operate as two independent conductors because of the skin effect.
>>
>> Immediately you connect the coax, current flows on to the outside of
>> the shield and it becomes part of the radiating system - just as if
>> you'd connected another wire to that side of the feedpoint.
>
>
>
>
> Imagine a coax with a resistor connected across the far end. The current
> will return via the inner surface of the shield, regardless of the
> impedance of the outer surface of the shield.
>
> Reason: Maxwell's equation curl H = J (neglect the dE/dt as irrelevant
> within the shield). This law says in a roundabout way that in order for
> the H field to be zero within the shield the magnetic flux linkages at
> the inner surface due to the center wire and the magnetic flux linkages
> due to the return current on the inner surface must be equal and in
> opposite directions. See also Terman 1955 page 22, which states
> (equivalently) that "the general principle is that current flows where
> it is encircled by the smallest number of flux lines". This can be true
> only if the current returns via the inner surface.
>
> The idea that the division of current is according to the impedance of
> the outside surface of the braid, is basically and fundamentally
> incorrect. There is more than just Ohm's law involved here. Intuitions
> fail in this situation.
>
> The current on the outside is due entirely to electromagnetic coupling
> from the antenna elements.
>
> Furthermore, another Maxwell equation says that the divergence of B =
> zero, which leads to the conclusion that current flows only in closed
> paths. This means that the common mode current that flows into a ground
> connection must find its way back to the antenna by some means, usually

> by electromagnetic induction (transformer action). If the antenna is
> highly isolated from "ground", as in space, there is no common mode
> current into a "ground" connection, and only the generator platform,
> transmission line and antenna are the closed path for common mode current.
>
> The example above referred to a resistor across the end of the coax.
> The situation for the dipole is no different, if electromagnetic
> coupling from dipole elements to coax outer surface is treated
> separately (superposition applies).
>
> Bill W0IYH

There is another error that is being repeated. The coax circuit is being modeled as a coax in conjunction with a "wire" that is somehow external to the coax and operating independently of the coax. The common mode current is assumed to flow in that wire and to be unassociated with the inside of the coax.

This external, independent wire idea is prevalent and is not correct, and leads to misunderstandings. A common mode current that flows on the outer surface produces a common mode voltage along the outer surface. This voltage is *transformer-coupled* to the center wire and constitutes an almost identical common mode voltage along the center wire. This transformer action is greatly enhanced by the presence of a current balun. In fact, that is one of the main features of the current balun: it inhibits the conversion of a common mode voltage *along* the length of the coax into a differential mode voltage *across* the coax. Without this transformer coupling, that is exactly what would happen.

The outside of the coax and the inside of the coax are not, and cannot be regarded as, separate and isolated entities. Coax is not that simple.

Bill W0IYH

1120. Re: Magloops + Simple Variable capacitor

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-14 16:21:56 UTC
From: kelly@dvol.com
Message-ID: <d22b54c3.0207140821.39d272d6@posting.google.com>
Source record: 138711

"Reg Edwards" <g4fgq.regp@btinternet.com> wrote in message
news:<agrgt8$of6$1@paris.btinternet.com>...
> > Would
> > reqire the use of a MAPP gas or similar torch but the resistance of
> > the joint would be lower than the copper tubing.
> ====================================
>
> How much lower ? Approximate ohms.
> Reg.
>
>
The guy asked, I answered. Correctly.
>
>
0.001 Ohms per stone.
>
>
But then there's also the matter of the resistances of the oxidation
products of both copper and wiped lead/tin soldered joints. Aluminum
is even worse in this respect eh?
>
>
w3rv

1121. Re: Radial/Ground Plate

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-14 16:30:19 UTC
From: 'Doc <w5lz@icok.net>
Message-ID: <3D31A70B.3C9D0F5A@icok.net>
Source record: 138712

Gary,
I don't think it would be too critical at all,
and almost anything would work. I'm not familiar
with what the base of your antenna looks like, but
if there's a bolt on the 'ground' portion of the
antenna, that should work for a connecting point.
'Doc

1122. Re: Radial/Ground Plate

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-14 16:39:31 UTC
From: Gary Boyer <gboyer@columbus.rr.com>
Message-ID: <7PhY8.164638$%U3.5056195@twister.columbus.rr.com>
Source record: 138713

Hi CAM..tnx for the suggestion..I am not clear on your circle of heavy copper wire....how do you support the wire as it goes in a circle....just curious as to how many radials you have soldered to this copper wire..tnx again....Gary..K8BY
"CAM" <w5dxp@hotmail.com> wrote in message news:3D31834F.53DF2C55@hotmail.com...
> Gary Boyer wrote:
> > Does anyone have any suggestions on a ground plate that you can attach your
> > radials....the plate would be used to tie the radials to a hustler 6btv
> > vertical..tnx...Gary..K8BY
>
> I don't use a plate, per se, just a loop of large copper wire to which I
> can solder radials and the coax shield.
> --
> cheers, CAM http://www.qsl.net/w5dxp
>
>
> -----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
> http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
> ------== Over 80,000 Newsgroups - 16 Different Servers! =-----

1123. Re: Radial/Ground Plate

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-14 16:42:07 UTC
From: Gary Boyer <gboyer@columbus.rr.com>
Message-ID: <zRhY8.164649$%U3.5057636@twister.columbus.rr.com>
Source record: 138714

DOC..I probably was not very clear...yes...that particular vertical does have a bolt...but I think it would just look neater to have the radials fastened to a circular type plate..are you using a vertical ? Tnx agn...Gary..K8BY
"'Doc" <w5lz@icok.net> wrote in message news:3D31A70B.3C9D0F5A@icok.net...
>
>
> Gary,
> I don't think it would be too critical at all,
> and almost anything would work. I'm not familiar
> with what the base of your antenna looks like, but
> if there's a bolt on the 'ground' portion of the
> antenna, that should work for a connecting point.
> 'Doc

1124. Re: BACK TO BASICS - EM waves, E and H fields, in phase orinquadr...

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-14 16:44:54 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <5ea3jukg6nivfnes448nut5hpnfrkb9cef@4ax.com>
Source record: 138715

On Sun, 14 Jul 2002 07:42:26 -0500, CAM <w5dxp@hotmail.com> wrote:

```
>> > +-------------------------------------------------I1->-+
>> > | |
>> > Source differential Load
>> > | |
>> > +-------------------------------------------------<-I2-+ X
> |
> ----------------------------<-I3-+
>
```

snip

```
>It includes the conceptual differential load for the conceptual differential
>currents. I added the I3 current path above. How can I1 equal I2 in magnitude
>with opposite phase and also satisfy the equation I1 = I2 + I3?
>--
>cheers, CAM http://www.qsl.net/w5dxp
>
```

Hi Cecil,

To satisfy Kirchhoff, "where" is the current I3 flowing to? AND how
does it get back? Otherwise your question:

```
> How can I1 equal I2 in magnitude
>with opposite phase and also satisfy the equation I1 = I2 + I3?
```

is simply reduced to I3 = 0 (already illustrated); but then why add a
nonconducting wire to the problem?

73's
Richard Clark, KB7QHC

1125. Re: BACK TO BASICS - EM waves, E and H fields, in phase orinquadr...

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-14 16:45:54 UTC
From: richardharrison@webtv.net
Message-ID: <9163-3D31AAC2-3@storefull-2398.public.lawson.webtv.net>
Source record: 138569

Tom, W8JI wrote:
"---your Ohm`s Law and power formulas used to calculate common mode voltage exciting the balun won`t work."

The power formulas are Ohm`s law. Ohm says:
I = E/R
Power in a resistance is ExI.
To make Ohm`s law give power it is necessary to multiply both sides of the Ohm`s equation by E. Everybody knows we can do this without changing the equation.
Immediately you have ExI = ExE/R. Restated, Power = E squared over R.

When excitation of one circuit is produced by energy in another circuit, the coupling (relation) between the circuits is determined by measuring the current in the exciting circuit and the voltage produced across a second circuit which is caused by the current in the exciting circuit. The ratio of voltage to current measured as described is called mutual impedance and is a natural Ohm`s law expression.

Note that when a large current in the exciting circuit is needed to make a small voltage across the remote excited circuit, the ratio of E/I is very small. This means the coupling is small.

I`ve lost count of the number of times I`ve tried to explain mutual impedance, a measure of coupling and the relation between circuits.

If mutual impedance seems difficult to grasp, look for it in any good electrical text. Many include it and likely explain it better than I.

Best regards, Richard Harrison, KB5WZI

1126. Re: Multi-band roof-mounted vertical fed with 450 ohm ladderline

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-14 16:51:39 UTC
From: 2w8ji@contesting.com
Message-ID: <3d31ab86.275275954@news.akorn.net>
Source record: 138716

On Sun, 14 Jul 2002 13:11:59 GMT, 'Doc <w5lz@icok.net> wrote:

>
>
>CAM,
> Which one? The one where I tried to answer the
>question? Or the ones after that one where I ask
>you and Dan to at least stick to the topic?
> And I think we've all wasted enough time and
>bandwidth on this.
> 'Doc
>
>PS - Tom, I think you're right.

I think so. Something has happened to Cecil, and his main goal is to
cause problems or start arguments.

maybe Chip is bootlegging his name?

1127. Re: eh antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-14 16:55:22 UTC
From: 2w8ji@contesting.com
Message-ID: <3d31ac24.275433896@news.akorn.net>
Source record: 138717

On Sun, 14 Jul 2002 08:26:56 -0500, CAM <w5dxp@hotmail.com> wrote:

>Got any idea what :-) means, Tom? Your statements differ only in
>degree, not kind, from the EH antenna statements, and trying to cover
>up an error is another error.

I'll tell you what.

I'll go away from this group, and you can have fun with someone else.

I find it so irritating that this just isn't worth my time any more. I
can fight with assholes like you in any bar, if that is what I want to
do with my time.

1128. Re: Matching coil vs antenna length - mobile antenna - The results

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-14 16:57:44 UTC
From: KA8DDZ <ka8ddz@hotmail.com>
Message-ID: <c4iY8.321$1_3.73284662@newssvr16.news.prodigy.com>
Source record: 138718

I intalled a standard 102" stainless steel whip and then began working from the inside of the ball mount with a 10 turn coil to ground, the coil came from the tank circuit of an old Swan 500 (parts chassis).

About 2 1/2 to 3 turns netted me an swr dip but only brought it down to 3:1, that was at the high end of the band.
I added a 6" solid piece to the base of the antenna and then checked swr, now dropped to about 1.6:1 but at the high end of the band.
Adding the spring to the system dropped it even lower now about 1.6:1 at 50.3 where I want it to be. The SWR goes up in both directions from 50.3.

With the current installation I have seen significant gain on tx and rx, a huge difference in recieved signal if the swr is above 2:1.

The next move will be to add a trimmer cap to flatten it out completly I hope, so far I am very pleased with the performance over the original 1/4 wave, although it was MUCH smaller. Thanks for all the input, there is alot more experimenting to be done.

Having spent several months now on 6, running simplex only to the house (usually) I have found that the weather and not just rain or sunshine have a significant effect on signal strenth from the fringe areas, cool clear days can improve the signal by what seems like 15db or more. Humid days=more signal loss, rainy days=huge signal loss. Has anyone else experienced this? Im talking about line of site or groundwave only.

Base antenna is a 5/8 wave wire vertical with 3 radials, mobile is the 1/2 wave, both stations running about 20w. Good communications up to about 20miles which may not seem like much but the local terrain is very hilly within a 10 mile radius of the base station.

Tim

1129. Re: BACK TO BASICS - EM waves, E and H fields, in phase orinquadr...

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-14 17:23:47 UTC
From: richardharrison@webtv.net
Message-ID: <17988-3D31B3A3-150@storefull-2396.public.lawson.webtv.net>
Source record: 138570

Tom, W8JI wrote:
"I`ve concluded it a lot like convincing my wife the wipers on my truck are NOT swinging time to the music on the radio and are not related, while she argues that if I remove the battery or turn off the key they both quit and that proves they are."

That is a different argument. Tom`s wipers don`t supply power to his radio, and it is unlikely that his radio supplies power to the wipers. They can be switched on or off independently.

We can`t switch off our differential r-f power and not switch off our common-mode power. Common-mode in our examples relies upon differential-mode as its source.

It is absurd to claim a proven cause to effect is unrelated, yet that claim endures in this thread.

Best regards, Richard Harrison, KB5WZI

1130. Re: Magloops + Simple Variable capacitor

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-14 17:42:27 UTC
From: Juerg Tschirren <juerg-tschirren@uiowa.edu>
Message-ID: <agsd63$d0h$1@server05.icaen.uiowa.edu>
Source record: 138578

If you have the ARRL Antenna Book, 19th Edition, open it on pages 5-10 and 5-11 and take a look at Eqns. 13 and 14. If you have an older edition look for "army loop" in the index, you may find it this way. If you don't have any edition of the book, buy it, it's well worth its price :-)

There you see that a radiation resistance R_r of 100 mOhm (0.1 Ohm) is quite realistic on the 20 m band. And with a loss resistance R_l of 1 mOhm (note: 1 mOhm and not 100 mOhm like you wrote) we do get about 1% loss ["about", because it's not linear, loss [%] = 100*R_r/(R_r + R_l)].

Juerg
AB0WH

ZOOM wrote:

> 100 mohms 1%?
> Please quote your source. I have never heard of this and would like to
> see where this spec came from since every loop is different, I can't see
> how this can generalize into a 1% loss in efficiency per every 100mohms of
> resistance. Now just because I never heard of it doen't mean it's not
> true but I would find it an interesting read to discover how they came up
> with this measurement.
>
> Robert
> VE3RPF

1131. Re: BACK TO BASICS - EM waves, E and H fields, in phase orinquadr...

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-14 17:47:14 UTC
From: CAM <w5dxp@hotmail.com>
Message-ID: <3D31B922.E8ABBAD3@hotmail.com>
Source record: 138571

"William E. Sabin" wrote:
> This external, independent wire idea is prevalent
> and is not correct, and leads to
> misunderstandings. A common mode current that
> flows on the outer surface produces a common mode
> voltage along the outer surface. This voltage is
> *transformer-coupled* to the center wire and
> constitutes an almost identical common mode
> voltage along the center wire.

So what we have been told about coax, that the physics of the coax forces the current on the center conductor to be equal to and 180 degrees out of phase with the current on the inside of the braid, is not true?
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

1132. Re: Radial/Ground Plate

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-14 17:50:27 UTC
From: CAM <w5dxp@hotmail.com>
Message-ID: <3D31B9E3.B836BC86@hotmail.com>
Source record: 138572

Gary Boyer wrote:
>
> Hi CAM..tnx for the suggestion..I am not clear on your circle of heavy
> copper wire....how do you support the wire as it goes in a circle....just
> curious as to how many radials you have soldered to this copper wire..tnx
> again....Gary..K8BY

For buried radials, the radials protruding from the ground, support the
circle of wire. For elevated radials on a 4x4 wooden support, I just staple
the ring of wire directly to the wood.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

1133. Re: BACK TO BASICS - EM waves, E and H fields, in phase orinquadr...

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-14 17:55:47 UTC
From: CAM <w5dxp@hotmail.com>
Message-ID: <3D31BB23.A42C1457@hotmail.com>
Source record: 138573

Richard Clark wrote:
>
> On Sun, 14 Jul 2002 07:42:26 -0500, CAM <w5dxp@hotmail.com> wrote:
>
> >> > +---I1->-+
> >> > | |
> >> > Source differential Load
> >> > | |
> >> > +---<-I2-+ X
> > |
> > ----------------------------<-I3-+
> >
> snip
> >
> >It includes the conceptual differential load for the conceptual differential
> >currents. I added the I3 current path above. How can I1 equal I2 in magnitude
> >with opposite phase and also satisfy the equation I1 = I2 + I3?
>
> To satisfy Kirchhoff, "where" is the current I3 flowing to? AND how
> does it get back? Otherwise your question:
> > How can I1 equal I2 in magnitude
> >with opposite phase and also satisfy the equation I1 = I2 + I3?
> is simply reduced to I3 = 0 (already illustrated); but then why add a
> nonconducting wire to the problem?

Consider I3 the RF current flowing in 1/4WL of wire.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
------== Over 80,000 Newsgroups - 16 Different Servers! =-----

1134. Re: Multi-band roof-mounted vertical fed with 450 ohm ladderline

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-14 18:04:34 UTC
From: CAM <w5dxp@hotmail.com>
Message-ID: <3D31BD32.87F01C51@hotmail.com>
Source record: 138574

Tom W8JI wrote:
> I think so. Something has happened to Cecil, and his main goal is to
> cause problems or start arguments.

Nothing happened to me, Tom. I admitted my mistake and apologized.
You, OTOH, halfway admit your mistake one day and then deny it the
next day. Your mistake may have been as simple as being ignorant of
the definition of "related" but you have compounded that simple
mistake into a Big Lie. Must be nice to feel that omniscient.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

1135. Re: eh antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-14 18:07:53 UTC
From: CAM <w5dxp@hotmail.com>
Message-ID: <3D31BDF9.7E26DC97@hotmail.com>
Source record: 138576

Tom W8JI wrote:
>
> On Sun, 14 Jul 2002 08:26:56 -0500, CAM <w5dxp@hotmail.com> wrote:
>
> >Got any idea what :-) means, Tom? Your statements differ only in
> >degree, not kind, from the EH antenna statements, and trying to cover
> >up an error is another error.
>
> I'll tell you what.
>
> I'll go away from this group, and you can have fun with someone else.
>
> I find it so irritating that this just isn't worth my time any more. I
> can fight with assholes like you in any bar, if that is what I want to
> do with my time.

I am only holding you to the standards that you demand of me, Tom. You
made a mistake and are trying to create a Big Lie to cover up your
mistake. I, OTOH, admitted and apologized for my mistake. So exactly
who is acting like an a$$hole?
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
------== Over 80,000 Newsgroups - 16 Different Servers! =-----

1136. Re: BACK TO BASICS - EM waves, E and H fields, in phase orinquadr...

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-14 18:09:39 UTC
From: "William E. Sabin" <sabinw@mwci-news>
Message-ID: <3D31BE63.3040602@mwci-news>
Source record: 138575

CAM wrote:

> "William E. Sabin" wrote:
>
>>This external, independent wire idea is prevalent
>>and is not correct, and leads to
>>misunderstandings. A common mode current that
>>flows on the outer surface produces a common mode
>>voltage along the outer surface. This voltage is
>>*transformer-coupled* to the center wire and
>>constitutes an almost identical common mode
>>voltage along the center wire.
>>
>
> So what we have been told about coax, that the physics of the coax forces
> the current on the center conductor to be equal to and 180 degrees out of
> phase with the current on the inside of the braid, is not true?
>

Yes, it is true, but the "influence" of the common
mode current on the outside has to be added in,
also. Superposition applies.

Bill W0IYH

1137. Re: BACK TO BASICS - EM waves, E and H fields, in phaseorinquadr...

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-14 18:17:00 UTC
From: CAM <w5dxp@hotmail.com>
Message-ID: <3D31C01C.454B7307@hotmail.com>
Source record: 138577

Richard Harrison wrote:
> It is absurd to claim a proven cause to effect is unrelated, yet that
> claim endures in this thread.

Looks like we are witnessing the birth of a new old wives' tale.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

1138. Re: BACK TO BASICS - EM waves, E and H fields, in phase orinquadr...

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-14 18:29:04 UTC
From: CAM <w5dxp@hotmail.com>
Message-ID: <3D31C2F0.CBF87023@hotmail.com>
Source record: 138579

"William E. Sabin" wrote:
>
> CAM wrote:
> > So what we have been told about coax, that the physics of the coax forces
> > the current on the center conductor to be equal to and 180 degrees out of
> > phase with the current on the inside of the braid, is not true?
>
> Yes, it is true, but the "influence" of the common
> mode current on the outside has to be added in,
> also. Superposition applies.

Then the common mode current that we think we are measuring on the outside
of the coax braid using a toroidal pickup coil is really measuring double
the actual current existing on the outside of the coax braid?

Also, are there any common mode currents returning through the earth
rather than through the coax?
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

1139. Re: BACK TO BASICS - EM waves, E and H fields, in phase orinquadr...

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-14 18:38:19 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <3D31C51B.5050207@eznec.com>
Source record: 138580

If I1 and I2 are the currents on the inside of a coaxial cable, I3 will
be zero. But if you add another load from I1 (representing the other
half of the dipole), I3 can become non-zero.

Why is this so difficult?

Roy Lewallen, W7EL

CAM wrote:
> Roy Lewallen wrote:
>
>>CAM wrote:
>>
>>>Aren't I1 and I2 in series?
>>>
>>> +---I1->-+
>>> | |
>>>Source differential Load
>>> | |
>>> +---<-I2-+ X
>>
> |
> ----------------------------<-I3-+
>
>
>>No, not in the accepted sense of the term. Why?
>
>
> With the source placed at the load, the currents in and out of the source
> and in and out of the load seem to be in series. Add a transmission
> line, and the currents in and out are no longer in series?
>
>
>>You realize, of course, that your diagram doesn't include all the loads.
>
>
> It includes the conceptual differential load for the conceptual differential
> currents. I added the I3 current path above. How can I1 equal I2 in magnitude
> with opposite phase and also satisfy the equation I1 = I2 + I3?

1140. Re: Multi-band roof-mounted vertical fed with 450 ohm ladderline

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-14 18:48:03 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <3D31C763.8090401@eznec.com>
Source record: 138581

Tom W8JI wrote:

> . . .

> Think about all the people who go around telling others that a
> groundplane only needs two radials, when a groundplane even with four
> radials can have significant common mode current on the feedline if we
> aren't careful. We have to be careful because these systems are really
> more complex than they appear.
>
> 73 Tom

Yes. Even if you're careful to exactly balance the currents on the radials, considerable current can be induced on the feedline from coupling to the vertical radiator. It can take two baluns -- one at the feedpoint and another about a quarter wave down the wire -- to reduce this to a low value. The amount of coupling depends on the length and orientation of the feedline. It's an interesting problem to model with EZNEC or a similar program.

Roy Lewallen, W7EL

1141. Re: BACK TO BASICS - EM waves, E and H fields, in phase orinquadr...

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-14 19:08:19 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <osi3juov07u1osvl5fm0a0em01tq6iap8f@4ax.com>
Source record: 138582

On Sun, 14 Jul 2002 12:55:47 -0500, CAM <w5dxp@hotmail.com> wrote:

>Richard Clark wrote:
>>
>> On Sun, 14 Jul 2002 07:42:26 -0500, CAM <w5dxp@hotmail.com> wrote:
>>
>> >> > +---I1->-+
>> >> > | |
>> >> > Source differential Load
>> >> > | |
>> >> > +---<-I2-+ X
>> > |
>> > ------------------------------<-I3-+
>> >
>> snip
>> >
>> >It includes the conceptual differential load for the conceptual differential
>> >currents. I added the I3 current path above. How can I1 equal I2 in magnitude
>> >with opposite phase and also satisfy the equation I1 = I2 + I3?
>>
>> To satisfy Kirchhoff, "where" is the current I3 flowing to? AND how
>> does it get back? Otherwise your question:
>> > How can I1 equal I2 in magnitude
>> >with opposite phase and also satisfy the equation I1 = I2 + I3?
>> is simply reduced to I3 = 0 (already illustrated); but then why add a
>> nonconducting wire to the problem?
>
>Consider I3 the RF current flowing in 1/4WL of wire.

Hi Cecil,

AC/DC/RF does not answer the "where" it flows, nor the "how" it
returns. As drawn and described to say:
>Consider I3 the RF current flowing in 1/4WL of wire.
also begs the question, if there is a current flowing, where did it
"come" from? The Differential load already completes the only
source's current path, there is no external potential to cause a
branch to occur.

73's
Richard Clark, KB7QHC

1142. Re: BACK TO BASICS - EM waves, E and H fields, in phase orinquadr...

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-14 19:12:33 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <2bj3juk3p6mbpcfq2ahntaj4v3m3c8thre@4ax.com>
Source record: 138583

On Sun, 14 Jul 2002 13:29:04 -0500, CAM <w5dxp@hotmail.com> wrote:

>"William E. Sabin" wrote:
>>
>> CAM wrote:
>> > So what we have been told about coax, that the physics of the coax forces
>> > the current on the center conductor to be equal to and 180 degrees out of
>> > phase with the current on the inside of the braid, is not true?
>>
>> Yes, it is true, but the "influence" of the common
>> mode current on the outside has to be added in,
>> also. Superposition applies.
>
>Then the common mode current that we think we are measuring on the outside
>of the coax braid using a toroidal pickup coil is really measuring double
>the actual current existing on the outside of the coax braid?

No.

>
>Also, are there any common mode currents returning through the earth
>rather than through the coax?

In the common experience, yes.

73's
Richard Clark, KB7QHC

1143. Re: BACK TO BASICS - EM waves, E and H fields, in phase orinquadr...

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-14 19:21:50 UTC
From: CAM <w5dxp@hotmail.com>
Message-ID: <3D31CF4E.326A2F6B@hotmail.com>
Source record: 138584

Roy Lewallen wrote:
> If I1 and I2 are the currents on the inside of a coaxial cable, I3 will
> be zero. But if you add another load from I1 (representing the other
> half of the dipole), I3 can become non-zero. Why is this so difficult?

I can measure a radiated EM field associated with that extra wire. I can hang a toroidal pickup around that piece of wire and measure a current. I may even be able to get an RF burn from that wire. That's why it is so difficult. Saying that there is zero I3 current in that wire doesn't agree with reality. So is there something wrong with the model or did God fail to properly design reality? (A rhetorical question :-)

In other words, would you grab one terminal of a dummy load being driven by 1000 watts because the RF current supplied to your body by some math model is predicted to be zero? I sure wouldn't!
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

1144. Re: eh antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-14 19:29:40 UTC
From: CAM <w5dxp@hotmail.com>
Message-ID: <3D31D124.F18316A3@hotmail.com>
Source record: 138585

Tom W8JI wrote:
> I'll go away from this group, and you can have fun with someone else.

I don't want you to leave the newsgroup, Tom. I have learned a lot from your postings. I just want you to stop posting false statements. You don't have to admit you made a mistake. You don't even have to admit that your statements were false. But as long as you insist on continuing to post false statements over and over, I will continue to point them out over and over.

If you cease and desist from posting false statements, I will cease and desist from pointing them out. Deal?
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
------== Over 80,000 Newsgroups - 16 Different Servers! =-----

1145. Re: BACK TO BASICS - EM waves, E and H fields, in phase orinquadr...

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-14 19:37:43 UTC
From: CAM <w5dxp@hotmail.com>
Message-ID: <3D31D307.160FFDF7@hotmail.com>
Source record: 138586

Richard Clark wrote:
>
> CAM <w5dxp@hotmail.com> wrote:
>
> >"William E. Sabin" wrote:
> >> Yes, it is true, but the "influence" of the common
> >> mode current on the outside has to be added in,
> >> also. Superposition applies.
> >>
> >Then the common mode current that we think we are measuring on the outside
> >of the coax braid using a toroidal pickup coil is really measuring double
> >the actual current existing on the outside of the coax braid?
>
> No.

Just "No"? Can the inside wire of coax carry common mode currents or not?
It has been reported here that when the inside wire of coax is tied to the
braid at both ends, the inside wire will not carry any RF. I'm confused.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
------== Over 80,000 Newsgroups - 16 Different Servers! =-----

1146. Re: Radial/Ground Plate

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-14 19:45:10 UTC
From: 'Doc <w5lz@icok.net>
Message-ID: <3D31D4B6.7D26ACD3@icok.net>
Source record: 138587

Gary,
Lets just say I 'have' a vertical. I seldom
use it.
If you want to use a circular plate to do your
grounding, the only hard part about it will be
cutting the thing. You'll still have to make the
connection to 'that' bolt, or some where, and like I
said before, there's nothing relly critical about
it. Have at it...
'Doc

1147. Re: eh antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-14 19:47:16 UTC
From: wzzzzz@xs4all.nl
Message-ID: <422d46e7.0207141147.1170847d@posting.google.com>
Source record: 138588

I glad that you didn't spit out of me, just the normale stuff....

I'm still testing it, today I've rebuild, it caused burned vingers and it has with a SWR from 1:1, but wit a lot of RF on the power line (coax).
The RFC coil in the coax gots hot !, not good.
Maybe almost every posters wants to have real affidence... ,statements from every tests, I don't have theme, I'm still testing with good results.

I think, nothing is impossible, everything is !

And what do computers say ?, is what computers say right ???,

Skol!
Willem

> kan je me de gegevens mailen?
als ik je mail adres kan krijgen zal ik je beantwoorden.
(ik ben zelfs zo gek om deze discussie aan te wakkeren met m'n eigen email adress.......)

1148. Re: eh antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-14 20:31:03 UTC
From: Uncle Peter <radioconnectionNO@cox.netSPAM>
Message-ID: <bclY8.113515$DB.3522713@news1.east.cox.net>
Source record: 138589

"willem" <wzzzzz@xs4all.nl> wrote in message
news:422d46e7.0207141147.1170847d@posting.google.com...
> I glad that you didn't spit out of me, just the normale stuff....
>
> > The RFC coil in the coax gots hot !, not good.
>
> I think, nothing is impossible, everything is !
>
> And what do computers say ?, is what computers say right ???,
>
>
> Skol!
> Willem
>

I think da komputer say the RF is on da feedline? No? Why does
coax koil git hot??

1149. Re: BACK TO BASICS - EM waves, E and H fields, in phase orinquadr...

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-14 20:54:37 UTC
From: "Ian White, G3SEK" <G3SEK@ifwtech.co.uk>
Message-ID: <tAKxfRTNUeM9EA5I@ifwtech.co.uk>
Source record: 138591

William E. Sabin wrote:
>
>
>There is another error that is being repeated. The coax circuit is
>being modeled as a coax in conjunction with a "wire" that is somehow
>external to the coax and operating independently of the coax. The
>common mode current is assumed to flow in that wire and to be
>unassociated with the inside of the coax.
>
>This external, independent wire idea is prevalent and is not correct,
>and leads to misunderstandings. A common mode current that flows on the
>outer surface produces a common mode voltage along the outer surface.
>This voltage is *transformer-coupled* to the center wire and
>constitutes an almost identical common mode voltage along the center wire.

Surely this common-mode voltage is transformer-coupled to both the
center conductor and the inside of the shield - equally and in phase?
Then the differential voltages and currents inside the shield are not
affected.

Therefore the points I was making about symmetry (or lack of it) at the
feedpoint are not affected either.

> This transformer action is greatly enhanced by the presence of a
>current balun. In fact, that is one of the main features of the current
>balun: it inhibits the conversion of a common mode voltage *along* the
>length of the coax into a differential mode voltage *across* the coax.
>Without this transformer coupling, that is exactly what would happen.
>
There's a different way to look at that. The alternative name for a
so-called current balun is a feedline choke, and that better describes
its intended function of creating a high impedance against the flow of
current on the outer surface of the shield. If this current is reduced,
the currents flowing in the two arms of the dipole are forced to be more
equal, and the whole system is forced closer to symmetry (though it can
never completely get there).

Obviously the presence of inductance creates a longitudinal voltage drop
along the outside of the shield. Magnetic coupling transfers this
voltage to the inner of the shield and the center conductor as well, but
these two induced voltages are in phase so they appear as common-mode;
they do not affect the normal differential-mode behavior of the coax as
a transmission line [1].

While acknowledging that these effects inside the coax are real and
true, they are not relevant to this particular discussion.

>The outside of the coax and the inside of the coax are not, and cannot
>be regarded as, separate and isolated entities. Coax is not that simple.
>
Indeed not, but it can be simplified for certain purposes - including
the purposes of this particular discussion.

[1] There is something that <does> affect the differential-mode
behavior of the coax as a transmission line. When the feedline choke is
introduced, the currents at the feedpoint will change. Previously the
outer of the coax was acting as an unwanted part of the antenna, but in
fixing that you have actually changed the antenna system. Naturally this
will result in a change of load impedance at the feedpoint, and as seen
by the transmitter at the other end of the transmission line.

--
73 from Ian G3SEK Editor, 'The VHF/UHF DX Book'
'In Practice' columnist for RadCom (RSGB)

1150. Re: BACK TO BASICS - EM waves, E and H fields, in phase orinquadr...

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-14 21:39:55 UTC
From: "Ian White, G3SEK" <G3SEK@ifwtech.co.uk>
Message-ID: <9hDlH7Ur+eM9EA59@ifwtech.co.uk>
Source record: 138590

Richard Clark wrote:
>
>To satisfy Kirchhoff, "where" is the current I3 flowing to? AND how
>does it get back?

Sorry, you can't subpoena that information using Kirchhoff's law.

Kirchhoff's law states only that the (algebraic) sum of all conducted currents flowing into and out of any point within a circuit is zero. It requires no information about the external circuit conditions that create and drive those currents.

--
73 from Ian G3SEK Editor, 'The VHF/UHF DX Book'
'In Practice' columnist for RadCom (RSGB)

1151. Re: WHERE CAN I GET A LONG WHIP

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-14 21:49:17 UTC
From: Mike <km6ab@pacbell.net>
Message-ID: <3D31F1DC.3965CD84@pacbell.net>
Source record: 138592

If you can use a sectional screw together antenna, the Shakespeare military AT-1011 series is a great choice. It is made of 4' fiberglass sections and are used as a 16' or 32' whip. The 16' size is what you see folded over the front end of HUMVEE's and there are many fixed, folding and spring bases available. The 8 section 32' whip and a canvas carrying case goes for about $125 surplus and bases run $25 to $125 - check surplus dealers like Murphy's Surplus in San Diego or www.american-milspec.com. I use the 32' version fed with an SGC auto tuner and there is a HUGE advantage on the lower HF bands compared to Hamsticks and other short loaded whips.

1152. Re: BACK TO BASICS - EM waves, E and H fields, in phase orinquadr...

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-14 21:53:18 UTC
From: richardharrison@webtv.net
Message-ID: <19145-3D31F2CE-162@storefull-2391.public.lawson.webtv.net>
Source record: 138594

CAM, W5DXP wrote:
Just "No?"

Common-mode signal is caused by a differential-mode LOAD imbalance. It isn`t caused by the balance of energy inside the coax. One side of the common-mode source is the structure named the "antenna" which is out of balance. It has a surplus or deficiency of charges and current in regularly repeated instances due to the inherent imbalance.

The other side of the common-mode source is the coax exterior. It shares excesses with the structure named "antenna".

Energy is exchanged between these sides of the common-mode circuit by displacement current. Earth may or may not be involved depending on its proximity.

Best regards, Richard Harrison, KB5WZI

1153. Cushcraft A2706S 2M/70cm opinions?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-14 21:55:29 UTC
From: larry_duke_williams@hotmail.com
Message-ID: <702859a0.0207141355.cc73c3d@posting.google.com>
Source record: 138593

Hi all-

I was thinking of purchasing Cushcraft's A2706S or A27010S beams, and I'm leaning towards the 6s for it's smaller footprint. I was hoping some helpful hams out there might lend an opinion or two about these antennas from experience. Primarily, the antenna would be for local ragchewing to hams within a 10 mile radius. Any experiences with these antennas out there?

-Larry

1154. Re: BACK TO BASICS - EM waves, E and H fields, in phase orinquadr...

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-14 22:15:51 UTC
From: richardharrison@webtv.net
Message-ID: <19146-3D31F817-61@storefull-2391.public.lawson.webtv.net>
Source record: 138598

Ian, G3SEK wrote:
"When the feedline choke is introduced, the currents at the feedpoint will change."

The inhibition of common-mode currents on the feedline changes the differential-mode load on the transmitter.

Ian should have weighed-in a month ago. A cyberspace traffic jam might have been averted.

Best regards, Richard Harrison, KB5WZI

1155. Re: BACK TO BASICS - EM waves, E and H fields, in phase orinquadr...

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-14 22:29:32 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <lau3juca6hdsl00dvjuu0fj88gevv1s9be@4ax.com>
Source record: 138595

On Sun, 14 Jul 2002 14:37:43 -0500, CAM <w5dxp@hotmail.com> wrote:

>> >Then the common mode current that we think we are measuring on the outside
>> >of the coax braid using a toroidal pickup coil is really measuring double
>> >the actual current existing on the outside of the coax braid?
>>
>> No.
>
>Just "No"? Can the inside wire of coax carry common mode currents or not?
>It has been reported here that when the inside wire of coax is tied to the
>braid at both ends, the inside wire will not carry any RF. I'm confused.

Hi Cecil,

Bill offered a perfectly suitable explanation. It relates to
exceedingly simple transformer mechanics: if wires migrate through a
core, one current that appears on one must appear in (couple to) all
(insofar as the ability of the source to support the load - and the
style of magnetics almost guarantees it).

Again, this is the sense of Common Mode that is described in all such
definitions of this configuration. It is also part and parcel to this
gassing on about "relationships" and coupling, and mutuality and ....

A complete diagram of the circuit would resolve much of your
confusion.

73's
Richard Clark, KB7QHC

1156. Re: BACK TO BASICS - EM waves, E and H fields, in phase orinquadr...

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-14 22:43:12 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <g0v3ju47o7k0h1mu3njcuojpl0q4m1atk8@4ax.com>
Source record: 138596

On Sun, 14 Jul 2002 22:39:55 +0100, "Ian White, G3SEK"
<G3SEK@ifwtech.co.uk> wrote:

>Richard Clark wrote:
>>
>>To satisfy Kirchhoff, "where" is the current I3 flowing to? AND how
>>does it get back?
>
>Sorry, you can't subpoena that information using Kirchhoff's law.
>
>Kirchhoff's law states only that the (algebraic) sum of all conducted
>currents flowing into and out of any point within a circuit is zero. It
>requires no information about the external circuit conditions that
>create and drive those currents.

Hi Ian,

You don't know either....
(Hint: satisfy what little you admit of Kirchhoff - if you can,
explain that for the current that leaves, denoted as I3, where is the
current equal to I3 and returning to that same point)

Solution, there is no loop (first violation). There is no potential
applied (second violation). There is no load (third violation). It
takes only one violation, not all, to dismiss this wire as being a
rhetorical ornament.

73's
Richard Clark, KB7QHC

1157. Re: BACK TO BASICS - EM waves, E and H fields, in phase orinquadr...

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-14 22:45:01 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <sqv3jug61ncdlk7i1gq2jvkq86p2ag7t04@4ax.com>
Source record: 138597

On Sun, 14 Jul 2002 14:21:50 -0500, CAM <w5dxp@hotmail.com> wrote:

>So is there something wrong with the model or did God fail
>to properly design reality? (A rhetorical question :-)

Hi Cecil,

More a problem with one of his fallen angels. ;-)

73's
Richard Clark, KB7QHC

1158. Re: BACK TO BASICS - EM waves, E and H fields, in phase orinquadr...

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-14 22:56:07 UTC
From: Reg Edwards <g4fgq.regp@btinternet.com>
Message-ID: <agsvi6rsu1@venus.btinternet.com>
Source record: 138599

Roy said -
> Why is this so difficult?
>
==========

Why indeed ? It is an elementary matter of network analysis.

And although you well understand what goes on, it seems you are unable to convey the basics because you insist on over-complicating the issues you have all waffled yourselves into.

Try drawing the most simple network on a piece of paper. Get rid of the in-essentials. Make sure it is COMPLETE. Contain it to the near field. Then there will be no loose ends where current leaks out into outer space.

I am trying hard not to overcomplicate matters myself.

Begin with color of Cecil's motorbike.

Yours, Reg.

1159. Re: eh antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-14 23:00:22 UTC
From: Reg Edwards <g4fgq.regp@btinternet.com>
Message-ID: <agsvq6$s7e$1@venus.btinternet.com>
Source record: 138600

Willem, you don't need a computer. Just a piece of paper and arithmetic.

Reg

1160. Re: BACK TO BASICS - EM waves, E and H fields, in phase orinquadr...

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-15 00:07:58 UTC
From: CAM <w5dxp@hotmail.com>
Message-ID: <3D32125E.4D3FACC7@hotmail.com>
Source record: 138601

Richard Clark wrote:
> You don't know either....
> (Hint: satisfy what little you admit of Kirchhoff - if you can,
> explain that for the current that leaves, denoted as I3, where is the
> current equal to I3 and returning to that same point)
>
> Solution, there is no loop (first violation). There is no potential
> applied (second violation). There is no load (third violation). It
> takes only one violation, not all, to dismiss this wire as being a
> rhetorical ornament.

Richard, would you be willing to drag your private parts along that
wire with 1000 watts applied to prove that it is a rhetorical ornament?
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

1161. Re: BACK TO BASICS - EM waves, E and H fields, in phase orinquadr...

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-15 00:21:57 UTC
From: richardharrison@webtv.net
Message-ID: <26039-3D3215A5-238@storefull-2393.public.lawson.webtv.net>
Source record: 138602

Reg wrote:
"Begin with the color of Cecil`s motirbike."

The legend is , a youth enters a store and tells the clerk he wants a head to toe outfit that is completely maroon.

Clerk says, "You must be an Aggie!"

Aggie replies, "You must think that because I want maroon clothes?"

Clerk says, "No, I think that because this is a hardware store."

Best regards, Richard Harrison, KB5WZI

1162. Re: MARS antennas

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-15 01:04:10 UTC
From: kelly@dvol.com
Message-ID: <d22b54c3.0207141704.2f81113@posting.google.com>
Source record: 138603

Dick Carroll <dixie@townsqr.com> wrote in message news:<aglnc1$sa0$0@208.207.71.151>...
> G Blair wrote:
> >
>
> Everyone talks about giant rhombics, but as far as I
> > know, Rick was the only to actually build one: 1000 ft on each leg.
> >
>
>
>
> Rhombics are truly awesome in the direction they're pointed. The old
> Signal Corps version atop 75 foot utility poles was even awesome to
> view.
> I still have memories of the one at the club station at Fort Monmouth
> (directed W/SW from the New Jersey coast) in the early 60's.
> So far nothing I've used compares.
>
> Dick
>
>
Then of course there was Don Wallace W6AM and his collection of
rhombics. All 52 miles of wire worth of 'em . .
>
>
w3rv

1163. Re: BACK TO BASICS - EM waves, E and H fields, in phase orinquadr...

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-15 01:34:21 UTC
From: richardharrison@webtv.net
Message-ID: <26039-3D32269D-250@storefull-2393.public.lawson.webtv.net>
Source record: 138604

Richard Clark wrote:
"The Differential load already completes the only source`s current path.
There is no external potential to cause a branch to occur."

Richard Clark must be considering the coax connected to a resistor. In the case of coax connected to an unbalanced antenna, there is an unbalanced external potential between the antenna and outer shield.

Don`t take the "Cecil Challenge", Richard. I`ve seen what happens to birds on a transmission line.

Best regards, Richard Harrison, KB5WZI

1164. Degen Designs (Home of the BBQ) Announcement

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-15 02:50:35 UTC
From: G&R <"stop the spam"@limbo.hell>
Message-ID: <rKqY8.1221$qi2.228228@news20.bellglobal.com>
Source record: 138605

July 14, 2002 We regretfully announce that an important part of our team and my dad (VE3 CVS, Erwin Schweigl) passed away on July 11, 2002. He will be missed by myself, my family and all those that he touched. We will continue in his footsteps to provide the products that he helped develop. (Posted on our site).

Many have seen our selected postings over the years suggesting our antenna solutions and have been nice enough to visit our site to see what we have to offer (and not send us any flame mail or postings).

Thank you.

We hope to continue in this fashion to earn your support and respect as a manufacturer and developer of antenna solutions.

Again thank you,

Guenther Schweigl
info@degendesigns.com
www.degendesigns.com

1165. Re: Oliver Heaviside

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-15 02:52:09 UTC
From: Tim <tthomps@no-spam-please.erols.com>
Message-ID: <agtdcjfcm1@bob.news.rcn.net>
Source record: 138606

Peter O. Brackett wrote in message ...
>Reg et al:
>
>Oliver Heaviside is also one of my heros. An engineer's engineer no doubt
>about it!
>

He's one of my heroes as well. Fot those interested, an excellent (IMHO) biography is provided in Paul Nahin's book "Oliver Heaviside: Sage in Solitude, The Life, Work, and Times of an Electrical Genius of the Victorian Age". The publisher is IEEE Press; the ISBN is 0-87942-238-6.

Another interesting book that discusses Heaviside's contributions is "The Maxwellians", by Bruce J. Hunt. The publisher is the Cornell University Press; the ISBN is 0-8014-2641-3.

With regards to the mathematicians of his day criticizing Heaviside's operational calculus, one of my math professors (discussing Dirac Delta functions while teaching a group of Physics majors) told us to follow our physical instincts - if we get the right answers and the method seems to be right, mathematicians will spend the time to develop and prove the necessary theorems. Of course, he discussed Heaviside's contributions in detail, giving me my introduction to the man's accomplishments.

Tim

1166. Re: BACK TO BASICS - EM waves, E and H fields, in phase orinquadr...

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-15 03:06:29 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <kke4ju0krl4af22rt5jhmsj0s6qlhb3gts@4ax.com>
Source record: 138607

On Sun, 14 Jul 2002 20:34:21 -0500 (CDT), richardharrison@webtv.net
(Richard Harrison) wrote:

>Richard Clark must be considering
>>
>> CAM wrote:
>> > Aren't I1 and I2 in series?
>> >
>> > +---I1->-+
>> > | |
>> > Source differential Load
>> > | |
>> > +---<-I2-+ X
> |
> ----------------------------<-I3-+

We have a point X defined by Cecil to have one current flowing in and
two currents flowing out. I1 and I2 are of the same magnitude. I3
can only be zero current (there is nothing left) and yet Cecil
maintains:
>Consider I3 the RF current flowing in 1/4WL of wire.
and who's on third?

Are we selling dummy loads with whips now? ;-)

73's
Richard Clark, KB7QHC

1167. Re: Magloops

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-15 03:43:10 UTC
From: ZOOM <robert931@sympatico.ca>
Message-ID: <jxrY8.448$o7.289556@news20.bellglobal.com>
Source record: 138608

Well I think people got to start building then iron out the details of resistance excetra. Frankly a soldered joint has very low loss that's not worth worrying about.

Get building and discover what matters and what doesn't. My loop is soldered and performs very well.

Robert
VE3RPf

"Mike Coslo" <mcoslo@adelphia.net> wrote in message news:3D2D21FC.10202@adelphia.net...
> I'm looking to make a portable antenna for 40-10 meters for one of the
> State QSO parties.
>
> I would be driving to a remote site, setting up my rig and working away.
>
> I have looked at a number of designs, and the Magnetic loop looks pretty
> interesting. I'd be able to plunk it in the back of my truck and set up
> on site, then tear down and move to the next county on my list as needed.
>
> Most of the hams I know are using dipoles, inverted V's and some G5RV's.
>
> Is the magloop just so much hokum? Or is it's major drawback the constant
> tuning, which is no problem AFAIAC?
>
> - Mike KB3EIA -
>

1168. Can 75 Ohm coax match a 3 meter whip @ 51 Mhz?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-15 03:52:12 UTC
From: Brooke Clarke <brooke@pacific.net>
Message-ID: <3D3246EC.79EE1B99@pacific.net>
Source record: 138609

Hello:

The AB-1135 is being sold you know where.
It will hold the 3 meter long combination AT-271 fishing pole whip & it's spring
AB-591 base.

Would a magic length of 75 Ohm coax match it to 50 Ohms 51 MHz?

If not is there a very simple coax in line way to match it at 51 MHz?

73,

Brooke Clarke, N6GCE
http://www.prc68.com

1169. Re: Radial/Ground Plate

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-15 04:12:50 UTC
From: rsparks <rsparks@elltel.net>
Message-ID: <3d324841$1_3@corp.newsgroups.com>
Source record: 138610

A small piece of copper plate or sheeting can be drilled around the outside for as many attachments as desired. Then solder the radials into place.

The sheet copper of various thickness can be found at a local sheet metal shop, or ordered from several places on the internet.

Roger, W7WKB

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

1170. fiberglass or aluminum mast

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-15 05:03:42 UTC
From: Matt Patterson <mattpatt@1starnet.com>
Message-ID: <OIsY8.201919$vq.10938241@bin6.nnrp.aus1.giganews.com>
Source record: 138611

Hi,

I'm looking for a good place to buy a figerglass or aluminum mast for my new tower. It needs to be at least 15' long. Was wondering if anyone had any good recomendations.

Thanks
Matt
KC5YTV

1171. Re: How To Measure Antenna Impedance?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-15 05:21:22 UTC
From: k7itm@aol.com
Message-ID: <3200347.0207142121.539ca41f@posting.google.com>
Source record: 138612

Unfortunately, it's not trivial to measure impedance to 10% accuracy
at 900MHz. Best, perhaps, would be if you can get your hands on a
modern network analyzer with an S-parameter test set, preferably one
you can calibrate to read at the end of a short feedline. If that's
out of reach, here are a couple suggestions that will get you in the
ballpark:

1. Build your own return-loss bridge and detectors that can measure
the in-phase and quadrature components of the reflection. Expect to
use some very good construction techniques. That's essentially a
network analyzer.

2. Measure the SWR. Put an L-network (or other simple matching
network) between the bridge and the impedance you want to measure, and
adjust for a match. Find the impedance you matched to from the values
of the L-netowrk components. This presumes you can keep parasitics
very low and you can measure or calculate the values of the components
accurately.

Um...good luck, too.

(Do you really need to know the impedance, or can you simply match it
to your transmission line?)

Cheers,
Tom

bytebird@yahoo.com (Steve Lutes) wrote in message
news:<af0d9f14.0207132209.27ad6847@posting.google.com>...
> I'm building an antenna (helix) and I need to measure its impedance
> (freq < or = 900 Mhz).
>
> How do I do this? I don't need a lot of accuracy (< or = 10%). Plus
> I'm willing to use an instrument that isn't an impedance bridge, say a
> grid-dip meter or Q meter
>
> Thank you
>
> Steve

1172. Re: Radial/Ground Plate

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-15 05:50:34 UTC
From: tmgroatatpeakpeakdotcom
Message-ID: <3d325fab.22216173@news.peakpeak.com>
Source record: 138613

On Sun, 14 Jul 2002 13:34:50 GMT, "Gary Boyer"
<gboyer@columbus.rr.com> wrote:

>Does anyone have any suggestions on a ground plate that you can attach your
>radials....the plate would be used to tie the radials to a hustler 6btv
>vertical..tnx...Gary..K8BY
>
>
Lance Johnson Engineering makes (made?) a cast ground plate. It's
solidly built and should last a lifetime, but it's priced accordingly.
The poor ham's copy is a round aluminum pan (pie pan, pizza pan,
etc.), with sheet metal screws placed around the rim and a hole cut in
the middle to pass the vertical through. Run a short piece of salvaged
coax braid from the pan to the antenna ground screw.

It works. But you could just as easily use a loop of bare wire, as Cam
said. Bonus: the wire loop won't leave a dead spot in the grass when
you move and take down the antenna ;^)

--KR0U

-- Tim Groat

To reply by e-mail, change the quoted words to
the corresponding punctuation marks.

1173. SM0VPO Homepages Update

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-15 08:39:48 UTC
From: Harry SM0VPO <someone@microsoft.com>
Message-ID: <agu2o0$h2a$1@newstoo.ericsson.se>
Source record: 138614

Hi all,

It's been quite a few months since I last posted anything here, in fact it is about a year ago. Harry's Homebrew Homepages is now located at http://w1.859.telia.com/~u85920178/ where there are no banners to slow down the traffic. There are no outages due to excessive traffic since there is no bandwidth limit. It is just a bloody dificult URL to remember! But work on antennas and radio equipment is always in progress.

During the past year, I have been hounded by demands for payment to "freeservers.com" (or should that be "FEEservers"?) so I have moved the page http://sm0vpo.8m.com to http://w1.859.telia.com/~u85920178. Some of you may be aware that PMP3.NET was hacked and eventually closed down due to the misuse. This took away my free homepages that were kindly hosted by PMP3.NET.

There is a new messageboard too, also without banners. A new FAQ (Frequently Asked Questions) and FASQ (Frequently Asked Silly Questions). All the old ones have been kept, but some new ones have been added, Eg: "How many volts do I need to kill someone?". During the past 12 months, Harry's Homebrew homepages (http://w1.859.telia.com/~u85920178/) has had quite a few additions. Some of the latest project examples include:

EPROM AF Generator (still under construction).
WAV to EPROM conversion.
Many synthesiser projects.
DC-DC voltage converters.
150mW FM TX (88MHz - 108MHz) (technique Ok for 145MHz).
Synthesised FM TX (88MHz - 108MHz) (technique Ok for 145MHz).
Antenna Z bridge for Spectrum Analyser.
Antenna Questions & Answers (Eg: "Size isn't everything!").

H.H.H. now has just three sites, but no mirror sites. they are all located at:

PROJECTS - http://w1.859.telia.com/~u85920178
Unlimited bandwidth, Full site, No advertising, SWE

VISITORS CIRCUITS - http://hem.spray.se/lythall
Selected visitors submitted circuits - SWE

PDF LIBRARY - http://hem.passagen.se/sm0vpo
Unlimited bandwidth, Full site, SWE

So perhaps I may have the pleasure of a visit from you. Whatever you do, have fun with antennas, homebrew, radio and electronics in general. Very best regards from Harry Lythall - SM0VPO

1174. 50 foot mast

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-15 11:01:02 UTC
From: Aaron Rogerson <arogerso@bigpond.net.au>
Message-ID: <OXxY8.445826$o66.1203497@news-server.bigpond.net.au>
Source record: 138615

Can someone here lead me to a link, or somewhere that describes how to erect a 50 foot mast.(aluminium) Including guy wires etc. It is for a 2.4ghz wireless LAN omni-directional. Thanks,
Aaron.

1175. Re: BACK TO BASICS - EM waves, E and H fields, in phase orinquadr...

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-15 12:24:26 UTC
From: CAM <w5dxp@hotmail.com>
Message-ID: <3D32BEFA.2721C64B@hotmail.com>
Source record: 138616

Richard Clark wrote:
>
> On Sun, 14 Jul 2002 20:34:21 -0500 (CDT), richardharrison@webtv.net
> (Richard Harrison) wrote:
>
> >Richard Clark must be considering
> >>
> >> CAM wrote:
> >> > Aren't I1 and I2 in series?
> >> >
> >> > +---I1->-+
> >> > | |
> >> > Source differential Load
> >> > | |
> >> > +---<-I2-+ X
> > |
> > ------------------------------<-I3-+
>
> We have a point X defined by Cecil to have one current flowing in and
> two currents flowing out. I1 and I2 are of the same magnitude. I3
> can only be zero current (there is nothing left) and yet Cecil
> maintains:

> >Consider I3 the RF current flowing in 1/4WL of wire.

> and who's on third? Are we selling dummy loads with whips now? ;-)

I repeat my challenge, Richard. Are you willing to drag your private
parts along that wire when the source is 1000 watts in order to prove
there is no RF current in that wire? If I1 equals I2, your private
parts should draw zero current, right? How sure are you of your
convictions?
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

1176. Re: BACK TO BASICS - EM waves, E and H fields, in phase orinquadr...

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-15 12:27:19 UTC
From: David Robbins <k1ttt@arrl.net>
Message-ID: <aguf3a018ic@enews2.newsguy.com>
Source record: 138618

"Richard Clark" <kb7qhc@attbi.com> wrote in message
news:g0v3ju47o7k0h1mu3njcuojpl0q4m1atk8@4ax.com...
> On Sun, 14 Jul 2002 22:39:55 +0100, "Ian White, G3SEK"
> <G3SEK@ifwtech.co.uk> wrote:
>
> >Richard Clark wrote:
> >>
> >>To satisfy Kirchhoff, "where" is the current I3 flowing to? AND how
> >>does it get back?
> >>
> >Sorry, you can't subpoena that information using Kirchhoff's law.
> >>
> >Kirchhoff's law states only that the (algebraic) sum of all conducted
> >currents flowing into and out of any point within a circuit is zero. It
> >requires no information about the external circuit conditions that
> >create and drive those currents.
>
> Hi Ian,
>
> You don't know either....
> (Hint: satisfy what little you admit of Kirchhoff - if you can,
> explain that for the current that leaves, denoted as I3, where is the
> current equal to I3 and returning to that same point)
>
> Solution, there is no loop (first violation). There is no potential
> applied (second violation). There is no load (third violation). It
> takes only one violation, not all, to dismiss this wire as being a
> rhetorical ornament.
>
> 73's
> Richard Clark, KB7QHC

ah, but here you are mixing your laws. kirchoff's applies to a point, you can add all the currents at a point and they must equal zero. BUT, you can NOT say where those currents go once they leave that point. the current I3 can flow down a 1/4 wave wire, reach the end, reflect back and show up some later time at that same point, at which time it must again sum up with I1 and I2 to be zero, but at that time the current component of I3 that has reflected from the end of the wire can be added back into I1 and I2 (which may change because of this new current component) to make the law work again. now if there were a resistive load at the end of that wire that happened to match the impedance of what ever propagation mode I3 sees as it travels along it's wire then the current goes into the load, heats it up and never gets back to the junction point, but I1, I2, and I3 still add up to

zero.

to properly analyze what happens to I3 after it satisfies kirchoff's law at the junction point you have to analyze all the various possibilities including ohm's contribution that removes energy as heat, and all the possible fields and waves generated by the moving electrons according to maxwell's equations.

1177. Re: fiberglass or aluminum mast

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-15 12:29:34 UTC
From: CAM <w5dxp@hotmail.com>
Message-ID: <3D32C02E.93C0B739@hotmail.com>
Source record: 138617

Matt Patterson wrote:
> I'm looking for a good place to buy a figerglass or aluminum mast for my new
> tower. It needs to be at least 15' long. Was wondering if anyone had any
> good recomendations.

I buy my fiberglas from Ryan Herco in Houston. http://www.ryanherco.com
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
------== Over 80,000 Newsgroups - 16 Different Servers! =-----

1178. Re: BACK TO BASICS - EM waves, E and H fields, in phase orinquadr...

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-15 12:36:14 UTC
From: David Robbins <k1ttt@arrl.net>
Message-ID: <agufjv019kn@enews2.newsguy.com>
Source record: 138520

"Richard Clark" <kb7qhc@attbi.com> wrote in message
news:kke4ju0krl4af22rt5jhmsj0s6qlhb3gts@4ax.com...
> On Sun, 14 Jul 2002 20:34:21 -0500 (CDT), richardharrison@webtv.net
> (Richard Harrison) wrote:
>
> >Richard Clark must be considering
> >>
> >> CAM wrote:
> >> > Aren't I1 and I2 in series?
> >> >
> >> > +---I1->-+
> >> > | |
> >> > Source differential Load
> >> > | |
> >> > +---<-I2-+ X
> > |
> > ------------------------------<-I3-+
>
> We have a point X defined by Cecil to have one current flowing in and
> two currents flowing out. I1 and I2 are of the same magnitude. I3
> can only be zero current (there is nothing left) and yet Cecil
> maintains:
> >Consider I3 the RF current flowing in 1/4WL of wire.
> and who's on third?
>
> Are we selling dummy loads with whips now? ;-)
>
> 73's
> Richard Clark, KB7QHC

if the 3 points with I1, I2, and I3 are all connected at X then the currents
I1 and I2 will ONLY be equal in the steady state solution where the source
is DC. In ANY other case, including the transient response to turning on a
DC source there will be some current I3 and I1 will not equal I2.

haven't you ever used a dummy load with a whip?? didn't the ARRL expose a
company selling a dummy load as an automatic instant antenna tuner several
years ago?

1179. Re: 50 foot mast

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-15 12:37:44 UTC
From: David Robbins <k1ttt@arrl.net>
Message-ID: <agufmq019rv@enews2.newsguy.com>
Source record: 138519

check with the manufacturer of the mast, they should have installation drawings and instructions for a properly engineered installation. your local building inspector will probably require copies of them to issue you a construction permit anyway.

"Aaron Rogerson" <arogerso@bigpond.net.au> wrote in message news:OXxY8.445826$o66.1203497@news-server.bigpond.net.au...
> Can someone here lead me to a link, or somewhere that describes how to erect
> a 50 foot mast.(aluminium) Including guy wires etc. It is for a 2.4ghz
> wireless LAN omni-directional. Thanks,
> Aaron.
>
>

1180. Re: Can 75 Ohm coax match a 3 meter whip @ 51 Mhz?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-15 12:45:39 UTC
From: David Robbins <k1ttt@arrl.net>
Message-ID: <agug5k01ahr@enews2.newsguy.com>
Source record: 138521

no, there is not magic combination. a 3m long antenna on 51MHz will be about 1/2 wave long. this will present a very high impedance(call it Zf) at the feedpoint. you can transform that impedance along a piece of coax to get any impedance from Zf (at even 1/4 wave lengths from the feedpoint) down to 1/ZF (at odd 1/4 wave lengths)... somewhere along that you may find a 50 ohm real part of the impedance, but there will be a large reactive component at that point. if you can find that point you can then add another coax stub to cancel the reactive component. design of stub matches like this are discussed in various texts... but the most basic problem you will have with this arrangement is that you are starting with a near 1/2 wave antenna which will be hard to match with any method, cutting it down to about 1/4 wave or extending it to about 5/8 wave would make it easier to match.

"Brooke Clarke" <brooke@pacific.net> wrote in message news:3D3246EC.79EE1B99@pacific.net...
> Hello:
>
> The AB-1135 is being sold you know where.
> It will hold the 3 meter long combination AT-271 fishing pole whip & it's spring
> AB-591 base.
>
> Would a magic length of 75 Ohm coax match it to 50 Ohms 51 MHz?
>
> If not is there a very simple coax in line way to match it at 51 MHz?
>
> 73,
>
> Brooke Clarke, N6GCE
> http://www.prc68.com
>

1181. Re: Radial/Ground Plate

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-15 13:34:11 UTC
From: Bob Miller <bamiller@texas.net>
Message-ID: <984yPSPi=jgCbfHDB2PhsTNTL4f=@4ax.com>
Source record: 138522

tmgroat"at"peakpeak"dot"com (Tim Groat) wrote:

>On Sun, 14 Jul 2002 13:34:50 GMT, "Gary Boyer"
><gboyer@columbus.rr.com> wrote:
>
>>Does anyone have any suggestions on a ground plate that you can attach your
>>radials....the plate would be used to tie the radials to a hustler 6btv
>>vertical..tnx...Gary..K8BY
>>
>>
>Lance Johnson Engineering makes (made?) a cast ground plate. It's
>solidly built and should last a lifetime, but it's priced accordingly.

He still makes the radial buss... http://www.qth.com/lance/

Bob
k5qwg

>The poor ham's copy is a round aluminum pan (pie pan, pizza pan,
>etc.), with sheet metal screws placed around the rim and a hole cut in
>the middle to pass the vertical through. Run a short piece of salvaged
>coax braid from the pan to the antenna ground screw.
>
>It works. But you could just as easily use a loop of bare wire, as Cam
>said. Bonus: the wire loop won't leave a dead spot in the grass when
>you move and take down the antenna ;^)
>
>--KR0U
>
>-- Tim Groat
>
>To reply by e-mail, change the quoted words to
>the corresponding punctuation marks.

1182. Re: 50 foot mast

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-15 13:53:30 UTC
From: Aaron Rogerson <arogerso@bigpond.net.au>
Message-ID: <utAY8.446403$o66.1205864@news-server.bigpond.net.au>
Source record: 138523

Don't need a permit in Darwin, Australia :)

"David Robbins" <k1ttt@arrl.net> wrote in message
news:agufmq019rv@enews2.newsguy.com...
> check with the manufacturer of the mast, they should have installation
> drawings and instructions for a properly engineered installation. your
> local building inspector will probably require copies of them to issue you
a
> construction permit anyway.
>
> "Aaron Rogerson" <arogerso@bigpond.net.au> wrote in message
> news:OXxY8.445826$o66.1203497@news-server.bigpond.net.au...
> > Can someone here lead me to a link, or somewhere that describes how to
> erect
> > a 50 foot mast.(aluminium) Including guy wires etc. It is for a 2.4ghz
> > wireless LAN omni-directional. Thanks,
> > Aaron.
> >
> >
>
>

1183. Re: BACK TO BASICS - EM waves, E and H fields, in phase orinquadr...

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-15 15:03:10 UTC
From: K7JEB <k7jeb@arrl.no_spam.net>
Message-ID: <OuBY8.103441$UT.6669755@bgtnsc05-news.ops.worldnet.att.net>
Source record: 138524

```
>CAM wrote:
>Aren't I1 and I2 in series?

> +-------------------------------------------------I1->-+
> | |
>Source differential Load
> | |
> +-------------------------------------------------<-I2-+ X
> |
> -----------------------------<-I3-+

> "Roy Lewallen" <w7el@eznec.com> wrote:
> Why is this so difficult?

Perhaps because the network to be analyzed should really be:

+-------------------------------------------------I1->-+
| |
Source1 Load 1
| |
+-------------(Ground Plane)-----------------------<-I3-+
| |
Source2 Load 2
| |
+-------------------------------------------------<-I2-+

If Source1 = Source2 AND Load 1 = Load 2, then I1 = I2, I3 = 0
and I1, I2 can be considered purely differential.

For any other condition, there will be a non-zero common-mode
current I3 and I1 will not equal I2.

If you think this looks like a Wheatstone bridge composed
of two voltage sources and two loads, you might be right.

--
Jim Bromley, K7JEB k7jeb @ arrl.net
Glendale, Arizona
```

1184. Re: Can 75 Ohm coax match a 3 meter whip @ 51 Mhz?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-15 15:21:07 UTC
From: 'Doc <w5lz@icok.net>
Message-ID: <3D32E851.B5DE2899@icok.net>
Source record: 138525

David,
Why not just feed it in the center?
'Doc

1185. Re: BACK TO BASICS - EM waves, E and H fields, in phase orinquadr...

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-15 15:34:59 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <doq5juko98c8ins3dah09bqg0v29ujr00t@4ax.com>
Source record: 138526

On Mon, 15 Jul 2002 12:27:19 -0000, "David Robbins" <k1ttt@arrl.net>
wrote:

>
>"Richard Clark" <kb7qhc@attbi.com> wrote in message
>news:g0v3ju47o7k0h1mu3njcuojpl0q4m1atk8@4ax.com...
>> On Sun, 14 Jul 2002 22:39:55 +0100, "Ian White, G3SEK"
>> <G3SEK@ifwtech.co.uk> wrote:
>>
>> >Richard Clark wrote:
>> >>
>> >>To satisfy Kirchhoff, "where" is the current I3 flowing to? AND how
>> >>does it get back?
>> >
>> >Sorry, you can't subpoena that information using Kirchhoff's law.
>> >
>> >Kirchhoff's law states only that the (algebraic) sum of all conducted
>> >currents flowing into and out of any point within a circuit is zero. It
>> >requires no information about the external circuit conditions that
>> >create and drive those currents.
>>
>> Hi Ian,
>>
>> You don't know either....
>> (Hint: satisfy what little you admit of Kirchhoff - if you can,
>> explain that for the current that leaves, denoted as I3, where is the
>> current equal to I3 and returning to that same point)
>>
>> Solution, there is no loop (first violation). There is no potential
>> applied (second violation). There is no load (third violation). It
>> takes only one violation, not all, to dismiss this wire as being a
>> rhetorical ornament.
>>
>> 73's
>> Richard Clark, KB7QHC
>
>ah, but here you are mixing your laws. kirchoff's applies to a point, you
>can add all the currents at a point and they must equal zero. BUT, you can
>NOT say where those currents go once they leave that point. the current I3
>can flow down a 1/4 wave wire, reach the end, reflect back and show up some
>later time at that same point, at which time it must again sum up with I1
>and I2 to be zero, but at that time the current component of I3 that has
>reflected from the end of the wire can be added back into I1 and I2 (which
>may change because of this new current component) to make the law work

>again. now if there were a resistive load at the end of that wire that
>happened to match the impedance of what ever propagation mode I3 sees as it
>travels along it's wire then the current goes into the load, heats it up and
>never gets back to the junction point, but I1, I2, and I3 still add up to
>zero.
>
>to properly analyze what happens to I3 after it satisfies kirchoff's law at
>the junction point you have to analyze all the various possibilities
>including ohm's contribution that removes energy as heat, and all the
>possible fields and waves generated by the moving electrons according to
>maxwell's equations.
>

Hi David,

You reading all of this from the eh handbook?

It is not all that difficult - except when playing with less than all
the facts (an obvious shortfall of the circuit description).

Still, no one, not even the author of the model, seems to be able to
answer how more current leaves a point than enters it.

73's
Richard Clark, KB7QHC

1186. Re: Radial/Ground Plate

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-15 15:36:56 UTC
From: richardharrison@webtv.net
Message-ID: <9160-3D32EC18-124@storefull-2398.public.lawson.webtv.net>
Source record: 138527

Tim Groat wrote:
"Lance Johnson Engineering makes (made) a cast ground plate."

A ground plate of aluminum or nagnesium connected to copper and buried at the earth`s surface won`t likely last long even if coated with petroleum jelly.

Metals close to each other in the galvanic series last best when connected where they can become moist.

Broadcasters surround towers with copper sheets. These are brazed together and 120 radials plus other connections are brazed to the sheets.

For ham installations, Cecil has a practical idea. Surround the tower with heavy copper wire. Attach your radials and other connections to this loop. Use copper to avoid erosion.

You don`t need to braze or solder for good connections. Nicopress would be fine, but expensive. Burndy (split-bolt) connectors can be tightened for permaent connections.

Best regards, Richard Harrison, KB5WZI]

1187. Re: BACK TO BASICS - EM waves, E and H fields, in phase orinquadr...

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-15 15:47:18 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <ecr5jusl9cf3gdmoh32g3s588rsvbboef9@4ax.com>
Source record: 138528

On Mon, 15 Jul 2002 15:03:10 GMT, "K7JEB" <k7jeb@arrl.no_spam.net>
wrote:

>
>>CAM wrote:
>>Aren't I1 and I2 in series?
>
>> +---I1->-+
>> | |
>>Source differential Load
>> | |
>> +---<-I2-+ X
>> |
>> ------------------------------<-I3-+
>
>> "Roy Lewallen" <w7el@eznec.com> wrote:
>> Why is this so difficult?
>
>
>Perhaps because the network to be analyzed should really be:
>
> +---I1->-+
> | |
> Source1 Load 1
> | |
> +-------------(Ground Plane)----------------------<-I3-+
> | |
> Source2 Load 2
> | |
> +---<-I2-+
>
>If Source1 = Source2 AND Load 1 = Load 2, then I1 = I2, I3 = 0
>and I1, I2 can be considered purely differential.
>
>For any other condition, there will be a non-zero common-mode
>current I3 and I1 will not equal I2.
>
>If you think this looks like a Wheatstone bridge composed
>of two voltage sources and two loads, you might be right.

Hi Jim,

While I don't necessarily agree with your conclusion, you at least are
giving the poor model a much needed brush-up. This posting has pushed
the thread to over 200 messages, and all too few are willing to look

at the circuit.

Imagine, it simply answers the question where does I3 go without all that anguish about life and the universe being unknowable. It also offers a source, a load, and a loop. It also points out how miserly the original description was to sufficient details ("context" as it was called). To this point, nearly every bobbing head posting here was agog with disbelief that this was achievable. It describes a simple Kirchhoffian solution that for these same 200+ postings refused to acknowledge was possible (much less necessary).

73's
Richard Clark, KB7QHC

1188. Re: Can 75 Ohm coax match a 3 meter whip @ 51 Mhz?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-15 16:39:24 UTC
From: richardharrison@webtv.net
Message-ID: <26040-3D32FABC-119@storefull-2393.public.lawson.webtv.net>
Source record: 138529

Brooke Clarke wrote:
"Is not there a very simple coax in line way to match it (an end-fed near 1/2-wave) at 51 MHz."

Not exactly. Brooke may not have the latest ARRL Antenna Book. Too bad. Page 16-25 of the 19th edition of that book shows a "Super-J" maritime antenna.

A 1/4-wave short-circuit stub at its base provides an adjustable match for coax to the high impedance of the end-fed antenna.

A parallel-tuned resonant circuit can work in place of the short-circuit stub. Just move the coax attachment tap on the coil up from ground for a match.

Best regards, Richard Harrison, KB5WZI

1189. Yagi spacing

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-15 17:12:21 UTC
From: "graham.ogle" <graham.ogle@ntlworld.com>
Message-ID: <0oDY8.2675$yz4.110731@newsfep1-win.server.ntli.net>
Source record: 138530

I want to mount a 6m and a 2m yagi on the same vertical support and use one rotator to turn both of them. Does anyone have any recomendations about the vertical separation of the 2 antennas?

Thanks

Graham

1190. Re: BACK TO BASICS - EM waves, E and H fields, in phase orinquadr...

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-15 17:24:37 UTC
From: CAM <w5dxp@hotmail.com>
Message-ID: <3D330555.74EF9390@hotmail.com>
Source record: 138531

Richard Clark wrote:
> Still, no one, not even the author of the model, seems to be able to
> answer how more current leaves a point than enters it.

I don't need to know the how and why to be able to measure the
current in that wire. But forget the wire. Would you grab one
terminal of a dummy load that was in the process of dissipating
1000 watts of RF (since you can prove on paper that zero current
would flow into your body)?
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

1191. Re: BACK TO BASICS - EM waves, E and H fields, in phase orinquadr...

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-15 17:27:34 UTC
From: CAM <w5dxp@hotmail.com>
Message-ID: <3D330606.CD380912@hotmail.com>
Source record: 138533

Richard Clark wrote:
> While I don't necessarily agree with your conclusion, you at least are
> giving the poor model a much needed brush-up. This posting has pushed
> the thread to over 200 messages, and all too few are willing to look
> at the circuit.

I'm looking at the circuit right now, Richard. If you want to see it,
come on over.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

1192. Re: Yagi spacing

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-15 17:29:31 UTC
From: Pie`` IK2VTJ <picarusoNONVOGLIOSPAM@writeme.com>
Message-ID: <agv0p7$ojiu7$1@ID-83989.news.dfncis.de>
Source record: 138532

"graham.ogle" <graham.ogle@ntlworld.com> ha scritto nel messaggio
news:0oDY8.2675$yz4.110731@newsfep1-win.server.ntli.net...
> I want to mount a 6m and a 2m yagi on the same vertical support and use
one
> rotator to turn both of them. Does anyone have any recomendations about
the
> vertical separation of the 2 antennas?
>
> Thanks
>
> Graham
>

If possible, the 6mt yagi at 6 mt over the roof and the 2 mt yagi 2 mt
higher.
Half heights could be still acceptable.

--
73 de IK2VTJ, Piero.

http://www.qsl.net/ik2vtj
http://www.ardf.it

Togli / Remove
NONVOGLIOSPAM
dall'indirizzo / from address

1193. Confusing Conundrum

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-15 17:38:19 UTC
From: SideBand <abNO8SPAMlr@csotbs.org>
Message-ID: <3D33088B.2000903@csotbs.org>
Source record: 138534

Here's the deal.. I'm planning on running HF mobile in the truck. The problem is twofold here:

1. The truck body is mostly fiberglass, which makes it difficult to find a ground.
2. When a ground is found, it is invariably plagued with noise from the fridge and the inverter.. (I know... don't run the fridge and the inverter, right? Well, then my milk goes bad and I can't charge my cellphone.)

So, I'm looking for a solution that will eliminate these problems. Isolating the RF ground from the body by setting up a separate counterpoise of some sort seems to be the way to go.. It worked on the 2M set, anyway.. The problem with that is size...

I'd also thought about dipoling two screwdriver antennas, or a pair of hamsticks for each band I'm interested in, but again, the size issue...

Any ideas?
--
73 de AB8LR, Chris

http://csotbs.shopiwon.com/ for great deals on computer products.

1194. Re: BACK TO BASICS - EM waves, E and H fields, in phase orinquadr...

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-15 17:56:12 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <8a36juoltvimqiqms6r7hcd0i637danmv9@4ax.com>
Source record: 138535

On Mon, 15 Jul 2002 12:24:37 -0500, CAM <w5dxp@hotmail.com> wrote:

>(since you can prove on paper

Using your paper and pen ;-)

73's
Richard Clark, KB7QHC

1195. Re: BACK TO BASICS - EM waves, E and H fields, in phase orinquadr...

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-15 18:16:22 UTC
From: CAM <w5dxp@hotmail.com>
Message-ID: <3D331176.79E3A018@hotmail.com>
Source record: 138536

Richard Clark wrote:
>
> CAM <w5dxp@hotmail.com> wrote:
> >(since you can prove on paper
>
> Using your paper and pen ;-)

I don't use paper and pen anymore, Richard. I have faith in reality and
go for measurements on the real thing. If I don't even have any faith in
my religion's model of reality, why should I have any faith in your model
of reality? :-)
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

1196. Re: Yagi spacing

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-15 18:22:34 UTC
From: KB9TMP <kb9tmp@juno.com>
Message-ID: <agv3t3$6b9$1@dagobah.blueriver.net>
Source record: 138544

"graham.ogle" <graham.ogle@ntlworld.com> wrote in message
news:0oDY8.2675$yz4.110731@newsfep1-win.server.ntli.net...
> I want to mount a 6m and a 2m yagi on the same vertical support and use
one
> rotator to turn both of them. Does anyone have any recomendations about
the
> vertical separation of the 2 antennas?
>
> Thanks
>
> Graham
>
>
You might look into the Cushcraft A627013S 6 Meter/2Meter/70CM
beam antenna. It's all three on one boom. It might save you a lot of
problems on the mounting.
--
'73' From KB9TMP
"The secret of life is honesty and fair dealing,
if you can fake that, you've got it made."
-Groucho Marx

1197. HELP!!!! with alliance HD73

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-15 18:26:29 UTC
From: Dennis Kaylor <k4oxg@tampabay.rr.com>
Message-ID: <ptEY8.38255$DS.982986@twister.tampabay.rr.com>
Source record: 138537
Cross-posted to: alt.ham-radio.dxing,alt.ham-radio.hf,alt.ham-radio.vhf-uhf,rec.radio.amateur,rec.radio.amateur.antenna,rec.radio.amateur.dx,rec.radio.amateur.equipment

HELP!!!
i got my HD73 installed on my tower and i forgot the wire sequince for the
rotor cable could someone help is it

123
456

or
123
654
if anyone knows this rotor please let me know which is correct
thanks

1198. Re: Yagi spacing

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-15 18:26:49 UTC
From: "Ian White, G3SEK" <G3SEK@ifwtech.co.uk>
Message-ID: <XqjfFXFpPxM9EAtO@ifwtech.co.uk>
Source record: 138538

graham.ogle wrote:
>I want to mount a 6m and a 2m yagi on the same vertical support and use one
>rotator to turn both of them. Does anyone have any recomendations about the
>vertical separation of the 2 antennas?
>
There's information on my web site... but the answer depends a lot on
the yagis involved.

--
73 from Ian G3SEK Editor, 'The VHF/UHF DX Book'
'In Practice' columnist for RadCom (RSGB)

1199. Re: BACK TO BASICS - EM waves, E and H fields, in phase orinquadr...

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-15 18:37:03 UTC
From: David Robbins <k1ttt@arrl.net>
Message-ID: <agv4ot02ivn@enews2.newsguy.com>
Source record: 138542

"Richard Clark" <kb7qhc@attbi.com> wrote in message
news:doq5juko98c8ins3dah09bqg0v29ujr00t@4ax.com...
> On Mon, 15 Jul 2002 12:27:19 -0000, "David Robbins" <k1ttt@arrl.net>
> wrote:
>
> >
> >"Richard Clark" <kb7qhc@attbi.com> wrote in message
> >news:g0v3ju47o7k0h1mu3njcuojpl0q4m1atk8@4ax.com...
> >> On Sun, 14 Jul 2002 22:39:55 +0100, "Ian White, G3SEK"
> >> <G3SEK@ifwtech.co.uk> wrote:
> >>
> >> >Richard Clark wrote:
> >> >>
> >> >>To satisfy Kirchhoff, "where" is the current I3 flowing to? AND how
> >> >>does it get back?
> >> >
> >> >Sorry, you can't subpoena that information using Kirchhoff's law.
> >> >
> >> >Kirchhoff's law states only that the (algebraic) sum of all conducted
> >> >currents flowing into and out of any point within a circuit is zero.
It
> >> >requires no information about the external circuit conditions that
> >> >create and drive those currents.
> >>
> >> Hi Ian,
> >>
> >> You don't know either....
> >> (Hint: satisfy what little you admit of Kirchhoff - if you can,
> >> explain that for the current that leaves, denoted as I3, where is the
> >> current equal to I3 and returning to that same point)
> >>
> >> Solution, there is no loop (first violation). There is no potential
> >> applied (second violation). There is no load (third violation). It
> >> takes only one violation, not all, to dismiss this wire as being a
> >> rhetorical ornament.
> >>
> >> 73's
> >> Richard Clark, KB7QHC
> >
> >ah, but here you are mixing your laws. kirchoff's applies to a point,
you
> >can add all the currents at a point and they must equal zero. BUT, you
can
> >NOT say where those currents go once they leave that point. the current

I3
> >can flow down a 1/4 wave wire, reach the end, reflect back and show up
some
> >later time at that same point, at which time it must again sum up with I1
> >and I2 to be zero, but at that time the current component of I3 that has
> >reflected from the end of the wire can be added back into I1 and I2
(which
> >may change because of this new current component) to make the law work
> >again. now if there were a resistive load at the end of that wire that
> >happened to match the impedance of what ever propagation mode I3 sees as
it
> >travels along it's wire then the current goes into the load, heats it up
and
> >never gets back to the junction point, but I1, I2, and I3 still add up to
> >zero.
> >
> >to properly analyze what happens to I3 after it satisfies kirchoff's law
at
> >the junction point you have to analyze all the various possibilities
> >including ohm's contribution that removes energy as heat, and all the
> >possible fields and waves generated by the moving electrons according to
> >maxwell's equations.
> >
>
> Hi David,
>
> You reading all of this from the eh handbook?
>
> It is not all that difficult - except when playing with less than all
> the facts (an obvious shortfall of the circuit description).
>
> Still, no one, not even the author of the model, seems to be able to
> answer how more current leaves a point than enters it.
>
> 73's
> Richard Clark, KB7QHC

who said anything about more current leaving a point than entering?
kirchoff's law is clear on that point. but you can not describe the loop or
where the current goes once it leaves a point using kirchoff's law and the
simple wire model being shown, you would have to add in displacement
currents and induced currents at every infinitesimally small wire segment
all along that wire to figure it out.

1200. Re: Can 75 Ohm coax match a 3 meter whip @ 51 Mhz?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-15 18:50:51 UTC
From: Brooke Clarke <brooke@pacific.net>
Message-ID: <3D33198B.2832A2DC@pacific.net>
Source record: 138539

Hi Doc:

The idea is that the PRC-25 radio comes with this antenna and the AB-1135 is a ground mount that will accept the antenna and uses the same mounting hardware as is on the PRC-25. When the AT-271 is installed on the PRC-25 there is built in matching network but when the AB-1135 is used then some other matching needs to be done. Maybe a network in a box to be placed in line at the base of the antenna?

Does anyone know how the AB-1135 was intended to be used?

73,

Brooke Clarke, N6GCE
http://www.prc68.com

'Doc wrote:

> David,
> Why not just feed it in the center?
> 'Doc

1201. Re: 50 foot mast

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-15 18:56:46 UTC
From: Brooke Clarke <brooke@pacific.net>
Message-ID: <3D331AEE.576D26B7@pacific.net>
Source record: 138540

Hi Aaron:

You might look into military mast sections as carried by Fair Radio and many others.
Many years ago, and for a number of yerars until a storm took it down, I had a 50 mast for a longwave beacon.
It took two people to lift it up. Use 4, not 3, anchor point for the guys so that the left and right guys will help stablize the mast as you tilt it up. The layout and install instructions are in the manuals for many military antennas that use this system.

I now have an OE-252 antenna that been up a few years on one of these.
http://www.pacificsites.com/~brooke/OE254/OE254.shtml

73,

Brooke Clarke, N6GCE
http://www.prc68.com

Aaron Rogerson wrote:

> Don't need a permit in Darwin, Australia :)
>
> "David Robbins" <k1ttt@arrl.net> wrote in message
> news:agufmq019rv@enews2.newsguy.com...
> > check with the manufacturer of the mast, they should have installation
> > drawings and instructions for a properly engineered installation. your
> > local building inspector will probably require copies of them to issue you
> a
> > construction permit anyway.
> >
> > "Aaron Rogerson" <arogerso@bigpond.net.au> wrote in message
> > news:OXxY8.445826$o66.1203497@news-server.bigpond.net.au...
> > > Can someone here lead me to a link, or somewhere that describes how to
> > erect
> > > a 50 foot mast.(aluminium) Including guy wires etc. It is for a 2.4ghz
> > > wireless LAN omni-directional. Thanks,
> > > Aaron.
> > >
> > >
> >
> >

1202. WTB: MFJ Antenna Analyzer

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-15 19:04:17 UTC
From: kbozek@yahoo.com
Message-ID: <506a3e3b.0207151104.6d21d721@posting.google.com>
Source record: 138541
Cross-posted to: rec.radio.swap,rec.radio.amateur.antenna

New to antenna building - Looking to buy a used MFJ 259 or 249 series antenna analyzer.

1203. Re: fiberglass or aluminum mast

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-15 19:06:04 UTC
From: kelly@dvol.com
Message-ID: <d22b54c3.0207151106.491269e0@posting.google.com>
Source record: 138543

"Matt Patterson" <mattpatt@1starnet.com> wrote in message
news:<OIsY8.201919$vq.10938241@bin6.nnrp.aus1.giganews.com>...
> Hi,
>
> I'm looking for a good place to buy a figerglass or aluminum mast for my new
> tower. It needs to be at least 15' long. Was wondering if anyone had any
> good recomendations.
>
>
Some of the answer depends on the kind of antenna(s) you plan to use.
For rotary beams I wouldn't use either fiberglass or aluminum masts.
Both could well wear very quickly in the usual hard tower-top sleeve
steel tube bearing vs. a steel mast. Both are difficult to find except
in large industrialized areas.
>
>
Continuous 15-21 foot lengths of fiberglass pipe are out there for the
process industries but you can bet it's extremely expensive and so is
the shipping cost. Run a search on "fiberglass pipe", you'll get a lot
of hits. Your best bet for finding aluminum is your yellow pages under
"metals". Aluminum pipe is usually available locally as electrical
conduit but the aluminum alloy used for conduit is very soft and not
nearly as strong as are the much stronger aircraft alloys like 6061T6
which is the minumum I use for antenna work.
>
>
Fiberglass has the additional disadvantage of being non-conductive
which is not good when antennas should be grounded for both proper
performance and lightning protection purposes.
>
>
My suggestion is to stick with galvanized 1 1/2" steel pipe which is
the ham-standard mast material. It's comparatively cheap, it's
thoroughly proven, wear-resistant, conductive, strong and it's
available in 21 foot lengths everywhere and it can be dragged home
without having to spend any money on shipping the stuff.
>
>
> Thanks
> Matt
> KC5YTV
>
>
w3rv

1204. Re: How To Measure Antenna Impedance?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-15 19:18:49 UTC
From: Bob Haviland <bobh@iag.net>
Message-ID: <teFY8.23018$A43.2309580@newsread2.prod.itd.earthlink.net>
Source record: 138545

Steve Lutes wrote in message ...
>I'm building an antenna (helix) and I need to measure its impedance
>(freq < or = 900 Mhz).
>
>How do I do this>

Its more work, but scale the antenna down in frequency, and use one of the
vhf rf bridges,
The ITT rf handbook covers use of q-meter to measure impedance. taint easy.
Check the nearest university. They may have the gear you need.
bob w4mb

1205. Re: Confusing Conundrum

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-15 19:22:04 UTC
From: Bob Cook <captcook@compuserve.com>
Message-ID: <agvatfqad1@nntp-m01.news.aol.com>
Source record: 138549

My two cents:

Probably some big capacitors or filters will cure your refrig noise problem.
The iunverter is another issue. You'll never it it quieted down. Best
solution is kill it when you want to run the SSB.

Bob

1206. Re: HELP!!!! with alliance HD73

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-15 19:26:42 UTC
From: "R. Scott" <washingtonham@yahoo.com>
Message-ID: <3D3321F2.41E12D65@yahoo.com>
Source record: 138546
Cross-posted to: alt.ham-radio.dxing,alt.ham-radio.hf,alt.ham-radio.vhf-uhf,rec.radio.amateur,rec.radio.amateur.antenna,rec.radio.amateur.dx,rec.radio.amateur.equipment

Dennis Kaylor wrote:
>
> HELP!!!
> i got my HD73 installed on my tower and i forgot the wire sequince for the
> rotor cable could someone help is it
>
> 123
> 456
>
> or
> 123
> 654
> if anyone knows this rotor please let me know which is correct
> thanks

I have the same rotor, when I get home from work Ill look it up for you.

Rick KF7QZ

1207. Re: Can 75 Ohm coax match a 3 meter whip @ 51 Mhz?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-15 19:52:26 UTC
From: k7itm@aol.com
Message-ID: <3200347.0207151152.41197bbc@posting.google.com>
Source record: 138547

I don't know the exact antenna system you posted about, but I assume
your 3-meter length description is accurate. Also, I don't know
exactly what you are feeding it against. Those factors will cause
some variability in the answer, but it's key to note that you have an
antenna just about half a wavelength long, which means it's a bit
above the halfwave resonance. A half-inch diameter 118" long antenna
fed against a perfect ground plane at 51MHz will have a feedpoint
impedance of _roughly_ 300-j400 ohms. If you're insistant on using 75
ohm line to match that, I'd suggest what's essentially a resonator:
about 70 electrical degrees of line in series from the antenna to
where you attach the 50 ohm feedline, and another shorted stub about
15 electrical degrees long attached at the point where the 50 ohm and
75 ohm series lines connect. The total 85 degrees length is resonated
by the capacitive reactance of the antenna. (I'm sure Reg will pick
right up on that one. ;-)

There are any number of other ways you can match that sort of
impedance to a 50 ohm feedline. A simple L network will do it: about
9.8pF across the feedpoint and about 620nH in series to the feedline.
That's also a lot easier to adjust than the coax stubs.

Cheers,
Tom

Brooke Clarke <brooke@pacific.net> wrote in message
news:<3D3246EC.79EE1B99@pacific.net>...
> Hello:
>
> The AB-1135 is being sold you know where.
> It will hold the 3 meter long combination AT-271 fishing pole whip & it's spring
> AB-591 base.
>
> Would a magic length of 75 Ohm coax match it to 50 Ohms 51 MHz?
>
> If not is there a very simple coax in line way to match it at 51 MHz?
>
> 73,
>
> Brooke Clarke, N6GCE
> http://www.prc68.com

1208. Re: 50 foot mast

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-15 20:00:40 UTC
From: kelly@dvol.com
Message-ID: <d22b54c3.0207151200.642b785a@posting.google.com>
Source record: 138548

"Aaron Rogerson" <arogerso@bigpond.net.au> wrote in message
news:<OXxY8.445826$o66.1203497@news-server.bigpond.net.au>...
> Can someone here lead me to a link, or somewhere that describes how to erect
> a 50 foot mast.(aluminium) Including guy wires etc. It is for a 2.4ghz
> wireless LAN omni-directional. Thanks,
> Aaron.
>
>
Try this one for a nice New Wave Antenna aluminum 40 foot push-up
mast:

http://www.aesham.com/pdf/130-139.pdf

I understand that Rohn makes 40 & 50 foot steel push-up masts but I
don't have any info on 'em. Try Texas Towers.
>
>
w3rv

1209. Re: BACK TO BASICS - EM waves, E and H fields, in phase orinquadr...

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-15 20:35:39 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <l9b6jucfgf7j8tmu0cve945o5o9ijfep6j@4ax.com>
Source record: 138550

On Mon, 15 Jul 2002 18:37:03 -0000, "David Robbins" <k1ttt@arrl.net>
wrote:

>>
>> Still, no one, not even the author of the model, seems to be able to
>> answer how more current leaves a point than enters it.
>>
>> 73's
>> Richard Clark, KB7QHC
>
>who said anything about more current leaving a point than entering?
>

Hi David,

Research the archives to find:
>CAM wrote:
>>
>> If I1 is the current on the outside of the inner conductor and I2 is the
>> current on the inside of the outer conductor, then doesn't I1 equal I2 in
>> magnitude and opposite in phase so that differential current equals I1?
>
>Yes. They're equal in value, but they're not the same current. I1 is the
>current on the outside of the inner conductor. The differential current
>is composed of both I1 and I2.
>
>Roy Lewallen, W7EL

Cecil's drawing (not mine):
>> CAM wrote:
>> > Aren't I1 and I2 in series?
>> >
>> > +---I1->-+
>> > | |
>> > Source differential Load
>> > | |
>> > +---<-I2-+ X
> |
> ----------------------------<-I3-+
exhibits one current entering point X and two leaving. The current
entering (identified by Cecil, not me) is I1; the currentS leaving
(identified by Cecil, not me) ARE I2 and I3. Per the standard
understanding of differential current as offered by Roy above, I1 and
I2 are equal (as confirmed by Cecil, others, and not simply me).

It is not a question of metaphysics nor is it unreasonable to ask: where is that current going? And further to balance the currents - at point X alone - requires more of this drawing than is offered; and that has been in fact already attended to by Jim Bromley, K7JEB.

So the technical issues can be resolved through discussing Jim's model, or the obviously more interesting philosophical questions of genital relationships (identified by Cecil, not me) with the poorer model can be pursued with the drawing above.

73's
Richard Clark, KB7QHC

1210. Re: BACK TO BASICS - EM waves, E and H fields, in phase orinquadr...

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-15 21:12:18 UTC
From: Reg Edwards <g4fgq.regp@btinternet.com>
Message-ID: <agvdriebc1@paris.btinternet.com>
Source record: 138551

> I have faith in reality and
> go for measurements on the real thing.

Radio amateurs suffer from delusions of accuracy when making measurements.

Why don't most contributors to this thread go back to square one and Ohm's Law and exercise their reasoning powers. I'm sure some of you have some.

The nonsense exceeds that generated by discussions on Reflections and Conjugate Matches.

But why should *I* spoil your enjoyment ?

Gentlemen, here's to your good health. Can I top up your glasses ?

Reg G4FGQ

1211. Re: building a 170 mhz yagi

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-15 21:42:22 UTC
From: JASON A DUGAS <kb5urq@prodigy.net>
Message-ID: <2lHY8.926$Y57.247029878@newssvr16.news.prodigy.com>
Source record: 138552

The easiest way to do this is to use one of the "Yagi calculators" on the
web. They are pretty basic but very simple. Just enter the frequency and
it will spit out the element lengths and spaces.
http://www.nemr.net/~aschmitz/antennas/calcantenna.html

Try the link above. I'm not sure if its the best one, but its just the
first one that popped up using Google.com.

Jason
KB5URQ
"Jason Porter" <jasonporter@sympatico.ca> wrote in message
news:a592a30a.0207130741.654fe921@posting.google.com...
> Hi all,
>
> I'm a sound recordist in TV and film, and I use wireless mics for a
> lot of my work. I want to improve the reception of my wireless
> receivers (in the 170 mhz area) by using a yagi antenna. Does anyone
> know where I can get plans to build one? I have good knowledge of
> contruction, but not the math.
>
> Thanks,
>
> -Jason
>

1212. Re: BACK TO BASICS - EM waves, E and H fields, in phase orinquadr...

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-15 21:49:43 UTC
From: David Robbins <k1ttt@arrl.net>
Message-ID: <agvg1u0ep4@enews2.newsguy.com>
Source record: 138554

"Richard Clark" <kb7qhc@attbi.com> wrote in message
news:l9b6jucfgf7j8tmu0cve945o5o9ijfep6j@4ax.com...
> On Mon, 15 Jul 2002 18:37:03 -0000, "David Robbins" <k1ttt@arrl.net>
> wrote:
>
> >>
> >> Still, no one, not even the author of the model, seems to be able to
> >> answer how more current leaves a point than enters it.
> >>
> >> 73's
> >> Richard Clark, KB7QHC
> >
> >who said anything about more current leaving a point than entering?
> >
>
> Hi David,
>
> Research the archives to find:
> >CAM wrote:
> >>
> >> If I1 is the current on the outside of the inner conductor and I2 is
the
> >> current on the inside of the outer conductor, then doesn't I1 equal I2
in
> >> magnitude and opposite in phase so that differential current equals I1?
> >
> >Yes. They're equal in value, but they're not the same current. I1 is the
> >current on the outside of the inner conductor. The differential current
> >is composed of both I1 and I2.
> >
> >Roy Lewallen, W7EL
>
> Cecil's drawing (not mine):
> >> CAM wrote:
> >> > Aren't I1 and I2 in series?
> >> >
> >> > +--I1->-+
> >> > | |
> >> > Source differential Load
> >> > | |
> >> > +--<-I2-+ X
> > |
> > ----------------------------<-I3-+
> exhibits one current entering point X and two leaving. The current

> entering (identified by Cecil, not me) is I1; the currentS leaving
> (identified by Cecil, not me) ARE I2 and I3. Per the standard
> understanding of differential current as offered by Roy above, I1 and
> I2 are equal (as confirmed by Cecil, others, and not simply me).
>
> It is not a question of metaphysics nor is it unreasonable to ask:
> where is that current going? And further to balance the currents - at
> point X alone - requires more of this drawing than is offered; and
> that has been in fact already attended to by Jim Bromley, K7JEB.
>
> So the technical issues can be resolved through discussing Jim's
> model, or the obviously more interesting philosophical questions of
> genital relationships (identified by Cecil, not me) with the poorer
> model can be pursued with the drawing above.
>
> 73's
> Richard Clark, KB7QHC

this thread has gone on so long that we are all talking about different things now. if indeed as you say the points marked with the +'s above are all connected together and the differential load is indeed before that connection point the whole thing is rather stupid as you have a short circuit across the line after the load. i had been reading it as a distortion of a dipole connected (the differential load) at the points where I1 and I2 are marked then the extra wire carrying I3 was representing the outside of the shield or alternately some other wire hanging off one side unbalancing the load. the whole thing has been twisted around so much that any statement made at this point could be supported or refuted by any other statement based the the writers interpretation of the problem and their own viewpoint.

1213. US Tower TX-489

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-15 21:56:52 UTC
From: Ed Williams <sunset392@cox.net>
Message-ID: <EyHY8.78768$%%2.3434198@news2.east.cox.net>
Source record: 138553

I am looking for some info on the raising fixture that is used on the TX489 tower.

If anyone could provide pictures and dimensions for the fixture I would sure be greatful.

Please reply direct to my email address.

Thanks in advance.

ed

1214. Re: Confusing Conundrum

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-15 22:35:00 UTC
From: k0bg@aol.com
Message-ID: <20020715183500.07236.00000695@mb-mj.aol.com>
Source record: 138555

Oh boy! Not enough information to really help much, but here goes.

Fiberglass truck? Must be an over the roader, huh? Do not confuse ground with groundplane! If it is a semi, or other large tractor, about the only place you have any substantial metal is the front bumper. Not an ideal place to mount a mobile antenna, but better than none. One of my long-time friends just retired from long haul, and ran mobile for many years. His antenna was a home brew one with a 6 foot copper mast, heavy duty Texas Bug Catcher coil, and a manual tuner to take care of the other bands besides 20. Worked that guy ALL OVER!

As for the noise, there are about as many solutions as there are noises. The best solution is not caps as they require splicing into the lines, which isn't all that smart of an idea. Palomar Engineers, and other sell several different sizes of split ferrite beads which slip over the existing wiring. They get very lossy over about 1 Mhz, so they do a good job of noise reduction.

There are so many other variables, without further information, it is hard to pin down solutions. I personally have been mobile for over 30 years, have owned about 10 radios in that time, and some 20 vehicles. If experience pays, my dues are caught up for about another 10 years, I think.

Alan, Kï¿½BG

1215. REQ: Article from ARRL Antenna Book, 16th edition, pages 7-17 to 7-20

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-15 22:37:13 UTC
From: discone <nospam@aol.com>
Message-ID: <o9j6ju486ibkh2lct62o7ptrilaeajdf0s@4ax.com>
Source record: 138556

REQ: Article from ARRL Antenna Book, 16th edition, pages 7-17 to 7-20

I'd appreciate someone scanning the article on discone antennas and
sending it to me at discone@vnet.net.
Thanks
OTR

1216. Re: Radial/Ground Plate

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-15 22:38:04 UTC
From: k0bg@aol.com
Message-ID: <20020715183804.07236.00000696@mb-mj.aol.com>
Source record: 138557

The base of my vertical has a 10 foot piece of 1/2" copper pipe bent in a circle and soldered together with a coupling. There are 120 radials varying in length from 30 to 90 feet. It works!

Alan, Kï¿½BG

1217. HB Rotatable Dipole

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-15 22:54:29 UTC
From: Tony Angerame <tangeram@lucent.com>
Message-ID: <agvjdn$5so@nntpb.cb.lucent.com>
Source record: 138558

Has anyone used the World Radio Fiberglass Masts? If so do you think they would be rigid enough to create a rotatable dipole? I mean two of them butted together to for a 40 footer loaded with some lightweight coils I suppose.

Tony WA6LZH

1218. Re: BACK TO BASICS - EM waves, E and H fields, in phase orinquadr...

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-15 22:59:50 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <srk6jug17n1t94ikb85vc2qqatqef33nfa@4ax.com>
Source record: 138559

On Mon, 15 Jul 2002 21:49:43 -0000, "David Robbins" <k1ttt@arrl.net>
wrote:

> the whole thing has been twisted around so much that
>any statement made at this point could be supported or refuted by any other
>statement based the the writers interpretation of the problem and their own
>viewpoint.

hence the value of a clear circuit description, Jim's work being very
much more complete and all modes quite distinct.

Note that much of every argument that went before his posting could
have as easily been argued with his diagram and issues settled long
ago. In fact it could draw together many noted observations without
denying anyone their braggin' rights.

73's
Richard Clark, KB7QHC

1219. Re: Confusing Conundrum

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-15 23:47:24 UTC
From: Bob Miller <bamiller@texas.net>
Message-ID: <NF4zPRJAS9JuoRvHTUFkojpI1L2M@4ax.com>
Source record: 138560

SideBand <abNO8SPAMlr@csotbs.org> wrote:

>Here's the deal.. I'm planning on running HF mobile in the truck. The
>problem is twofold here:
>
>1. The truck body is mostly fiberglass, which makes it difficult to find a
>ground.
>2. When a ground is found, it is invariably plagued with noise from the
>fridge and the inverter.. (I know... don't run the fridge and the inverter,
>right? Well, then my milk goes bad and I can't charge my cellphone.)

Put your damned milk in a Thermos bottle and charge your friggin' phone through
a DC charger in your cigarette lighter.

Bob
k5qwg

>
>Any ideas?

1220. Re: 50 foot mast

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-16 00:32:31 UTC
From: J Tabor <denews@taborsoft.com>
Message-ID: <uj6qd1rdopruc3@corp.supernews.com>
Source record: 138561

Greetings,

You think the LMR 600 would support the antenna, or should one just go with the LMR 900? <vbg>

Regards,
Jim

"Brian Kelly" <kelly@dvol.com> wrote in message > Try this one for a nice New Wave Antenna aluminum 40 foot push-up
> mast:
>
> http://www.aesham.com/pdf/130-139.pdf
>
> I understand that Rohn makes 40 & 50 foot steel push-up masts but I
> don't have any info on 'em. Try Texas Towers.
> >
> >
> w3rv

1221. Re: fiberglass or aluminum mast

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-16 03:14:57 UTC
From: Crazy George <munschNO@attglobal.net.SPAM>
Message-ID: <3d339468$1_1@news1.prserv.net>
Source record: 138562

> My suggestion is to stick with galvanized 1 1/2" steel pipe which is
> the ham-standard mast material. It's comparatively cheap, it's
> thoroughly proven, wear-resistant, conductive, strong and it's
> available in 21 foot lengths everywhere and it can be dragged home
> without having to spend any money on shipping the stuff.
> w3rv

Brian:
Water pipe is a poor choice for structural material. It is designed to be malleable, and have high hoop strength, but is not very strong for its weight in any other mode. A commonly available material which is designed to be a structural member is the various sizes of chain link fence post material. You have to go to a fence installer, as the do it to yourself stores only stock one or 2 sizes and in short lengths, but real fence places will have raw stock in many sizes and 21 foot lengths like water pipe. Much lighter if you have to haul it very far up a tower, and much stronger in bending moment. There are also some black structural pipes which meet the strength criteria, but also not found at your local stores.

--
Crazy George
Remove NO and SPAM from return address

1222. Re: BACK TO BASICS - EM waves, E and H fields, in phase orinquadr...

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-16 03:30:12 UTC
From: CAM <w5dxp@hotmail.com>
Message-ID: <3D339344.93155B87@hotmail.com>
Source record: 138563

Richard Clark wrote:
> Note that much of every argument that went before his posting could
> have as easily been argued with his diagram and issues settled long
> ago. In fact it could draw together many noted observations without
> denying anyone their braggin' rights.

So how I draw something on a sheet of paper affects the results of the
measurements I make on my test bench?
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

1223. Re: Radial/Ground Plate

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-16 07:46:24 UTC
From: amfowler@melbpc.org.au
Message-ID: <3d35cdbf.7062232@news.melbpc.org.au>
Source record: 138564

"Gary Boyer" <gboyer@columbus.rr.com> wrote:

>Does anyone have any suggestions on a ground plate that you can attach your
>radials....the plate would be used to tie the radials to a hustler 6btv
>vertical..tnx...Gary..K8BY
>
Gary,
We used to use a buried "heavy" copper conductor in
a circle around the base of the mast and connected the
radials to this. It worked well in most cases. The
exceptions were short aerials and soil which had quite
different conductivities when wet than when dry. Used a
copper sheet to stabilise the base impedance in this case.

All joints were made using phos-copper welding rod
and oxy-acetylene equipment. This overcame corrosion
problems.

Alan.

1224. Re: fiberglass or aluminum mast

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-16 08:34:03 UTC
From: 'Doc <w5lz@icok.net>
Message-ID: <3D33DA5D.84476DC4@icok.net>
Source record: 138565

Matt,
A few of the tower manufacturor's used to offer
steel masts. No idea if they still do, but it's
worth a try. Depending on the antennas mounted on
the mast, the mast may be a real 'hog', weighing as
mush or more than a section of tower. It may seem
like 'over-kill' but it really isn't. Good luck.
'Doc

1225. Dual band HT and Mobile HELP PLEASE!!

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-16 08:49:01 UTC
From: JEEPMON <JEEPMON@HOTMAIL.COM>
Message-ID: <06RY8.537339$352.91904@sccrnsc02>
Source record: 138566
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.equipment,rec.radio.scanner,rec.radio.shortwave

Can anyone tell me witch dual band HT's and mobile radios can both receive and transmit at the same time??

I have only found the Kenwood TH 79a and HT that while you are transmitting on 2 meters you can receive on 440.

Again are there any other HT's and Mobile dual band Ham radios that can simultaneously receive and transmit at the same time?

1226. Re: fiberglass or aluminum mast

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-16 09:10:41 UTC
From: DPH <rally2xs@compuserve.com>
Message-ID: <bio7ju873i3aktmuld0ph4aehe4d9itqj6@4ax.com>
Source record: 138567

On Tue, 16 Jul 2002 08:34:03 GMT, 'Doc <w5lz@icok.net> wrote:

>
>
>Matt,
> A few of the tower manufacturor's used to offer
>steel masts. No idea if they still do, but it's
>worth a try. Depending on the antennas mounted on
>the mast, the mast may be a real 'hog', weighing as
>mush or more than a section of tower. It may seem
>like 'over-kill' but it really isn't. Good luck.
> 'Doc

I saw a set of steel masts from Rohn in the R & L Electronics catalog
that I downloaded a couple weeks ago. Up to 50 feet tall. Catalog is
big, so if U don't have hi speed access, count on a wait to download
it.

R & L website here:

http://www.randl.com/cart/

Dave Head
K8DH

1227. Re: Dual band HT and Mobile HELP PLEASE!!

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-16 10:42:59 UTC
From: Scott <acepilot@bloomer.net>
Message-ID: <3D33F8B3.2D6AC987@bloomer.net>
Source record: 138568
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.equipment,rec.radio.scanner,rec.radio.shortwave

The Kenwood TM-742A mobile (tri-bander) can receive on the other bands
while transmitting on one band.

Scott
N0EDV

JEEPMON wrote:
>
> Can anyone tell me witch dual band HT's and mobile radios can both receive
> and transmit at the same time??
>
> I have only found the Kenwood TH 79a and HT that while you are transmitting
> on 2 meters you can receive on 440.
>
> Again are there any other HT's and Mobile dual band Ham radios that can
> simultaneously receive and transmit at the same time?

--

Scott
http://corbenflyer.tripod.com
http://groups.yahoo.com/group/ParasolAirplanes
Building RV-4
Gotta Fly or Gonna Die!

1228. Re: Dual band HT and Mobile HELP PLEASE!!

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-16 10:48:00 UTC
From: radiofun <radiofun@charter.net>
Message-ID: <uj7ugniqenfaa2@corp.supernews.com>
Source record: 138469
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.equipment,rec.radio.scanner,rec.radio.shortwave

Any "true" dual bander will do this. The Icom 207 or Yaesu FT-90 won't. They aren't true dual banders.

"JEEPMON" <JEEPMON@HOTMAIL.COM> wrote in message news:06RY8.537339$352.91904@sccrnsc02...
> Can anyone tell me witch dual band HT's and mobile radios can both receive
> and transmit at the same time??
>
> I have only found the Kenwood TH 79a and HT that while you are transmitting
> on 2 meters you can receive on 440.
>
> Again are there any other HT's and Mobile dual band Ham radios that can
> simultaneously receive and transmit at the same time?
>
>
>

1229. F/S Hustler 5BTV Vertical

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-16 12:31:08 UTC
From: radiohaven <radiohaven@aol.com>
Message-ID: <gmUY8.136815$uk2.53446647@twister.nyroc.rr.com>
Source record: 138470
Cross-posted to: rec.radio.amateur.antenna,rec.radio.swap

F/S Hustler 5BTV Vertical 5 band 80-10 Meters in EXCELLENT condition, only up
for a few weeks, Complete ready to go, Manual Original Box.$110.00 Shipped lower 48 via UPS

1230. Re: fiberglass or aluminum mast

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-16 12:32:20 UTC
From: dan <danlx@execpc.com>
Message-ID: <3d34139d$0$1424$272ea4a1@news.execpc.com>
Source record: 138471

On Mon, 15 Jul 2002 22:14:57 -0500, "Crazy George"
<munschNO@attglobal.net.SPAM> wrote:

>> My suggestion is to stick with galvanized 1 1/2" steel pipe which is
>> the ham-standard mast material. It's comparatively cheap, it's
>> thoroughly proven, wear-resistant, conductive, strong and it's
>> available in 21 foot lengths everywhere and it can be dragged home
>> without having to spend any money on shipping the stuff.
>> w3rv
>
>Brian:
>Water pipe is a poor choice for structural material. It is designed to be
>malleable, and have high hoop strength, but is not very strong for its
>weight in any other mode. A commonly available material which is designed
>to be a structural member is the various sizes of chain link fence post
>material. You have to go to a fence installer, as the do it to yourself
>stores only stock one or 2 sizes and in short lengths, but real fence places
>will have raw stock in many sizes and 21 foot lengths like water pipe. Much
>lighter if you have to haul it very far up a tower, and much stronger in
>bending moment. There are also some black structural pipes which meet the
>strength criteria, but also not found at your local stores.
Hi all,
So far I have not seen a reference to the good old cheapest place to
get metal pipes, plates, angles or any combination of said pieces.
The JUNK YARD. Or more politically correct, the recycling center ;<}
I have found steel plate for tower base/parts, pipe of various
lengths, aluminum plate for rotors and just about any steel or
aluminum angle you can imagine. Not only can you find lots of good
stuff, the price is usually pennies on the dollar when compared to
new. Yes, I know, there is usually a little work involved in getting
it painted or polished up and you have to drill your own holes but,
isn't that part of the fun? I have found that when you frequent these
establishments it is possible to leave a note up, for the operator of
the scale, with request for the particular parts you are looking for.
Dan

I've rambled enough, back to the rocking chair. ZZZZZZZZZ
Remove left x for a direct reply.

1231. Re: building a 170 mhz yagi

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-16 12:42:53 UTC
From: shutup_cartman@remove.hotmail.nospam.com.oink
Message-ID: <3d3413f4.4373583@news.aei.ca>
Source record: 138472

On Mon, 15 Jul 2002 21:42:22 GMT, "JASON A DUGAS" <kb5urq@prodigy.net>
wrote:

>The easiest way to do this is to use one of the "Yagi calculators" on the
>web. They are pretty basic but very simple. Just enter the frequency and
>it will spit out the element lengths and spaces.
>http://www.nemr.net/~aschmitz/antennas/calcantenna.html

Besides if I read his request correctly, this will be a receive only
antenna. The "fine tuning" is a lot less critical with no SWR
ajustments to deal with and a basic yagi can work wonders. (he says
after having built a rough yagi out of a stick and 4 coat hangers to
DRAMATICALLY improve my reception for 88-108mhz broadcast band FM at
my backcountry house where reception was zilch)

Pat

1232. Re: Radial/Ground Plate

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-16 13:58:27 UTC
From: Sparks W4EAS <sparksw4eas@mindspring.com>
Message-ID: <3D342683.23FA@mindspring.com>
Source record: 138473

Do like we do in the Broadcast Industry... Use 3/4 inch soft copper tubing, fill with sand, bend in a circle that will fit around tower base, "Silver Solder All" connections. Use coupling on end to end of loop. Then "Silver Solder" 120 1/4 wave radials (3 Degrees apart), and inter space with another 120 shorter radilas... ALL silver Soldered. A "Lawn Edger" PULLED backwards will cut a 4 1/2 inch by 1/4 inch slot to push the radial into. Use a 4 foot tubing with a guy wire "Thimble" hose clamped to the end iof the tubing to push the wire into the slot :-) I use THHC number 14 solid wire in 500 foot rolls. About 11.95 at Lowes.
73, Sparks W4EAS Broadcast Consultant

1233. Re: Confusing Conundrum

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-16 14:27:43 UTC
From: Gary McAdams <g.m.mcadams@worldnet.att.net>
Message-ID: <z3WY8.105273$UT.6788155@bgtnsc05-news.ops.worldnet.att.net>
Source record: 138474

Bob, k5qwg says:
Bob Miller <bamiller@texas.net>
> Put your damned milk in a Thermos bottle and charge your friggin' phone
through
> a DC charger in your cigarette lighter.
>
> Bob
> k5qwg
>

Well Bob, that was very helpful.

If answering questions pisses you off that much,
why did you waste your oh so precious time composing
the one-liner?

Geezus fellah, get a grip!

The preceding is a perfect example of why Amateur
radio is going downhill. Fellow asks a perfectly reasonable
question and some old fart, who apparently has no
clue, give a mean spirited, vile one-line reply.

Thanks a lot Bob, its guys like you who are slowly killing
what was once a very nice hobby.

Of course, 'ol Bob is probably the nicest fellow in person.
Stands to reason that he would not answer like that if the
person asking the question could reach out and smack him
upside the head as he so richly deserved!

Well, my comments are not answering the original question
either so its back in the wood work for me.

73 Gary WG7X

1234. Re: Confusing Conundrum

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-16 15:25:10 UTC
From: Bob Miller <bamiller@texas.net>
Message-ID: <8jg0PelblsPZh=44vE+z9eXDI3fx@4ax.com>
Source record: 138475

"Gary McAdams" <g.m.mcadams@worldnet.att.net> wrote:

>Bob, k5qwg says:
>Bob Miller <bamiller@texas.net>
>> Put your damned milk in a Thermos bottle and charge your friggin' phone
>through
>> a DC charger in your cigarette lighter.
>>
>> Bob
>> k5qwg
>>
>
>Well Bob, that was very helpful.
>
>If answering questions pisses you off that much,
>why did you waste your oh so precious time composing
>the one-liner?
>
>Geezus fellah, get a grip!

Well, I guess my one-liner wasn't as funny as I thought it was. Sorry about that. But it was based on whether or not you can really "clean up" the rfi on one of these little, inexpensive inverters that go into cars & trucks. The solution might be more expensive than the cost of the inverter itself.

I notice that Radio Shack has some true sine wave inverters intended for high quality audio use, but they're priced at $859 and $1349 respectively.

Otherwise, no offense intended -- have a good day.

Bob
k5qwg

>Well, my comments are not answering the original question
>either so its back in the wood work for me.
>
>73 Gary WG7X
>

1235. Re: Dual band HT and Mobile HELP PLEASE!!

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-16 15:25:52 UTC
From: Harris <aharris@bookworm.suffolk.lib.ny.us>
Message-ID: <4WWY8.14170$T_.294908@iad-read.news.verio.net>
Source record: 138476
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.equipment,rec.radio.scanner,rec.radio.shortwave

In rec.radio.shortwave JEEPMON <JEEPMON@HOTMAIL.COM> wrote:
> Can anyone tell me witch dual band HT's and mobile radios can both receive
> and transmit at the same time??

The feature is called "cross-band repeat." It should be clearly stated on the radio's description. These radios can simultaneosly receive two VHF signals, or two UHF signals, or one VHF and one UHF signal. And they can transmit on one band (VHF or UHF) while receiving on the other. Or they can act as a cross-band repeater. My Alinco DJ-G5TH does all this as do many (but not all) dual band radios.

It sounds great, but in reality it's not all it's cracked up to be. Do you really want to be monitoring one frequency when you're transmitting on another while you're motoring down the highway?

Art Harris N2AH

1236. Re: BACK TO BASICS - EM waves, E and H fields, in phase or inquadr...

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-16 15:32:29 UTC
From: "Peter O. Brackett" <ab4bc@ix.netcom.com>
Message-ID: <ah1ea5$4vq$1@slb1.atl.mindspring.net>
Source record: 138477

Roy:

[snip]
> and a common mode current as:
>
> 1/2 * (I1 + I2)
>
> One of these is simply the average of the two currents. The other is
[snip]

Agreed, the common mode current is *defined* by that particular mathematical expression, and... your comments are definitely true but when they are tendered in that way your comments tend to make common mode current seem more like a mathematical illusion... which it is not. The common mode current definitely exerts forces and can cause actions.

BTW... which current does a *clamp on* ammeter read when clamped around two conductors?

Is that clamp on ammeter instrument reading a *real* current, when clamped around two conductors? How about if it is clamped around Litz wire?

Is a current flowing when an individual electron passes by?

For how long does it flow?

What if two electrons pass by each other closely, but in opposite directions, and at different times? etc...

--Peter K1PO

1237. Re: Dual band HT and Mobile HELP PLEASE!!

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-16 15:44:41 UTC
From: KB9TMP <kb9tmp@juno.com>
Message-ID: <ah1f10$gq7$1@dagobah.blueriver.net>
Source record: 138480
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.equipment,rec.radio.scanner,rec.radio.shortwave

"Harris" <aharris@bookworm.suffolk.lib.ny.us> wrote in message
news:4WWY8.14170$T_.294908@iad-read.news.verio.net...
> In rec.radio.shortwave JEEPMON <JEEPMON@HOTMAIL.COM> wrote:
> > Can anyone tell me witch dual band HT's and mobile radios can both
receive
> > and transmit at the same time??
>
> The feature is called "cross-band repeat." It should be clearly stated on
> the radio's description. These radios can simultaneosly receive two VHF
> signals, or two UHF signals, or one VHF and one UHF signal. And they can
> transmit on one band (VHF or UHF) while receiving on the other. Or they
> can act as a cross-band repeater. My Alinco DJ-G5TH does all this as do
> many (but not all) dual band radios.
>
> It sounds great, but in reality it's not all it's cracked up to be. Do you
> really want to be monitoring one frequency when you're transmitting on
> another while you're motoring down the highway?
>
> Art Harris N2AH
>
>

Art
Agree 110% Nothing more irritating than talking on one band and
the other band take off 'talking' it's a real PAIN. I always kept the
radio function set to mute the subband when the primary band
was in TX. Makes any radio a LOT more friendly :^)

1238. Re: Radial/Ground Plate

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-16 16:04:12 UTC
From: Reg Edwards <g4fgq.regp@btinternet.com>
Message-ID: <ah1g5s$1ia$1@helle.btinternet.com>
Source record: 138478

Is american 'silver-soldering' the same as UK 'brazing' ?

--
========================
Regards from Reg G4FGQ
Free Radio Design Software
Go to http://www.g4fgq.com
========================
"Sparks W4EAS" <sparksw4eas@mindspring.com> wrote in message
news:3D342683.23FA@mindspring.com...
> Do like we do in the Broadcast Industry... Use 3/4 inch soft copper
> tubing, fill with sand, bend in a circle that will fit around tower
> base, "Silver Solder All" connections. Use coupling on end to end of
> loop. Then "Silver Solder" 120 1/4 wave radials (3 Degrees apart), and
> inter space with another 120 shorter radilas... ALL silver Soldered. A
> "Lawn Edger" PULLED backwards will cut a 4 1/2 inch by 1/4 inch slot to
> push the radial into. Use a 4 foot tubing with a guy wire "Thimble" hose
> clamped to the end iof the tubing to push the wire into the slot :-) I
> use THHC number 14 solid wire in 500 foot rolls. About 11.95 at Lowes.
> 73, Sparks W4EAS Broadcast Consultant

1239. Re: HB Rotatable Dipole

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-16 16:09:51 UTC
From: k0bg@aol.com
Message-ID: <20020716120951.12787.00000925@mb-fy.aol.com>
Source record: 138479

I've looked at their site a couple of times, and it seem to me the poles are 35 feet long, which is longer than each leg of a 40 meter dipole (ï¿½ 32.5). A wire down the middle would suffice, however, you can buy telescoped aluminum tubing from several companies. They tend to be light than glass, and and there are all sorts of mounting hardware available too.

Alan, Kï¿½BG

1240. Re: BACK TO BASICS - EM waves, E and H fields, in phase orinquadr...

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-16 16:19:18 UTC
From: richardharrison@webtv.net
Message-ID: <6717-3D344786-447@storefull-2392.public.lawson.webtv.net>
Source record: 138483

David Robbins wrote:
"This thread has gone on so long that we are all talking about different things now."

Flat-world types had no logical support, refused to admit error, and introduced many diversions to turn attention away from their nonsense.

The source of energy is the r-f transmitter. One of its terminals is positive when its other terminal is negative. Via a coax transmission line this is a differential-mode signal source to what we would have as a balanced load, a dipole.

Most of this thread considered coax as the transmission line. The shield is likely grounded at the transmitter. The signal is launched between the inner surface of the shield and the outer surface of the center conductor of the coax. There is no r-f communication to the outside world at the transmitter. It is prohibited by "skin effect".

We have differential-mode propagation inside the coax even though it is considered an unbalanced line. This isn`t as strange as it may seem. The insides of the coax are a common-mode choke.

A common-mode choke may be considered as a 1:1 transformer between two coils. Current in the same direction (common-mode) in both coils cooperate in producing "counter-emf". This inhibits the current.

Differential-mode current through the coils is flowing in opposite directions, cancelling counter-emf production, and allowing current to pass.

Look at the equivalent circuit of your coax and its common-mode choke possibilities are apparent.

We agree the exterior of the coax is subject to common-mode current. We agree that the only source is the differential-mode energy from tnside the coax. All responsible definitions say dependent is related. That doesn`t deter the flat-earth people.

The point that imbalance enables common-mode to appear on the coax hasn`t been refuted. Ergo, no imbalance, no common-mode.

Common-mode current must have a generator with two terminals. One is obvious. It is where the inside of the coax shield meets the outside of the same shield. That is, at the load. Since energy can`t escape at the transmitter end of the coax, the other terminal must be the unbalanced antenna. How is this circuit completed? The same way the circuit between the two halves of a balanced dipole is completed, displacement current.

Pseudo-science has been invoked to present a wide array of nonsense, and I claim to be a non-participant in this promulgation of baloney. The answers are simple.

Best regards, Richard Harrison, KB5WZI

1241. Re: HB Rotatable Dipole

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-16 16:27:23 UTC
From: Tony Angerame <tangeram@lucent.com>
Message-ID: <ah1h3r$bmj@nntpb.cb.lucent.com>
Source record: 138481

OK I thought they were only twenty feet long. These are the poles sold by
the Magazine of the same name , they are only 20 bucks a piece.\

"

1242. Re: BACK TO BASICS - EM waves, E and H fields, in phase or inquadr...

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-16 16:35:19 UTC
From: richardharrison@webtv.net
Message-ID: <6719-3D344B47-137@storefull-2392.public.lawson.webtv.net>
Source record: 138482

Peter, K1PO wrote:
"BTW...which current does a "clamp on" ammeter read when clamped around two conductors?"

The difference current.

"Is a current flowing when an individual electron passes by?"

A charge moves, a current flows.

"For how long does it flow?"

As long as there is a path and until the charge is equalized between sites.

Best regards, Richard Harrison, KB5WZI

1243. Re: Radial/Ground Plate

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-16 16:52:35 UTC
From: richardharrison@webtv.net
Message-ID: <6717-3D344F53-452@storefull-2392.public.lawson.webtv.net>
Source record: 138485

Reg, G4FGQ wrote:
"Is american "silver-soldering" the same as UK "brazing"?"

I expect not. Brazing rods are used for the soldering called "brazing" in the US. Silver-solder may be a rod also, but it usually requires only a propane torgh to melt versus an acetylene torch usually required for brazing.

Best regards, Richard Harrison, KB5WZI

1244. Re: BACK TO BASICS - EM waves, E and H fields, in phase or inquadr...

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-16 17:12:34 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <3D345402.6000009@eznec.com>
Source record: 138484

Peter O. Brackett wrote:

> . . .

> BTW... which current does a *clamp on* ammeter read when clamped around two
> conductors?

>. . .

It measures the (vector) sum of the currents on all the wires it
encloses. See Ampere's Law.

Roy Lewallen, W7EL

1245. Re: HB Rotatable Dipole

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-16 17:33:33 UTC
From: KA9CAR <nospam@nospam.usa>
Message-ID: <ah1l8n$2pcc$1@news1.tribune.com>
Source record: 138486

I Bought one of the World radio poles.

It is a South Bend Sunny Day 21 foot fishing pole (SD21). The last section
is solid. My friend calls it a "perch pole". If you search the net for
South bend pole you should find more details on it.

You can hold it out horizontal, no problem. It won't bear any weight to
speak of vertically as it telescopes down if you do.

It is made from a single piece of tapered fiberglass tube. It is cut into
sections, then telescoped together from the "large end" so that as you pull
it open, eventually the sections "jam" into each other.

I use mine to thread wire antennas through trees.
I broke the tip of the last section off, so I taped a new loop on the end.

Well worth the $20 I spent on it.
KA9CAR
John

Tony Angerame <tangeram@lucent.com> wrote in message
news:agvjdn$5so@nntpb.cb.lucent.com...
> Has anyone used the World Radio Fiberglass Masts? If so do you think they
> would be rigid enough to create a rotatable dipole? I mean two of them
> butted together to for a 40 footer loaded with some lightweight coils I
> suppose.
>
> Tony WA6LZH
>
>

1246. Re: Dual band HT and Mobile HELP PLEASE!!

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-16 17:59:43 UTC
From: CAM <w5dxp@hotmail.com>
Message-ID: <3D345F0F.E3EC0A0@hotmail.com>
Source record: 138487
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.equipment,rec.radio.scanner,rec.radio.shortwave

KB9TMP wrote:
>
> "Harris" <aharris@bookworm.suffolk.lib.ny.us> wrote:
> > It sounds great, but in reality it's not all it's cracked up to be. Do you
> > really want to be monitoring one frequency when you're transmitting on
> > another while you're motoring down the highway?
> >
> Agree 110% Nothing more irritating than talking on one band and
> the other band take off 'talking' it's a real PAIN. I always kept the
> radio function set to mute the subband when the primary band
> was in TX. Makes any radio a LOT more friendly :^)

OTOH, the remote cross-band repeater function is pretty handy when
hiking with a large group over hills and through dales.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
------== Over 80,000 Newsgroups - 16 Different Servers! =-----

1247. Re: BACK TO BASICS - EM waves, E and H fields, in phase or inquadr...

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-16 18:00:32 UTC
From: richardharrison@webtv.net
Message-ID: <26039-3D345F40-443@storefull-2393.public.lawson.webtv.net>
Source record: 138492

Row Lewallen wrote:
"It (a clamp-on ammeter) measures the (vector) sum of the currents on
all the wires it encloses."

Correct.

Best regards, Richard Harrison, KB5WZI

1248. Re: Radial/Ground Plate

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-16 18:02:54 UTC
From: CAM <w5dxp@hotmail.com>
Message-ID: <3D345FCE.6D8A2428@hotmail.com>
Source record: 138488

Reg Edwards wrote:
> Is american 'silver-soldering' the same as UK 'brazing' ?

Hey, I thought the English preferred 'S's to 'Z's. :-)
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
------== Over 80,000 Newsgroups - 16 Different Servers! =-----

1249. Re: HB Rotatable Dipole

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-16 18:06:56 UTC
From: CAM <w5dxp@hotmail.com>
Message-ID: <3D3460C0.41197571@hotmail.com>
Source record: 138489

Tony Angerame wrote:
> Has anyone used the World Radio Fiberglass Masts?

I've used two SD-20's for a portable loaded 20m rotatable
dipole with very good results. The center loading coil
doubled as a balun.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
------== Over 80,000 Newsgroups - 16 Different Servers! =-----

1250. Re: BACK TO BASICS - EM waves, E and H fields, in phase orinquadr...

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-16 18:11:29 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <73i8jusmtsvu0han0lk2t9bf4l6t59f8db@4ax.com>
Source record: 138490

On Mon, 15 Jul 2002 15:03:10 GMT, "K7JEB" <k7jeb@arrl.no_spam.net>
wrote:

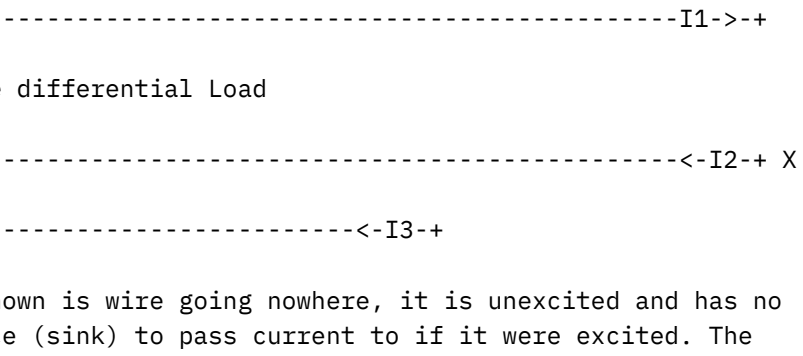
>Perhaps because the network to be analyzed should really be:
>
> +---I1->-+
> | |
> Source1 Load 1
> | |
> +-------------(Ground Plane)-----------------------<-I3-+
> | |
> Source2 Load 2
> | |
> +---<-I2-+
>
>If Source1 = Source2 AND Load 1 = Load 2, then I1 = I2, I3 = 0
>and I1, I2 can be considered purely differential.
>
>For any other condition, there will be a non-zero common-mode
>current I3 and I1 will not equal I2.
>
>If you think this looks like a Wheatstone bridge composed
>of two voltage sources and two loads, you might be right.
>
>
>--
>Jim Bromley, K7JEB k7jeb @ arrl.net
>Glendale, Arizona

Hi Jim,

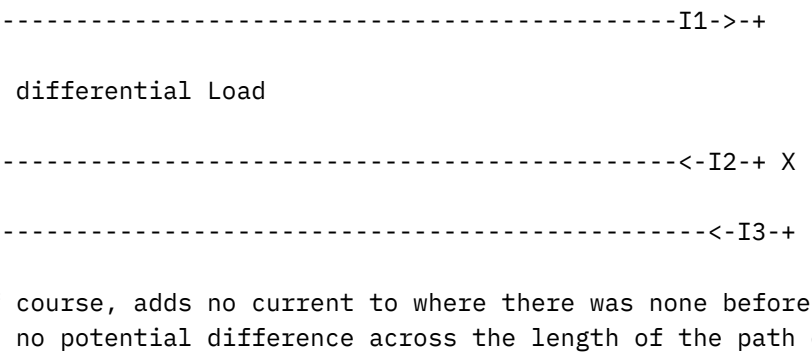
This came close as a description of the problems encountered in
discussion of the Common Mode. For one, I can appreciate the
inclusion of two sources as it mimics the actual circuit found in
nearly all of the HF rigs in use (at least for the transistorized
versions). This is a bit of a hedge in that the two sources are
actually a push-pull design, but the balance is already designed into
the rig and exists up to the final output transformer whose output
winding is fully isolated from ground - until it hits the low pass
output filter which ties one side to ground and the rig is unbalanced
(in the twin line sense) from that point on.

Your I3 circuit path illustrates one of the major oversights of the
earlier model this replaces. In that earlier piece, there was a lot
taken for granted (which is to say not illustrated) and it contained

outright errors (in correlation to the description of the circuit).
Again, consider:

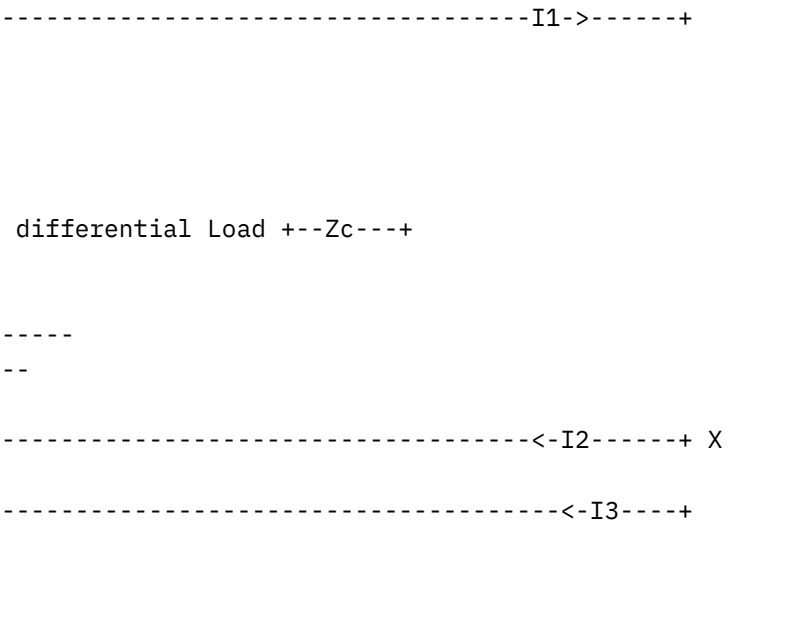


I3 as shown is wire going nowhere, it is unexcited and has no
reference (sink) to pass current to if it were excited. The
"presumption" is that it is the outside of the common shield. Even
this fails in the face of the obvious - the outside of the common
shield does not terminate in an open (which would make for a miracle
coax that had continuity on the inside, but none on the outside).
Rather, at a crude minimum it must look like this:



This, of course, adds no current to where there was none before as
there is no potential difference across the length of the path denoted
by I3. There is no current induced into I3 because the two currents
that could couple to it, I1 and I2, are equal and opposite as enforced
by the symmetry of the coax.

Continuing with modifications of the original, towards your design:



>> -

Take note that I add what is labeled Zc, which supplies the return
path for the Common Mode current.

The following perspective attempts to mimic the structure of a
balanced dipole fed in the middle with an unchoked coax. Z1 and Z2
illustrate each element of the dipole, are equal, and their electric
coupling to earth below is illustrated with *** paths through
reactances also equal (hence the "balance" with respect to geometry
and circuit elements). However, we have an additional path, that is
out of symmetry, which is illustrated as a metallic current path to
ground supporting an inductive reactance XL2.

```
------------Z1--------+ ++--------Z2-----------
* | || *
* | || *
* | || *
* | || *
* | || *
XC1 | |XL2 XC2
* | || *
* | || *
* | || *
* Source || *
* | || *
----- ------------- -----
--- ----------- ---
- --------- -
```

It matters little about the placement of the source as the feedline
imposes a condition of equal and opposite currents. As such it can be
replaced with a floating source as long as we retain the outside
shield path back to the original ground connection.
Which, when me remove the feedline:

```
------------Z1--------Source+--------Z2-----------
* | *
* | *
* | *
* | *
* | *
XC1 XL2 XC2
* | *
* | *
* | *
* | *
* | *
----- ------------- -----
--- ----------- ---
- --------- -
```

This reveals two loops of current from one source. It also shows the return paths for all currents. From this perspective, we can see that the source excites both the Differential and the Common Modes. We also see that the outside of the coax shield is in parallel with one element and its series path to ground. Hence, even though the model is physically symmetrical, the outside surface of the coax creates an electrical dis-symmetry.

This, then, answers all the questions I have offered:

Q1. Where is the Common Mode current I3 going?
A1. to ground (Common)

Q2. What is the potential that is forcing it?
A2.

$$\text{Source} * \frac{XL2 * (Z2 + XC2)}{XL2 + Z2 + XC2} \Big/ \left(Z1 + XC1 + \frac{XL2 * (Z2 + XC2)}{XL2 + Z2 + XC2}\right)$$

Q3. How does the Common Mode current return to its source?
A3. Through Common (of course), capacitive ground coupling to the radiating elements and then the Source.

73's
Richard Clark, KB7QHC

1251. Re: BACK TO BASICS - EM waves, E and H fields, in phaseorinquadr...

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-16 18:14:58 UTC
From: CAM <w5dxp@hotmail.com>
Message-ID: <3D3462A2.6765109D@hotmail.com>
Source record: 138493

Richard Harrison wrote:
> We agree the exterior of the coax is subject to common-mode current. We
> agree that the only source is the differential-mode energy from tnside
> the coax. All responsible definitions say dependent is related. That
> doesn`t deter the flat-earth people.

Pretty good analogy, Richard. A flat-earth model is a model that doesn't match reality. A differential/common-mode model where the components are "NOT related" is a model that doesn't match reality.

There seems to be some people on this newsgroup who believe that when the model doesn't match reality then there is something wrong with reality. The preacher at my church has the same problem. :-)
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

1252. Re: HB Rotatable Dipole

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-16 18:20:14 UTC
From: CAM <w5dxp@hotmail.com>
Message-ID: <3D3463DE.E1C80EF4@hotmail.com>
Source record: 138494

Tony Angerame wrote:
> OK I thought they were only twenty feet long. These are the poles sold by
> the Magazine of the same name , they are only 20 bucks a piece.\

Those are the SD-20 (West Bend - Sunny Day) fishing poles. They are great for backpacking and portable operations. My favorite portable antenna is two of those supporting a loaded 20m dipole on a rotatable mast. One is also used for the St. Louis Vertical. I've got plans to try two in a phased vertical configuration.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

1253. Re: HB Rotatable Dipole

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-16 18:22:25 UTC
From: Tony Angerame <tangeram@lucent.com>
Message-ID: <ah1nri$crc@nntpb.cb.lucent.com>
Source record: 138491

I see, a fishing pole, well that sounds better. I am gointo to connect two together with a piece of 2x2 or lucite or someting at the center then run an ordinary #18 wire along the length to form a dipole. I may use the pole itself as a form for two loading coils thus forming a 40 foot or so loaded and rotatable dipole. I can get it up to 50 feet which should help me make more east coast contacts. hanks for your input I'll check out the pole on the web. The World Radio ads are not too descriptive. I suppose they don't want you to know it's really a fishing pole.

Tony

1254. Re: HB Rotatable Dipole

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-16 18:24:07 UTC
From: CAM <w5dxp@hotmail.com>
Message-ID: <3D3464C7.22922664@hotmail.com>
Source record: 138496

KA9CAR wrote:
> You can hold (the SD-20) out horizontal, no problem. It won't bear any weight to
> speak of vertically as it telescopes down if you do.

That's strange considering it is used for the infamous St. Louis Vertical
antenna. Maybe you are suggesting it won't hold up a Yagi? :-)
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
------== Over 80,000 Newsgroups - 16 Different Servers! =-----

1255. Re: Radial/Ground Plate

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-16 18:26:42 UTC
From: Sparks W4EAS <sparksw4eas@mindspring.com>
Message-ID: <3D346562.6BC2@mindspring.com>
Source record: 138495

Sorry, You can NOT silver solder with propane! You use paste flux AND need the temp. of a acetylene torch! Regards Sparks W4EAS

1256. Re: BACK TO BASICS - EM waves, E and H fields, in phase orinquadr...

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-16 18:35:26 UTC
From: CAM <w5dxp@hotmail.com>
Message-ID: <3D34676E.38C7161C@hotmail.com>
Source record: 138497

Richard Clark wrote:
> Again, consider:
> >> +---I1->-+
> >> | |
> >>Source differential Load
> >> | |
> >> +---<-I2-+ X
> >> |
> >> ----------------------------<-I3-+
> >
> I3 as shown is wire going nowhere, it is unexcited and has no
> reference (sink) to pass current to if it were excited. The
> "presumption" is that it is the outside of the common shield. Even
> this fails in the face of the obvious - the outside of the common
> shield does not terminate in an open (which would make for a miracle
> coax that had continuity on the inside, but none on the outside).

Whoa there, Richard. I3 is NOT the current down the outside of the coax. I3 is the current flowing in a wire attached to a dummy load (or the current flowing in you if you are attached to the dummy load).

Even with a balanced source, a balanced transmission line, and a balanced load, hanging you (or a wire) off one side of the balanced load will result in I3. You can prove that to be an incorrect statement by grabbing one side of a dummy load being supplied with 1000 watts.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

1257. Re: 'Aerial' Antennas

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-16 18:51:14 UTC
From: Mike <mike.joyner@nothanks.blueyonder.co.uk>
Message-ID: <lkq8ju8fbfbe0pdnt8ja9nqh5h4v9ito1q@4ax.com>
Source record: 138498

On Sun, 7 Jul 2002 13:42:15 +0100, "G4VGO" <g4vgo@qsl.net> wrote:

>I am in the process of building an antenna website, focusing on kite and
>balloon lifted antennas.
>
>http://www.qsl.net/g4vgo/index.htm
>
>Comments welcome
>
>Thanks and 73
>
>Bob G4VGO
>

Bob the picture http://www.qsl.net/g4vgo/Best1.jpg is missing from
your site, tried changing the cap B but still not there

Regards Mike
GM8FYJ

1258. Re: Radial/Ground Plate

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-16 19:37:16 UTC
From: richardharrison@webtv.net
Message-ID: <855-3D3475EC-176@storefull-2394.public.lawson.webtv.net>
Source record: 138500

Sparks, W4EAS wrote:
"Sorry, You can NOT silver solder with propane!"

Glad I didn`t know that when I soldered all my copper water pipes using a propane torch. That was 30 years ago and they haven`t leaked yet.

I am no expert, but I`ve both brazed and soldered. I`ve done some welding too.

To get an expert opinion I searched the net. Department of Labor document came up first. It says:

Like welding, soldering and brazing use metal to join two pieces of metal but the added metal has a lower melting point than the workpieces.

Soldering uses metals with a melting point below 800 degrees Fahrenheit; brazing uses metals with a melting point above 800 degrees.
(Surely this refers to the added metals, not the workpieces.)

I am sure my experiences weren`t atypical. I recall that the copper pipes had to be dry to silver-solder, else the evaporation would cool the copper pipes faster than my propane torch could supply enough heat to melt the silver-solder. Dry copper conducts heat away fast enough to make the soldering no easy task. It would have been convenient to have had an acetylene torch, but propane was all I had and I succeeded.

Best regards, Richard Harrison, KB5WZI

1259. Re: Radial/Ground Plate

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-16 19:40:51 UTC
From: Gene Fuller <W4SZzzzzz@att.net>
Message-ID: <3D3476BF.D0AF924C@att.net>
Source record: 138499

Sparks W4EAS wrote:
>
> Sorry, You can NOT silver solder with propane! You use paste flux AND
> need the temp. of a acetylene torch! Regards Sparks W4EAS

Hmmm,

I have silver soldered various materials many times using only a simple propane torch. The only issue is the total amount of heat needed. The *temperature* of a propane torch is more than adequate. If the pieces being connected are massive (more than a few wires) then a larger torch will be necessary. In no case is the very high temperature of an oxy-acetylene torch beneficial.

Did I violate any laws by doing what I can NOT do?

73,
Gene W4SZ

1260. Re: BACK TO BASICS - EM waves, E and H fields, in phase orinquadr...

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-16 20:03:41 UTC
From: richardharrison@webtv.net
Message-ID: <9160-3D347C1D-213@storefull-2398.public.lawson.webtv.net>
Source record: 138501

Richard Clark wrote:
Q1. Where is the Common Mode current I3 going?
A1. to ground (Common)

I don`t try to follow the schematics as they are distorted in transmission and it`s too hard to figure what the author intended.

But, if you mean the common-mode signal is seeking ground, it has no particular reason to do so. The signal can`t escape the coax at the transmitter. There is no signal going to ground at the transmitter other than that which has made a round-trip inside the coax to the load then returned on the outside of the coax. It can`t exit the coax at the transmitter. The signal is not conducted through the metal there. Skin effect prohibits it.
Also, radiation from exposed antenna conductors falls on the ground, for what that`s worth.

Best regards, Richard Harrison, KB5WZI

1261. FS: Bilal ISOTRON antennas

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-16 20:22:34 UTC
From: jonweiner@aol.com
Message-ID: <20020716162234.01865.00000252@mb-mu.aol.com>
Source record: 138502

I have for sale two Bilal Isotron antennas. Model 80 (80 meters) $70., and model 40 (40 & 30 meters) $60. Prefer pick up at Greenville, SC or add $8. each for shipping. Antennas have been assembled and used indoors only. Complete with original instruction manuals.

Jon

1262. Re: BACK TO BASICS - EM waves, E and H fields, in phase orinquadr...

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-16 20:23:26 UTC
From: richardharrison@webtv.net
Message-ID: <16905-3D3480BE-408@storefull-2397.public.lawson.webtv.net>
Source record: 138504

CAM wrote:
"You can prove that to be an incorrect statement by grabbing one side of a dummy load being supplied with 1000 watts."

I saw a schematic yesterday for a short haul TV relay transmitter which used a dummy load with a whisker or whiskers of an inch or two as an antenna.

There must be a better way of avoiding reflections and ghosts.

Best regards, Richard Harrison, KB5WZI

1263. rempte antennna tuner as balun for multi-dipole antenna?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-16 20:39:23 UTC
From: Andreas Hofmann <andreash23@hotmail.com>
Message-ID: <3d34847b$1@news.microsoft.com>
Source record: 138503

Hi,

I am in the process of putting up a couple of dipoles parallel and will feed them with coax. Coax is preferable since I need to make it as invisible as possible, that is also the reason for putting up 2 or 3 parallel dipoles instread of a vertical or beam.

Now my question is, what about the balun? I know I need a balun, since the antenna is balanced and the coax is not.
I am actually thinking about putting a remote antenna tuner right on the antenna feed point. That way my coax losses are minized and it should perform just as good as a ladder line, I think. Will the antenna tuner act as a balun as well?

Any suggestions on how this can be done and on good 100 W remote tuners are welcome.

Andreas
ku7t

1264. Re: Radial/Ground Plate

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-16 21:09:18 UTC
From: Sylvan Butler <Znospam+noZs_0207@hpb13799Z.Zboi.hpZ.com.invalid>
Message-ID: <slrnaj92ru.olu.Znospam+noZs_0207@hpb13799Z.Zboi.hpZ.com.invalid>
Source record: 138506

On Tue, 16 Jul 2002 14:37:16 -0500 (CDT), Richard Harrison <richardharrison@webtv.net>
wrote:
> Sparks, W4EAS wrote:
> "Sorry, You can NOT silver solder with propane!"
>
> Glad I didn`t know that when I soldered all my copper water pipes using
> a propane torch. That was 30 years ago and they haven`t leaked yet.

> make the soldering no easy task. It would have been convenient to have
> had an acetylene torch, but propane was all I had and I succeeded.

The guys doing my air conditioning work last week were using a small
propane-like torch to silver solder the copper pipes. I think they
were using MAPP gas instead of plain propane, though. :)

I used to silver solder small things using my normal soldering iron.

sdb
--
| Sylvan Butler | Not speaking for Hewlett-Packard | sbutler-boi.hp.com |
| Watch out for my e-mail address. Thank UCE. >>>> change ^ to @ <<<< |
They that can give up essential liberty to obtain a little temporary
safety deserve neither liberty nor safety. --Benjamin Franklin, 1759
Stop Palladium, TCPA and Senator Fritz Hollings, NOW!
http://www.cl.cam.ac.uk/users/rja14/tcpa-faq.html

1265. Re: Dual band HT and Mobile HELP PLEASE!!

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-16 21:15:34 UTC
From: Dev <hmm@ohmy.com>
Message-ID: <W10Z8.847$Vl5.6996@news0.telusplanet.net>
Source record: 138505
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.equipment,rec.radio.scanner,rec.radio.shortwave

my old ft-8000 mobile worked for that too. or was it the 8100. I forget.

CAM <w5dxp@hotmail.com> wrote in message
news:3D345F0F.E3EC0A0@hotmail.com...
> KB9TMP wrote:
> >
> > "Harris" <aharris@bookworm.suffolk.lib.ny.us> wrote:
> > > It sounds great, but in reality it's not all it's cracked up to be. Do
you
> > > really want to be monitoring one frequency when you're transmitting on
> > > another while you're motoring down the highway?
> > >
> > Agree 110% Nothing more irritating than talking on one band and
> > the other band take off 'talking' it's a real PAIN. I always kept the
> > radio function set to mute the subband when the primary band
> > was in TX. Makes any radio a LOT more friendly :^)
>
> OTOH, the remote cross-band repeater function is pretty handy when
> hiking with a large group over hills and through dales.
> --
> cheers, CAM http://www.qsl.net/w5dxp
>
>
> -----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
> http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
> ------== Over 80,000 Newsgroups - 16 Different Servers! =-----

1266. Re: Radial/Ground Plate

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-16 21:46:16 UTC
From: Gary Boyer <gboyer@columbus.rr.com>
Message-ID: <Iu0Z8.168972$%U3.6763996@twister.columbus.rr.com>
Source record: 138507

Wow..tnx everyone for all of your great suggestions...it is a really
learining experience..so many really good ideas..I never expected to get all
of these suggestions...this is a great newsgroup..I am planning on using
some of them soon as my vertical arrives from dealer...73 to all of
you...tnx again....K8BY..Gary
"Gary Boyer" <gboyer@columbus.rr.com> wrote in message
news:_5fY8.164513$%U3.4925614@twister.columbus.rr.com...
> Does anyone have any suggestions on a ground plate that you can attach
your
> radials....the plate would be used to tie the radials to a hustler 6btv
> vertical..tnx...Gary..K8BY
>
>

1267. Re: Dual band HT and Mobile HELP PLEASE!!

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-16 22:28:55 UTC
From: "Gary \"Joe\" Mayfield" <gary_mayfield@hotmail.com>
Message-ID: <uj97hgeu5oej2e@corp.supernews.com>
Source record: 138508
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.equipment,rec.radio.scanner,rec.radio.shortwave

Several older radios do. Yaesu FT-4700, FT-470, FT-530, FT-5200, FT-5100, Icom IC-2340 and others. They do not do U - U or V- V , but will listen on one band while transmitting on the other. This is IDEAL (almost mandatory) for satellite use like UO-14, SO-41, and AO-27.

73,
Joe
"JEEPMON" <JEEPMON@HOTMAIL.COM> wrote in message
news:06RY8.537339$352.91904@sccrnsc02...
> Can anyone tell me witch dual band HT's and mobile radios can both receive
> and transmit at the same time??
>
> I have only found the Kenwood TH 79a and HT that while you are
transmitting
> on 2 meters you can receive on 440.
>
> Again are there any other HT's and Mobile dual band Ham radios that can
> simultaneously receive and transmit at the same time?
>
>
>

1268. C1208DA Mars/Cap Mod

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-16 23:22:10 UTC
From: J�ST M�! M�RK {���} <markis@sbcglobal.net>
Message-ID: <CU1Z8.784$rc7.53581134@newssvr14.news.prodigy.com>
Source record: 138509

Hello, I have a question about my Standard C1208DA radio. I would like to know if there is a modification for it so it will tx on MARS. I have looked everywhere and I finally ran into a gentleman that said he did his butt can no longer find the mod info. He told me if anyone knew how you folks did. Thanks for any help you can provide.

markis@sbcglobal.net

1269. Re: Radial/Ground Plate

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-16 23:36:14 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <3D34ADEE.8050603@eznec.com>
Source record: 138510

Sylvan Butler wrote:
> . . .
> I used to silver solder small things using my normal soldering iron.

People commonly confuse silver-loaded ordinary solder with "silver solder". Silver-loaded ordinary solder is ordinary tin-lead soft solder with 1 - 3% or so silver added. This is used for soldering surface mount components that have silver or gold metalization, or metalized ceramic terminal strips, to prevent wicking the metalization off the part. The melting point of this solder is only a little above the melting point of ordinary 63/37 or 60/40 solder. Ordinary flux and soldering irons are used to apply it. This is not what's usually referred to as silver solder.

Silver solder is a hard solder made from other metals than just tin and lead. Its melting point is much too high for an ordinary soldering iron, and it also requires a different flux than soft solder. Like several others posting here, I've successfully silver soldered small items with a propane torch, although some alloys might require higher temperatures.

Roy Lewallen, W7EL

1270. Re: BACK TO BASICS - EM waves, E and H fields, in phase orinquadr...

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-16 23:55:30 UTC
From: K7JEB <k7jeb@arrl.no_spam.net>
Message-ID: <Sn2Z8.33193$lu6.1873641@bgtnsc04-news.ops.worldnet.att.net>
Source record: 138511

Richard Clark, KB7QHC wrote (regarding the circuit below):

```
> +-------------------------------------------------I1->-+
> | |
> Source1 Load 1
> | |
> +-------------(Ground Plane)----------------------<-I3-+
> | |
> Source2 Load 2
> | |
> +-------------------------------------------------<-I2-+
```

> This came close as a description of the problems encountered in
> discussion of the Common Mode. For one, I can appreciate the
> inclusion of two sources as it mimics the actual circuit found in
> nearly all of the HF rigs in use (at least for the transistorized
> versions). This is a bit of a hedge in that the two sources are
> actually a push-pull design, but the balance is already designed into
> the rig and exists up to the final output transformer whose output
> winding is fully isolated from ground - until it hits the low pass
> output filter which ties one side to ground and the rig is unbalanced
> (in the twin line sense) from that point on.

I really didn't have practical transmitters in mind, but, rather, elemental voltage sources, each of which could be set to an arbitrary magnitude and phase, including zero volts. One of the rules about such sources is that they have zero self-impedance, so current continues to flow through them even if they are "turned off".

I just wanted to show the coupling mechanism between common-mode and differential-mode currents when the differential-mode circuit becomes unbalanced either in its sources or loads.

I think extending the analysis to real transmission lines connected to real antennas becomes difficult because circuit-theory conventions don't hold well for distributed components and radiative coupling. I snuck through on the unstated assumption that the velocity factor of the differential-mode transmission line was the same as that of the common-mode line. Otherwise I would have had to deal with W7EL's TDR "ghost".

73,

Jim Bromley, K7JEB k7jeb @ arrl.net
Glendale, Arizona

1271. wanted 23cms atv loop yagi

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-17 00:04:07 UTC
From: pete <pete.hill@blueyonder.co.uk>
Message-ID: <Qv2Z8.4020$WK6.3059@news-binary.blueyonder.co.uk>
Source record: 138512

Hi
Has anyone got any info they could give me on building
a 23cms loop yagi for use on atv.

Thanks in advance for any info.

--
Pete.hill@blueyonder.co.uk

1272. Re: HB Rotatable Dipole

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-17 00:37:06 UTC
From: Tony Angerame <tangeram@lucent.com>
Message-ID: <ah2dq2$f9e@nntpb.cb.lucent.com>
Source record: 138513

Thanks Cam et al that's the info I was looking for. A forty dollar rotatable dipole. Let's keep this from MFJ OK?

Tony

"CAM" <w5dxp@hotmail.com> wrote in message news:3D3460C0.41197571@hotmail.com...
> Tony Angerame wrote:
> > Has anyone used the World Radio Fiberglass Masts?
>
> I've used two SD-20's for a portable loaded 20m rotatable
> dipole with very good results. The center loading coil
> doubled as a balun.
> --
> cheers, CAM http://www.qsl.net/w5dxp
>
>
> -----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
> http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
> -----== Over 80,000 Newsgroups - 16 Different Servers! =-----

1273. Re: 50 foot mast

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-17 01:00:47 UTC
From: kelly@dvol.com
Message-ID: <d22b54c3.0207161700.40b1c77e@posting.google.com>
Source record: 138514

"J Tabor" <denews@taborsoft.com> wrote in message
news:<uj6qd1rdopruc3@corp.supernews.com>...
> Greetings,
>
> You think the LMR 600 would support the antenna, or should one just go with
> the LMR 900? <vbg>
>
>
Two inch Heliax . . . so who needs a mast anyway?
>
>
> > w3rv
.
.
. . . .

1274. Re: BACK TO BASICS - EM waves, E and H fields, in phase orinquadr...

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-17 01:38:53 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <uhi9jugbaaaac0tarqirc3so3jebihgpai@4ax.com>
Source record: 138515

On Tue, 16 Jul 2002 23:55:30 GMT, "K7JEB" <k7jeb@arrl.no_spam.net>
wrote:

>I just wanted to show the coupling mechanism between
>common-mode and differential-mode currents when the
>differential-mode circuit becomes unbalanced either
>in its sources or loads.
>
>I think extending the analysis to real transmission
>lines connected to real antennas becomes difficult
>because circuit-theory conventions don't hold well
>for distributed components and radiative coupling.

Hi Jim,

The solutions are really quite simple. It is the experience of our
getting in the way of ourselves in confirming them that accounts for
the difficulty. Complexity is usually found in the problems we bring
to the solution.

73's
Richard Clark, KB7QHC

1275. Anyone Using STEPPIR Yagi

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-17 02:32:53 UTC
From: John Seney <wd1v@amsat.org>
Message-ID: <wd1v-F4C8B7.22320416072002@netnews.attbi.com>
Source record: 138516

The design is cool - curious to hear from someone with
real on-the-air experiences.

JS
Scope FAQ at http://www.qsl.net/wd1v

1276. LMR400 around rotator

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-17 03:35:34 UTC
From: J Tabor <denews@taborsoft.com>
Message-ID: <uj9pgf81l8pb80@corp.supernews.com>
Source record: 138517

Greeting,

Wondering if the LMR400 type coax works ok around a rotor, with several turns coil of course.

Have seen comments abouut 9913 solid center conductor breaking. Have had some up in use with UHF for almost 17 years. It's still ok, I think. :)

Anyway looking at new installation and new coax, for HF of course.

Thanks for any comment.

Regards,
Jim - KU5S

1277. Re: Dual band HT and Mobile HELP PLEASE!!

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-17 04:04:59 UTC
From: Mark Russo <mrrusso@optonline.net>
Message-ID: <3D34ECEB.7801BDB@optonline.net>
Source record: 138422
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.equipment,rec.radio.scanner,rec.radio.shortwave

Alinco DJ-580T, Kenwood FT-530, FT-51, TM-721, TM-732, TM-733, Yaesu FT-8000,
FT-8100....
Many can

JEEPMON wrote:

> Can anyone tell me witch dual band HT's and mobile radios can both receive
> and transmit at the same time??
>
> I have only found the Kenwood TH 79a and HT that while you are transmitting
> on 2 meters you can receive on 440.
>
> Again are there any other HT's and Mobile dual band Ham radios that can
> simultaneously receive and transmit at the same time?

--

All e-mail received and SENT from me
has been checked by Norton Anti-Virus 2002.

mrrusso@optonline.net

GOD BLESS AMERICA!!!

1278. Re: Coax conduit to tower

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-17 04:35:29 UTC
From: rj <HIGZ@HOTMAIL.COM>
Message-ID: <lu6Z8.28756$OY2.1001074@twister.southeast.rr.com>
Source record: 138518

You may want to consider using corrugated drain pipe instead -- and get the kind with the weep holes in the bottom. The PVC is more expensive, harder to work with, smaller capacity and it WILL fill with water -- guaranteed unless the entire length slopes to a drain.

Regards,
Rush -- W4QA
"David" <phochief@nonspamhotmail.com> wrote in message news:AssU8.20787$wj4.1935375@e3500-atl2.usenetserver.com...
> Getting ready to dig the concrete base for my new tower and plan to run a 1
> 1/2 inch PVC pipe from my shack to my tower about 30' away and up through
> the concrete base. This pipe is big enough to carry several coax lines plus
> the rotor cable, so is there any reason I would want to run a separate pipe
> for anything else? I've never had a problem running the coax and rotor
> cable next to each other. The reason I ask is because I see photos of a
> tower installation on the texas towers website with two PVC conduits coming
> up through the concrete base.
>
> David
>
>
>
>
>

1279. Re: Radial/Ground Plate

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-17 05:01:03 UTC
From: Rick Karlquist <richard@karlquist.removethis.com>
Message-ID: <jS6Z8.226303$Uu2.48797@sccrnsc03>
Source record: 138419

What I use is "Stay-Brite", available at any welding
supply shop. It is a eutectic alloy of 3.6% silver,
96.4% tin. It melts at 300C, as opposed to 63/37
tin/lead that melts at a little under 200C. I have
gone through at least 10 lbs of Stay-Brite in soldering
my 20 miles of radials. There is no flux in Stay-Brite.
Do not get flux at the welding store. What I use
is Kester R pure rosin. So far I have used half of
my 2 gallon bottle!

Rick N6RK

"Roy Lewallen" <w7el@eznec.com> wrote in message
news:3D34ADEE.8050603@eznec.com...
> Sylvan Butler wrote:
> > . . .
> > I used to silver solder small things using my normal soldering iron.
>
> People commonly confuse silver-loaded ordinary solder with "silver
> solder". Silver-loaded ordinary solder is ordinary tin-lead soft solder
> with 1 - 3% or so silver added. This is used for soldering surface mount
> components that have silver or gold metalization, or metalized ceramic
> terminal strips, to prevent wicking the metalization off the part. The
> melting point of this solder is only a little above the melting point of
> ordinary 63/37 or 60/40 solder. Ordinary flux and soldering irons are
> used to apply it. This is not what's usually referred to as silver solder.
>
> Silver solder is a hard solder made from other metals than just tin and
> lead. Its melting point is much too high for an ordinary soldering iron,
> and it also requires a different flux than soft solder. Like several
> others posting here, I've successfully silver soldered small items with
> a propane torch, although some alloys might require higher temperatures.
>
> Roy Lewallen, W7EL
>

1280. Re: Radial/Ground Plate

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-17 05:09:56 UTC
From: CW <clinton.magers@attbi.com>
Message-ID: <E_6Z8.226385$Uu2.49146@sccrnsc03>
Source record: 138420

Two different things. Silver soldering and silver brazing. Different alloys
are used, both containing silver.

--

CW
KC7NOD

"Gene Fuller" <W4SZzzzzz@att.net> wrote in message
news:3D3476BF.D0AF924C@att.net...
>
>
> Sparks W4EAS wrote:
> >
> > Sorry, You can NOT silver solder with propane! You use paste flux AND
> > need the temp. of a acetylene torch! Regards Sparks W4EAS
>
>
> Hmmm,
>
> I have silver soldered various materials many times using only a simple
> propane torch. The only issue is the total amount of heat needed. The
> *temperature* of a propane torch is more than adequate. If the pieces
> being connected are massive (more than a few wires) then a larger torch
> will be necessary. In no case is the very high temperature of an
> oxy-acetylene torch beneficial.
>
> Did I violate any laws by doing what I can NOT do?
>
> 73,
> Gene W4SZ

1281. Re: Matching coil vs antenna length - mobile antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-17 06:27:32 UTC
From: 'Doc <w5lz@icok.net>
Message-ID: <3D350E39.641149EA@icok.net>
Source record: 138421

Roy,
Perhaps the question should be, why would it
not occur at resonance.
'Doc

1282. Re: LMR400 around rotator

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-17 06:45:25 UTC
From: "Ian White, G3SEK" <G3SEK@ifwtech.co.uk>
Message-ID: <nLpDtBCFKRN9EAB+@ifwtech.co.uk>
Source record: 138423

J Tabor wrote:
>Greeting,
>
>Wondering if the LMR400 type coax works ok around a rotor, with several
>turns coil of course.
>
Can't help you about LMR400 specifically, but I do have some related
experience...

>Have seen comments abouut 9913 solid center conductor breaking. Have had
>some up in use with UHF for almost 17 years. It's still ok, I think. :)
>
As far as I've experienced and have heard of, the problems with 9913 or
its European near-equivalents (H100, Westflex) have been with tearing of
the outer conductor. What often happens is that, even though you have
left a generous loop, the whole loop rotates and the bending stress
still concentrates at the anchor points.

Depending on your operating habits, the shield could hold up for years -
or it could be only a few days if you got the installation wrong.

I never heard of a center conductor breaking - but maybe that's because
the outer always got there first.

>Anyway looking at new installation and new coax, for HF of course.
>
With any of these semi-flexible (= semi-rigid) cables, the rotator loop
is going to be a "consumable" item that you *will* need to change during
the lifetime of the installation.

To make the eventual tower-top job much easier, it's best to install an
inline coax connector near the top of the tower (but far enough down
that the rotation doesn't twist on the connector itself). Presumably you
have chosen LMR400 for low losses over a very long run - but since this
is only for the DC bands, why not change to RG213 near the top of the
tower? Then you can forget about the whole problem.

--
73 from Ian G3SEK Editor, 'The VHF/UHF DX Book'
'In Practice' columnist for RadCom (RSGB)

1283. Re: fiberglass or aluminum mast

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-17 10:16:54 UTC
From: kelly@dvol.com
Message-ID: <d22b54c3.0207170216.70a9e08d@posting.google.com>
Source record: 138424

"Crazy George" <munschNO@attglobal.net.SPAM> wrote in message
news:<3d339468$1_1@news1.prserv.net>...
>
>
>>My suggestion is to stick with galvanized 1 1/2" steel pipe which is
>>the ham-standard mast material. It's comparatively cheap, it's
>>thoroughly proven, wear-resistant, conductive, strong and it's
>>available in 21 foot lengths everywhere and it can be dragged home
>>without having to spend any money on shipping the stuff.
>Brian:
>pipe is a poor choice for structural material. It is designed to be
>malleable, and have high hoop strength, but is not very strong for its
>weight in any other mode.
>
>
George I usually 95% agree with your posts but I gotta take
umbrage with this one. All loads whether "hoop", bending or shear
imposed on any mast or pipe generate stresses. Because all metals
are homogeneous and behave in a linear manner below their yield
points in all directions when stressed it is not possible for
a mast to "be stronger" when subjected to hoop loads than it is when
loaded to the same level of stress in bending or shear. To be
more specific it all actually gets down to compression, tension
and shear stresses which result from wherever they come from.
The fundamentally irrelevant external loading geometry.
Interstial slip planes and all that nonsense. Which don't
fly very high anyway in a NG dedicated to the eternal quest
for low SWRs and 12 DbD gains from wet noodles (without radials)
so I'll spare ya the rest of it. But it's out there.
>
>
Antenna masts are not subject to hoop loads so it gets down to
keeping the combination of the max. shear plus bending stresses
below the yield point of the particular recipe and heat-treating
of the steel (or aluninum) used for the mast. Plus a safety
factor.
>
>
Garden variety standard plumber's steel pipe is normally in
accordance with the specifications for ASTM A53 Grade 1
Schedule 40 pipe which calls for a well-known min. yield strength
of 30,000 psi. That's a structural design criteria any design
engineer can hang his hat and his beams on. Yes, "plumber's
pipe" is most decidedly a very widely used and accepted

structural material if used within in it's range of
allowable working stresses.
>
>
Malleabilty only matters when the structure is subject to
impact loads. Wind loads are not impact loads.
>
>
If the strength/weight ratio is a big issue it's time to pop
for masts made of steels like heat-treated ASI 4130, 4140 and
others of that ilk which have yields in the 75,000-125,000 psi
range. But you better have the coin to spend on a mast . . check
the Texas Towers website. Ugly! Plus shipping . . Not UPS.
But if ya need thinner walls to get the weight down the
higher strength steels are the way to go.
>
>
Me, I'm a cheap sumbitch, If the pipe is stamped "A53" it's gonna
work just fine *if* I plod thru the numbers and don't overstress
it. And I can get the stuff somewhere around the corner and
cartop it home.
>
>
>A commonly available material which is designed
>to be a structural member is the various sizes of chain link
>fence post material.
>
>
I've done a lotta masts & other structures by the numbers as
explained in any applied mechanics 101 text, e.g., Den Hartog,
Timoshenko, etc. and with a lot of materials but I'd never
previously run into the specs for fence post stock so I called
around to several industrial & fence pipe distributors in this
area and asked.
>
>
There are *no* published mechanical specs for fence post stock.
There is zero quality control, accoutability or promises of
performance. Most fence post material is recyled junk steel
of unknown parentage, normally imported from God knows where.
Sorta like Radio Shack antenna masts . . . And this was from
the guys who sell the crap. If you wanna dangle your 13 element
Force 12 tribander at 80 feet from a fence post instead of from
A53 pipe be my guest George me boy . . or try to get a gas line
made from a fence post past your local code enforcement clods.
>
>
>You have to go to a fence installer, as the
>do it to yourself stores only stock one or 2 sizes and in short
>lengths, but real fence places will have raw stock in many sizes

>and 21 foot lengths like water pipe. Much lighter if you have
>to haul it very far up a tower, and much stronger in
>bending moment.
>
>
With all due respect George this is *all* flat-out wrong. Somebody
really led you down the path Sire . .
>
>
>There are also some black structural pipes which meet the
strength criteria, but also not found at your local stores.
>
>
--
Crazy George
Remove NO and SPAM from return address
>
>
w3rv

1284. Re: BACK TO BASICS - EM waves, E and H fields, in phase orinquadr...

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-17 11:49:19 UTC
From: K7JEB <k7jeb@arrl.no_spam.net>
Message-ID: <3RcZ8.35205$lu6.1970700@bgtnsc04-news.ops.worldnet.att.net>
Source record: 138425

K7JEB:
>>I think extending the analysis to real transmission
>>lines connected to real antennas becomes difficult
>>because circuit-theory conventions don't hold well
>>for distributed components and radiative coupling.

KB7QHC:
> The solutions are really quite simple. It is the experience of our
> getting in the way of ourselves in confirming them that accounts for
> the difficulty. Complexity is usually found in the problems we bring
> to the solution.

Perhaps I should have written "messy" rather than
"difficult". What I meant was that I wouldn't use
a SPICE-like program, with its lumped-component models,
to address an antenna problem where a reasonable
degree of accuracy is expected.

Jim Bromley, K7JEB k7jeb @ arrl.net
Glendale, Arizona

1285. Re: rempte antennna tuner as balun for multi-dipole antenna?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-17 12:39:03 UTC
From: Don Niles <k2pmc@adelphia.net>
Message-ID: <HzdZ8.2318$Ga1.721542@news1.news.adelphia.net>
Source record: 138426

Andreas,

You mention parallel dipoles. If you mean you are using several dipoles, all connected to the same center insulator, you don't need a balun. I am assuming you will be using either 50 or 75 ohm coax. If you have a 40 meter dipole, you don't need a 15 meter dipole because at the 3rd harmonic, the 40 meter dipole will provide a reasonably low swr on 15 meters. On the other bands, the impedance/reactance will be sufficiently high so as to isolate the non-resonant dipoles from the resonant dipole. Your multiband coax fed system will work quite well.

Regards,

Don - K2PMC

"Andreas Hofmann" <andreash23@hotmail.com> wrote in message news:3d34847b$1@news.microsoft.com...
> Hi,
>
> I am in the process of putting up a couple of dipoles parallel and will feed
> them with coax. Coax is preferable since I need to make it as invisible as
> possible, that is also the reason for putting up 2 or 3 parallel dipoles
> instread of a vertical or beam.
>
> Now my question is, what about the balun? I know I need a balun, since the
> antenna is balanced and the coax is not.
> I am actually thinking about putting a remote antenna tuner right on the
> antenna feed point. That way my coax losses are minized and it should
> perform just as good as a ladder line, I think. Will the antenna tuner act
> as a balun as well?
>
>
> Any suggestions on how this can be done and on good 100 W remote tuners are
> welcome.
>
>
> Andreas
> ku7t
>
>

1286. Re: LMR400 around rotator

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-17 13:17:01 UTC
From: 'Doc <w5lz@icok.net>
Message-ID: <3D356E31.42D224D4@icok.net>
Source record: 138427

Jim,
Ought to work just fine.
'Doc

1287. Re: Matching coil vs antenna length - mobile antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-17 13:17:50 UTC
From: richardharrison@webtv.net
Message-ID: <4678-3D356E7E-6@storefull-2392.public.lawson.webtv.net>
Source record: 138429

Roy Lewallen wrote:
"I just want to make sure people understand there`s nothing about an antenna itself that makes its radiation characteristics different at resonance."

True enough. It`s current in the wire that in the right environment produces radiation.

In a standing-wave antenna, reactance in the wire inhibits current, Balance out reactance with its conjugate and lower the bar to current. When the net reactance is zero, the antenna is resonant.

The item some amateurs miss is: resonance isn`t necessarily an impedance match. A resonant 1/4-wave may look like a 30-ohm resistor to a 50-ohm coax, A mismatch exists between 30 and 50 ohms and SWR results.

Best regards, Richard Harrison, KB5WZI

1288. Minimum distance between mast mounted antennas?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-17 13:23:01 UTC
From: Ed Laughery <laughery@bellsouth.net>
Message-ID: <U8eZ8.49867$1q2.3654578@e3500-atl2.usenetserver.com>
Source record: 138428

Hi

What is the minimum distance to keep between a 6 meter yagi and a 2 meter yagi on the same mast? Is this a rule of thumb or is there a formula to compute this data? If the 6M yagi were replaced with a 6M 1/4 wave ground plane (with four 1/4 wave radials), would the distance between be effected? In a more general case, where HF and 2M and/or 6M antennas are placed near each other, does the same rule or formula for minimum distance between apply? If not, please elaborate.

I am currently trying to weave my way thru EZNEC - do the above questions lend themselves for modeling to obtain a solution?.

Thanks in advance.

73
Ed
AD5JV

1289. Help building 23cms loop yagi

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-17 13:48:47 UTC
From: pete <pete.hill@blueyonder.co.uk>
Message-ID: <3BeZ8.7738$WK6.2770@news-binary.blueyonder.co.uk>
Source record: 138430

Hi
Can anyone please forward me details on how to put
together a loop yagi for 23cms atv.

Thanks for any info.

Regards Pete

--
Pete.hill@blueyonder.co.uk

1290. Re: Radial/Ground Plate

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-17 14:20:31 UTC
From: Gene Fuller <W4SZzzzzz@att.net>
Message-ID: <3D357D2A.A1CA71BE@att.net>
Source record: 138431

CW,

You may call it silver "brazing", but I choose to call it silver "soldering". In any case I am talking about stuff like Easy-Flo, not Radio Shack 2% silver bearing lead-tin solder.

Another of my hobbies is model engineering, in which silver soldering (brazing) is widely used. The great majority of folks use the term silver SOLDER.

(Even the Brits, Reg. I have dozens of model engineering books by British authors who use the term silver solder.)

Perhaps someone can check with the IEEE dictionary. 8-)

73,
Gene
W4SZ

CW wrote:
>
> Two different things. Silver soldering and silver brazing. Different alloys
> are used, both containing silver.
>
> --
>
> CW
> KC7NOD
>
> "Gene Fuller" <W4SZzzzzz@att.net> wrote in message
> news:3D3476BF.D0AF924C@att.net...
> >
> >
> > Sparks W4EAS wrote:
> > >
> > > Sorry, You can NOT silver solder with propane! You use paste flux AND
> > > need the temp. of a acetylene torch! Regards Sparks W4EAS
> >
> >
> > Hmmm,
> >
> > I have silver soldered various materials many times using only a simple
> > propane torch. The only issue is the total amount of heat needed. The
> > *temperature* of a propane torch is more than adequate. If the pieces
> > being connected are massive (more than a few wires) then a larger torch
> > will be necessary. In no case is the very high temperature of an

> > oxy-acetylene torch beneficial.
> >
> > Did I violate any laws by doing what I can NOT do?
> >
> > 73,
> > Gene W4SZ

1291. Re: Matching coil vs antenna length - mobile antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-17 14:22:38 UTC
From: richardharrison@webtv.net
Message-ID: <22888-3D357DAE-29@storefull-2393.public.lawson.webtv.net>
Source record: 138432

Reg, G4FGQ wrote:
"The whole system must, must, must be resonant."

A little exaggeration for emphasis and illustration, perhaps. There is some truth in there, somewhere.

If the standing wave antenna is not resonant, its reactance may allow little antenna current.

"Antenna tuners" at the operating position can resonate the antenna via the transmission line, so the antenna current is maximized.

Best regards, Richard Harrison, KB5WZI

1292. Re: Minimum distance between mast mounted antennas?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-17 14:45:13 UTC
From: richardharrison@webtv.net
Message-ID: <22888-3D3582F9-31@storefull-2393.public.lawson.webtv.net>
Source record: 138434

Ed, AD5N wrote:
"What is the minimum distance to keep between a 6 meter yagi and a 2 meter yagi on the same mast?"

Ed left out a most important item. Are the wires side by side or are they end to end?

Best regards, Richard Harrison, KB5WZI

1293. Re: Minimum distance between mast mounted antennas?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-17 14:57:11 UTC
From: richardharrison@webtv.net
Message-ID: <22891-3D3585C7-3@storefull-2393.public.lawson.webtv.net>
Source record: 138433

OOPS! Sorry, it`s Ed, AD5JV
Best regards, Richard Harrison, KB5WZI

1294. Re: Radial/Ground Plate

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-17 15:21:07 UTC
From: richardharrison@webtv.net
Message-ID: <22890-3D358B63-5@storefull-2393.public.lawson.webtv.net>
Source record: 138437

I did another net search on "brazing rod". The first item:
#3111 Silver Solder Rods and Flux---Melting temperature 1300 degrees F
and external flux is required.

By the US Dept. of Labor definition, these rods would qualify as
"brazing" as more than 800 degrees F temperature is required to melt
them.

Best regards, Richard Harrison, KB5WZI

1295. Re: Anyone Using STEPPIR Yagi

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-17 15:31:07 UTC
From: "H. Adam Stevens" <solo@totalaccess.net>
Message-ID: <ujb3g3hjqulv82@corp.supernews.com>
Source record: 138435

Not up yet, but the assembly is going well.
Everything fits.
It was this or a log periodic.
H.
NQ5H

"John Seney" <wd1v@amsat.org> wrote in message
news:wd1v-F4C8B7.22320416072002@netnews.attbi.com...
> The design is cool - curious to hear from someone with
> real on-the-air experiences.
>
> JS
> Scope FAQ at http://www.qsl.net/wd1v
>
>

1296. Re: Dual band HT and Mobile HELP PLEASE!!

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-17 15:41:29 UTC
From: Damon Wascom <kc5cqw@excite.com>
Message-ID: <ujb419opeaf278@corp.supernews.com>
Source record: 138436
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.equipment,rec.radio.scanner,rec.radio.shortwave

The ADI AT-600 will fill your needs, however, I don't think they make them anymore.
"JEEPMON" <JEEPMON@HOTMAIL.COM> wrote in message news:06RY8.537339$352.91904@sccrnsc02...
> Can anyone tell me witch dual band HT's and mobile radios can both receive
> and transmit at the same time??
>
> I have only found the Kenwood TH 79a and HT that while you are transmitting
> on 2 meters you can receive on 440.
>
> Again are there any other HT's and Mobile dual band Ham radios that can
> simultaneously receive and transmit at the same time?
>
>
>

1297. Re: LMR400 around rotator

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-17 15:42:44 UTC
From: Jay in the Mojave <jay123a@qnet.com>
Message-ID: <3D359074.324B3B43@qnet.com>
Source record: 138438

Hello Jim:

I use a 2 to 3 foor service loop, and no problems in years.

Jay in the Mojave

J Tabor wrote:
>
> Greeting,
>
> Wondering if the LMR400 type coax works ok around a rotor, with several
> turns coil of course.
>
> Have seen comments abouut 9913 solid center conductor breaking. Have had
> some up in use with UHF for almost 17 years. It's still ok, I think. :)
>
> Anyway looking at new installation and new coax, for HF of course.
>
> Thanks for any comment.
>
> Regards,
> Jim - KU5S

1298. Re: Radial/Ground Plate

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-17 15:57:15 UTC
From: richardharrison@webtv.net
Message-ID: <22890-3D3593DB-7@storefull-2393.public.lawson.webtv.net>
Source record: 138440

I searched the net again on "propane torch". First item:
"Trigger Start Propane Torch---Useful for soldering copper pipes,
loosening rusted bolts and fittings, thawing pipes, removing floor
tiles...and many more tasks!"

Best regards, Richard Harrison, KB5WZI

1299. Silly Question Re. LPF?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-17 16:11:05 UTC
From: wa2si@arrl.net
Message-ID: <b7d1465c.0207170811.7fde5520@posting.google.com>
Source record: 138439

Can the components of a low pass filter deteriorate with age. I have an old Bencher LPF that I bought in the mid 80's, used for awhile, and packed away until recently. The SO-239's are slightly discolored (Presumably from age.) but the unit is in otherwise perfect condition. (On the outside.) Just wonderin'?

73 de Bert
WA2SI

1300. Re: HB Rotatable Dipole

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-17 16:27:10 UTC
From: "Eric C. Weaver" <weav@sigma.net>
Message-ID: <3D359ADE.10D15242@sigma.net>
Source record: 138441

Tony Angerame wrote:
>
> Thanks Cam et al that's the info I was looking for. A forty dollar
> rotatable dipole. Let's keep this from MFJ OK?

MFJ would charge $80 for it, and 1/3 of the units would break within a month.

1301. Re: LMR400 around rotator

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-17 17:01:02 UTC
From: Sylvan Butler <Znospam+noZs_0207@hpb13799Z.Zboi.hpZ.com.invalid>
Message-ID: <slrnajb8me.u03.Znospam+noZs_0207@hpb13799Z.Zboi.hpZ.com.invalid>
Source record: 138442

On Wed, 17 Jul 2002 07:45:25 +0100, Ian White, G3SEK <G3SEK@ifwtech.co.uk> wrote:
> have chosen LMR400 for low losses over a very long run - but since this
> is only for the DC bands, why not change to RG213 near the top of the
> tower? Then you can forget about the whole problem.

Or use LMR-400UF (it's for flex)

sdb

--
| Sylvan Butler | Not speaking for Hewlett-Packard | sbutler-boi.hp.com |
| Watch out for my e-mail address. Thank UCE. >>>> change ^ to @ <<<< |
They that can give up essential liberty to obtain a little temporary
safety deserve neither liberty nor safety. --Benjamin Franklin, 1759
Stop Palladium, TCPA and Senator Fritz Hollings, NOW!
http://www.cl.cam.ac.uk/users/rja14/tcpa-faq.html

1302. Free fiberglass poles,maybe.

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-17 17:44:22 UTC
From: kc5cqa <kc5cqa@yahoo.com>
Message-ID: <ufabjugv1q9t9s43u4qvdd7vlbn0ir0n97@4ax.com>
Source record: 138443

This worked for me,,,,,,,,,,, because I live 'out in the boonies'. Sometime back I noticed the High Way Dept taking out some damaged sign poles, you know like STOP, SLOW, Curve,, and the like,,, well since they were close to my home, I decided to ask them what they were going to do with the 'poles'. (6 foot tall, not counting what was in the ground) The told me they were replacing the fiberglass 'poles' with metal,(I had never noticed, or knew they were fiberglass) soooo, on the upbeat I told them I was a ham and could use a couple of the "masts". I figured they would tell me where , and when I could buy or put in a bid for the poles,,, I have bought 'pipe poles' from junk dealers in the past, who had bought pipe from the Hi Dept but in bulk. To my surprise they said they would drop off the fiber poles at my house since I lived just a few blocks away....,So that is something to consider next time you see those guys out there with the reflected jackets working on signs. just my two cents. cl.

1303. Need help Doc!

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-17 17:51:33 UTC
From: J�ST M�! M�RK {���} <markis@sbcglobal.net>
Message-ID: <F8iZ8.1494$o26.74908902@newssvr14.news.prodigy.com>
Source record: 138444

Hello, I have a question about my Standard C1208DA radio. I would like to know if there is a modification for Mars/Cap. I have looked everywhere, I have been told there is one. Just no luck finding it. Thanks for any help you can provide.

1304. Re: Silly Question Re. LPF?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-17 18:47:47 UTC
From: "M.J.Powell" <mike@pickmere.demon.co.uk>
Message-ID: <BOlyZWBTvbN9Ew1S@pickmere.demon.co.uk>
Source record: 138450

In article <b7d1465c.0207170811.7fde5520@posting.google.com>, Bert Craig
<wa2si@arrl.net> writes
>Can the components of a low pass filter deteriorate with age. I have
>an old Bencher LPF that I bought in the mid 80's, used for awhile, and
>packed away until recently. The SO-239's are slightly discolored
>(Presumably from age.) but the unit is in otherwise perfect condition.
>(On the outside.) Just wonderin'?

Caps can die. Try testing it on your receiver.

Mike
--
M.J.Powell

1305. Re: eh antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-17 20:11:06 UTC
From: harrie <harrioe@home.net>
Message-ID: <3D35CF5A.ADB76711@home.net>
Source record: 138445

Richard Clark wrote:

> On 12 Jul 2002 16:14:47 -0700, wzzzzz@xs4all.nl (willem) wrote:
>
> >I'm a amateur (ik ben een amateurr)

> what are you, a buy guy????(no, just a amateur, testing stuff....)

For a lot of guys:
Buy education
Go to shop
Buy transmitter
Buy antenna
Buy license
Buy it all
Be dome (write it in russian if you can ???)
Give a nobody, no change, which was no eduction, but feeling for
antennas, ..., aggrh, what do I bother.....

Ok, you won, happy ?
I hope
I don't care

PS.But what I do care !!! (I deleted the group of my deja account and my
provider account so it's yours again) this must not be a topic which
bounced (W8jb) out of the newsgroup.
My aposlsie (excusses) that I interfert in the group, it will never
happen again.
No, my english isn't good, but how is your dutch ??, german??, france
???

I'm sorry that I tried this group to get some clear answers from guys
who tested this antenna, but there seams to be more experiance on the
net in self.

Thanks any way.

Skol!
Willem
Last time at the amateur newsgroup (luckely I not a legal amateur, with
all that pricks.....(no, I don't buy stuff, I build it
....)

>

1306. Re: Silly Question Re. LPF?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-17 20:31:18 UTC
From: David Robbins <k1ttt@arrl.net>
Message-ID: <ah4k6n02887@enews3.newsguy.com>
Source record: 138447

yes, kind of... old so-239's with cheap plastic or phenolic insulation can break down with age or heat. the capacitors are probably a ceramic type so they would probably not degrade with time, but could be damaged by shock, lightning, or too much power. check it by putting it between an swr meter and dummy load, it should not appreciably increase the swr on the hf bands. if you have a 6m or 2m transmitter you can try those to see if it does show some rejection above hf or take it to a local tv or radio repair place and see if they have a sweep generator to test it with.

"Bert Craig" <wa2si@arrl.net> wrote in message
news:b7d1465c.0207170811.7fde5520@posting.google.com...
> Can the components of a low pass filter deteriorate with age. I have
> an old Bencher LPF that I bought in the mid 80's, used for awhile, and
> packed away until recently. The SO-239's are slightly discolored
> (Presumably from age.) but the unit is in otherwise perfect condition.
> (On the outside.) Just wonderin'?
>
> 73 de Bert
> WA2SI

1307. Re: Minimum distance between mast mounted antennas?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-17 20:31:34 UTC
From: 'Doc <w5lz@icok.net>
Message-ID: <3D35D423.F7C0AD76@icok.net>
Source record: 138446

Ed,
I don't know of any 'hard and fast' rule about
antenna separations. In general, you want to keep
them as far apart as possible, or within reason.
Usually a 1/4 wave separation is the 'rule of thumb'.
With 6 and 2 meter antennas, I'd use at least a 1/4
wave or about 2 feet separation, more is better.
A 1/4 wave at the higher frequency of the two, sort of.
I wouldn't replace the 6 meter yagi with a grondplane
unless you just wanted too.
The same holds true for HF antennas, but is certainly
harder to do. You usually have to settle for some
'reasonable' distance, rather than a 1/4 wave. The
higher frequency antenna is affected more than the lower
frequency antenna, but both will be affected to some
extent. (Don't you just love these definite answers?)
'Doc

1308. St.Louis Vertical Question

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-17 21:09:37 UTC
From: pentode <pentode@ntlworld.com>
Message-ID: <fYkZ8.3855$Dh3.167597@newsfep1-win.server.ntli.net>
Source record: 138451

I am building the St.Louis Vertical portable antenna,
and need a copy of the schematic for the matching tuner.
Can anyone help?
I have searched the QRP-L archives with no result.
Please reply soon.
Many thanks.

Duncan G4DFV

1309. Re: Minimum distance between mast mounted antennas?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-17 21:10:23 UTC
From: Ed Laughery <laughery@bellsouth.net>
Message-ID: <%_kZ8.52496$1q2.4078898@e3500-atl2.usenetserver.com>
Source record: 138448

Thanks for the info Doc

Of course, every answer generates a couple of questions, so here goes....

Does the inevitable effect of the antennas near each other cause changes in resonant frequency and/or radiation pattern?

Look forward to your response - definitive or not (Hi).

73
Ed

"'Doc" <w5lz@icok.net> wrote in message news:3D35D423.F7C0AD76@icok.net...
> Ed,
> I don't know of any 'hard and fast' rule about
> antenna separations. In general, you want to keep
> them as far apart as possible, or within reason.
> Usually a 1/4 wave separation is the 'rule of thumb'.
> With 6 and 2 meter antennas, I'd use at least a 1/4
> wave or about 2 feet separation, more is better.
> A 1/4 wave at the higher frequency of the two, sort of.
> I wouldn't replace the 6 meter yagi with a grondplane
> unless you just wanted too.
> The same holds true for HF antennas, but is certainly
> harder to do. You usually have to settle for some
> 'reasonable' distance, rather than a 1/4 wave. The
> higher frequency antenna is affected more than the lower
> frequency antenna, but both will be affected to some
> extent. (Don't you just love these definite answers?)
> 'Doc

1310. Re: Minimum distance between mast mounted antennas?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-17 21:15:40 UTC
From: Ed Laughery <laughery@bellsouth.net>
Message-ID: <Y3lZ8.52592$1q2.4097318@e3500-atl2.usenetserver.com>
Source record: 138449

Hi Richard

Antennas to be mounted - one above the other. Which begs the question, does it matter which antenna is on top. In addition, the 2 m antenna is currently mounted with elements vertical. What difference will it make (if any) with the 6 m antenna mounted horizontally?

73s
Ed

"Richard Harrison" <richardharrison@webtv.net> wrote in message news:22888-3D3582F9-31@storefull-2393.public.lawson.webtv.net...
> Ed, AD5N wrote:
> "What is the minimum distance to keep between a 6 meter yagi and a 2
> meter yagi on the same mast?"
>
> Ed left out a most important item. Are the wires side by side or are
> they end to end?
>
> Best regards, Richard Harrison, KB5WZI
>

1311. Re: Free fiberglass poles,maybe.

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-17 21:51:50 UTC
From: RaOuL <russ@bit-net.nospam.com>
Message-ID: <RLnZ8.1147$_T4.85435@news.bit-net.com>
Source record: 138457

Look out!! Now that they know where to dispose of their old fiberglass poles
you could find yourself being the "preferred" disposal method. <Grin>

"kc5cqa" <kc5cqa@yahoo.com> wrote in message
news:ufabjugv1q9t9s43u4qvdd7vlbn0ir0n97@4ax.com...

<snip>

> To my surprise they said they would drop off the fiber poles at my
> house since I lived just a few blocks away....,

1312. Re: Looking for a ham on Grand Cayman

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-17 22:08:48 UTC
From: "Kim H. Simmons" <kim@lanl.gov>
Message-ID: <3D35EAEF.CF836BE5@lanl.gov>
Source record: 138452

Bob Cook wrote:

> Greetings,
>
> I am wondering if there are any hams here who live in or will soon be
> visiting Grand Cayman. I would like to seek and try to arrange for some
> assistance to another ham, who is 84 years old, and who lives on Grand
> Cayman. He has a beam antenna he would like to get up.
>
> Thanks,
>
> Bob K9KKY
>
> www.Ocean-Pro.com
> Professional Yacht Delivery
> Offshore Sailing Instruction
> Naples, FL 800-329-4884

I will be in Grand Cayman from 11Aug02 to 23Aug02.
AD5GE

1313. Re: St.Louis Vertical Question

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-17 22:16:08 UTC
From: k0bg@aol.com
Message-ID: <20020717181608.01969.00000255@mb-mr.aol.com>
Source record: 138453

You know what? You can buy one from MFJ cheaper than you can buy the parts to make one. If you have the money, you might want to investigate the LDG autotuner, as it would let you do long wires too.

Alan, Kï¿½BG

1314. Re: Help building 23cms loop yagi

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-17 22:25:55 UTC
From: k0bg@aol.com
Message-ID: <20020717182555.01969.00000256@mb-mr.aol.com>
Source record: 138454

There are several posted plans for loop yagis for 1296. But....

Most of these are NOT ATV types. At 1296, the band width of a typical yagi is a little shy of what is needed to ATV, and way shy on 435.5.

When you find one, you need to make sure the design is for a LARGE driven element(1" or more), and/or one with a loop driven element. Having once been on both 435.5 with 12, 22 element yagis and 1296 with 24, 32 element yagis, band width is an essential element if you'll excuse the pun.

Alan, Kï¿½BG

1315. Re: rempte antennna tuner as balun for multi-dipole antenna?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-17 22:37:18 UTC
From: k0bg@aol.com
Message-ID: <20020717183718.01969.00000259@mb-mr.aol.com>
Source record: 138455

There are lots of folks on the newsgroup who will disagree, but you really don't need a balun. Yes, they are nice to make sure there are no parallel currents on the outside of the coax, and as a 'cure' to skewing the pattern of the dipole. But not a necessity. If you use a tuner, and you decide to use a balun, you'll almost have to make one. Most purchased baluns do not do well with high VSWR, especially those made with ferrites. A better choice is an iron cored one, like a T200-2. Properly made, they'll handle very high VSWR without damage.

You can purchase from ARRL Dr. Jerry Sevick's "Building and Using Baluns and Ununs". It is the bible on baluns.

Alan, Kï¿½BG

1316. Re: Radial/Ground Plate

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-17 23:42:27 UTC
From: CW <clinton.magers@attbi.com>
Message-ID: <DhnZ8.232337$Uu2.50173@sccrnsc03>
Source record: 138456

There is a difference between silver brazing and silver soldering. Brazing
is done at a much higher temperature than soldering. As Richard pointed out
earlier, the excepted cutoff point is 800 degrees. In both cases, silver
bearing allow is used as the filler metal. Alloyed differently for the
temperatures involved. It has nothing to do with what you choose to call it.
--

CW
KC7NOD

"Gene Fuller" <W4SZzzzzz@att.net> wrote in message
news:3D357D2A.A1CA71BE@att.net...
> CW,
>
> You may call it silver "brazing", but I choose to call it silver
> "soldering". In any case I am talking about stuff like Easy-Flo, not
> Radio Shack 2% silver bearing lead-tin solder.
>
> Another of my hobbies is model engineering, in which silver soldering
> (brazing) is widely used. The great majority of folks use the term
> silver SOLDER.
>
> (Even the Brits, Reg. I have dozens of model engineering books by
> British authors who use the term silver solder.)
>
> Perhaps someone can check with the IEEE dictionary. 8-)
>
> 73,
> Gene
> W4SZ
>
> CW wrote:
> >
> > Two different things. Silver soldering and silver brazing. Different
alloys
> > are used, both containing silver.
> >
> > --
> >
> > CW
> > KC7NOD
> >
> > "Gene Fuller" <W4SZzzzzz@att.net> wrote in message
> > news:3D3476BF.D0AF924C@att.net...
> > >

> > >
> > > Sparks W4EAS wrote:
> > > >
> > > > Sorry, You can NOT silver solder with propane! You use paste flux
AND
> > > > need the temp. of a acetylene torch! Regards Sparks W4EAS
> > >
> > >
> > > Hmmm,
> > >
> > > I have silver soldered various materials many times using only a
simple
> > > propane torch. The only issue is the total amount of heat needed. The
> > > *temperature* of a propane torch is more than adequate. If the pieces
> > > being connected are massive (more than a few wires) then a larger
torch
> > > will be necessary. In no case is the very high temperature of an
> > > oxy-acetylene torch beneficial.
> > >
> > > Did I violate any laws by doing what I can NOT do?
> > >
> > > 73,
> > > Gene W4SZ

1317. Attic loop question

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-18 00:51:07 UTC
From: Frank Helsell <fhelsell@mchsi.com>
Message-ID: <_hoZ8.569967$cQ3.53535@sccrnsc01>
Source record: 138458

I am installing a wire loop in my attic. I can install it vertically (7 feet high and 50 feet long) or horizontal (12 feet wide and 50 feet long). I would appreciate hearing anyone's opinion on whether it would be better to install the loop vertically of horizontally.

Some additional info, if it will help:
I will be feeding the loop with an SGC 237 auto-tune coupler.
I hope to use it on 80 meters through 10 meters.
Almost all of my QSOs are stateside CW ragchews - I don't do much DX.
I'm running 100 watts.

73,
Frank Helsell
W&#65533;MHZ

1318. HF antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-18 00:54:40 UTC
From: Onder <onderusta@soundhabitat.net>
Message-ID: <TeoZ8.37370$Hj3.112588@newsfeeds.bigpond.com>
Source record: 138459

what is a good antenna to use for frequencies 1-30 mhz

1319. Question on antenna separation distance

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-18 01:12:46 UTC
From: tek_guy@hotmail.com
Message-ID: <cbf4a67d.0207171712.4614d06c@posting.google.com>
Source record: 138460

I've just installed a new antenna for 6 meters (a Par Omniangle loop), and I think I've run into a problem with antenna separation. The radio is an Icom '706MKIIG, if that makes any difference.

The antennas are up in my attic (more of a loft, really). The Par is on a 4 foot high mast on top of a metal shelf unit. Before, I stuck a mag-mount antenna on the metal shelf for an FM antenna. But now, that shelf is in the footprint of the loop.

I've read posts on how 706 owners have damaged the radio's front end by having antennas too close. Ideally, I'd like to run 100 watts on the 6 meter antenna, and have the option of 50 watts on the mag-mount. I usually use somewhere around 10-25 watts for repeater stuff, but I'd like to be able to run full power if I ever need to...

My question is, how far apart should I have these antennas, so I don't overload the radio's front end?

Thanks in advance.

Jim, KG4NEL

1320. Re: Minimum distance between mast mounted antennas?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-18 01:39:50 UTC
From: richardharrison@webtv.net
Message-ID: <26563-3D361C66-86@storefull-2394.public.lawson.webtv.net>
Source record: 138462

Ed Laughery wrote:
"Does it matter which antenna is on top?"

Usually not much advantage or disadvantage from which antenna is on top. Bragging rights are "important" to some commercial users so that multiple-user towers are often equipped with candelabra mounts to place antennas at the same height, though this may severely increase the amount of each others energy they each have to deall with.

Which of your line-of-sight paths is most critical to you? You might put that antenna on top.

Coupling is much greater between parallel wires than end-to-end wires. One VHF repeater manual estimates the difference is 10x. I haven`t verified the claim. End-to-end wires have each other in their nulls.

One vertical antenna and one horizontal antenna re pretty well decoupled. Cross-polarization loss is often estimated around 20 db.

The path loss in a transmitted signal is 22 db in the first wavelength traveled plus 6 additional db loss every time the distance doubles after that. You can pick the isolation you want from physical separation from that.

Many multiple antenna users are satisfied with several wavelengths separation. This usually gets you out of the near field.

For diversity reception, 10 wavelengths has been found to provide signals which usually fade independently. At microwave frequencies the separations used are usually greater. You often see the dishes separated by tens of feet and the frequency is 6 GHz. Go figure.

At the lower frequency, an antenna is fewer wavelengths above ground than an antenna operating at a higher frequency. To equalize the playing field, you might put the lower-frequency antenna on top.

In stacking antennas, you might recall that 1/4-wave from a reflecting surface tends to reinforce the reflected return combined with the incident perpendicular to the reflection surface. The round trip is 180 degrees. The reflection process adds 180 degrees, and this puts the signals in-phase directly back at the origin. An example is the horizontal antenna 1/4-wave above earth. This antenna is a noted cloud-warmer. An elevation of 1/2-wave by the same logic cancels the signal directly overhead.

Best regards, Richard Harrison, KB5WZI

1321. Re: Question on antenna separation distance

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-18 02:35:38 UTC
From: richardharrison@webtv.net
Message-ID: <22891-3D36297A-24@storefull-2393.public.lawson.webtv.net>
Source record: 138463

Jim KG4NEL wrote:
"---how far apart should I have these antennas, so I don`t overload the radio`s front end/"

This is best determined by experimentation. An example. UHF STL links were to be replaced by VHF (100 MHz FM broadcast band sets) to reduce fades and improve fidelity of our programs. Problem! Broadcast shortwave signals overloaded the FM receivers and SW harmonics also plagued the STL reception. This problem should have been anticipated, but it wasn`t.

Solution, a sweet spot was found about 1/2 mile from the transmitting plant for the 10 STL receivers and their corner reflector antennas.

Jim might find a sweet spot for one of his antennas before he destroys a radio.

Best regards, Richard Harrison, KB5WZI

1322. Re: HF antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-18 03:34:36 UTC
From: richardharrison@webtv.net
Message-ID: <15767-3D36374C-77@storefull-2397.public.lawson.webtv.net>
Source record: 138464

Try a random length of wire as high and as long as you can make it. You may form it into a loop surrounding your property and connect it to the aerial and earth terminals of your radio. You may make a more compact loop of wire for indoor use.

Reg G4FGQ, may have a free loop program and may be asked for suggestions.

My new RCA K-80 all-band console came with an internal large rotatable loop with a few turns of good sized wire that seemed to work well on all bands and that was over 60 years ago.

Best regards, Richard Harrison, KB5WZI

1323. Re: Radial/Ground Plate

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-18 03:47:49 UTC
From: Gene Fuller <W4SZzzzzz@att.net>
Message-ID: <3D363A60.F8A37986@att.net>
Source record: 138465

CW,

You can call it what you like. I choose to call it silver solder.

The stuff I typically use has a melting temperature in the range of 1200 F to 1300 F. The material is sold as silver solder, and that is a very common terminology.

An example of usage by one of the worldwide leaders in the field is taken directly from the Johnson Matthey web site.

"Johnson Matthey's Silver-flo range forms a group of more than 20 cadmium free silver brazing alloys. These silver solders have been developed to meet the brazing needs of all sectors of industry."

It would seem that both terms are used somewhat interchangeably.

Feel free to bask in your "correctness". I am over and out on this topic.

And, by the way, the original issue was the need for an acetylene torch to work with these joining materials. I have silver soldered (brazed) many times without ever once using an acetylene torch to do so.

Whomever it was that wanted to connect radials to a wire ring around the base of his antenna should go ahead and use whatever torch he has available.

73,
Gene
W4SZ

CW wrote:
>
> There is a difference between silver brazing and silver soldering. Brazing
> is done at a much higher temperature than soldering. As Richard pointed out
> earlier, the excepted cutoff point is 800 degrees. In both cases, silver
> bearing allow is used as the filler metal. Alloyed differently for the
> temperatures involved. It has nothing to do with what you choose to call it.
> --
>
> CW
> KC7NOD
>
> "Gene Fuller" <W4SZzzzzz@att.net> wrote in message
> news:3D357D2A.A1CA71BE@att.net...
> > CW,

> >
> > You may call it silver "brazing", but I choose to call it silver
> > "soldering". In any case I am talking about stuff like Easy-Flo, not
> > Radio Shack 2% silver bearing lead-tin solder.
> >
> > Another of my hobbies is model engineering, in which silver soldering
> > (brazing) is widely used. The great majority of folks use the term
> > silver SOLDER.
> >
> > (Even the Brits, Reg. I have dozens of model engineering books by
> > British authors who use the term silver solder.)
> >
> > Perhaps someone can check with the IEEE dictionary. 8-)
> >
> > 73,
> > Gene
> > W4SZ
> >
> > CW wrote:
> > >
> > > Two different things. Silver soldering and silver brazing. Different
> alloys
> > > are used, both containing silver.
> > >
> > > --
> > >
> > > CW
> > > KC7NOD
> > >
> > > "Gene Fuller" <W4SZzzzzz@att.net> wrote in message
> > > news:3D3476BF.D0AF924C@att.net...
> > > >
> > > >
> > > > Sparks W4EAS wrote:
> > > > >
> > > > > Sorry, You can NOT silver solder with propane! You use paste flux
> AND
> > > > > need the temp. of a acetylene torch! Regards Sparks W4EAS
> > > > >
> > > > >
> > > > > Hmmm,
> > > > >
> > > > > I have silver soldered various materials many times using only a
> simple
> > > > > propane torch. The only issue is the total amount of heat needed. The
> > > > > *temperature* of a propane torch is more than adequate. If the pieces
> > > > > being connected are massive (more than a few wires) then a larger
> torch
> > > > > will be necessary. In no case is the very high temperature of an
> > > > > oxy-acetylene torch beneficial.

> > > >
> > > > Did I violate any laws by doing what I can NOT do?
> > > >
> > > > 73,
> > > > Gene W4SZ

1324. Dual band antenna???

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-18 05:20:54 UTC
From: Russell <rustyspam@dccnet.com>
Message-ID: <3D365036.5030806@dccnet.com>
Source record: 138466

Hi there,
I am looking for a small (2-3 feet tall)for my attic,dual band base antenna?
Any ideas of what works well? name and or model?
What the price is?
Any gain?
Please e-mail me directly with any info???...
rusty@dccnet.com
Thanks very much-Russ

1325. Placement of egg insulators?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-18 06:40:20 UTC
From: post_to_usenet@hotmail.com
Message-ID: <b6b4e772.0207172240.170dd584@posting.google.com>
Source record: 138467

Hi,

We will be installing a GAP Eagle at the local radioclub and some of us wonder on what is the best placement of the egg insulators on the supporting wires.

At first I thought it would be good to have the first set of them at 2.5m (8.2 ft) from the mast as this is a quarter wave of the higher band to use (10m).

Then thought that this is probably not what we want to do. I assume that for a vertical dipole type antenna what you want is a mast NOT resonating on the used frequencies so that it presents a high impedance and the field is affected as little as possible.

Please explain or direct me to some online info on these questions.

Thanks in advance

Toni

1326. Harmonic generation on supporting wires?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-18 06:48:48 UTC
From: post_to_usenet@hotmail.com
Message-ID: <b6b4e772.0207172248.744dc7f1@posting.google.com>
Source record: 138468

Hi all,

Can the supporting wires, directly attached to the antenna's mast, act as harmonic radiation generators due to rectification in the (likely to get rusty) wire-mast union?

I assume this could happen when the supporting wires are resonant on the used frequency and important currents developed in the wire-mast union.

Opinions?

Thanks for answers

Toni

1327. Re: HF antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-18 08:11:27 UTC
From: 'Doc <w5lz@icok.net>
Message-ID: <3D36782C.4D5B73E1@icok.net>
Source record: 138369

Onder,
For receiving? The longest antenna you can get
into the air. For transmitting? Forget it.
'Doc

1328. Re: Attic loop question

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-18 08:14:23 UTC
From: 'Doc <w5lz@icok.net>
Message-ID: <3D3678DB.BBBF5272@icok.net>
Source record: 138370

Frank,
Neither one will work very well, but,
take the 12' x 50', it's the longest.
'Doc

1329. Investigation about RF-Bridges

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-18 08:23:22 UTC
From: Peter Thoms <048191-0001@t-online.de>
Message-ID: <ah6joqhck04$1@news.t-online.com>
Source record: 138383

Hallo NG,

I am curious about following publications:

W. N. Tuttle: Proc. Inst. Radio Engrs., NY 28 1940 S.23
D. B. Sinclair: Proc. Inst. Radio Engrs., NY 28 1940 S.310

Where can I get copies?

vy 73 de Peter, DL6LAT

1330. Re: Attic loop question

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-18 08:51:02 UTC
From: Reg Edwards <g4fgq.regp@btinternet.com>
Message-ID: <ah5vhm$l4g$1@knossos.btinternet.com>
Source record: 138371

In principle, the loop enclosing the largest area is the most efficient. On the other hand a small loop is best in the vertical plane.

Just try both and see what happens.

1331. Re: rempte antennna tuner as balun for multi-dipole antenna?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-18 09:31:21 UTC
From: Bob Cook <captcook@compuserve.com>
Message-ID: <ah65dtpch1@nntp-m01.news.aol.com>
Source record: 138372

Multi-band dipoles:

I would agree with the prior posts here. Balun not necessary. And I would go one step further and propose that with proper antenna lengths and proper coax feedline lengths, you will probably be able to get away with having your tuner at the transmitter end of the coax vs at the antenna end, much simpler. I would certainly recommend trying it that way before you go to the extra work. I am using two such multi-band antennas, (parallel dipoles, in the same cable, 3 dipoles per band, fed with coax, tuner at the transmitter end). I use them on 40, 30, 20, 17, 15, 12 and 10 meters.

Bob K9KKY

www.Ocean-Pro.com
Professional Yacht Delivery
Offshore Sailing Instruction
Naples, FL 800-329-4884

1332. Mobile Antennas

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-18 10:18:31 UTC
From: KC8PMX <kc8pmx@NOSPAMdiamondcs.net>
Message-ID: <ah6g5d327ol@enews1.newsguy.com>
Source record: 138382

I am looking to replace my mobile antenna and am looking for
advice/opinions/suggestions on what you believe is the best mobile antenna.

It must meet the basic requirements:

*best gain/performance/reception
*must be magnet mount of some kind due to having to move it from vehicle to
vehicle and
cannot drill in either vehicles.
*must be at least a 2 meter antenna, but a dual band would be cool.... 6m/2m
or
70cm/2m. Even a triband would be cool if the gain was decent at least on
6 and 2
meters.
*Under $125 bucks.

Lemme know what your suggestions are. My current J*p Shack antenna has
definitely seen better days and needs replacement.

--
Ryan, KC8PMX
FF/MFR
www.qsl.net/w8kea (click on banner at bottom of screen to vote for the site
please)
REMOVE "NOSPAM" in email address to reply.

1333. Re: Placement of egg insulators?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-18 11:07:35 UTC
From: CAM <w5dxp@hotmail.com>
Message-ID: <3D36A177.6291D56F@hotmail.com>
Source record: 138373

Toni wrote:
> We will be installing a GAP Eagle at the local radioclub and some of
> us wonder on what is the best placement of the egg insulators on the
> supporting wires.

Avoid the problem entirely by using UV resistant Dacron Polyester
antenna rope available from AES.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

1334. Painting a vertical antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-18 11:17:05 UTC
From: j.scott.huber@worldnet.att.net
Message-ID: <436bedbe.0207180317.74534bfe@posting.google.com>
Source record: 138374

I would like to put up a 14AVQ vertical and keep it as stealth as possible. I am thinking of giving it a light coat of flat black spray paint to help hide it from out antenna police in the neighborhood. It would be less obvious than the shiny aluminum. My question is whether it will effect the performance of the antenna or not. Thanks.

Scott - W3BUG

1335. Re: Painting a vertical antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-18 11:25:50 UTC
From: ":-) Bill" <therealexray@netscape.net>
Message-ID: <3D36A5BE.8F4CBB1@netscape.net>
Source record: 138375

Scott wrote:
>
> I would like to put up a 14AVQ vertical and keep it as stealth as
> possible. I am thinking of giving it a light coat of flat black spray
> paint to help hide it from out antenna police in the neighborhood. It
> would be less obvious than the shiny aluminum. My question is whether
> it will effect the performance of the antenna or not. Thanks.
>
> Scott - W3BUG

Non-metallic paint will have no effect on the antenna.
-Bill WX4A

1336. High Frequency Sailboat antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-18 12:11:22 UTC
From: William Piccione <sayah1947@nyc.rr.com>
Message-ID: <KfyZ8.99091$QD2.27615058@twister.nyc.rr.com>
Source record: 138376

Hi, I am new to radio but I want to install a inexpensive and portable ssb antenna for my large sailboat. The mast hight is 40'. I have the option of hoisting the antenna to the mast from the deck on a halyard attached to a stainless steel wire. Could the stainless steel line (3/8" thick) be used as an antenna? Also is it possible to trail an antenna in the water?

Thanks,

1337. Re: St.Louis Vertical Question

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-18 12:40:34 UTC
From: pentode <pentode@ntlworld.com>
Message-ID: <_AyZ8.14641$Zl6.393449@newsfep2-win.server.ntli.net>
Source record: 138377

```
Alan, I don't need to buy the parts to make one,
as I have sufficent stock of suitable components,
so I don't need to buy one, and I enjoy construction.
So I will repeat my question:
Where can I obtain a copy of the schematic for the tuner
for the St.Louis Vertical portable antenna?
```

K0bg <k0bg@aol.com> wrote in message
news:20020717181608.01969.00000255@mb-mr.aol.com...
> You know what? You can buy one from MFJ cheaper than you can buy the parts
to
> make one. If you have the money, you might want to investigate the LDG
> autotuner, as it would let you do long wires too.
>
> Alan, K�BG

1338. Re: HF antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-18 12:50:20 UTC
From: richardharrison@webtv.net
Message-ID: <4677-3D36B98C-124@storefull-2392.public.lawson.webtv.net>
Source record: 138378

Doc, WE5LZ wrote:
"For transmitting? Forget it."
(good antenna for 1-30 MHz)

That is correct, but there are usable wide-range antennas. Many military and commercial radios have been supplied with a whip or wire to use over the entire range. These generally are end-fed from a very versatile tuner.

Best regards, Richard Harrison, KB5WZI

1339. Re: HF antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-18 13:39:22 UTC
From: richardharrison@webtv.net
Message-ID: <17619-3D36C50A-29@storefull-2395.public.lawson.webtv.net>
Source record: 138381

OOPS! Sorry. It`s W5LZ.
My fat finger hits the W & E keys in a single stroke at times.

Best regards, Richard Harrison, KB5WZI

1340. Re: High Frequency Sailboat antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-18 13:43:53 UTC
From: k0bg@aol.com
Message-ID: <20020718094353.11983.00000200@mb-fy.aol.com>
Source record: 138379

I'm not a sailor, but I have a good friend who is. He has a 75 foot cat. We installed insulators in the main mast portside backstay which is about 65 or so feet in length. This is fed by an Icom AT-130E (maritime version of the AH-4) located near the port keel groundplate in the Captain's cabin. It feeds the stay thru about 12 feet of RG8 grounded only at the tuner end. It easily covers 80 thru 10, plus the 2.1 Mhz emergency calling channel.

Alan, Kï¿½BG

1341. Re: Painting a vertical antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-18 13:45:06 UTC
From: k0bg@aol.com
Message-ID: <20020718094506.11983.00000201@mb-fy.aol.com>
Source record: 138380

Suggestion. Use Krylon's "Smoke" color. It's gray/blue just like the sky.

Alan, Kï¿½BG

1342. Re: Mobile Antennas

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-18 15:25:02 UTC
From: David Cook <nospam.davepc2@oz.net>
Message-ID: <h5BZ8.48801$Wt3.34288@rwcrnsc53>
Source record: 138384

For the price, it's hard to beat the MFJ-1724B - $16.95. It's been working great for me.

-- Dave, WA0TTN

"KC8PMX" <kc8pmx@NOSPAMdiamondcs.net> wrote in message news:ah6g5d327ol@enews1.newsguy.com...
> I am looking to replace my mobile antenna and am looking for
> advice/opinions/suggestions on what you believe is the best mobile antenna.
>
> It must meet the basic requirements:
>
> *best gain/performance/reception
> *must be magnet mount of some kind due to having to move it from vehicle to
> vehicle and
> cannot drill in either vehicles.
> *must be at least a 2 meter antenna, but a dual band would be cool.... 6m/2m
> or
> 70cm/2m. Even a triband would be cool if the gain was decent at least on
> 6 and 2
> meters.
> *Under $125 bucks.
>
> Lemme know what your suggestions are. My current J*p Shack antenna has
> definitely seen better days and needs replacement.
>
>
> --
> Ryan, KC8PMX
> FF/MFR
> www.qsl.net/w8kea (click on banner at bottom of screen to vote for the site
> please)
> REMOVE "NOSPAM" in email address to reply.
>
>
>

1343. Re: Harmonic generation on supporting wires?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-18 15:45:01 UTC
From: Crazy George <munschNO@attglobal.net.SPAM>
Message-ID: <3d36e83e_4@news1.prserv.net>
Source record: 138386

Toni:
Yes.

Which is why many people put egg insulators in them on the top end next to the mast. And break them up in pieces smaller than a half wave on the highest frequency of interest. It depends on many variables, primarily how much the antenna is coupled to them. By the way, they are commonly referred to as guy wires.

Good Luck!
--
Crazy George
Remove NO and SPAM from return address
Toni <post_to_usenet@hotmail.com> wrote in message
news:b6b4e772.0207172248.744dc7f1@posting.google.com...
> Hi all,
>
> Can the supporting wires, directly attached to the antenna's mast, act
> as harmonic radiation generators due to rectification in the (likely
> to get rusty) wire-mast union?
>
> I assume this could happen when the supporting wires are resonant on
> the used frequency and important currents developed in the wire-mast
> union.
>
> Opinions?
>
> Thanks for answers
>
> Toni

1344. Re: Placement of egg insulators?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-18 15:48:51 UTC
From: Crazy George <munschNO@attglobal.net.SPAM>
Message-ID: <3d36e83f_4@news1.prserv.net>
Source record: 138387

CAM <w5dxp@hotmail.com> wrote in message
news:3D36A177.6291D56F@hotmail.com...
> Toni wrote:
> > We will be installing a GAP Eagle at the local radioclub and some of
> > us wonder on what is the best placement of the egg insulators on the
> > supporting wires.
>
> Avoid the problem entirely by using UV resistant Dacron Polyester
> antenna rope available from AES.

Providing you don't have any squirrels around. I had one shred a length of
that rope for lining for its nest. Ruined a 100 foot piece of it right in
the middle which I was using for a halyard. They don't seem to bother
Phyllistran (or is it Phillystran?).
--
Crazy George
Remove NO and SPAM from return address

> --
> cheers, CAM http://www.qsl.net/w5dxp
>
>

1345. Re: St.Louis Vertical Question

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-18 15:49:02 UTC
From: xxx <nodamn_sp@m.at.all>
Message-ID: <3d36e2d5_1@corp-news.newsgroups.com>
Source record: 138385

Here's a link that may help. The author has his contact info there, so he may have the information you need.

http://www.fix.net/~jparker/slvt.html

73,

Bob VE3MPG

"pentode" <pentode@ntlworld.com> wrote in message
news:_AyZ8.14641$Zl6.393449@newsfep2-win.server.ntli.net...
> Alan, I don't need to buy the parts to make one,
> as I have sufficent stock of suitable components,
> so I don't need to buy one, and I enjoy construction.
> So I will repeat my question:
> Where can I obtain a copy of the schematic for the tuner
> for the St.Louis Vertical portable antenna?
>
>
> K0bg <k0bg@aol.com> wrote in message
> news:20020717181608.01969.00000255@mb-mr.aol.com...
> > You know what? You can buy one from MFJ cheaper than you can buy the
parts
> to
> > make one. If you have the money, you might want to investigate the LDG
> > autotuner, as it would let you do long wires too.
> >
> > Alan, K�BG
>
>

1346. Re: High Frequency Sailboat antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-18 16:47:24 UTC
From: Tazanator <tazanator1@hotmail.com>
Message-ID: <wiCZ8.49420$Wt3.34518@rwcrnsc53>
Source record: 138388

well the subs trail there ant's so it might work ....
"William Piccione" <sayah1947@nyc.rr.com> wrote in message
news:KfyZ8.99091$QD2.27615058@twister.nyc.rr.com...
> Hi, I am new to radio but I want to install a inexpensive and portable ssb
> antenna for my large sailboat. The mast hight is 40'. I have the option
of
> hoisting the antenna to the mast from the deck on a halyard attached to a
> stainless steel wire. Could the stainless steel line (3/8" thick) be used
> as an antenna? Also is it possible to trail an antenna in the water?
>
> Thanks,
>
>

1347. Re: High Frequency Sailboat antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-18 17:24:49 UTC
From: ":-) Bill" <therealexray@netscape.net>
Message-ID: <3D36F9E1.125E78E0@netscape.net>
Source record: 138389

Tazanator wrote:
>
> well the subs trail there ant's so it might work ....

At HF?

-Bill

1348. Re: Painting a vertical antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-18 17:27:47 UTC
From: Jason <uPVC@btinternet.com>
Message-ID: <ah6tqi$qm8$1@venus.btinternet.com>
Source record: 138390

Iam also looking for paint to make an antenna less sightless, Iam interested in the krylon smoke colour paint I have visited there website but the only sell in the US, I live in the UK ! is there an alternative that is available in this country.

--
Yours
Jason

uPVC@btinternet.com

1349. Re: rempte antennna tuner as balun for multi-dipole antenna?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-18 17:48:06 UTC
From: "Edward A. Feustel" <efeustel@erols.com>
Message-ID: <ah6v0r$ki5$1@bob.news.rcn.net>
Source record: 138391

On the other hand, you could use one properly selected antenna with openwire feed. The diameter of such wires is a lot smaller and thus harder to see. If you use transparent tubing or polystyrene separators and an insulated wire of a "blending" color, you will get few complaints. Then tune your feeder and antenna to the bands
you want to use.

Ed, N5EI
"Andreas Hofmann" <andreash23@hotmail.com> wrote in message
news:3d34847b$1@news.microsoft.com...
> Hi,
>
> I am in the process of putting up a couple of dipoles parallel and will
feed
> them with coax. Coax is preferable since I need to make it as invisible
as
> possible, that is also the reason for putting up 2 or 3 parallel dipoles
> instread of a vertical or beam.
>
> Now my question is, what about the balun? I know I need a balun, since
the
> antenna is balanced and the coax is not.
> I am actually thinking about putting a remote antenna tuner right on the
> antenna feed point. That way my coax losses are minized and it should
> perform just as good as a ladder line, I think. Will the antenna tuner
act
> as a balun as well?
>
>
> Any suggestions on how this can be done and on good 100 W remote tuners
are
> welcome.
>
>
> Andreas
> ku7t
>
>

1350. What antenna do you use as SWLer?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-18 17:57:18 UTC
From: mail2michelnl@yahoo.com
Message-ID: <3d37009c.522870@news.sprenkeler.myweb.nl>
Source record: 138392

Hay folks,

For SWLers I have a question. Since a half year now I own a 535 what I always wanted because it is (was?545) the best non commercial hf receiver.

One question I have for you SWLers is what antenna do you folks use on

your receiver? As curious I am I wondering why you use that antenna in what circumstances.
For example: I use my 535 with 16 meters wire (stainless steel 0.7mm) on a RF Systems Magnetic long wire balun (MLB) in western Europe (Netherlands). Till now I didn't find a antenna with this length that can deliver more or better signal. A next step is perhaps a T2FD (low noise antenna) because the S/N ratio is better.

In short: What kind of antenna do you use with your receiver, why and in what circumstances.
I'm sure other SWL'ers are curious about this.

gr. Michel

1351. Re: impostor a solta

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-18 18:10:28 UTC
From: richardharrison@webtv.net
Message-ID: <15771-3D370494-20@storefull-2397.public.lawson.webtv.net>
Source record: 138394

Hyioqt@lassa.com warns us of an "impostor on the loose".

We are further advised of a professional certified psychologist`s opinion about the "real" personality of Leonardo Paredes (Mr Walls?).

The author of this tirade goes on to say he doesn`t know, or know how to say, "Leonardo", but the description all corresponds to a disturbed personality.

This is supposed to be an expert opinion but as posted on this newsgroup, it is hear-say at least twice removed. Further, no connection to antennas is claimed. So, I don`t think it belongs here.

Best regards, Richard Harrison, KB5WZI

1352. Re: High Frequency Sailboat antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-18 18:24:41 UTC
From: richardharrison@webtv.net
Message-ID: <15767-3D3707E9-154@storefull-2397.public.lawson.webtv.net>
Source record: 138393

William Piccione wrote:
"Also is it possible to trail an antenna in the water?"

The sea short-circuits horizontally polarized waves. Vertically polarized waves are reflected in-phase with the surface wave. If you want DX, use vertical polarization.

Best regards, Richard Harrison, KB5WZI

1353. Re: Painting a vertical antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-18 18:56:08 UTC
From: dplatt@radagast.org
Message-ID: <uje3q8ncc6ot3f@corp.supernews.com>
Source record: 138395

>Iam also looking for paint to make an antenna less sightless, Iam interested
>in the krylon smoke colour paint I have visited there website but the only
>sell in the US, I live in the UK ! is there an alternative that is available
>in this country.

I used a slate blue/gray - one of the Rustoleum brand of accent
colors. It's somewhat darker (I think) than the "smoke" color, but
works as a pretty good "not too awfully visible against the sky"
shade, and it's close enough to the colors used on our house walls and
trim that it fits in well.

--
Dave Platt <dplatt@radagast.org> AE6EO
Hosting the Jade Warrior home page: http://www.radagast.org/jade-warrior
I do _not_ wish to receive unsolicited commercial email, and I will
boycott any company which has the gall to send me such ads!

1354. Re: High Frequency Sailboat antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-18 19:00:19 UTC
From: Fred Hambrecht <w4jle@charter.net>
Message-ID: <uje42768kd1gbf@corp.supernews.com>
Source record: 138396

Yes we did, however the transmitting station was several megawatts ELF.
"Tazanator" <tazanator1@hotmail.com> wrote in message
news:wiCZ8.49420$Wt3.34518@rwcrnsc53...
> well the subs trail there ant's so it might work ....

1355. Re: 'Aerial' Antennas

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-18 19:03:12 UTC
From: G4VGO <rmread@attglobal.net>
Message-ID: <3d3713eb_2@news2.prserv.net>
Source record: 138397

Now fixed...try now!!!

1356. Re: Painting a vertical antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-18 19:03:41 UTC
From: Fred Hambrecht <w4jle@charter.net>
Message-ID: <uje48h78sd0c15@corp.supernews.com>
Source record: 138398

Using blues, greens, and black in random patterns would be more effective.

"Dave Platt" <dplatt@radagast.org> wrote in message
news:uje3q8ncc6ot3f@corp.supernews.com...
> >Iam also looking for paint to make an antenna less sightless, Iam
interested
> >in the krylon smoke colour paint I have visited there website but the
only
> >sell in the US, I live in the UK ! is there an alternative that is
available
> >in this country.
>
> I used a slate blue/gray - one of the Rustoleum brand of accent
> colors. It's somewhat darker (I think) than the "smoke" color, but
> works as a pretty good "not too awfully visible against the sky"
> shade, and it's close enough to the colors used on our house walls and
> trim that it fits in well.
>
> --
> Dave Platt <dplatt@radagast.org> AE6EO
> Hosting the Jade Warrior home page: http://www.radagast.org/jade-warrior
> I do _not_ wish to receive unsolicited commercial email, and I will
> boycott any company which has the gall to send me such ads!

1357. What does the 'U' mean in RGnn/U cables?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-18 19:43:29 UTC
From: Joe McElvenney <ximac@btinternet.com>
Message-ID: <VA.00000179.00152703@btinternet.com>
Source record: 138399

Hi,

I am sure that someone out there knows this. A recent post in another newsgroup set me off searching my library and the net for the answer but I have failed. I am fairly sure that 'RG' stands for 'Radio Grade' but can only guess that the 'U' means unbalanced but the definitive publication MIL-HDBK-216 is now way out of print.

Cheers - Joe, G3LLV

1358. Re: HF antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-18 19:47:02 UTC
From: 'Doc <w5lz@icok.net>
Message-ID: <3D371B2F.1C0256E0@icok.net>
Source record: 138400

Richard,
You're right, the military and a few manufacturers have fixed length antennas that can be used over a very wide frequency range. Even so, the performance on the lower bands is pretty crummy. The key work in your post was -tuner-. With a tuner that's versatile enough, you can make a 9 foot whip work anywhere. But not very well in most places. There still ain't no such thing as a free lunch...
'Doc

1359. Re: High Frequency Sailboat antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-18 19:59:08 UTC
From: Joe McElvenney <ximac@btinternet.com>
Message-ID: <VA.0000017a.00237910@btinternet.com>
Source record: 138401

Hi,

You could try a trailing counterpoise though if your hull is fibre-glass or some such material. Years ago I was involved in fitting radios to police boats on an African lake (Malawi) and we couldn't get a decent ground for that reason. Efficiency went up hugely just by trailing a wire even though it was in fresh water. We were very careful not to get it anywhere near the props though.

Cheers - Joe, G3LLV

1360. Re: What does the 'U' mean in RGnn/U cables?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-18 20:04:27 UTC
From: Bob Marshall-Read <rmread@attglobal.net>
Message-ID: <3d372245_1@news2.prserv.net>
Source record: 138402

I think Utility
"Joe McElvenney" <ximac@btinternet.com> wrote in message
news:VA.00000179.00152703@btinternet.com...
> Hi,
>
> I am sure that someone out there knows this. A recent
> post in another newsgroup set me off searching my library
> and the net for the answer but I have failed. I am fairly
> sure that 'RG' stands for 'Radio Grade' but can only guess
> that the 'U' means unbalanced but the definitive
> publication MIL-HDBK-216 is now way out of print.
>
> Cheers - Joe, G3LLV
>
>

1361. Re: Dual band antenna???

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-18 20:41:27 UTC
From: Alan Beagley <abeagley@optonline.net>
Message-ID: <3D3727F7.2010101@optonline.net>
Source record: 138403

e-mailed and posted:

Which two bands?

-=-
Alan, AB2OS

Russell wrote:
> Hi there,
> I am looking for a small (2-3 feet tall)for my attic,dual band base
> antenna?
> Any ideas of what works well? name and or model?
> What the price is?
> Any gain?
> Please e-mail me directly with any info???...

1362. Re: Radial/Ground Plate

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-18 21:13:27 UTC
From: Sylvan Butler <Znospam+noZs_0207@hpb13799Z.Zboi.hpZ.com.invalid>
Message-ID: <slrnajebrn.ga.Znospam+noZs_0207@hpb13799Z.Zboi.hpZ.com.invalid>
Source record: 138409

On Wed, 17 Jul 2002 23:42:27 GMT, CW <clinton.magers@attbi.com> wrote:
> There is a difference between silver brazing and silver soldering. Brazing
> is done at a much higher temperature than soldering. As Richard pointed out
> earlier, the excepted cutoff point is 800 degrees. In both cases, silver

Right. And many soldering irons will heat above 800F. This
distincting between soldering and brazing seems to be a frequent
topic of conversation in the rec.crafts.metalworking (IIRC) group.

> bearing allow is used as the filler metal. Alloyed differently for the
> temperatures involved. It has nothing to do with what you choose to call it.

Pretty much. I don't know how long the 800F distinction has been
made in the various parts of the world though.

The other issues people may have, is that you can find a wide range
of melting temperatures in silver alloy filler material for
soldering or brazing. If someone uses an 800F liquidity alloy with
a soldering iron, is that soldering or brazing? When someone uses a
900F allow with MAPP gas that is brazing, but someone who has only
used a 1200F alloy wonders how anyone does silver brazing without an
OxyAcetylene torch. (Sometimes slow heat is good enough, other
times you want quick heat to avoid spreading heat too far thru the
assembly which can damage the valve, or dis-temper the barrel, etc.)

sdb
--
| Sylvan Butler | Not speaking for Hewlett-Packard | sbutler-boi.hp.com |
| Watch out for my e-mail address. Thank UCE. >>>> change ^ to @ <<<< |
They that can give up essential liberty to obtain a little temporary
safety deserve neither liberty nor safety. --Benjamin Franklin, 1759
Stop Palladium, TCPA and Senator Fritz Hollings, NOW!
http://www.cl.cam.ac.uk/users/rja14/tcpa-faq.html

1363. Re: HB Rotatable Dipole

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-18 21:15:14 UTC
From: aunwin@fgi.net
Message-ID: <c4becf19.0207181315.eafe654@posting.google.com>
Source record: 138404

CAM <w5dxp@hotmail.com> wrote in message news:<3D3460C0.41197571@hotmail.com>...
> Tony Angerame wrote:
> > Has anyone used the World Radio Fiberglass Masts?
>
> I've used two SD-20's for a portable loaded 20m rotatable
> dipole with very good results. The center loading coil
> doubled as a balun.

What are the loads doing for you on a 20 M dipole antenna
when you are using 2 SWD-20's (21 feet a side) ?

1364. Re: Attic loop question

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-18 21:16:21 UTC
From: Sylvan Butler <Znospam+noZs_0207@hpb13799Z.Zboi.hpZ.com.invalid>
Message-ID: <slrnajec15.ga.Znospam+noZs_0207@hpb13799Z.Zboi.hpZ.com.invalid>
Source record: 138410

On Thu, 18 Jul 2002 08:51:02 +0000 (UTC), Reg Edwards <g4fgq.regp@btinternet.com> wrote:
> In principle, the loop enclosing the largest area is the most efficient. On

Seems clear enough...

> the other hand a small loop is best in the vertical plane.

Does that mean:
if stuck with a small loop keep it vertical instead of horizontal
or
if stuck with vertical sometimes a small loop beats a larger loop
?

sdb

--
| Sylvan Butler | Not speaking for Hewlett-Packard | sbutler-boi.hp.com |
| Watch out for my e-mail address. Thank UCE. >>>> change ^ to @ <<<< |
They that can give up essential liberty to obtain a little temporary
safety deserve neither liberty nor safety. --Benjamin Franklin, 1759
Stop Palladium, TCPA and Senator Fritz Hollings, NOW!
http://www.cl.cam.ac.uk/users/rja14/tcpa-faq.html

1365. Re: Free fiberglass poles,maybe.

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-18 21:16:59 UTC
From: Sylvan Butler <Znospam+noZs_0207@hpb13799Z.Zboi.hpZ.com.invalid>
Message-ID: <slrnajec2b.ga.Znospam+noZs_0207@hpb13799Z.Zboi.hpZ.com.invalid>
Source record: 138408

On Wed, 17 Jul 2002 17:51:50 -0400, RaOuL <russ@bit-net.nospam.com> wrote:
> "kc5cqa" <kc5cqa@yahoo.com> wrote in message
> news:ufabjugv1q9t9s43u4qvdd7vlbn0ir0n97@4ax.com...
>> To my surprise they said they would drop off the fiber poles at my
>> house since I lived just a few blocks away....,

> Look out!! Now that they know where to dispose of their old fiberglass poles
> you could find yourself being the "preferred" disposal method. <Grin>

Sounds like a new money making opportunity to me! :)

sdb
--
| Sylvan Butler | Not speaking for Hewlett-Packard | sbutler-boi.hp.com |
| Watch out for my e-mail address. Thank UCE. >>>> change ^ to @ <<<< |
They that can give up essential liberty to obtain a little temporary
safety deserve neither liberty nor safety. --Benjamin Franklin, 1759
Stop Palladium, TCPA and Senator Fritz Hollings, NOW!
http://www.cl.cam.ac.uk/users/rja14/tcpa-faq.html

1366. Re: HB Rotatable Dipole

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-18 21:24:44 UTC
From: CAM <w5dxp@hotmail.com>
Message-ID: <3D37321C.8B645004@hotmail.com>
Source record: 138405

Art Unwin KB9MZ wrote:
>
> CAM <w5dxp@hotmail.com> wrote in message news:<3D3460C0.41197571@hotmail.com>...
> > Tony Angerame wrote:
> > > Has anyone used the World Radio Fiberglass Masts?
> >
> > I've used two SD-20's for a portable loaded 20m rotatable
> > dipole with very good results. The center loading coil
> > doubled as a balun.
>
> What are the loads doing for you on a 20 M dipole antenna
> when you are using 2 SWD-20's (21 feet a side) ?

I had forgotten what band I used it on - it was 40m.
--
cheers, CAM, W5DXP

----------== Posted via Newsfeed.Com - Uncensored Usenet News ==----------
http://www.newsfeed.com The #1 Newsgroup Service in the World!
-----= Over 100,000 Newsgroups - Unlimited Fast Downloads - 19 Servers =-----

1367. Re: Mobile Antennas

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-18 21:38:04 UTC
From: RaOuL <russ@bit-net.nospam.com>
Message-ID: <azGZ8.1148$_T4.85641@news.bit-net.com>
Source record: 138406

The MFJ-1724B is a great starter antenna, both me and my XYL used them when we first got licensed last year. In fact, she is still using hers! I have since upgraded to a Hustler 5/8 wave mag mount that set me back about $35. It offers a noticeable performance improvement over the MFJ and the price didn't break my bank.

-Russ KB1GKN

"David Cook" <nospam.davepc2@oz.net> wrote in message news:h5BZ8.48801$Wt3.34288@rwcrnsc53...
> For the price, it's hard to beat the MFJ-1724B - $16.95. It's been working
> great for me.
>
> -- Dave, WA0TTN
>
> "KC8PMX" <kc8pmx@NOSPAMdiamondcs.net> wrote in message
> news:ah6g5d327ol@enews1.newsguy.com...
> > I am looking to replace my mobile antenna and am looking for
> > advice/opinions/suggestions on what you believe is the best mobile
> antenna.
> >
> > It must meet the basic requirements:
> >
> > *best gain/performance/reception
> > *must be magnet mount of some kind due to having to move it from vehicle
> to
> > vehicle and
> > cannot drill in either vehicles.
> > *must be at least a 2 meter antenna, but a dual band would be cool....
> 6m/2m
> > or
> > 70cm/2m. Even a triband would be cool if the gain was decent at least
> on
> > 6 and 2
> > meters.
> > *Under $125 bucks.
> >
> > Lemme know what your suggestions are. My current J*p Shack antenna has
> > definitely seen better days and needs replacement.
> >
> >
> > --
> > Ryan, KC8PMX
> > FF/MFR
> > www.qsl.net/w8kea (click on banner at bottom of screen to vote for the

> site
> > please)
> > REMOVE "NOSPAM" in email address to reply.
> >
> >
> >
>
>

1368. Re: High Frequency Sailboat antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-18 21:50:47 UTC
From: 'Doc <w5lz@icok.net>
Message-ID: <3D37382F.DBFE6060@icok.net>
Source record: 138407

Tazanator,
I think that if you check, you will find that
the antenna that submarines 'trail' is used on ELF.
Anything above ELF is sent using a multipurpose
antenna usually built into the periscope. I'm afraid
that an HF antenna 'trailed' through the water makes
for one terrible signal.
'Doc

1369. Re: Dual band antenna???

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-18 22:27:45 UTC
From: Reg Edwards <g4fgq.regp@btinternet.com>
Message-ID: <ah7fd0$r92$2@venus.btinternet.com>
Source record: 138411

> Which two bands?
==========

Alan, indeed, a good question.

On receipt of an original careless query of that sort it makes one wonder whether it's a waste of time composing a sensible reply on the grounds that the originator would be incapable of understanding it.

But I suppose we must be charitable and press on regardless.

Reg, G4FGQ

1370. Re: What antenna do you use as SWLer?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-18 22:34:48 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <qfgejuckoldhhg9n03j88tjuukbfg1ipei@4ax.com>
Source record: 138412

On Thu, 18 Jul 2002 17:57:18 GMT, mail2michelnl@yahoo.com (michel)
wrote:

>Hay folks,
>
>For SWLers I have a question. Since a half year now I own a 535 what I
>always wanted because it is (was?545) the best non commercial hf
>receiver.
>
>One question I have for you SWLers is what antenna do you folks use on
>
>your receiver? As curious I am I wondering why you use that antenna
>in what circumstances.
>For example: I use my 535 with 16 meters wire (stainless steel 0.7mm)
>on a RF Systems Magnetic long wire balun (MLB) in western Europe
>(Netherlands). Till now I didn't find a antenna with this length that
>can deliver more or better signal. A next step is perhaps a T2FD (low
>noise antenna) because the S/N ratio is better.
>
>In short: What kind of antenna do you use with your receiver, why and
>in what circumstances.
>I'm sure other SWL'ers are curious about this.
>
>gr. Michel
>

Hi Michel,

You name two antennas amateurs would not pick normally - loss being
the key factor. For reception, it doesn't matter too much as you can
always add gain (once you have a signal).

Aside from your choices, for SWLing, I have always found a long-wire
is as effective as any. As high and as long as possible. Once, you
have that, more important choices are in tuner or preselector.

73's
Richard Clark, KB7QHC

1371. Re: What does the 'U' mean in RGnn/U cables?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-18 23:21:58 UTC
From: Crazy George <munschNO@attglobal.net.SPAM>
Message-ID: <3d375270_3@news1.prserv.net>
Source record: 138413

RG = Radio Guide
U = General Utility

You will find the /U suffix on many US military nomenclatured items which can be applied to more than 1 specific system. Sometimes, like coaxial cable, it applies to almost all systems. It also appears as the first letter in AN/xxx nomenclatured systems, as AN/URD-10.

By the way, the RG nomenclature system is obsolete, and replaced by M17/nn-nnnn numbers. See MIL-C-17 for further information.

--
Crazy George
Remove NO and SPAM from return address
Joe McElvenney <ximac@btinternet.com> wrote in message news:VA.00000179.00152703@btinternet.com...
> Hi,
>
> I am sure that someone out there knows this. A recent
> post in another newsgroup set me off searching my library
> and the net for the answer but I have failed. I am fairly
> sure that 'RG' stands for 'Radio Grade' but can only guess
> that the 'U' means unbalanced but the definitive
> publication MIL-HDBK-216 is now way out of print.
>
> Cheers - Joe, G3LLV
>
>

1372. Re: Radial/Ground Plate

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-19 00:14:54 UTC
From: CW <clinton.magers@attbi.com>
Message-ID: <2SIZ8.563854$352.98927@sccrnsc02>
Source record: 138414

It doesn't matter who is using the terminology, if they are using it wrong they are wrong. BT, where did you come up with the phrase below, a bad movie?
--

CW
KC7NOD

"Gene Fuller" <W4SZzzzzz@att.net> wrote in message news:3D363A60.F8A37986@att.net...

over and out

1373. Tape Whip Adapter in stock

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-19 00:19:18 UTC
From: Brooke Clarke <brooke@pacific.net>
Message-ID: <3D375B06.983D04A9@pacific.net>
Source record: 138415
Cross-posted to: rec.radio.amateur.boatanchors,rec.radio.amateur.antenna

Hello:

I now have in stock a Tape Whip Adapter that accepts 5/16-24 male threaded antennas (like are used on the PRC-25 and PRC-77) many of which are available on eBay at a reasonable price and screws into standard ham radio 3/8-24 antenna bases. More info at: <http://www.pacificsites.com/~brooke/TWA.shtml>

73,

Brooke Clarke, N6GCE
other mil radio products: http://www.prc68.com

1374. Re: What does the 'U' mean in RGnn/U cables?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-19 00:40:01 UTC
From: Joe McElvenney <ximac@btinternet.com>
Message-ID: <VA.0000017e.002b2389@btinternet.com>
Source record: 138416

Hi,

Thanks everybody for putting me right. One more piece of
the great jigsaw puzzle has now fallen into place.

73 de Joe, G3LLV

1375. Re: What antenna do you use as SWLer?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-19 00:49:55 UTC
From: Scott Huber <j.scott.huber@worldnet.att.net>
Message-ID: <TmJZ8.109994$UT.7038882@bgtnsc05-news.ops.worldnet.att.net>
Source record: 138417

Hi Michel,
I too have to agree with Rick, as I was a serious SWL'er prior to getting my ham ticket. I used a simple "long-wire" about 75 feet long up about 35 feet and could easily tune to just about any station provided conditions of the band were good. It was a cheap and effective antenna. If you get plagued with noise, add an outboard DSP unit to your rig (Timebridge, etc) and it will clean-up your signal quite a bit.

Best of DX and 73,
Scott - W3BUG

"michel" <mail2michelnl@yahoo.com> wrote in message news:3d37009c.522870@news.sprenkeler.myweb.nl...
> Hay folks,
>
> For SWLers I have a question. Since a half year now I own a 535 what I
> always wanted because it is (was?545) the best non commercial hf
> receiver.
>
> One question I have for you SWLers is what antenna do you folks use on
>
> your receiver? As curious I am I wondering why you use that antenna
> in what circumstances.
> For example: I use my 535 with 16 meters wire (stainless steel 0.7mm)
> on a RF Systems Magnetic long wire balun (MLB) in western Europe
> (Netherlands). Till now I didn't find a antenna with this length that
> can deliver more or better signal. A next step is perhaps a T2FD (low
> noise antenna) because the S/N ratio is better.
>
> In short: What kind of antenna do you use with your receiver, why and
> in what circumstances.
> I'm sure other SWL'ers are curious about this.
>
> gr. Michel
>
>

1376. Re: Mobile Antennas

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-19 00:52:53 UTC
From: DPH <rally2xs@compuserve.com>
Message-ID: <ofoejukmj1ubejgmpm8cutpfu8rraapuie@4ax.com>
Source record: 138418

On Thu, 18 Jul 2002 06:18:31 -0400, "KC8PMX"
<kc8pmx@NOSPAMdiamondcs.net> wrote:

>I am looking to replace my mobile antenna and am looking for
>advice/opinions/suggestions on what you believe is the best mobile antenna.
>
>It must meet the basic requirements:
>
>*best gain/performance/reception
>*must be magnet mount of some kind due to having to move it from vehicle to
>vehicle and
> cannot drill in either vehicles.
>*must be at least a 2 meter antenna, but a dual band would be cool.... 6m/2m
>or
> 70cm/2m. Even a triband would be cool if the gain was decent at least on
>6 and 2
> meters.
>*Under $125 bucks.
>
>Lemme know what your suggestions are. My current J*p Shack antenna has
>definitely seen better days and needs replacement.

Can't say about the price, because its been some time since I bought
mine (maybe 5 years?) but the Larsen dual band 2m / 440 antenna on a
Larsen mag mount, right in the center of the roof, is a really good
working antenna. Built like a tank, it has a magnet that is good for
really high speeds, too, so if you are on I-10 in Arizona, where the
limit is 75 and everyone goes faster-than-that, it still won't blow
off even in a stiff headwind. Well, usually, anyway! <G>

I've been using Larsen since I was a 2-way radio tech some 22 years
ago, and converted to Larsen from Antenna Specialists because they
did blow off the top of my car, and have found them to always work
very well.

Dave Head
K8DH

1377. j-pole

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-19 00:56:19 UTC
From: JEEPMON <JEEPMON@HOTMAIL.COM>
Message-ID: <TsJZ8.582213$cQ3.54786@sccrnsc01>
Source record: 138319

What are the disadvantages of a j-pole antenna made of copper tubing? Is any ground plane needed. If not why not? What are the best books to read or websites about j-pole antennas, more specifically cooper tubing j-poles. How would an vertical antenna (commercially made from Diamond, Comet, Hustler, Hy-Gain, ect.)with ground radials compare to a j-pole antenna for 6m, 2m, 220MHz, 440MHz, and 1.2 GHz? What would most of you use?

1378. Re: j-pole

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-19 01:19:16 UTC
From: ZOOM <robert931@sympatico.ca>
Message-ID: <8OJZ8.15105$Db.955652@news20.bellglobal.com>
Source record: 138320

Put this in a search engine and come up with all sorts of sites: "JPOLE"
They work but they are not a beam!

"JEEPMON" <JEEPMON@HOTMAIL.COM> wrote in message
news:TsJZ8.582213$cQ3.54786@sccrnsc01...
> What are the disadvantages of a j-pole antenna made of copper tubing? Is
any
> ground plane needed. If not why not? What are the best books to read or
> websites about j-pole antennas, more specifically cooper tubing j-poles.
How
> would an vertical antenna (commercially made from Diamond, Comet, Hustler,
> Hy-Gain, ect.)with ground radials compare to a j-pole antenna for 6m, 2m,
> 220MHz, 440MHz, and 1.2 GHz? What would most of you use?
>
>

1379. Re: Attic loop question

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-19 01:20:10 UTC
From: ZOOM <robert931@sympatico.ca>
Message-ID: <_OJZ8.15106$Db.956050@news20.bellglobal.com>
Source record: 138321

Try Both!
"Frank Helsell" <fhelsell@mchsi.com> wrote in message
news:_hoZ8.569967$cQ3.53535@sccrnsc01...
> I am installing a wire loop in my attic. I can install it vertically (7
> feet high and 50 feet long) or horizontal (12 feet wide and 50 feet long).
> I would appreciate hearing anyone's opinion on whether it would be better
to
> install the loop vertically of horizontally.
>
> Some additional info, if it will help:
> I will be feeding the loop with an SGC 237 auto-tune coupler.
> I hope to use it on 80 meters through 10 meters.
> Almost all of my QSOs are stateside CW ragchews - I don't do much DX.
> I'm running 100 watts.
>
> 73,
> Frank Helsell
> W�MHZ
>
>
>
>
>

1380. Re: HF antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-19 01:41:35 UTC
From: N4LQ <N4LQ@igLou.com>
Message-ID: <3d361cae_1@news.iglou.com>
Source record: 138461

A 50 ohm, non inductive, high power resistor would give trouble free and
reliable service on all frequencies.

--
Steve Ellington N4LQ.
"Onder" <onderusta@soundhabitat.net> wrote in message
news:TeoZ8.37370$Hj3.112588@newsfeeds.bigpond.com...
> what is a good antenna to use for frequencies 1-30 mhz
>
>
>

1381. Re: What antenna do you use as SWLer?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-19 02:55:16 UTC
From: richardharrison@webtv.net
Message-ID: <8932-3D377F94-191@storefull-2398.public.lawson.webtv.net>
Source record: 138324

Michel wrote:
"A next step is perhaps a T2FD (low noise antenna) because the S/N ratio is better."

I agree with Ricard Clark. The value of the T2FD is in its ability to quickly and easily accept transmitted frequency changes without fuss. For reception this is not a problem.

It`s true the noise s lower but so is the signal especially in the Netherlands where soil conductivity is excellent. High soil conducivity short-circuits low-angle horizontally polarized waves.

As an SWLer, you want to hear from many directions. You want to hear from near and far. A vertically polarized antenna is ideal for your situation.

Use the tallest wire you can erect. You can add a flat-top to it for capacitance loading, or make an inverted "L". Use this vertically polarized antenna against a good connection to that excellent Dutch earth. Enjoy!

Best regards, Richard Harrison, KB5WZI

1382. Re: j-pole

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-19 03:08:52 UTC
From: CAM <w5dxp@hotmail.com>
Message-ID: <3D3782C4.1FAFC628@hotmail.com>
Source record: 138322

JEEPMON wrote:
> What are the disadvantages of a j-pole antenna made of copper tubing? Is any
> ground plane needed. If not why not?

A J-Pole has approximately the same current distribution as a center-fed
1/2WL dipole. It is simply end-fed with a matching stub. Up in the air,
like the center-fed dipole, it needs no ground plane, but maybe does
need some decoupling like a few turns of coax acting like a choke.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

1383. Re: High Frequency Sailboat antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-19 03:12:41 UTC
From: Dick Carroll <dickc58@att.net>
Message-ID: <3C7D012D.272B88E@att.net>
Source record: 138323

William Piccione wrote:

> Hi, I am new to radio but I want to install a inexpensive and portable ssb
> antenna for my large sailboat. The mast hight is 40'. I have the option of
> hoisting the antenna to the mast from the deck on a halyard attached to a
> stainless steel wire. Could the stainless steel line (3/8" thick) be used
> as an antenna?

Yes, I've used stainless steel cable (tower guys) for HF antennas successfully
for years. There will be some (minor) loss compared to copper but it works well.

> Also is it possible to trail an antenna in the water?

Nope. Under way, the water is your "ground". :-)

Dick

1384. Re: High Frequency Sailboat antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-19 05:14:39 UTC
From: CW <clinton.magers@attbi.com>
Message-ID: <3fNZ8.584626$cQ3.62916@sccrnsc01>
Source record: 138325

At vlf.
"Tazanator" <tazanator1@hotmail.com> wrote in message
news:wiCZ8.49420$Wt3.34518@rwcrnsc53...
> well the subs trail there ant's so it might work ....

1385. Re: What antenna do you use as SWLer?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-19 07:55:57 UTC
From: nm5k@wt.net
Message-ID: <25eb70d7.0207182355.27f9db85@posting.google.com>
Source record: 138326

mail2michelnl@yahoo.com (michel) wrote in message
news:<3d37009c.522870@news.sprenkeler.myweb.nl>...
> Hay folks,
>
> For SWLers I have a question. Since a half year now I own a 535 what I
> always wanted because it is (was?545) the best non commercial hf
> receiver.
>
> One question I have for you SWLers is what antenna do you folks use on
>
> your receiver? As curious I am I wondering why you use that antenna
> in what circumstances.
> For example: I use my 535 with 16 meters wire (stainless steel 0.7mm)
> on a RF Systems Magnetic long wire balun (MLB) in western Europe
> (Netherlands). Till now I didn't find a antenna with this length that
> can deliver more or better signal. A next step is perhaps a T2FD (low
> noise antenna) because the S/N ratio is better.

Dunno...When I hear the term "low noise" used for an antenna, my first
thought is "low performance". Noise is rf just like any other source.
If your antenna does not receive noise too well, it's likely not going
to be too hot on the desired signals tuned. Many antennas are "quiet"
due to excess loss in the system.
>

> In short: What kind of antenna do you use with your receiver, why and
> in what circumstances.
> I'm sure other SWL'ers are curious about this.

Myself, I use the same antennas I use on the ham bands. Most HF stuff
is received on my parallel 80-40-20 meter dipoles on a single coax
feed. In the winter, I often change it to 160-80-40. My 160m inv L is
also usable on most any HF freq. I have other verticals I use from
time to time. I use verticals and yagi's on VHF/UHF. I've recently
built a few small loops for lowband receiving. I can use those or my
wire antennas on those bands, but I get less AM-BC trash on the loops.
I'm in a hot AM-BC area, with good ground conductivity, and much
moisture. It's easy to have problems due to rectification in corroded
metal. I've been having a problem with that on my wire antennas if
used on longwave or even 160m. For some reason, my house, mast or
both are overly hot with AM-BC rf. I haven't been able to cure it yet.
I've tried unhooking guy wires, grounds and ungrounding, coax changes,
banging my mast for static ,etc, etc, etc, and still haven't nailed it
down. I notice my water heater is real hot with AM-BC rf also...And it
came about fairly gradually over a period of months and seems to be

getting slowly worse. I can get on my ladder line fed 40 meter dipole that is in the attic, and the noise is gone for the most part, but the tuner may be helping on that. And the two antennas are not that far apart. You would think the attic antenna would be worse, being close to the plumbing, etc, but not so. I heard one guy mention problems like this just from using stranded copper wire for antennas. It happens that all my antennas are stranded wire, but they do have the insulation on them. So really , you wouldn't think it would be a problem. My attic antenna is using the same wire, and it's not as bad. The thing is, using a portable am radio as a FS meter, it seems my mast, and the grounded metal around the house are the hot points, not my antenna itself. IE: the ground wire to the power line coming from the pole is pretty hot also..
I'm getting a lot more local AM garbage on the low bands than I did a couple of years ago. Something has changed around here, and I'm gonna have to find what it is.
BTW, using a tuner or even just a variable cap inline kills a lot of it, but I shouldn't have to do that. MK

http://web.wt.net/~nm5k/

1386. Re: Radial/Ground Plate

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-19 08:21:01 UTC
From: nm5k@wt.net
Message-ID: <25eb70d7.0207190021.21a5884@posting.google.com>
Source record: 138327

Gene Fuller <W4SZzzzzz@att.net> wrote in message
> And, by the way, the original issue was the need for an acetylene torch
> to work with these joining materials. I have silver soldered (brazed)
> many times without ever once using an acetylene torch to do so.
>
> Whomever it was that wanted to connect radials to a wire ring around the
> base of his antenna should go ahead and use whatever torch he has
> available.
>
> 73,
> Gene
> W4SZ

You can use a propane torch to do that as long as the area is not too
big.
The problem with many small propane torches is they don't have the
heat needed to really do it up right. You end up with crappy looking
and weak joints. With an oxi-acetylene torch you have the heat needed
to really have the solder flow well. Makes much smoother and stronger
joints when the solder is flowing like hot butter. I've got an
oxi-acetylene torch here in the room with me. "anti-theft measure"...I
do A/C work at times, so always have one. But I also keep a small
propane torch on my truck as a emergency backup. Never know when I
might want to burn something...But I have to say, I consider the
propane torch a "toy" in comparison to the oxi-acetylene torch. It
just barely gets enough heat going to do the job. Ok for small stuff,
but not large. I can burn up anything with my trusty oxi-acetylene
torch. Give me a little time, and I could cut a car in half. :) MK

1387. Re: Attic loop question

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-19 08:29:17 UTC
From: Reg Edwards <g4fgq.regp@btinternet.com>
Message-ID: <ah8iksaln1@knossos.btinternet.com>
Source record: 138328

> Does that mean:
> if stuck with a small loop keep it vertical instead of horizontal
> or
> if stuck with vertical sometimes a small loop beats a larger loop
> ?
==========

Change the "or" to "and".

But inside an attic where the house wiring does a lot of radiating anything
might happen. No alternative but to suck it and see.

Reg, G4FGQ

1388. HF vertical and lighting protection

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-19 09:15:28 UTC
From: Bjorn Henrik Vangstein <vangsteREMOVETHIS@online.no>
Message-ID: <PMQZ8.509$Py1.8787@news2.ulv.nextra.no>
Source record: 138329

I'm about to mount a HF vertical with a counterpoise on the roof. The antenna will be mounted on a steel tube and the tube will be led through the roof and supported on the attic floor.

Should the steel tube be DC-grounded to the house' ground system to protect against static electricity and lightning? Or should it not - to avoid lightning stroke? (E.g. that the antenna would be more 'attractive' to lightning because of its low potential relative to the air).

Should the tube be RF-insulated from DC-ground?

73, LA5MDA - Henrik

1389. Re: HF vertical and lighting protection

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-19 10:54:04 UTC
From: plmills@attglobal.net
Message-ID: <3d37f396_4@news1.prserv.net>
Source record: 138330

Henrik,

It probably doesn't matter either way but I would
suggest grounding it.

I had a Cushcraft vertical mounted on a steel mast
outside the building with my hamshack. The steel
mast was sitting on the ground and tied to a copper
ground rod. The antenna took an induced lightning
hit sufficient to blow the balun box into small pieces
and deform the traps. The lightning travelled down
the coax taped to the steel mast and then burned
a small hole in the roof where the coax first touched
the roof en route to the window where the cables
come in. I had a coax feed-thru bushing mounted
in a grounded aluminum panel at the window. The
center insulation was burned out of the coax connector
leading to the rig.....an FT-990 that became a parts
unit in a real hurry. In addition, a telephone company
connection box outside the house was blown apart,
and, where my long wire antenna lead-in laid against
some wood trim, the wood was shattered as though
it had been ripped up with a pry bar.

In short, lightning does what it wants and there is not
much one can do....

73, Phil
W5BVB

1390. Re: j-pole

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-19 11:33:50 UTC
From: Fredrik Olofsson <meteon@telia.com>
Message-ID: <yOSZ8.48050$n4.11844680@newsc.telia.net>
Source record: 138331

"JEEPMON" <JEEPMON@HOTMAIL.COM> skrev i meddelandet
news:TsJZ8.582213$cQ3.54786@sccrnsc01...
> What are the disadvantages of a j-pole antenna made of copper tubing? Is
any
> ground plane needed. If not why not? What are the best books to read or
> websites about j-pole antennas, more specifically cooper tubing j-poles.
How
> would an vertical antenna (commercially made from Diamond, Comet, Hustler,
> Hy-Gain, ect.)with ground radials compare to a j-pole antenna for 6m, 2m,
> 220MHz, 440MHz, and 1.2 GHz? What would most of you use?

The commercial antennas may be colinear, so they offer extra gain by compressing the elevation lobe. Nice looking, sturdy, and multiband (eg. three bands of 50 (limited), 144, 432, 1296), I'd certainly use them, and I've seen that many who do.

The ARRL Antenna Handbook offers two designs for J-poles, but there are several descriptions on the net too, including a variant using the TV style ladder line (this is said to work even up to 1 GHz). I remember one multiband description, 144/432 j-pole cactus antenna of copper pipe :) One link is http://archimedes.galilei.com/raiar/cactus.html another site I have had the honour to visit is http://hamgate1.sunyerie.edu/races/antenna.htm

Fredrik

1391. Re: Painting a vertical antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-19 12:45:46 UTC
From: pentode <pentode@ntlworld.com>
Message-ID: <PLTZ8.2506$K12.72104@newsfep1-win.server.ntli.net>
Source record: 138332

Try and obtain some of the miltary spec. "invisible" paint used on the
Stealth aircraft!

1392. Re: HF vertical and lighting protection

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-19 12:54:35 UTC
From: Bjorn Henrik Vangstein <vangsteREMOVETHIS@online.no>
Message-ID: <f_TZ8.679$sR2.12118@news4.ulv.nextra.no>
Source record: 138333

<plmills@attglobal.net> wrote in message news:3d37f396_4@news1.prserv.net...
> Henrik,
>
> It probably doesn't matter either way but I would
> suggest grounding it.
>
> I had a Cushcraft vertical mounted on a steel mast
> outside the building with my hamshack. The steel
> mast was sitting on the ground and tied to a copper
> ground rod. The antenna took an induced lightning
> hit sufficient to blow the balun box into small pieces
> and deform the traps. The lightning travelled down
> the coax taped to the steel mast and then burned
> a small hole in the roof where the coax first touched
> the roof en route to the window where the cables
> come in. I had a coax feed-thru bushing mounted
> in a grounded aluminum panel at the window. The
> center insulation was burned out of the coax connector
> leading to the rig.....an FT-990 that became a parts
> unit in a real hurry. In addition, a telephone company
> connection box outside the house was blown apart,
> and, where my long wire antenna lead-in laid against
> some wood trim, the wood was shattered as though
> it had been ripped up with a pry bar.
>
> In short, lightning does what it wants and there is not
> much one can do....
>
> 73, Phil
> W5BVB
>

Thanks for the tip (warning), Phil. It was a sad story.

Henrik

1393. Re: HF vertical and lighting protection

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-19 12:55:43 UTC
From: CAM <w5dxp@hotmail.com>
Message-ID: <3D380C4F.68952C92@hotmail.com>
Source record: 138334

Bjorn Henrik Vangstein wrote:
>
> I'm about to mount a HF vertical with a counterpoise on the roof. The
> antenna will be mounted on a steel tube and the tube will be led through the
> roof and supported on the attic floor.
>
> Should the steel tube be DC-grounded to the house' ground system to protect
> against static electricity and lightning? Or should it not - to avoid
> lightning stroke? (E.g. that the antenna would be more 'attractive' to
> lightning because of its low potential relative to the air).
>
> Should the tube be RF-insulated from DC-ground?

Do you have building codes that should be followed?
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
------== Over 80,000 Newsgroups - 16 Different Servers! =-----

1394. Re: HF vertical and lighting protection

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-19 13:16:15 UTC
From: Jake Brodsky <frussle@erols.com>
Message-ID: <1a3gju8jeoja33g9re6na75jk7mgv58cda@4ax.com>
Source record: 138336

On Fri, 19 Jul 2002 05:54:04 -0500, <plmills@attglobal.net> wrote:

>It probably doesn't matter either way but I would
>suggest grounding it.

It does matter. The question is not whether it should be grounded,
but HOW.

>In short, lightning does what it wants and there is not
>much one can do....

But there is a lot you can do to help eliminate the problem.

Here are some suggestions:

First, how is your house grounded? Find that grounding point where
the electrical system meets the ground. Take a separate ground wire
from that very grounding rod (or cold water pipe if you live in an old
house) and ground your antenna system to it.

Second, that ground wire should be as straight as possible.
Straighter is better because it means less inductance.

Third, don't go cheap on this wire. Make sure it's at least #10 AWG
Solid Copper wire.

Fourth, if at all possible, stay away from electrical lines or the
interior of the house, but keep the wire straight.

The idea is to ground everything at one point and have everything in
the house ride that one ground point up and down in potential. You
want Minimal inductance on the wire, and if possible, try to keep it
from inducing currents in other wires nearby.

I've seen grounding like this work very well at work. Our towers have
taken direct lightning hits and our equipment has suffered absolutely
no damage.

73,

Jake Brodsky, AB3A mailto:frussle@erols.com
"Beware of the massive impossible!"

1395. Re: HF vertical and lighting protection

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-19 13:16:55 UTC
From: Bjorn Henrik Vangstein <vangsteREMOVETHIS@online.no>
Message-ID: <bjUZ8.686$sR2.12447@news4.ulv.nextra.no>
Source record: 138335

"CAM" <w5dxp@hotmail.com> wrote in message
news:3D380C4F.68952C92@hotmail.com...
> Bjorn Henrik Vangstein wrote:
> >
> > I'm about to mount a HF vertical with a counterpoise on the roof. The
> > antenna will be mounted on a steel tube and the tube will be led through
the
> > roof and supported on the attic floor.
> >
> > Should the steel tube be DC-grounded to the house' ground system to
protect
> > against static electricity and lightning? Or should it not - to avoid
> > lightning stroke? (E.g. that the antenna would be more 'attractive' to
> > lightning because of its low potential relative to the air).
> >
> > Should the tube be RF-insulated from DC-ground?
>
> Do you have building codes that should be followed?
> --
> cheers, CAM http://www.qsl.net/w5dxp
>

Hello CAM,

No, the building codes does not contain any paragraphs about antennas.
My (former) neighbour mounted a CB antenna on the same roof in much the same
manner as I explained. He did not ground the tube.

Henrik

1396. Re: HF vertical and lighting protection

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-19 13:39:40 UTC
From: 'Doc <w5lz@icok.net>
Message-ID: <3D381681.7D65DF5B@icok.net>
Source record: 138338

Henrik,
Anytime you 'bring' RF into your house, or closer to your electrical wiring, you increase the chance of having RFI and electrical safety problems. The 'idea' is to minimize any interaction as much as possible.
The metal tube/pole is more a safety issue than an RF issue. Grounding the pole from the attic, and avoiding interaction with the house wiring, can turn into a major undertaking, but one that I would certainly do the best I could with. Exchanging the metal tube for a nonconducting one would be what I would rather do, but that that may not be an option for you.
I would ground the metal tube from the roof before entering the house, using the largest conductor I could find (or afford). Providing a path to ground before entering the house is preferable to going 'through' the house, if possible.
I hope this helps...
'Doc

1397. Re: HF vertical and lighting protection

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-19 13:57:13 UTC
From: CAM <w5dxp@hotmail.com>
Message-ID: <3D381AB9.CAE84BB3@hotmail.com>
Source record: 138339

Bjorn Henrik Vangstein wrote:
> No, the building codes does not contain any paragraphs about antennas.
> My (former) neighbour mounted a CB antenna on the same roof in much the same
> manner as I explained. He did not ground the tube.

After hearing horror stories about birds being blown to bits by lightning
hitting birdhouses, I have installed my birdhouse on a fiberglass pole.
I also use fiberglass poles for my dipole antennas and 2x4 wooden supports
for my vertical.
--
cheers, CAM, W5DXP

----------== Posted via Newsfeed.Com - Uncensored Usenet News ==----------
http://www.newsfeed.com The #1 Newsgroup Service in the World!
-----= Over 100,000 Newsgroups - Unlimited Fast Downloads - 19 Servers =-----

1398. Re: Coaxial trap Q question

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-19 14:00:23 UTC
From: CAM <w5dxp@hotmail.com>
Message-ID: <3D381B77.9A2D47F@hotmail.com>
Source record: 138340

Bill Meara wrote:
>
> I have a rotateable 17 meter dipole that I wish to convert for dual
> band (20 and 17 meter) use. I was planning on doing this with coaxial
> traps, but I'm concerned that the Q might not be high enough given
> the closeness in frequency of the two bands.
>
> What do you guys think?

I use ladder-line to feed my 33 ft. rotatable dipole for operation
on 20m-10m. The matching is done at the transmitter.
--
cheers, CAM, W5DXP

----------== Posted via Newsfeed.Com - Uncensored Usenet News ==----------
http://www.newsfeed.com The #1 Newsgroup Service in the World!
-----= Over 100,000 Newsgroups - Unlimited Fast Downloads - 19 Servers =-----

1399. Re: What antenna do you use as SWLer?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-19 14:04:19 UTC
From: richardharrison@webtv.net
Message-ID: <277-3D381C63-28@storefull-2392.public.lawson.webtv.net>
Source record: 138343

Mark Keith wrote:
"My 160m inv L is also usable on most any HF frequency.---but I get less AM BC trash on the loops (for lowband receiving)."

This is information Michel can probably use. The "L" has very little directivity but the loop has nulls.

The vertical antenna is poor from a noise standpoint as it receives from all azimuths and most noise is local and vertically polarized. There is no groundwave propagation of horizontally polarized waves.

The vertical traits that make it susceptible to noise also make it susceptible to signals. In The Netherlands, making a good ground connection should be easy and a poor ground connection is the reason verticals don`t give good performance in many places.

The horizontal antenna would have to be impractically high to work well for many SWLers in a country with such high soil conductivity as many places in the netherlands.

Best regards, Richard Harrison, KB5WZI

1400. Re: HF vertical and lighting protection

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-19 14:10:04 UTC
From: remove_ok1sip@atlas.cz
Message-ID: <5f5159fa.0207190610.31940ecc@posting.google.com>
Source record: 138341

Hi Henrik,
I'm no expert in lightning protection, this is my personal opinion:
I would connect the mast (steel tube) to a low-impedance ground, but NOT via the inside of the house. If your house already has a lightning protection system with proper grounding, connect the mast with a thick, short wire to that. If it has not, you had better install it before erecting the antenna or make a "lightning ground" at least. An occassional lightning stroke must be caught BEFORE it enters the house, if you want to prevent a REALLY BIG fire.
Remember, a lightning is a high-energy RF process, so both low resistance and low inductance are essential.
Another question is protection of the antenna radiator. It cannot be grounded directly, of course. Use a gas discharger between the coax and protective ground, just at the bottom of the antenna. Bridge it with a several kiloohm resistor to bleed the static. Use a transformer separator in the coax. If you do not use the antenna or when a storm approaches, the best solution seems to be to physically disconnect the coax outside (before it enters your shack) and connect the antenna lead directly to ground.

73 de Ivan OK1SIP

1401. Re: Coaxial trap Q question

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-19 14:11:30 UTC
From: Ricardo Martins <ricardo.martins@pt.uu.net>
Message-ID: <3D381E12.58F6E41B@pt.uu.net>
Source record: 138342

Hello Bill,

Try this design: http://www.raunvis.hi.is/~matti/TF3MA/LPDA.html
Doesn't use traps but looks nice (at least that is my impression)
see also here: http://web.ukonline.co.uk/g3ldo/bya_errata.htm (look for
the multiwire dipole)

Or... use one like my "multiband random aluminum tube" plus a tuner.. :)

Um abraï¿½o,

Ricardo Martins / CT2GQV

Bill Meara wrote:
>
> I have a rotateable 17 meter dipole that I wish to convert for dual
> band (20 and 17 meter) use. I was planning on doing this with coaxial
> traps, but I'm concerned that the Q might not be high enough given
> the closeness in frequency of the two bands.
>
> What do you guys think? Would coaxial traps work on a 17 meter/20
> meter dipole? Would it be better to use the conventional coil and cap
> traps?
>
> Thanks in advance.
>
> 73 de Bill CU2JL N2CQR
> Sao Miguel Island, The Azores, Portugal
> 37.7 N 25.7 W
> http://planeta.clix.pt/n2cqr

--
Ricardo Martins / CT2GQV

1402. Coaxial trap Q question

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-19 14:24:54 UTC
From: n2cqr@clix.pt
Message-ID: <3d38202f.286095155@news.clix.pt>
Source record: 138337

I have a rotateable 17 meter dipole that I wish to convert for dual band (20 and 17 meter) use. I was planning on doing this with coaxial traps, but I'm concerned that the Q might not be high enough given the closeness in frequency of the two bands.

What do you guys think? Would coaxial traps work on a 17 meter/20 meter dipole? Would it be better to use the conventional coil and cap traps?

Thanks in advance.

73 de Bill CU2JL N2CQR
Sao Miguel Island, The Azores, Portugal
37.7 N 25.7 W
http://planeta.clix.pt/n2cqr

1403. Re: j-pole

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-19 14:42:29 UTC
From: Ron McConnell <rcmcc@earthlink.net>
Message-ID: <3D38256A.EB5BFBCE@earthlink.net>
Source record: 138344

JEEPMON wrote:

> websites about j-pole antennas,

As "Zoom" notes, there are all sorts of web sites on j-poles.
IMHO, the best place to start is Steve AA5TB Yates's

http://www.qsl.net/aa5tb

under "Antennas."

In particular, check out the link to unabridged version of
Gary N3GO O'Neill's Communications Quarterly article
on j-poles, end-fed Zepps... His findings can be verified
with a Smith chart or other t-line program.

George VE3ERP Murphy, ve3erp@encode.com,
has his version of my version of Gary's j-pole program
in the later versions (>= 43?) of his Hamcalc package
of 250+ ham programs.

Cheers, 73,

Ron McConnell
w2iol

1404. Re: HF vertical and lighting protection

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-19 14:54:37 UTC
From: richardharrison@webtv.net
Message-ID: <277-3D38282D-36@storefull-2392.public.lawson.webtv.net>
Source record: 138345

Jake, AB3A wrote:
"Third, don`t go cheap on this wire. Make sure it`s at least #10 AWG Solid Copper wire."

Jake`s whole posting was good. My references specify a minimum of #6 AWG for lightning protection using multiple ground interconnections, however. #6 is larger than #10.

Best regards, Richard Harrison, KB5WZI

1405. Re: HF vertical and lighting protection

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-19 15:12:19 UTC
From: richardharrison@webtv.net
Message-ID: <277-3D382C53-38@storefull-2392.public.lawson.webtv.net>
Source record: 138349

Henrik wrote:
"No, building code does not contain any paragraphs about antennas."

TV receivers used to come with installation instructions which almost always advised installers to ground antenna masts. The TV supplier wants to avoid liability for damage. Two reasons to ground the mast, protection from electrical shock and protection from lightning damage. The supplier doesn`t want to say too much. It might scare buyers away.

Best regards, Richard Harrison, KB5WZI

1406. Re: HF vertical and lighting protection

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-19 15:22:58 UTC
From: Bjorn Henrik Vangstein <vangsteREMOVETHIS@online.no>
Message-ID: <m9WZ8.710$sR2.12843@news4.ulv.nextra.no>
Source record: 138346

"Bjorn Henrik Vangstein" <vangsteREMOVETHIS@online.no> wrote in message
news:PMQZ8.509$Py1.8787@news2.ulv.nextra.no...
>
> I'm about to mount a HF vertical with a counterpoise on the roof. The
> antenna will be mounted on a steel tube and the tube will be led through
the
> roof and supported on the attic floor.
>
> Should the steel tube be DC-grounded to the house' ground system to
protect
> against static electricity and lightning? Or should it not - to avoid
> lightning stroke? (E.g. that the antenna would be more 'attractive' to
> lightning because of its low potential relative to the air).
>
> Should the tube be RF-insulated from DC-ground?
>
> 73, LA5MDA - Henrik
>
>
>

Thanks for all the interesting comments and suggestions.
The building has no lightning protection system (but I'm afraid my antenna
is going to be...)
but the ground system is new. Because my shack is in the attic (close to the
antenna mast tube)
about 40 feet above the ground point (where the ground wire is connected to
physical ground/water innlet). But the wire is thick (I think #10) and is
accessible
about 15 feet away from the antenna.

Henrik

1407. Re: HF vertical and lighting protection

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-19 15:25:31 UTC
From: richardharrison@webtv.net
Message-ID: <277-3D382F6B-40@storefull-2392.public.lawson.webtv.net>
Source record: 138348

Doc, W5LZ wrote:
"Exchanging the metal tube for a non-conducting one would be what I would rather do,---."

That would be fine if you could exchange your antenna and line for non-conducting items. You can`t. So, use a conducting mast and if you can`t, use a heavy ground conductor for the length of the mast by all means.

Best regards, Richard Harrison, KB5WZI

1408. HF Antenna Suggestion

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-19 15:42:33 UTC
From: Pappy@USA.net
Message-ID: <3D383368.E65FE73C@USA.net>
Source record: 138347

I have been investigating vertical antennas. Now that I have looked at 5 different antennas I am confused as which one to purchase.

I am leaning toward the Cushcraft MA5V. Said vertical antenna will be mounted on a 30' tower and fed with 1/4" hard line.

Which one would you fellow hams like to suggest?

1409. Horizontal DELTA and SQUARE loops (EZNEC DEMO) question

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-19 16:08:02 UTC
From: ardujenski@aol.com
Message-ID: <20020719120802.26819.00000021@mb-bg.aol.com>
Source record: 138350

I am a bit new to use of EZNEC (DEMO) but slowly learning the ropes. I playing with 80m horizontal loop at 30ft high I got an interesting result. The 80m DELTA seemed to exhibit a few desireable features (for me):
(1) No null at high angles as with SQUARE
(2) More uniform pattern and fewer deep nulls as you go up in frequency/band
(3) No real directional or predominate lobe

I was comparing the 72ft per side SQUARE to a DELTA 96ft per side both at 30ft.

I know I have limited number of elements but has anyone else had similar results? Alan KB7MBI

1410. Re: HF vertical and lighting protection

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-19 16:15:08 UTC
From: richardharrison@webtv.net
Message-ID: <29548-3D383B0C-28@storefull-2391.public.lawson.webtv.net>
Source record: 138353

Ivan, OK1SP expressed many good observations. Ivan also wrote: "Use a gas discharger between the coax and protective ground,---."

The coax exterior needs to be grounded directly at the base of the tower, unless the tower is base insulated.

Gas dischargers may be obsolete as differential-mode protection across coax. Many radios are solid-state now, and not able to take the energy that could get by before the gas tube fired. They are too slow and require too many volts to ignite for most solid-state.

Fortunately, coax discriminates against the common-mode which lightning imposes on the coax interior. The coax interior is a natural common-mode choke. Lightning is going to travel on the coax exterior, not its interior.

I worked many years for a company with 100`s of radios in many places and we had zero lightning damage on radio inputs and outputs. We also had zero gas tubes on antenna circuits. I believe gas tubes are superfluous on most antenna circuits. I have used many gas tubes on low-frequency circuits. They protected well and were less troublesome on audio circuits than the carbon gaps they replaced.

Best regards, Richard Harrison, KB5WZI

1411. Pro57B on a Hygain Hg-52 tower

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-19 16:15:56 UTC
From: Ben <b-fisher@uiuc.edu>
Message-ID: <ESWZ8.5140$m7.53883@vixen.cso.uiuc.edu>
Source record: 138351

Hello
I have a Mosley Pro57B antenna that I am hoping to put on the top of my HyGain hg-52 crank up tower. Will I have problems with the tower and this antenna? The Tower is 10 square feet and the antenna is 11 square feet. Has anyone else put these two together without problems?
Ben K9BF

1412. Re: Pro57B on a Hygain Hg-52 tower

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-19 16:39:44 UTC
From: dinoal7lz@aol.com
Message-ID: <20020719123944.02280.00000812@mb-mv.aol.com>
Source record: 138352

Ben---I've got a TH7DX on the top of my 52SS...the original manual for the tower that I have says 9 sq feet at 50mph when fully extended; HyGain revised the concrete dimensions after I bought my tower in the early 80's which may account for the additional load capacity you mention (I upped the hole size in the two QTHs after the first using the original specs)....the TH7DX actually is 9.4 sq ft and I've got a couple of 2m, 432 and discone antennas above it...guess the bottom line is that in normal wind conditions you're probably ok...if the wind is projected to be 40/50mph or above I always crank my tower at least part way down which I believe adds enough additional capacity (above and beyond the safety factor already built into the system) to withstand the load....here in hurricane country it comes ALL the way down to the 23' level for sure.

Dino KLï¿½S/4

1413. Re: HF vertical and lighting protection

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-19 18:25:46 UTC
From: 'Doc <w5lz@icok.net>
Message-ID: <3D3859A0.8E66D0DA@icok.net>
Source record: 138354

Richard,
The point of not using a conductive mast is that
you decrease the number of contact points between
mast and structure. Those points of contact provide
a nice source of 'fuel' in case of a lightning strike.
Eliminating those points of contact makes your local
fire department happier too.
I know of one or two operators that I wish did use
non-conducting antennas and feed lines, but in this
particular case, I don't think it would be a very good
idea...
'Doc

1414. Re: Horizontal DELTA and SQUARE loops (EZNEC DEMO) question

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-19 18:52:06 UTC
From: Walter <walter@accessus.net>
Message-ID: <qdZZ8.270819$vq.14869631@bin6.nnrp.aus1.giganews.com>
Source record: 138355

Alan, your findings on the computer are running true to what
I have seen over the years of using horizontal loops. However,
your computer program is great for the desktop but when you
are putting up the 'real' antenna, you will notice that using
three supports vs 4 supports will give your antenna wire a
bit more stress because of the longer runs and fewer
supports.

Also, if you change the feed from a corner of a 4 sided horiz.
loop and move it away from a corner (using an 80 mtr loop)
about 20 feet, I think you will find that the adjusted feed point
will begin to change the 4 sided loop performance to more
like the delta horiz. loop. You normally would Not want to
feed the 80 horiz. loop, 4 sided, in the middle of a side. The
Zo is a major change from feeding at or near a corner.

You should just put up a horiz. loop and start keeping a
good set of data notes. As you are learning more about
them, I will bet that you will soon find that some computer
programs and even lots of textbooks are not up to
date with the horiz. loops actual performance.EZNEC
seems to have a good loop program. But its not gospel!

73...Walter, AG5P

"ARDUJENSKI" <ardujenski@aol.com> wrote in message
news:20020719120802.26819.00000021@mb-bg.aol.com...
> I am a bit new to use of EZNEC (DEMO) but slowly learning the ropes.
I playing
> with 80m horizontal loop at 30ft high I got an interesting result.
The 80m
> DELTA seemed to exhibit a few desireable features (for me):
> (1) No null at high angles as with SQUARE
> (2) More uniform pattern and fewer deep nulls as you go up in
frequency/band
> (3) No real directional or predominate lobe
>
> I was comparing the 72ft per side SQUARE to a DELTA 96ft per side
both at 30ft.
>
> I know I have limited number of elements but has anyone else had
similar
> results? Alan KB7MBI
>

1415. Re: Coaxial trap Q question

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-19 19:30:39 UTC
From: John Passaneau <jxp16@psu.edu>
Message-ID: <ah9pd4$l9c@r02n01.cac.psu.edu>
Source record: 138357

Hi Bill
Unlike some "helpful" answers your getting, I'm going to try and answer your question. To the best of my information, conventional coil and cap traps can have a higher Q than coax traps. However, I think that either one will work. I think that the conventional traps are easier to build and with the better Q makes them the best chouse. By the way a good capacitor for the conventional traps would be a length of coax. RG-8 has about 30pf per foot capacitance and is rated for 3800V. At a 1500w output there could be 1900V or more across the trap capacitor.
Anyway either type of trap should have all the Q needed to work.

If I can be of any help let me know.

--
John Passaneau
Penn State University, State College Pa.
W3JXP
w3jxp@arrl.net

"Bill Meara" <n2cqr@clix.pt> wrote in message
news:3d38202f.286095155@news.clix.pt...
> I have a rotateable 17 meter dipole that I wish to convert for dual
> band (20 and 17 meter) use. I was planning on doing this with coaxial
> traps, but I'm concerned that the Q might not be high enough given
> the closeness in frequency of the two bands.
>
> What do you guys think? Would coaxial traps work on a 17 meter/20
> meter dipole? Would it be better to use the conventional coil and cap
> traps?
>
> Thanks in advance.
>
>
> 73 de Bill CU2JL N2CQR
> Sao Miguel Island, The Azores, Portugal
> 37.7 N 25.7 W
> http://planeta.clix.pt/n2cqr

1416. Re: Horizontal DELTA and SQUARE loops (EZNEC DEMO) question

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-19 19:34:30 UTC
From: ardujenski@aol.com
Message-ID: <20020719153430.09167.00000336@mb-df.aol.com>
Source record: 138356

Walter
Thanks for the valuable feedback. I do subscribe th the position you noted of using computer generated info basically as a ballpark estimator. I found that to be especially true with trying to optimize an INVERTED-L and that impedances were ballpark but actual physical testing TWEEKED THE DESIGN. I had two thoughts in mind when I started dabbling here with EZNEC. First was to look at what to expect for a field friendly 80m SQUARE LOOP and then in my QTH situation, the house and 2 trees made for a nice DELTA arrangement.

The recent article in QST confirmed my crude results for the SQUARE LOOP as did the data presented by K0EZ and his 80m loop. THAT deep null overhead was of concern in that for 80m the NVIS was the primary consideration for enhanced local communications. Seeing the disappearance of the null on the DELTA seemed to provide an acceptable set of lobe patterns and impedances.

I will get the opportunity over the summer/fall to try both with great anticipation of how the actual measured results and performances compare

Thanks again--Alan KB7MBI

1417. Re: HF vertical and lighting protection

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-19 19:39:32 UTC
From: richardharrison@webtv.net
Message-ID: <28048-3D386AF4-4@storefull-2391.public.lawson.webtv.net>
Source record: 138358

Doc, WW5LZ wrote:
"The point of not using a connductive mast is that you decrease the number of contact points between mast and structure."

When lightning strikes your elevated antenna atop your non-conductive mast, the lightning comes into your shack via the metallic feedline unless you take diversionary measures.

Let`s consider medium frequency stations. All as far as I know use conductive vertical antennas. Those that I worked at never had lightning in the shack including inside the radio. Though directly struck by nearly every storm in the area, the closest the lightning ever came was the coax. It rarely got to the coax. Usually it flashed at the Faraday screen between the coils coupling the antenna.

Best regards, Richard Harrison, KB5WZI

1418. Re: What antenna do you use as SWLer?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-19 21:33:21 UTC
From: Fredrik Olofsson <meteon@telia.com>
Message-ID: <BA%Z8.16619$p56.5420393@newsb.telia.net>
Source record: 138359

Directivity would be an economical thing to do, because it could clear up signals rather cheaply.

Rotatable loop?

1419. Re: j-pole

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-19 23:16:12 UTC
From: JEEPMON <JEEPMON@HOTMAIL.COM>
Message-ID: <051_8.596169$cQ3.96182@sccrnsc01>
Source record: 138360

Is it true that j-poles couple to nearby objects more than most antennas?
Are their patterns truly omnidirectional and what is the general take-off
angles?

"JEEPMON" <JEEPMON@HOTMAIL.COM> wrote in message
news:TsJZ8.582213$cQ3.54786@sccrnsc01...
> What are the disadvantages of a j-pole antenna made of copper tubing? Is
any
> ground plane needed. If not why not? What are the best books to read or
> websites about j-pole antennas, more specifically cooper tubing j-poles.
How
> would an vertical antenna (commercially made from Diamond, Comet, Hustler,
> Hy-Gain, ect.)with ground radials compare to a j-pole antenna for 6m, 2m,
> 220MHz, 440MHz, and 1.2 GHz? What would most of you use?
>
>

1420. Re: Coaxial trap Q question

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-20 00:10:33 UTC
From: n2ey@aol.com
Message-ID: <20020719201033.04875.00000097@mb-mj.aol.com>
Source record: 138361

In article <3d38202f.286095155@news.clix.pt>, n2cqr@clix.pt (Bill Meara) writes:

>I have a rotateable 17 meter dipole that I wish to convert for dual
>band (20 and 17 meter) use. I was planning on doing this with coaxial
>traps, but I'm concerned that the Q might not be high enough given
>the closeness in frequency of the two bands.
>
>What do you guys think? Would coaxial traps work on a 17 meter/20
>meter dipole? Would it be better to use the conventional coil and cap
>traps?

Hello Bill - been some time!

Coax-cable traps will work fine. Their main advantage is that they are made from cheap and commonly-available materials. Their disadvantages are:

- somewhat lower Q than conventional traps of the same size
- more difficult to adjust to exact frequency
- require prototyping (tolerances of coax and PVC pipe are such that you can't just wind 'em by formula and assume they are on frequency)
- LC ratio is not adjustable, and tends to be higher L/lower C than usually seen in LC traps
- coax traps are asymmetrical (don't turn them around!)
- have to be careful not to violate minimum bend radius of coax.

I have found that RG-58 with solid dielectric and stranded center conductor is about the best stuff to use.

Good luck!

73 de Jim, N2EY

1421. Re: Horizontal DELTA and SQUARE loops (EZNEC DEMO) question

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-20 01:11:22 UTC
From: 'Doc <w5lz@icok.net>
Message-ID: <3D38B8AF.FF42A183@icok.net>
Source record: 138362

Alan,
I'm confused. What 'deep null' overhead are you
talking about? Modeling either the 'delta' or 'quad'
loop at any height close to 30 feet doesn't yield a
'null' overhead. In fact, that's where the major
lobe is. What am I missing?
'Doc

1422. Re: What antenna do you use as SWLer?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-20 01:12:04 UTC
From: Bob Miller <bamiller@texas.net>
Message-ID: <NbY4PVjeSv09ywoUwv=QChJZu3hu@4ax.com>
Source record: 138363

mail2michelnl@yahoo.com (michel) wrote:

>Hay folks,
>
>For SWLers I have a question. Since a half year now I own a 535 what I
>always wanted because it is (was?545) the best non commercial hf
>receiver.
>
>One question I have for you SWLers is what antenna do you folks use on
>
>your receiver? As curious I am I wondering why you use that antenna
>in what circumstances.
>For example: I use my 535 with 16 meters wire (stainless steel 0.7mm)
>on a RF Systems Magnetic long wire balun (MLB) in western Europe
>(Netherlands).

I keep hearing about these swl "magnetic long wire baluns" but I'm not sure why you need one, and whether it is really helping things. On the back of your 535 (I assume it's the JRC receiver) there is both a 50-ohm coax connector and a hi-z random wire connector. If you have a long wire, I'd just connect it directly to the hi-z connector.

Put up the longest, highest piece of wire, of any length, the longer the better. That is your "best antenna."

Don't waste your money on the T2FD. If you have money to burn, go have a big, juicy steak dinner :-)

Have fun...

Bob
k5qwg

>Till now I didn't find a antenna with this length that
>can deliver more or better signal. A next step is perhaps a T2FD (low
>noise antenna) because the S/N ratio is better.
>
>In short: What kind of antenna do you use with your receiver, why and
>in what circumstances.
>I'm sure other SWL'ers are curious about this.
>
>gr. Michel
>

1423. Re: HF antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-20 02:11:15 UTC
From: Jerry Oxendine <joxendi@bellsouth.net>
Message-ID: <uy3_8.106910$JU3.46640009@e3500-atl1.usenetserver.com>
Source record: 138365

'Doc <w5lz@icok.net> wrote in message news:3D371B2F.1C0256E0@icok.net...
>
>
> Richard,

<<snip>>

. There still ain't no such thing as a
> free lunch...

Ain't it th' truth! I often get at friendly odds with my colleagues in a "certain" SAR
organization who desparately want to find a "beautiful", easy, and spouse-friendly
kind of mobile HF antenna. But then they wonder how come their mobile doesn't
quite make it into the state-wide HF net, or why people keep asking for relays on
the "weak" mobile, and OTH, why *some* mobile stations never seem to have trouble getting to the NCS. To purposely oversimplify, it takes a BIG, UGLY antenna to get a BIG BAD signal out! If you want "Pretty", you can get it; if you
want "PERFORMANCE", you can get that, but the 2 concepts will not mix.

My philosophy is that, because lives can be in the balance, and messages MUST
get thru, I don't have time to do the repeat-repeat-repeat thing. So I am willing to endure the giggles, the ridiculing smiles of people as I drive past with the big
3" Carolina Cyclone II on the bumper. When not engaged in SAR activities, it
is satisfying to be able, most of the time, talk to whomever I can hear--I don't try
to compete with the BIG contesters, however. But I get quite a few compliments
on my mobile. I ain't the biggest signal around, but I hold my own--and I thank
Amateur Radio for continuing to teach me how to apply what I learn from my hobby to that of lifesaving and home security--while having a ball in the process!

As to the so-called "tuners", couplers, hamsticks (dummy-loads-on-a-stick), they
stink on the low bands, and there truly ain't no free lunch!

73

Jerry
K4KWH

> 'Doc

1424. Re: What does the 'U' mean in RGnn/U cables?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-20 02:22:39 UTC
From: W4WNT <w4wnt@carolina.rr.com>
Message-ID: <PP3_8.7433$Qn5.269773@twister.southeast.rr.com>
Source record: 138366

Underground

RG-8U can be buried.

Joe McElvenney <ximac@btinternet.com> wrote in message
news:VA.00000179.00152703@btinternet.com...
> Hi,
>
> I am sure that someone out there knows this. A recent
> post in another newsgroup set me off searching my library
> and the net for the answer but I have failed. I am fairly
> sure that 'RG' stands for 'Radio Grade' but can only guess
> that the 'U' means unbalanced but the definitive
> publication MIL-HDBK-216 is now way out of print.
>
> Cheers - Joe, G3LLV
>
>

1425. Re: What does the 'U' mean in RGnn/U cables?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-20 02:40:07 UTC
From: ":-) Bill" <therealexray@netscape.net>
Message-ID: <3D38CD87.9FECDEBB@netscape.net>
Source record: 138367

W4WNT wrote:
>
> Underground
>
> RG-8U can be buried.

Horse-hockey.

-Bill

1426. Re: HF vertical and lighting protection

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-20 03:01:59 UTC
From: 'Doc <w5lz@icok.net>
Message-ID: <3D38D29B.F6C9016F@icok.net>
Source record: 138368

Richard,
Then instead of worrying about grounding, you're
saying he should use a Faraday shield?
'Doc

1427. Re: What does the 'U' mean in RGnn/U cables?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-20 03:12:11 UTC
From: Fred Hambrecht <w4jle@charter.net>
Message-ID: <ujhl8dg8ia93d4@corp.supernews.com>
Source record: 138219

Suspect your correct Bill, as I remember U=Utility

":-) Bill" <therealexray@netscape.net> wrote in message
news:3D38CD87.9FECDEBB@netscape.net...
> W4WNT wrote:
> >
> > Underground
> >
> > RG-8U can be buried.
>
> Horse-hockey.
>
> -Bill

1428. Inverted vertical

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-20 03:21:23 UTC
From: bhuson@gte.net
Message-ID: <20020719202434262034 9@evrtwa1-ar4-4-47-066-192.evrtwa1.dsl-verizon.net>
Source record: 138220

Having just got the tower up and the beam mounted, the next step is to side-mount my duo-band and A-99 verticals. It would be a lot easier to mount the sidearm with the antennas premounted. It would also be a whole lot easier to mount the sidearm upside down, thus having inverted verticals. What would be the overall disaster in doing this?

1429. Re: Coaxial trap Q question

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-20 03:27:24 UTC
From: ann7how@aol.com
Message-ID: <20020719232724.14857.00000134@mb-bj.aol.com>
Source record: 138221

It worked fine for me! Hal, w9uya

1430. Re: Inverted vertical

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-20 03:38:57 UTC
From: ":-) Bill" <therealexray@netscape.net>
Message-ID: <3D38DB51.66887DB1@netscape.net>
Source record: 138222

WA7HYD Bob wrote:
>
> Having just got the tower up and the beam mounted, the next step is to
> side-mount my duo-band and A-99 verticals. It would be a lot easier to
> mount the sidearm with the antennas premounted. It would also be a whole
> lot easier to mount the sidearm upside down, thus having inverted
> verticals. What would be the overall disaster in doing this?

Google search didn't help me with that model. Does the antenna not
require a ground plane?

-Bill

1431. Re: Horizontal DELTA and SQUARE loops (EZNEC DEMO) question

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-20 04:38:19 UTC
From: ardujenski@aol.com
Message-ID: <20020720003819.13067.00000522@mb-fq.aol.com>
Source record: 138224

Doc
If you look at the QST article in August you will see the null. I get a similar pattern using EZNEC DEMO. I could be doing something wrong but the article shows it too--Alan KB7MBI

1432. Re: Inverted vertical

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-20 04:40:08 UTC
From: 'Doc <w5lz@icok.net>
Message-ID: <3D38E99D.F91B9662@icok.net>
Source record: 138225

Bob,
The only problem I see is that you will have
to use the sideband opposite of what you would
nrmally use since the signal would be inverted.
'Doc

PS - Depending on the type of antenna, there
would be no difference in signal.

1433. Re: Horizontal DELTA and SQUARE loops (EZNEC DEMO) question

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-20 05:14:21 UTC
From: ardujenski@aol.com
Message-ID: <20020720011421.10370.00000427@mb-mq.aol.com>
Source record: 138226

If you run EZNEC DEMO and use the file N4PCloop AND RUN IT FOR 3.5mhZ you will see what I mean with that deep null at 90 degrees---Alan KB7MBI

1434. Re: What antenna do you use as SWLer?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-20 05:44:56 UTC
From: CW <clinton.magers@attbi.com>
Message-ID: <sN6_8.581047$352.118846@sccrnsc02>
Source record: 138227

"Put up the longest, highest piece of wire, of any length, the longer the better". That is the standard advice. Problem is, that usually it is a long way from satisfactory. It works very well if your receiver is located in a very electrically quite spot but that is seldom the case. Usually, there are computer monitors, TVs, electric appliances, ect, putting out enough EMI to make such an arrangement less than satisfactory. Shutting down everything in the house that could cause a problem is not very practical. The solution is to run coax to the random wire that is located as far as possible away from these noise sources. The "magnetic long wire baluns" that you here of aren't baluns at all. They are 9:1 impedance transformers. Connecting a high Z random wire to coax does not work to well. The loses are substantial. The transformer helps substantially. It, of course, does not provide a prefect match but the average impedance is lowered enough to make signal transfer much better. The commercial "magnetic long wire baluns" are a bit expensive at about $60.00. Most people make their own.
--

CW
KC7NOD

"Bob Miller" <bamiller@texas.net> wrote in message
news:NbY4PVjeSv09ywoUwv=QChJZu3hu@4ax.com...
> mail2michelnl@yahoo.com (michel) wrote:
>
>
> I keep hearing about these swl "magnetic long wire baluns" but I'm not
sure why
> you need one, and whether it is really helping things. On the back of your
535
> (I assume it's the JRC receiver) there is both a 50-ohm coax connector and
a
> hi-z random wire connector. If you have a long wire, I'd just connect it
> directly to the hi-z connector.
>
> Put up the longest, highest piece of wire, of any length, the longer the
better.
> That is your "best antenna."
>
> Don't waste your money on the T2FD. If you have money to burn, go have a
big,
> juicy steak dinner :-)
>
> Have fun...
>
> Bob

> k5qwg
>
>
> >Till now I didn't find a antenna with this length that
> >can deliver more or better signal. A next step is perhaps a T2FD (low
> >noise antenna) because the S/N ratio is better.
> >
> >In short: What kind of antenna do you use with your receiver, why and
> >in what circumstances.
> >I'm sure other SWL'ers are curious about this.
> >
> >gr. Michel
> >
>

1435. Re: Coaxial trap Q question

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-20 08:23:23 UTC
From: Reg Edwards <g4fgq.regp@btinternet.com>
Message-ID: <ahb6lr$7pa$1@paris.btinternet.com>
Source record: 138228

> - coax traps are asymmetrical (don't turn them around!)
==========
I think they are assymetrical only to the extent that the length of the trap is added to the wire on one side and subtracted from the length of wire on the other side. Subject to the foregoing they are usable in either direction. In any case the length of the trap at lower frequs is insignificant. Are these your findings ?

Reg, G4FGQ

1436. Re: HF vertical and lighting protection

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-20 09:05:35 UTC
From: Bill Nelson <billn@spock.peak.org>
Message-ID: <ahb94v$i25$7@quark.scn.rain.com>
Source record: 138229

OK1SIP <remove_ok1sip@atlas.cz> wrote:

> Another question is protection of the antenna radiator. It cannot be
> grounded directly, of course. Use a gas discharger between the coax

Many antenna designs are DC grounded. They are also effectively at ground for low frequencies - which is where most of the power in a lightning strike is located.

I have seen repeater systems that have had direct strikes to the antennas - while the stations were active. The only damage was to the antennas - and in most cases the antennas only had a hole melted in them. This is necessary in many parts of the country that may have lightning storms just about every day during the summer and fall.

These are transistor based repeaters, which are more susceptable to high voltages than the old tube stations.

--
Bill Nelson (billn@peak.org)

1437. Re: HF vertical and lighting protection

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-20 09:08:57 UTC
From: Bill Nelson <billn@spock.peak.org>
Message-ID: <ahb9b9$i25$8@quark.scn.rain.com>
Source record: 138230

Richard Harrison <richardharrison@webtv.net> wrote:
> Ivan, OK1SP expressed many good observations. Ivan also wrote: "Use a
> gas discharger between the coax and protective ground,---."

> The coax exterior needs to be grounded directly at the base of the
> tower, unless the tower is base insulated.

Also at the top. This minimizes the voltage differential between the
coax and the tower. If the tower is tall, it may be desirable to ground
the shield at multiple places.

> I worked many years for a company with 100`s of radios in many places
> and we had zero lightning damage on radio inputs and outputs. We also
> had zero gas tubes on antenna circuits. I believe gas tubes are
> superfluous on most antenna circuits. I have used many gas tubes on
> low-frequency circuits. They protected well and were less troublesome on
> audio circuits than the carbon gaps they replaced.

Yep. I never used gas tubes except on old tube based systems. In
retrospect, they were probably unnecessary even then.

--
Bill Nelson (billn@peak.org)

1438. Re: Confusing Conundrum

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-20 10:37:19 UTC
From: SideBand <abNO8SPAMlr@csotbs.org>
Message-ID: <3D393D5F.9010504@csotbs.org>
Source record: 138231

Gee, Bob.. With help like that, I guess I don't need any problems...

Thanks anyway.

de AB8LR

Bob Miller wrote:

> SideBand <abNO8SPAMlr@csotbs.org> wrote:
>
>
>>Here's the deal.. I'm planning on running HF mobile in the truck. The
>>problem is twofold here:
>>
>>1. The truck body is mostly fiberglass, which makes it difficult to find a
>>ground.
>>2. When a ground is found, it is invariably plagued with noise from the
>>fridge and the inverter.. (I know... don't run the fridge and the inverter,
>>right? Well, then my milk goes bad and I can't charge my cellphone.)
>>
>
> Put your damned milk in a Thermos bottle and charge your friggin' phone through
> a DC charger in your cigarette lighter.
>
> Bob
> k5qwg
>
>
>
>>Any ideas?
>>
>

--
73 de AB8LR, Chris

http://csotbs.shopiwon.com/ for great deals on computer products.

1439. Re: Confusing Conundrum

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-20 10:46:32 UTC
From: SideBand <abNO8SPAMlr@csotbs.org>
Message-ID: <3D393F88.8090800@csotbs.org>
Source record: 138232

Thanks for the help, fellas...

I'm thinking more along the lines of how to implement an isolated RF ground on the truck, rather than spending 20 years going through a truck I'm only going to own for three...

I only run the inverter when I'm parked, so I can charge the phone, but the fridge has to stay powered on most of the time.

The bands of interest are 20 and 40, with a possibility of 75 as well, but I'm not so worried about 75 right off...

I'm planning on installing my 706MkIIG and LDG AT-11MP in the truck for the rig, so I'll be able to "tune around" most any impedance mismatches...

Thanks again...

73 de AB8LR, Chris

K0bg wrote:

> Oh boy! Not enough information to really help much, but here goes.
>
> Fiberglass truck? Must be an over the roader, huh? Do not confuse ground with
> groundplane! If it is a semi, or other large tractor, about the only place you
> have any substantial metal is the front bumper. Not an ideal place to mount a
> mobile antenna, but better than none. One of my long-time friends just retired
> from long haul, and ran mobile for many years. His antenna was a home brew one
> with a 6 foot copper mast, heavy duty Texas Bug Catcher coil, and a manual
> tuner to take care of the other bands besides 20. Worked that guy ALL OVER!
>
> As for the noise, there are about as many solutions as there are noises. The
> best solution is not caps as they require splicing into the lines, which isn't
> all that smart of an idea. Palomar Engineers, and other sell several different
> sizes of split ferrite beads which slip over the existing wiring. They get very
> lossy over about 1 Mhz, so they do a good job of noise reduction.
>
> There are so many other variables, without further information, it is hard to
> pin down solutions. I personally have been mobile for over 30 years, have owned
> about 10 radios in that time, and some 20 vehicles. If experience pays, my dues
> are caught up for about another 10 years, I think.
>
> Alan, Kï¿½BG
>

--
73 de AB8LR, Chris

http://csotbs.shopiwon.com/ for great deals on computer products.

1440. Inverted V dipole problems on 160M and 80M

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-20 11:06:33 UTC
From: cprstn54zz@att.net
Message-ID: <3d393f10.206244968@news-server.optonline.net>
Source record: 138233

I am not radiating much of a ground wave on 80M and 160M. Testing
with an RX only 1/2 mile away (line of sight) I see only 1/10 the
signal I see at 10M, 20M and 40M. My tuner gets SWR down to 1.0 on
all bands. I hear a lot, but no one seems to copy me.

I just finished installing what I think is the highest, most antenna
that I could install on my property: An Alpha-Delta DX-LB+
multi-band inverted V dipole. It has separate dipoles for 10M and 20M
and they work fine. It has a shortened dipole for 40-80-160 with four
loading coils. See:
http://www.alphadeltacom.com/pg1.htm

Its center is 40 ft up. Its ends are 12 ft up from the ground. The
terrain has a substantial slope along the antenna -- dropping roughly
15 ft from end to end. Therefore, one end is 15 ft. higher than the
other end (as measured from sea level)

What is happening?
-Is most of the signal going straight up?
-Will it help to get the ends higher?
-Should the ends be at the same height above seal level -- or the
ground underneath each respective end?
-Is this kind of shortened dipole simply very weak at the low
frequencies and requires an amp?
-Is the summer season a factor in ground wave strength?
-Is there anything else I can do?

Ken KC2JDY

Ken
(to reply via email
remove "zz" from address)

1441. WTB W9INN 80/40 Dipole

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-20 12:20:14 UTC
From: Mark Krubsack <mkrubsack@yahoo.com>
Message-ID: <7alijucmfvs1tbb4o2ojbn3qnut3r0gtp6@4ax.com>
Source record: 138234

I'm looking for a W9INN 80/40 meter dipole. Anyone have one for sale?
Email me if you do. Thanks.

Mark, KE6OI.

Mark Krubsack,
ke6oi@arrl.net

1442. White Ham Stick?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-20 12:39:17 UTC
From: rons533@dejazzd.com
Message-ID: <3D39596B.78DC@dejazzd.com>
Source record: 138235

Is there such a thing as a white color Ham Stick? Believe it or not I need a white one. Had thought about painting a black one but it will be in a harsh enviornment and I am concerned the paint will peel. I know there are several manufacturers of this type antenna. Maybe one is white?

Thanks

1443. Re: White Ham Stick?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-20 13:31:25 UTC
From: SeeSignature@below.com
Message-ID: <3d396578.321115374@news.ga.comcast.giganews.com>
Source record: 138236

No reason you couldn't put white shrinkwrap over the manufacturer's
black shrinkwrap. A hair dryer can shrink it. I don't think paint
would stick.

Jerry W4UK

On Sat, 20 Jul 2002 12:39:17 GMT, rons533@dejazzd.com wrote:

>Is there such a thing as a white color Ham Stick? Believe it or not I
>need a white one. Had thought about painting a black one but it will be
>in a harsh enviornment and I am concerned the paint will peel. I know
>there are several manufacturers of this type antenna. Maybe one is
>white?
>
>Thanks

--
To reply, remove space in je flanders@comcast.net

1444. Re: Inverted vertical

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-20 13:39:03 UTC
From: Ed Juge/NM <ed@juge.org>
Message-ID: <3d396a16.0@oracle.zianet.com>
Source record: 138237

If the vertical is VHF or UHF (built-on ground plane) side mounting is fine. Get it as far as you can from the tower so the tower won't de-tune it. (And don't worry about which sideband to use!! ;-) The absolute best place for it would be above your beam. The higher, the better.

Ed, W5EJ

"WA7HYD Bob" <bhuson@gte.net> wrote in message news:20020719202434262O349@evrtwa1-ar4-4-47-066-192.evrtwa1.dsl-verizon.net.
..
> Having just got the tower up and the beam mounted, the next step is to
> side-mount my duo-band and A-99 verticals. It would be a lot easier to
> mount the sidearm with the antennas premounted. It would also be a whole
> lot easier to mount the sidearm upside down, thus having inverted
> verticals. What would be the overall disaster in doing this?

1445. Re: HF antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-20 13:50:52 UTC
From: Ed Juge/NM <ed@juge.org>
Message-ID: <3d396c74.0@oracle.zianet.com>
Source record: 138239

Hi, Jerry...

I almost bought one of your Tarheel antennas. It looked to me like one of the two best I could find on the net, but I never had seen one in the flesh. I wanted something other than those "mobile RF chokes" most screwdrivers look like. Unfortunately, when I called, nobody was there to answer.

If I may insert a small plug for a competitor with whom I have absolutely no connection except as a user, there IS one screwdriver that's very nice looking and even XYL friendly... the Stealth II, a patented design from Hi-Q Antennas, and the one I was able to make contact with. The coil is about 10" long and all tuning is internal. The length of the antenna never changes and the coil is sealed against dirt and moisture. I have the four-inch diameter model. Excellent performer... a few db (less than an S-unit) better than the 3" model I originally bought. But be prepared to spend some serious bux!! You're absolutely right... there ain't no free lunch.

73.. Ed, W5EJ

"Jerry Oxendine" <joxendi@bellsouth.net> wrote in message news:uy3_8.106910$JU3.46640009@e3500-atl1.usenetserver.com...
>
> 'Doc <w5lz@icok.net> wrote in message news:3D371B2F.1C0256E0@icok.net...
> >
> >
> > Richard,
>
> <<snip>>
>
> . There still ain't no such thing as a
> > free lunch...
>
> Ain't it th' truth! I often get at friendly odds with my colleagues in a
> "certain" SAR
> organization who desparately want to find a "beautiful", easy, and
> spouse-friendly
> kind of mobile HF antenna. But then they wonder how come their mobile
> doesn't
> quite make it into the state-wide HF net, or why people keep asking for
> relays on
> the "weak" mobile, and OTH, why *some* mobile stations never seem to have
> trouble getting to the NCS. To purposely oversimplify, it takes a BIG, UGLY
> antenna to get a BIG BAD signal out! If you want "Pretty", you can get

it;
> if you
> want "PERFORMANCE", you can get that, but the 2 concepts will not mix.
>
> My philosophy is that, because lives can be in the balance, and messages
> MUST
> get thru, I don't have time to do the repeat-repeat-repeat thing. So I am
> willing to endure the giggles, the ridiculing smiles of people as I drive
> past with the big
> 3" Carolina Cyclone II on the bumper. When not engaged in SAR activities,
> it
> is satisfying to be able, most of the time, talk to whomever I can hear--I
> don't try
> to compete with the BIG contesters, however. But I get quite a few
> compliments
> on my mobile. I ain't the biggest signal around, but I hold my own--and I
> thank
> Amateur Radio for continuing to teach me how to apply what I learn from my
> hobby to that of lifesaving and home security--while having a ball in the
> process!
>
> As to the so-called "tuners", couplers, hamsticks
(dummy-loads-on-a-stick),
> they
> stink on the low bands, and there truly ain't no free lunch!
>
> 73
>
> Jerry
> K4KWH
>
>
>
> > 'Doc
>
>
>

1446. Re: White Ham Stick?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-20 13:51:17 UTC
From: Dale Parfitt <parinc@gte.net>
Message-ID: <3D39690F.6D4A6CE3@gte.net>
Source record: 138238

rons533@dejazzd.com wrote:

> Is there such a thing as a white color Ham Stick? Believe it or not I
> need a white one. Had thought about painting a black one but it will be
> in a harsh enviornment and I am concerned the paint will peel. I know
> there are several manufacturers of this type antenna. Maybe one is
> white?
>
> Thanks

Lowe's and Home Depot carry an aerosol paint that is designed to adhere to vinyl- so well that even flexible seat covers hold up for years. Although polyolefin is not a pure vinyl- my guess is that this will work very well.

Dale W4OP

1447. Re: Coaxial trap Q question

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-20 14:49:08 UTC
From: n2ey@aol.com
Message-ID: <20020720104908.00427.00000028@mb-cc.aol.com>
Source record: 138240

In article <ahb6lr$7pa$1@paris.btinternet.com>, "Reg Edwards"
<g4fgq.regp@btinternet.com> writes:

>> - coax traps are asymmetrical (don't turn them around!)
>============================
>I think they are assymetrical only to the extent that the length of the trap
>is added to the wire on one side and subtracted from the length of wire on
>the other side. Subject to the foregoing they are usable in either
>direction. In any case the length of the trap at lower frequs is
>insignificant. Are these your findings ?
>---
Reg,

My findings are based on 80-40 dipoles using traps made from RG-58 and PVC pipe. Traps were tuned to 7050 kHz on the bench (no wires connected) with a GDO, and antenna lengths adjusted for minimum SWR at 7050 and 3575 using an SWR bridge. I've built several of these since 1984, and all have behaved the same way.

What I've found is that turning the traps around makes a marked difference in the wire lengths needed for minimum SWR. The difference is much more than the trap length. Rather than deal with constant confusion, I simply standardised on "center conductor of coax in the trap goes towards the center of the antenna", and had no more problems.

Main point is to know that the effect exists, and is easily avoided.

73 de Jim, N2EY

1448. Re: Inverted V dipole problems on 160M and 80M

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-20 15:03:41 UTC
From: Dick Carroll <dickc58@att.net>
Message-ID: <3C7FA5CD.5A8A6F6E@att.net>
Source record: 138241

Ken wrote:

> I am not radiating much of a ground wave on 80M and 160M. Testing
> with an RX only 1/2 mile away (line of sight) I see only 1/10 the
> signal I see at 10M, 20M and 40M. My tuner gets SWR down to 1.0 on
> all bands. I hear a lot, but no one seems to copy me.
>
> I just finished installing what I think is the highest, most antenna
> that I could install on my property: An Alpha-Delta DX-LB+
> multi-band inverted V dipole. It has separate dipoles for 10M and 20M
> and they work fine. It has a shortened dipole for 40-80-160 with four
> loading coils. See:
> http://www.alphadeltacom.com/pg1.htm
>
> Its center is 40 ft up. Its ends are 12 ft up from the ground. The
> terrain has a substantial slope along the antenna -- dropping roughly
> 15 ft from end to end. Therefore, one end is 15 ft. higher than the
> other end (as measured from sea level)
>
> What is happening?
> -Is most of the signal going straight up?

Yes. As most hams are on 160, you're basically in NVIS mode due to lack of antenna height. A 1/4 wavelength on 160 is around 250 feet. You and nearly all the rest of us aren't even close. But they DO work out ok. See below.

>
> -Will it help to get the ends higher?

No.

>
> -Should the ends be at the same height above seal level -- or the
> ground underneath each respective end?

That's of little or no consequence.

>
> -Is this kind of shortened dipole simply very weak at the low
> frequencies and requires an amp?

Shortened dipoles are always "weaker" and of narrower bandwidth. An amp can help your transmitted signal be heard better, farther.

>
> -Is the summer season a factor in ground wave strength?

Nope. Summertime noise on 160 is always a factor, though. It's often at a too high a level for good reception even when all stations involved are using optimum antennas.

>
> -Is there anything else I can do?
>

Probably nothing practical. 160 is far better in the winter months. Most don't do a lot of work there during the spring and summer "thunderstorm" months. Far too much static. Try it on a very cold winter night and you'll hear things you never even suspected were on the air during summer.
You'll work 'em, too. On CW at least. SSB and AM are done too, just not as easily.

Few years ago I wanted to put up a temporary antenna for 160. With winter close on my heels, I bought and hung a Alpha-Delta DX-A Sloper at 30 feet on the tower. It worked so well I left it up even after I got a fullsized dipole hung the next spring. It's still up for use as a backup.
Those things seem to work far better than they have any right or reason to. Maybe it loaded the tower as the "other half". :-)

Dick

1449. Re: Horizontal DELTA and SQUARE loops (EZNEC DEMO) question

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-20 15:07:12 UTC
From: 'Doc <w5lz@icok.net>
Message-ID: <3D397C93.5CF7522@icok.net>
Source record: 138242

Alan,
Okay, found my problem. I was only checking on the
primary frequency. When going higher than the primary,
there is a 'null' that developes with a corresponding
lower 'take-off' angle, for the 'delta' loop. Not so
for the 'quad' loop (no null).
Some days are better than others, and the other day
was one of my 'slow' ones. I always get to where I'm
going, but seldom in a straight line. (And any other
excuses that may apply)
'Doc

1450. Re: Pro57B on a Hygain Hg-52 tower

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-20 15:14:06 UTC
From: 'Doc <w5lz@icok.net>
Message-ID: <3D397E30.CB6ACA40@icok.net>
Source record: 138243

Ben,
Depends on how you define 'okay'. The antenna is
too large for the tower at whatever the wind speed the
tower's rating is for. There is a 'fudge factor' built
into the tower's ratings, but it is NOT a good idea to
rely on that. Almost all hams overload their towers.
It isn't a good idea at all, but most seem to get away
with it (at least for a while). Best advice is to buy
lots of insurance...
'Doc

1451. Re: Horizontal DELTA and SQUARE loops (EZNEC DEMO) question

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-20 15:48:45 UTC
From: ardujenski@aol.com
Message-ID: <20020720114845.10222.00000328@mb-cd.aol.com>
Source record: 138244

Doc
There does seem to be a lot of varying opinions regarding high angle null. In discussing say the quietness of the loop antennas one may wonder if the it is the deep high angle null cutting out high angle noise or the fact the loop static is naturally bled off by design (or both). The null predicted is very sharp and very high angle where most signals are not--even close in ones (should be maybe 80-85 degree vs 90 degree).

If one looks at an INVERTED-L it is a bit noisier than many and maybe because it does have no nulls.

This is all very fascinating stuff. As pointed out by Evan K9SQG the real proof is in the performance. I sort of think that the analytical gets you in the ballpark and the real world testing addresses the unknowns in the calculations. In the question of the loop being a bit quieter antenna, maybe, just maybe a high angle null exists, but then it may just has to do with the non-static build up.

When looking at CEBIK's lobes for the Inverted-L he shows two distinct lobes--one for the horizontal wire and one for the vertical wire. In reallity it is probably a marriage of the two lobes. With the loops we may not be getting the complete picture either depending upon how we model

Thanks for the feedback.
Alan KB7MBI

1452. Help with Butternut HF5B please!

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-20 17:35:49 UTC
From: MW0CDO <gw7lhi@hotmail.com>
Message-ID: <ahc718$rdo3n$1@ID-117699.news.dfncis.de>
Source record: 138245

Hi there.

I have an original Butternut HF5B "Butterfly" beam.

The problem is that it arrived without assembly instructions.

So I downloaded 3 different manuals from Benchers' site, which are very useful but they do not quite match up with the antenna I have!

Some of the capacitors have been substituted by Butternut / Bencher for whatever reasons over the production life of the antenna. Original versions had 2 ceramic capacitors.. one on the driven element and one on the reflector, the rest being tubular metal ones.

I believe that I have the original version, where the 10/15/20m capacitor on the driven element is a ceramic type rather than a tubular metal one. (Part ID is EE in the manual)
The measurements given in all the manuals I have state that this capacitor should be initially connected to the radiator 45.5 inches from the driven end.. but this is physically impossible given the parts I have here! I have no reason to suspect that any of the supplied parts are incorrect, even though the antenna was "previously enjoyed"
There is also a ceramic capacitor on the reflector, and the dimensions given for it's placement are easily achievable.

Can anyone tell me the approximate distance from the driven end of the element that this capacitor should be connected at?

I would be very grateful if anyone could send a scan via email of the driven and reflector suggested starting dimensions and tuning procedure from the original Butternut manual to ptomlinson@ntlworld.com
Or tell me where I could see a reasonable picture of an original HF5B on the 'net?

Many thanks in advance!

Paul MW0CDO in sunny South Wales UK.

1453. Broadband Folded Dipoles & Delta Loops

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-20 19:32:28 UTC
From: K7HMP / 4 <k7hmp@arrl.net>
Message-ID: <3D39BACC.ED041C81@arrl.net>
Source record: 138246

I've recently become interested in a couple antennas I've noticed over the years in catalogs and magazines. They appear to be "normal" Folded Dipoles or Delta Loops; except, they are fed with a balun and have a "termination device" (read "dummy load"?) at the midpoint. The most common one is the B&W Broadband Folded Dipole which will apparently work from 1.8 to 30 MHz with an SWR of less than 2:1.

Has anyone used these with any success? Is the 2:1 real? Or, does the "termination device" do something with other portions of the power, so that although it isn't being reflected, it isn't radiating either?

While I know that termination resistors are a time-honored technique for Rhombics - which work great on a broad range of frequencies - I'm less sure I understand why they would work in a dipole type configuration.

Are their any sites or books that have a layman's explanation of how or why these antennas work?

Appreciate the insight either direct or posted here.

73, Dave

Dave Williams - K7HMP/4
Stafford, Virginia

1454. Re: HF vertical and lighting protection

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-20 19:36:53 UTC
From: richardharrison@webtv.net
Message-ID: <1745-3D39BBD5-11@storefull-2393.public.lawson.webtv.net>
Source record: 138247

Doc, W5LZ wrote:
"Then instead of worrying about grounding, you`re saying he should use a Faraday shield?"

That would be also use a Faraday shield along with an excellent grounding system.

I don`t see many hams using Faraday screens (shields).

Nearly all broadcast stations use Faraday screens. The stated purpose is usually for harmonic suppression as the screen eliminates capacitive coupling to the antenna. Fact is the screens are extremely effective lightning stoppers. The screen is directly grounded. The screen is usually heavily pock marked from all the lightning hits it has taken. The arc-gaps across the base insulators are usually pristine with no marks on their painted surfaces.

Station coax is usually buried. No lightning is going to ride its surface into the shack. But, many stations have above ground routing and the coac is grounded at least at each end of a run and often at many other places too. The skeletal type is grounded at every supporting pole.

The station has excellent grounding via the radials at every tower and an elaborate grounding system at the shack. Lightning doesn`t get far inside the coax which rejects the common-mode at radio frequencies. For low frequencies there is direct grounding in many circuits in the station and at the towers. The center-conductor of the coax is often d-c isolated so that an arc in the coax can be used to d-c trigger a momentary carrier interruption to kill the arc.

Best regards, Richard Harrison, KB5WZI

1455. Re: Magloops

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-20 19:55:34 UTC
From: dfg <A.Gras@wanadoo.fr>
Message-ID: <ahcheunpq1@wanadoo.fr>
Source record: 138253

hello,
take a look at:
http://www.qsl.net/mnqrp/Loop/Mag_Loops.htm

best 73's
Alain

"Mike Coslo" <mcoslo@adelphia.net> a écrit dans le message news:
3D2D21FC.10202@adelphia.net...
> I'm looking to make a portable antenna for 40-10 meters for one of the
> State QSO parties.
>
> I would be driving to a remote site, setting up my rig and working away.
>
> I have looked at a number of designs, and the Magnetic loop looks pretty
> interesting. I'd be able to plunk it in the back of my truck and set up
> on site, then tear down and move to the next county on my list as needed.
>
> Most of the hams I know are using dipoles, inverted V's and some G5RV's.
>
> Is the magloop just so much hokum? Or is it's major drawback the constant
> tuning, which is no problem AFAIAC?
>
> - Mike KB3EIA -
>

1456. Re: HF vertical and lighting protection

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-20 20:07:34 UTC
From: richardharrison@webtv.net
Message-ID: <2311-3D39C306-52@storefull-2394.public.lawson.webtv.net>
Source record: 138250

Bill Nelson wrote:
"Also at the top (of the tower, ground the tower-mounted coax shield).
This minimizes the voltage differential between the coax and tower."

Yes. That is an important point. It is best to shift as much energy from the coax exterior to the tower as possible. Nearly all our antennas used folded driven elements and these were securely connected with the tower at the mounting point.

Suppliers often urged us to try an ungrounded antenna type. We did relent at times and nearly every time the antenna would soon be severely damaged or destroyed by lightning unless we protected it with a 1/4-wave short-circuited stub. The coax was grounded at the top in all cases.

Best regards, Richard Harrison, KB5WZI

1457. Re: Broadband Folded Dipoles & Delta Loops

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-20 20:11:56 UTC
From: JackR <JackRyan@aol.com>
Message-ID: <guj_8.12179$_M2.4075530@twister.socal.rr.com>
Source record: 138248

Its being radiated all right, only as 'heat' from the dummy load, i.e. resistor at the feedpoint! Works good, but so does a regular dummy load...Flattens the swr right out! Which of course is the whole point of the resistor.....Some rf gets out, but a lot of it is heating the resistor...bummer.....

"K7HMP / 4" <k7hmp@arrl.net> wrote in message news:3D39BACC.ED041C81@arrl.net...
> I've recently become interested in a couple antennas I've noticed over
> the years in catalogs and magazines. They appear to be "normal" Folded
> Dipoles or Delta Loops; except, they are fed with a balun and have a
> "termination device" (read "dummy load"?) at the midpoint. The most
> common one is the B&W Broadband Folded Dipole which will apparently work
> from 1.8 to 30 MHz with an SWR of less than 2:1.
>
> Has anyone used these with any success? Is the 2:1 real? Or, does the
> "termination device" do something with other portions of the power, so
> that although it isn't being reflected, it isn't radiating either?
>
> While I know that termination resistors are a time-honored technique for
> Rhombics - which work great on a broad range of frequencies - I'm less
> sure I understand why they would work in a dipole type configuration.
>
> Are their any sites or books that have a layman's explanation of how or
> why these antennas work?
>
> Appreciate the insight either direct or posted here.
>
> 73, Dave
>
> Dave Williams - K7HMP/4
> Stafford, Virginia
>

1458. Re: Broadband Folded Dipoles & Delta Loops

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-20 20:13:51 UTC
From: ardujenski@aol.com
Message-ID: <20020720161351.03278.00000433@mb-mp.aol.com>
Source record: 138249

Here are some sites you may want to review. Note there has been a lot of discussion on the T2FD and B&W folded dipole over the past few years. Being broadbanded note it will not be as efficient as antennas such as dipoles cut for specific bands. Although not the most efficient it does offer certain conveniences such as not tuner necessary but at a price of loss of power. On 160m the B&W will be as much as 16dBlower than a resonant dipole at same height acording to reports but approach efficiencies more acceptable at the upper bands.
http://www.cebik.com/wbfd.html

http://www.cebik.com/t2fd.html

http://www.hard-core-dx.com/nordicdx/antenna/wire/

Go to eHam.com and look up B&W BROADBAND ANTENNA

Alan KB7MBI in Woodinville, WA

1459. Re: What does the 'U' mean in RGnn/U cables?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-20 20:20:54 UTC
From: Crazy George <munschNO@attglobal.net.SPAM>
Message-ID: <3d39caf4_2@news1.prserv.net>
Source record: 138251

Bill:
RG8 can be buried, as can household garbage. And both will work about the same as far as RF is concerned. It'll just take a little longer for the RG8 to fail.

--
Crazy George
Remove NO and SPAM from return address
:-) Bill <therealexray@netscape.net> wrote in message news:3D38CD87.9FECDEBB@netscape.net...
> W4WNT wrote:
> >
> > Underground
> >
> > RG-8U can be buried.
>
> Horse-hockey.
>
> -Bill

1460. Re: Broadband Folded Dipoles & Delta Loops

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-20 20:22:45 UTC
From: richardharrison@webtv.net
Message-ID: <2311-3D39C695-53@storefull-2394.public.lawson.webtv.net>
Source record: 138254

Dave, K7HMP/4 wrote:
"Are there any sites or books that have a layman`s explanation of how or why these antennas work?"

L.B. Cebik, W4RNL has modeled these antennas and presents their performance on his web pages.

Just search using L.B. Cebik as your keyword. W4RNL will likely work as a key also. Cebik`s exercise is likely to be believed.

Best regards, Richard Harrison, KB5WZI

1461. Re: Broadband Folded Dipoles & Delta Loops

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-20 20:30:42 UTC
From: 'Doc <w5lz@icok.net>
Message-ID: <3D39C85A.86219A47@icok.net>
Source record: 138252

Dave,
I think your talking about antennas like B&K's folded
dipole. If so, then yes, they do work. The problem is
that they work very badly. Can't say exactly why, but
I do know from experience that they are absolutely NOT
worth having, unless you can't have ANY other kind of
antenna.
'Doc

1462. Re: Magloops

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-20 20:45:32 UTC
From: dfg <A.Gras@wanadoo.fr>
Message-ID: <ahdkrv$l4$1@wanadoo.fr>
Source record: 138274

in french:
http://f5ixu.waika9.com/boucle.htm
about magnetic loop

"Mike Coslo" <mcoslo@adelphia.net> a crit dans le message news:
3D2D21FC.10202@adelphia.net...
> I'm looking to make a portable antenna for 40-10 meters for one of the
> State QSO parties.
>
> I would be driving to a remote site, setting up my rig and working away.
>
> I have looked at a number of designs, and the Magnetic loop looks pretty
> interesting. I'd be able to plunk it in the back of my truck and set up
> on site, then tear down and move to the next county on my list as needed.
>
> Most of the hams I know are using dipoles, inverted V's and some G5RV's.
>
> Is the magloop just so much hokum? Or is it's major drawback the constant
> tuning, which is no problem AFAIAC?
>
> - Mike KB3EIA -
>

1463. Re: What does the 'U' mean in RGnn/U cables?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-20 20:45:39 UTC
From: ":-) Bill" <therealexray@netscape.net>
Message-ID: <3D39CBF3.ABEA482E@netscape.net>
Source record: 138255

Crazy George wrote:
>
> Bill:
> RG8 can be buried, as can household garbage. And both will work about the
> same as far as RF is concerned. It'll just take a little longer for the RG8
> to fail.
>
> --
> Crazy George

The 'horse-hockey' was in reference to the U signifying "underground".
-Bill

1464. Re: Broadband Folded Dipoles & Delta Loops

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-20 21:06:40 UTC
From: Steve <n4lq@iglou.com>
Message-ID: <3d39de9c_2@news.iglou.com>
Source record: 138256

Here we go again. Now someone will speak up and tell us how they worked VK with one and just loves it. Well I bought one a few years ago just to see how bad the B&W really was. It was BAD BAD BAD. Very heavy, very ugly and very dead. Oh sure, signals could be heard and some stations worked. But they were down at least 20-30db on 80 meters! Higher bands were a bit better...if you call it better. The only thing going for it is low swr. Only the government would buy one of these things. 73

--
Steve
N4LQ

"'Doc" <w5lz@icok.net> wrote in message news:3D39C85A.86219A47@icok.net...
> Dave,
> I think your talking about antennas like B&K's folded
> dipole. If so, then yes, they do work. The problem is
> that they work very badly. Can't say exactly why, but
> I do know from experience that they are absolutely NOT
> worth having, unless you can't have ANY other kind of
> antenna.
> 'Doc

1465. Re: Broadband Folded Dipoles & Delta Loops

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-20 22:11:32 UTC
From: Bob Haviland <bobh@iag.net>
Message-ID: <oel_8.7956$_C2.585746@newsread2.prod.itd.earthlink.net>
Source record: 138257

It is necessary to distinguish between performance in reception and transmission.

In transmission, the resistor is a loss. Signals at the other end will be low.

In reception, the resistor is also a loss, reducing both the desired signal and the accompaning noise by the same amount. If the noise is still lower than the noise floor of the receiver system, the S/N is still the same. The loss can be compensated by turning up the RF gain, which is usually done automaticaly.

Although lossy, the system can be useful.

bob w4mb

1466. Re: Broadband Folded Dipoles & Delta Loops

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-20 22:35:38 UTC
From: 'Doc <w5lz@icok.net>
Message-ID: <3D39E5AD.26352EF0@icok.net>
Source record: 138259

Bob,
That's an artificial distinction, and as such,
means that it isn't true except in few cases.
'Doc

1467. Re: HF vertical and lighting protection

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-20 22:41:09 UTC
From: 'Doc <w5lz@icok.net>
Message-ID: <3D39E6F8.87BB101F@icok.net>
Source record: 138260

Richard,
It's obvious that you aren't hearing what I'm
saying. So, I don't see any point in trying to
explain it to you.
'Doc

1468. Re: Coaxial trap Q question

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-20 23:09:19 UTC
From: n2cqr@clix.pt
Message-ID: <3d39ebe9.51902795@news.clix.pt>
Source record: 138258

Thanks Jim. I was wondering which way they were supposed to go!

Just built trap #1 usiing measurements from 1981 QST article by W3JIP.
GDO is broken, so I coupled the sig generator to the trap and watched
the voltage across it with an RF probe. Big peak, but around 17.8
Mhz. Spread the turns out a little bit and then checked again. Now
it shows resonance at around 18.12 . Just where I want it. This was
easy.

73 Bill CU2JL

On 20 Jul 2002 14:49:08 GMT, n2ey@aol.com (N2EY) wrote:

>In article <ahb6lr$7pa$1@paris.btinternet.com>, "Reg Edwards"
><g4fgq.regp@btinternet.com> writes:
>
>>> - coax traps are asymmetrical (don't turn them around!)
>>============================
>>I think they are assymetrical only to the extent that the length of the trap
>>is added to the wire on one side and subtracted from the length of wire on
>>the other side. Subject to the foregoing they are usable in either
>>direction. In any case the length of the trap at lower frequs is
>>insignificant. Are these your findings ?
>>---
>Reg,
>
>My findings are based on 80-40 dipoles using traps made from RG-58 and PVC
>pipe. Traps were tuned to 7050 kHz on the bench (no wires connected) with a
>GDO, and antenna lengths adjusted for minimum SWR at 7050 and 3575 using an SWR
>bridge. I've built several of these since 1984, and all have behaved the same
>way.
>
>What I've found is that turning the traps around makes a marked difference in
>the wire lengths needed for minimum SWR. The difference is much more than the
>trap length. Rather than deal with constant confusion, I simply standardised on
>"center conductor of coax in the trap goes towards the center of the antenna",
>and had no more problems.
>
>Main point is to know that the effect exists, and is easily avoided.
>
>73 de Jim, N2EY
>
>
>

73 de Bill CU2JL N2CQR
Sao Miguel Island, The Azores, Portugal
37.7 N 25.7 W
http://planeta.clix.pt/n2cqr

1469. Impedance Question

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-20 23:12:13 UTC
From: Robert Rose <rgsrose@tiac.net>
Message-ID: <ahcqsu$i3l$1@slb1.atl.mindspring.net>
Source record: 138262

Hi,

Am new at this, so the following, please:

I'm using a simple long wire antenna for listening only (<30 MHz)

Goes directly to my high-Z receiver input, and works fine.

If I add an inline lightning arrester, which is of the coax type, I guess I would
jury rig it with a bannana plug.

But was wondering since these protectors are 50 ohm Z, am I creating such a mismatch that it would not be a good idea? (the long wire, I'm told, is probably around 600 ohms)

To use the lightning protector, would I "have" to go to a coax feed line to the long wire in my attic,
and use a balun, even though the protector itself is only an inch or so in length?

thanks,
Bob

1470. Re: Coax conduit to tower

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-20 23:14:46 UTC
From: Roger Halstead <rdhalste@tm.net>
Message-ID: <G9m_8.829$7t.990072@newshog.newsread.com>
Source record: 138261

"rj" <HIGZ@HOTMAIL.COM> wrote in message
news:lu6Z8.28756$OY2.1001074@twister.southeast.rr.com...
> You may want to consider using corrugated drain pipe instead -- and get
the
> kind with the weep holes in the bottom. The PVC is more expensive, harder
> to work with, smaller capacity and it WILL fill with water -- guaranteed
> unless the entire length slopes to a drain.
>
Never had water get in conduit yet.
This has only been in a few year, but no problem so far.
I had one run made of 5" sewer pipe I used for 17 years. That used a capped
off 45 with drain holes in the bottom, but never needed them.

I seal every joint in the PVC. You'd have to cut it apart.

--
Roger Halstead (K8RI EN73)
www.rogerhalstead.com
N833R World's oldest Debonair? (S# CD-2)
> Regards,
> Rush -- W4QA
> "David" <phochief@nonspamhotmail.com> wrote in message
> news:AssU8.20787$wj4.1935375@e3500-atl2.usenetserver.com...
> > Getting ready to dig the concrete base for my new tower and plan to run
a
> 1
> > 1/2 inch PVC pipe from my shack to my tower about 30' away and up
through
> > the concrete base. This pipe is big enough to carry several coax lines
> plus
> > the rotor cable, so is there any reason I would want to run a separate
> pipe
> > for anything else? I've never had a problem running the coax and rotor
> > cable next to each other. The reason I ask is because I see photos of a
> > tower installation on the texas towers website with two PVC conduits
> coming
> > up through the concrete base.
> >
> > David
> >
> >
> >
> >
> >
>

>

1471. Re: Impedance Question

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-20 23:46:04 UTC
From: ":-) Bill" <therealexray@netscape.net>
Message-ID: <3D39F63C.2089DCF@netscape.net>
Source record: 138263

Robert Rose wrote:
>
> Hi,
>
> Am new at this, so the following, please:
>
> I'm using a simple long wire antenna for listening only (<30 MHz)
>
> Goes directly to my high-Z receiver input, and works fine.
>
> If I add an inline lightning arrester, which is of the coax type, I guess I
> would
> jury rig it with a bannana plug.
>
> But was wondering since these protectors are 50 ohm Z, am I creating such a
> mismatch that it would not be a good idea? (the long wire, I'm told, is
> probably around 600 ohms)
>
> To use the lightning protector, would I "have" to go to a coax feed line to
> the long wire in my attic,
> and use a balun, even though the protector itself is only an inch or so in
> length?
>
> thanks,
> Bob

You can jury rig it with a banana plug. Many of those devices are only
a spark gap anyway.
As far as the impedance mismatch, your random-wire system is of a
different impedance at every frequency...may be 30 ohms at one and 3000
at another. You shouldn't notice any difference with the gadget inline.
-Bill

1472. Re: Impedance Question

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-21 00:10:45 UTC
From: "H. Adam Stevens" <solo@totalaccess.net>
Message-ID: <ujjv2dbn070b56@corp.supernews.com>
Source record: 138264

I don't mean to nit pick but......
You won't notice any difference because the device is small compared to the wavelengths in question.
(frequencies <30 MHz => wavelengths >300 feet)
All these 2-inch-long "arrestors" do is allow static buildup to leak off before it goes through your radio.
A direct strike is likely to smoke your radio anyway.
Why not just disconnect the antenna when not in use?
H
NQ5H

":-) Bill" <therealexray@netscape.net> wrote in message news:3D39F63C.2089DCF@netscape.net...
> Robert Rose wrote:
> >
> > Hi,
> >
> > Am new at this, so the following, please:
> >
> > I'm using a simple long wire antenna for listening only (<30 MHz)
> >
> > Goes directly to my high-Z receiver input, and works fine.
> >
> > If I add an inline lightning arrester, which is of the coax type, I guess I
> > would
> > jury rig it with a bannana plug.
> >
> > But was wondering since these protectors are 50 ohm Z, am I creating such a
> > mismatch that it would not be a good idea? (the long wire, I'm told, is
> > probably around 600 ohms)
> >
> > To use the lightning protector, would I "have" to go to a coax feed line to
> > the long wire in my attic,
> > and use a balun, even though the protector itself is only an inch or so in
> > length?
> >
> > thanks,
> > Bob
>

> You can jury rig it with a banana plug. Many of those devices are only
> a spark gap anyway.
> As far as the impedance mismatch, your random-wire system is of a
> different impedance at every frequency...may be 30 ohms at one and 3000
> at another. You shouldn't notice any difference with the gadget inline.
> -Bill

1473. Re: HF vertical and lighting protection

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-21 00:16:23 UTC
From: richardharrison@webtv.net
Message-ID: <23419-3D39FD57-117@storefull-2397.public.lawson.webtv.net>
Source record: 138265

Doc, W5LZ wrote:
"Richard,
It`s obvious that you aren`t hearing what I`m saying. So, I doon`t
see any point in trying to explain it to you."

Actually, I`ve had a lot of experience with lightning protection and succeeded where others failed. Even so, I`ve barely scratched the surface of a sometimes complicated problem, and would like to learn more. I think I`m qualified to understand what you might like to tell me if you give it to me in well chosen words of just a few syllables. What did I miss?

Best regards, Richard Harrison, KB5WZI

1474. Re: Horizontal DELTA and SQUARE loops (EZNEC DEMO) question

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-21 01:10:16 UTC
From: N4LQ <N4LQ@igLou.com>
Message-ID: <3d38b857_3@news.iglou.com>
Source record: 138364

Currently I have both an 80m square horizontal loop and a 40m delta
horizontal loop installed at nearly the same height. I've tried moving the
feeder around on the 80m loop and it does in fact change the nulls slightly.
I have a huge null to the west and all the 6's are weak. Moving the feeder
to near the center of one side was supposed to move the null. It did help
but 6's are still weak.
This is what prompted me to try the 40m horiz delta. When I first put it up,
I was totally astounded at the huge difference. The delta has no obvious
nulls. 6's are now 30db stronger than the 80m loop (on 20m).
I like to use these antennas for all bands but for 40 -10m, the delta is
better, much better, in all directions. All signals on 40m, dx and local,
are unbelievably stronger.
The 80m loop is coming down. I'll put something else up for 160 and 80m.
Maybe my old inverted L.
This is the kind of stuff you never find out unless you can have both
antennas up at the same time and do a lot of A/B testing.
73

--
Steve Ellington N4LQ.
"ARDUJENSKI" <ardujenski@aol.com> wrote in message
news:20020719153430.09167.00000336@mb-df.aol.com...
> Walter
> Thanks for the valuable feedback. I do subscribe th the position you noted
of
> using computer generated info basically as a ballpark estimator. I found
that
> to be especially true with trying to optimize an INVERTED-L and that
impedances
> were ballpark but actual physical testing TWEEKED THE DESIGN. I had two
> thoughts in mind when I started dabbling here with EZNEC. First was to
look at
> what to expect for a field friendly 80m SQUARE LOOP and then in my QTH
> situation, the house and 2 trees made for a nice DELTA arrangement.
>
> The recent article in QST confirmed my crude results for the SQUARE LOOP
as did
> the data presented by K0EZ and his 80m loop. THAT deep null overhead was
of
> concern in that for 80m the NVIS was the primary consideration for
enhanced
> local communications. Seeing the disappearance of the null on the DELTA
seemed
> to provide an acceptable set of lobe patterns and impedances.

>
> I will get the opportunity over the summer/fall to try both with great
> anticipation of how the actual measured results and performances compare
>
> Thanks again--Alan KB7MBI

1475. Re: Broadband Folded Dipoles & Delta Loops

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-21 01:30:28 UTC
From: richardharrison@webtv.net
Message-ID: <23419-3D3A0EB4-134@storefull-2397.public.lawson.webtv.net>
Source record: 138266

Doc wrote:
"Bob,
That`s an artificial distinction,---"

Bob had written: "It is necessary to distinguish between performance in reception and transmission."

The distinction is significant.

At a tranciever the local noise may almost obliterate reception but be inaudible on the transmitted signal from the transciever. Noise is usually a reception problem, not a transmission problem.

Seldom is antenna loss a factor in reception for a good HF receiver. Just turn up the gain to compensate for antenna loss as Bob said.

Most of the commercial HF receiving stations in the world use antennas which employ loss. Rhombics have dissipation resistors for unidirectional termination. Beverages hug the earth which extracts a high energy toll.

But the commercial receiving station antennas are highly directional and thus shun interference. The gain is turned up to compensate antenna loss but since interference was ignored in many directions, the S/N of these antennas is better than high efficiency may have provided in a less directional antenna.

My experience includes a commercial HF receiving station with a large antenna farm full of those rhombic antennas (for space diversity, three in each direction) with their lossy termination resistances. The receiving station associated with those rhombics was filled with Crosby and Pioneer triple diversity receiving sets. They worked around the clock providing high quality program relay for broadcasts.

At home I used a Beverage antenna with frequency diversity which worked like gang busters to receive WCBS and WWL in Europe.

Best regards, Richard Harrison, KB5WZI

1476. Re: Confusing Conundrum/Pse email me--my replies keep bouncing!

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-21 02:34:56 UTC
From: Jerry Oxendine <joxendi@bellsouth.net>
Message-ID: <g9p_8.70894$1q2.8382957@e3500-atl2.usenetserver.com>
Source record: 138267

Email me with a good email--the one you are giving me won't work!

Jerry
SideBand <abNO8SPAMlr@csotbs.org> wrote in message
news:3D33088B.2000903@csotbs.org...
> Here's the deal.. I'm planning on running HF mobile in the truck. The
> problem is twofold here:
>
> 1. The truck body is mostly fiberglass, which makes it difficult to find a
> ground.
> 2. When a ground is found, it is invariably plagued with noise from the
> fridge and the inverter.. (I know... don't run the fridge and the
inverter,
> right? Well, then my milk goes bad and I can't charge my cellphone.)
>
> So, I'm looking for a solution that will eliminate these problems.
> Isolating the RF ground from the body by setting up a separate
counterpoise
> of some sort seems to be the way to go.. It worked on the 2M set, anyway..
> The problem with that is size...
>
> I'd also thought about dipoling two screwdriver antennas, or a pair of
> hamsticks for each band I'm interested in, but again, the size issue...
>
> Any ideas?
> --
> 73 de AB8LR, Chris
>
> http://csotbs.shopiwon.com/ for great deals on computer products.
>

1477. Re: Impedance Question

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-21 02:56:35 UTC
From: 'Doc <w5lz@icok.net>
Message-ID: <3D3A22CC.D0C517D9@icok.net>
Source record: 138268

Bob,
With the antenna being in your attic, I wouldn't
bother with the lightning arrester to start with. If
your antenna takes a lightning strike in your attic,
the radios are going to be the last, and least of your
worries...
'Doc

PS - And yes, the difference in impedance will make
some change to the antenna's input impedance,
but nothing noticable.

1478. Re: Broadband Folded Dipoles & Delta Loops

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-21 02:58:22 UTC
From: 'Doc <w5lz@icok.net>
Message-ID: <3D3A2340.262F3B88@icok.net>
Source record: 138269

Richard,
Go back to your Faraday shields, you didn't read
this one right either.
'Doc

1479. Re: What does the 'U' mean in RGnn/U cables?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-21 03:30:02 UTC
From: Crazy George <munschNO@attglobal.net.SPAM>
Message-ID: <3d3a2f64_1@news1.prserv.net>
Source record: 138270

Joe:
I forgot to point out RG-22/U, RG-23/U, RG-43/U and RG-86/U among others are balanced two center conductor coax. Hardly fits your unbalanced description. Then check RG-160/U, and RG-182/U which are 4 conductor balanced coax.

--
Crazy George
Remove NO and SPAM from return address

Joe McElvenney <ximac@btinternet.com> wrote in message news:VA.00000179.00152703@btinternet.com...
> Hi,
>
> I am sure that someone out there knows this. A recent
> post in another newsgroup set me off searching my library
> and the net for the answer but I have failed. I am fairly
> sure that 'RG' stands for 'Radio Grade' but can only guess
> that the 'U' means unbalanced but the definitive
> publication MIL-HDBK-216 is now way out of print.
>
> Cheers - Joe, G3LLV
>
>

1480. Re: Horizontal DELTA and SQUARE loops (EZNEC DEMO) question

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-21 03:42:06 UTC
From: N4LQ <N4LQ@igLou.com>
Message-ID: <3d38dbed$1_2@news.iglou.com>
Source record: 138223

I assumed he must be referring to one of the harmonic bands although he
didn't say so. Obviously on the fundamental, the loop at 30ft has just the
opposite of a null! My 80m loop on 40m had such a narrow vertical pattern
that only a few signals were strong while the 40m loops performance is
outstanding at what seems like all angles (on 40m of course).

--
Steve Ellington N4LQ.
"'Doc" <w5lz@icok.net> wrote in message news:3D38B8AF.FF42A183@icok.net...
> Alan,
> I'm confused. What 'deep null' overhead are you
> talking about? Modeling either the 'delta' or 'quad'
> loop at any height close to 30 feet doesn't yield a
> 'null' overhead. In fact, that's where the major
> lobe is. What am I missing?
> 'Doc

1481. Re: Impedance Question

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-21 04:30:51 UTC
From: "J. Harvey" <JM002.Harvey_ANTI*SPAM_@Sympatico.ca>
Message-ID: <CNq_8.17763$Db.1569263@news20.bellglobal.com>
Source record: 138271

"'Doc"
> With the antenna being in your attic, I wouldn't
> bother with the lightning arrester to start with. If
> your antenna takes a lightning strike in your attic,
> the radios are going to be the last, and least of your
> worries...

The name 'lightning arrestor' is an example of overly-ambitious nomenclaturism. Such bad naming can lead to muddled thinking about the capabilities and purpose of such devices. Can such a device "arrest lightning" ? Obviously not - except perhaps as a small part of a much larger lightning protection system. The device in question is more accurately described as a 'static discharger'. 'Static' (sic) in this case could include coupled EM from *nearby lightning strikes*.

My house in NS has never been (directly) struck by lightning. The location of the main strike was obvious by (for example) the exploded pine tree and was several hundreds of feet away. But I've had hundreds dollars of damage to alarms systems, telephone equipment, battery chargers, and so forth caused by these nearby strikes. The common element has always been *long runs of wiring INSIDE* my RF transparent house.

'Doc is correct that direct strikes are an important issue, but coupled EM induced damage to electronics is far more common than direct strike damage. It isn't a good idea to concentrate only on direct strikes and to neglect the coupled EM from nearby strikes.

It is a mistake to ignore any long runs of *indoor* wiring (whether labelled by man as an 'attic antenna' or 'telephone wiring' or 'intercom' or whatever....as if the name mattered to the gods of EM). Most houses are completely transparent to coupled EM (as from nearby lightning strikes). This concept has not yet sunk into the collective ham radio mind.

NQ5H had some good advice - "Why not just disconnect the antenna when not in use?"

1482. Re: Guerrilla.net collinear omni antenna build problems

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-21 05:14:17 UTC
From: inetquestion@hotmail.com
Message-ID: <d3cf151.0207202114.4d239bad@posting.google.com>
Source record: 138272
Cross-posted to: rec.radio.amateur.antenna,alt.internet.wireless

Got a few questions about the design of this antenna.

1. Why use brass instead of copper? Copper is a better conductor,
and readily available.

2. I understands the reasoning for the lengths of tubing & rod, but
what about the diameter? Were these just convenient values, or was
there some math behind the decision?

3. What happened to the original site? Does it only exist in
google's cache now?

TIA,

inet
mailto:inetquestion@hotmail.com

1483. Burying coax

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-21 06:13:59 UTC
From: "wally." <anon@anon.com>
Message-ID: <3d3a5128$0$11265$afc38c87@news.optusnet.com.au>
Source record: 138273

On the topic of burying coax, how deep/far should coax be buried to offer some lightning protection?

Cheers,
wally.

"Richard Harrison" <richardharrison@webtv.net> wrote in message news:1745-3D39BBD5-11@storefull-2393.public.lawson.webtv.net...
> Doc, W5LZ wrote:
> "Then instead of worrying about grounding, you`re saying he should use a
> Faraday shield?"
>
> That would be also use a Faraday shield along with an excellent
> grounding system.
>
> I don`t see many hams using Faraday screens (shields).
>
> Nearly all broadcast stations use Faraday screens. The stated purpose is
> usually for harmonic suppression as the screen eliminates capacitive
> coupling to the antenna. Fact is the screens are extremely effective
> lightning stoppers. The screen is directly grounded. The screen is
> usually heavily pock marked from all the lightning hits it has taken.
> The arc-gaps across the base insulators are usually pristine with no
> marks on their painted surfaces.
>
> Station coax is usually buried. No lightning is going to ride its
> surface into the shack. But, many stations have above ground routing and
> the coac is grounded at least at each end of a run and often at many
> other places too. The skeletal type is grounded at every supporting
> pole.
>
> The station has excellent grounding via the radials at every tower and
> an elaborate grounding system at the shack. Lightning doesn`t get far
> inside the coax which rejects the common-mode at radio frequencies. For
> low frequencies there is direct grounding in many circuits in the
> station and at the towers. The center-conductor of the coax is often d-c
> isolated so that an arc in the coax can be used to d-c trigger a
> momentary carrier interruption to kill the arc.
>
> Best regards, Richard Harrison, KB5WZI
>

1484. Re: Burying coax

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-21 07:38:26 UTC
From: jgboyles@aol.com
Message-ID: <20020721033826.01941.00001460@mb-mo.aol.com>
Source record: 138275

>On the topic of burying coax, how deep/far should coax be buried to offer
>some lightning protection?

Lightning takes the path (paths) of least resistance to ground. If you have
a beam on a well grounded 50' tower, most of the current will go to ground thru
the tower. However some of the current will try to flow thru your coax and rig
to ground. Burying the coax would not shunt the current to ground, except for
some capacitive coupling. A loop or two in the coax might help, as it would
act as an rf choke.
Another example, you have a dipole that is the highest structure in the area.
It takes a direct hit. The only path to ground is thru your coax and rig.
Burying the coax again provides only capacitive grounding. How deep? 2-6
inches. How much will this help? I don't know because Lightning is difficult
to summon for experiments.
The best way is to insure lightning has a path to ground that is not thru
your equipment. Or try to get your antennas less attractive to lightning.

73 Gary N4AST

1485. Re: Guerrilla.net collinear omni antenna build problems

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-21 10:28:53 UTC
From: Leonid Rosenboim <MY_FIRST_NAME@CONSULTANT.COM>
Message-ID: <newscache$efklzg$gya$1@lnews.actcom.co.il>
Source record: 138276
Cross-posted to: rec.radio.amateur.antenna,alt.internet.wireless

"inetquestion" <inetquestion@hotmail.com> wrote in message
news:d3cf151.0207202114.4d239bad@posting.google.com...
> Got a few questions about the design of this antenna.
>
> 1. Why use brass instead of copper? Copper is a better conductor,
> and readily available.

Pure copper is too expensive, and has not enough mechanical strength, i.e.
impractical.

>
> 2. I understands the reasoning for the lengths of tubing & rod, but
> what about the diameter? Were these just convenient values, or was
> there some math behind the decision?

tube diameter influences antenna BANDWIDTH, i.e. what is the frequency range
around the center frequency that the antenna responds to (aka 3db
bandwdith). The wider the tubes, the wider the bandwidth, but wider
bandwidth makes a less effecient (smaller gain) antenna. There's a price for
anything.

1486. Re: Inverted V dipole problems on 160M and 80M

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-21 10:54:00 UTC
From: nm5k@wt.net
Message-ID: <25eb70d7.0207210253.db903bc@posting.google.com>
Source record: 138277

cprstn54zz@att.net (Ken) wrote in message
news:<3d393f10.206244968@news-server.optonline.net>...
> I am not radiating much of a ground wave on 80M and 160M. Testing
> with an RX only 1/2 mile away (line of sight) I see only 1/10 the
> signal I see at 10M, 20M and 40M. My tuner gets SWR down to 1.0 on
> all bands. I hear a lot, but no one seems to copy me.
>
> I just finished installing what I think is the highest, most antenna
> that I could install on my property: An Alpha-Delta DX-LB+
> multi-band inverted V dipole. It has separate dipoles for 10M and 20M
> and they work fine. It has a shortened dipole for 40-80-160 with four
> loading coils. See:
> http://www.alphadeltacom.com/pg1.htm
>
> Its center is 40 ft up. Its ends are 12 ft up from the ground. The
> terrain has a substantial slope along the antenna -- dropping roughly
> 15 ft from end to end. Therefore, one end is 15 ft. higher than the
> other end (as measured from sea level)
>
> What is happening?
> -Is most of the signal going straight up?

Yes, on the low bands.
> -Will it help to get the ends higher?

Some.

> -Should the ends be at the same height above seal level -- or the
> ground underneath each respective end?

Not really critical. The higher the better, but if one is lower than
another, no big deal.

> -Is this kind of shortened dipole simply very weak at the low
> frequencies and requires an amp?

It must not be the most efficient antenna on the low bands. Someone
should at least hear you. I talk on 80m all the time with only 100w,
and I don't have any trouble using a normal full size dipole. And the
band is noisy here also.

> -Is the summer season a factor in ground wave strength?

No, but there is a lot more noise to cover up any weak signal. Also,
bear in mind, the ground wave from a mostly horizontal inv vee is not
going to be very good. Any good vertical would eat it up in that
regard. Why is ground wave so important? Regular people you talk to

that are close? Most of what you would work on 160 and 80m will be skywave. And yes, with your antenna at it's fairly low height, it's shooting straight up. You should do fairly well to regional stuff within a few 100 miles. If not, something is not up to par. You could easily model your antenna just to see the pattern on each band. It varies quite a bit when the antenna is over a wavelength high on 10m, and about 1/12 wave or so high on 160m.

> -Is there anything else I can do?

Depends where you are trying to work. For ground wave or dx on 160m, a vertical would be better. But it will need radials also...A full size dipole is better than a loaded dipole. You might consider a "Z" dipole. It's nearly as good as a regular straight dipole. No loading coil losses at least...But if you can't squeeze it in, you can always fire an amp up I guess. MK

1487. Better 2M vertical?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-21 11:25:42 UTC
From: JEEPMON <JEEPMON@HOTMAIL.COM>
Message-ID: <VSw_8.16254$dC.2895@sccrnsc03>
Source record: 138278

I am looking at the Hustler G7-144 and the Diamond F23A. I see that Hustler includes an SWR chart with the antenna. What is the SWR curve for the Diamond antenna. I hope it is more broad, is it? Which antenna is made better both electrically and mechanically. Does anyone have a preference to either antenna and why? I looked on e-ham and only one negative review for the Diamond and none for the Hustler.

Thank you very much for your help.

1488. Re: Impedance Question

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-21 11:46:39 UTC
From: 'Doc <w5lz@icok.net>
Message-ID: <3D3A9F0E.AE1DF7B0@icok.net>
Source record: 138279

J. Harvey,
While I agree with you about the terminology
I still think a 'lightning arrester' isn't needed
for an antenna in an attic. Much of the 'static'
discharge you have with an outdoor antenna is
simply not present on an indoor antenna because
it isn't exposed to weather.
From what you said about your own experiences,
either you didn't use a 'lightning arrester', or
it was ineffective. Even so, I seriously doubt if
one would have helped to any great extent. There's
nothing wrong with trying to be safe. But there's
not much point in putting a 'back-up' alarm on a
statue either...
'Doc

1489. Re: Guerrilla.net collinear omni antenna build problems

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-21 11:49:57 UTC
From: Reg Edwards <g4fgq.regp@btinternet.com>
Message-ID: <ahe754pio1@paris.btinternet.com>
Source record: 138280
Cross-posted to: rec.radio.amateur.antenna,alt.internet.wireless

> 2. I understands the reasoning for the lengths of tubing & rod, but
> what about the diameter? Were these just convenient values, or was
> there some math behind the decision?

==========

The effect of diameter on bandwidth is less than is popularly supposed. It's all hearsay. No-one ever gives any figures of what they are talking about.

Programs DIPCAGE1 and SWR_FREQ provide numercal values of bandwidth versus element dimensions which apply to simple types of antenna. Run programs on a 'what-if ' basis.

Download in a few seconds, not zipped up, run immediately.

==========
Regards from Reg G4FGQ
Free Radio Design Software
Go to http://www.g4fgq.com
==========

1490. Re: Inverted V dipole problems on 160M and 80M

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-21 11:53:23 UTC
From: 'Doc <w5lz@icok.net>
Message-ID: <3D3AA0A2.5A0172C5@icok.net>
Source record: 138281

Mark & all,
An antenna's height above sea level makes
absolutely no difference unless you happen to
live at sea level. What does make a difference
is the height above ground level. A little bit
of 'nit-picking', but a big difference in meaning.
'Doc

1491. Re: Coaxial trap Q question

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-21 12:06:32 UTC
From: n2ey@aol.com
Message-ID: <20020721080632.01571.00000109@mb-ct.aol.com>
Source record: 138282

In article <3d39ebe9.51902795@news.clix.pt>, n2cqr@clix.pt (Bill Meara) writes:

>Thanks Jim. I was wondering which way they were supposed to go!

Bill and group,

I don't think performance is really affected by which way they go, as long as both sides of a dipole are done the same and the antenna is trimmed to frequency. Where I got into mass confusion was when I "copied" an existing antenna without regard for trap orientation.
>
>Just built trap #1 usiing measurements from 1981 QST article by W3JIP.

That's a lower-Z trap design. See QST for December, 1984. N4UU's article is the one I've used.

>GDO is broken, so I coupled the sig generator to the trap and watched
>the voltage across it with an RF probe. Big peak, but around 17.8
>Mhz. Spread the turns out a little bit and then checked again. Now
>it shows resonance at around 18.12 . Just where I want it. This was
>easy.

I've always used the dipper because any wire connection affects the resonant frequency.

73 es GL de Jim, N2EY
>
>73 Bill CU2JL
>

1492. Re: Broadband Folded Dipoles & Delta Loops

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-21 12:17:11 UTC
From: richardharrison@webtv.net
Message-ID: <16117-3D3AA647-101@storefull-2396.public.lawson.webtv.net>
Source record: 138283

Bob, W4MB wrote:
"If the noise is still lower than the noise floor of the receiver system, the S/N is still the same."

Bob was essentially correct. If you have for example 50 millivolts of signal and 2 millivolts of noise, the S/N is 25. Attenuate both. Cut them in half. S/N is 25/1, still 25.

Then Bob wrote:
"Although lossy, the system can be useful."

Then Doc, W5LZ wrote: "Bob, That`s an artificial distinction, and as such, imeans that it isn`t true except in few cases. Doc"

Yes. Those rare cases when you have a good signal.

Show us your arithmetic, Doc.

Best regards, Richard Harrison, KB5WZI

1493. Re: Impedance Question

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-21 12:49:32 UTC
From: richardharrison@webtv.net
Message-ID: <2311-3D3AADDC-154@storefull-2394.public.lawson.webtv.net>
Source record: 138285

J. Harvey wrote:
"It is a mistake to ignore any long runs of "indoor" wiring (whether labeled by man as "attic antenna" or "telephone wiring" or "intercom" or whatever."

Yes, but pairs such as telephone, Romex power, or intercom pick up little induced energy between the wires. Induced voltage may be high, but it`s the same on both wires of the pair. Peril to the connected load is usually small until two systems come together in the same box. These systems may have vastly different potentials.

Modems and answering machines are at risk because they are connected both to power and phone lines, for example.

Best regards, Richard Harrison, KB5WZI

1494. Re: Guerrilla.net collinear omni antenna build problems

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-21 13:06:15 UTC
From: k1bqt@aol.com
Message-ID: <20020721090615.29848.00000504@mb-mn.aol.com>
Source record: 138284

>BANDWIDTH, i.e. what is the frequency range around the center frequency that the antenna responds to (aka 3db
bandwdith).<

Bandwidth is most often established on the basis of the antenna's SWR (or return-loss) passband.

>...wider bandwidth makes a less effecient (smaller gain) antenna.<

Guess that means my 75-meter mobile antenna should be blowing the doors off my 75-meter dipole. Gonna have to look into that!

>There's a price for anything.<

...including free advice.

Rick K1BQT

1495. Re: Inverted V dipole problems on 160M and 80M

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-21 13:20:47 UTC
From: Reg Edwards <g4fgq.regp@btinternet.com>
Message-ID: <ahecfeomp1@helle.btinternet.com>
Source record: 138286

Doc, nitpicking is perfectly legitimate provided the nitpicker says so. In that case it can be very informative. A very nice response Doc.

1496. Re: Impedance Question

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-21 13:22:05 UTC
From: 'Doc <w5lz@icok.net>
Message-ID: <3D3AB56E.DB0919BC@icok.net>
Source record: 138287

Richard,
And you must not have paid attention to the
topic of discussion.
'Doc

1497. Re: Broadband Folded Dipoles & Delta Loops

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-21 13:26:17 UTC
From: 'Doc <w5lz@icok.net>
Message-ID: <3D3AB669.F6BE479C@icok.net>
Source record: 138288

Richard,
Have you ever used one of the B&K folded
dipoles? How did it compare with an ordinary
dipole on the band in use?
'Doc

1498. Re: Inverted vertical

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-21 13:47:44 UTC
From: Leigh Preece <news@leighs.org>
Message-ID: <B%y_8.1247$k81.77776@newsfep1-win.server.ntli.net>
Source record: 138289

Amused me when I read the subject, but I have to ask:

"Inverted Vertical" - isn't that another way of saying a horizontal?

Reading a dictionary definition makes me think so.

8-))

Leigh.....

1499. Re: Burying coax

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-21 14:02:23 UTC
From: "J. Harvey" <JM002.Harvey_ANTI*SPAM_@Sympatico.ca>
Message-ID: <k9z_8.83$sb5.40568@news20.bellglobal.com>
Source record: 138290

"wally."
> On the topic of burying coax, how deep/far should
> coax be buried to offer some lightning protection?

I had an 80-m dipole strung up fairly low between two trees. The RG8-type coaxial cable was run along the ground (not buried) for about 200 feet. When a massive lightning bolt hit a tree several hundred feet away on the corner of the property, there were roughly foot-long sparks jumping from the disconnected end of the coax under the desk. I was surprised that foot-long sparks would decide to come all the way into the house after 200 feet of coaxial cable laying on the ground. I guess the ground conductivty of my property leaves something to be desired...

1500. Re: Guerrilla.net collinear omni antenna build problems

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-21 14:10:45 UTC
From: Reg Edwards <g4fgq.regp@btinternet.com>
Message-ID: <ahefd4$sg0$1@helle.btinternet.com>
Source record: 138291
Cross-posted to: rec.radio.amateur.antenna,alt.internet.wireless

> The wider the tubes, the wider the bandwidth, but wider
> bandwidth makes a less effecient (smaller gain) antenna. There's a price
for
> anything.
>
==========

Leonid, sorry to disagree. Bandwidth of an antenna has no effect on
radiating efficiency. Why should it?

In fact, as tubes are made wider, efficiency will slightly increase because
of lower RF loss resistance.

Reg G4FGQ

1501. Re: Burying coax

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-21 14:28:23 UTC
From: 'Doc <w5lz@icok.net>
Message-ID: <3D3AC4F7.50D5EA33@icok.net>
Source record: 138292

J. Harvey",
From the way you described it, ground conductivity
had nothing to do with it. Your feed line wasn't
grounded.
'Doc

1502. Lightning 201 - The Missing Damage Mechansim

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-21 15:05:59 UTC
From: "J. Harvey" <JM002.Harvey_ANTI*SPAM_@Sympatico.ca>
Message-ID: <Y4A_8.150$sb5.55580@news20.bellglobal.com>
Source record: 138294

Sorry, we were drifting off topic... I've moved this to a new thread.

> J. Harvey wrote:
> "It is a mistake to ignore any long runs of "indoor"
> wiring (whether labelled by man as "attic antenna"
> or "telephone wiring" or "intercom" or whatever."

"Richard Harrison"
> Yes, but pairs such as telephone, Romex power,
> or intercom pick up little induced energy between
> the wires. Induced voltage may be high, but it`s the
> same on both wires of the pair. Peril to the connected
> load is usually small until two systems come together
> in the same box. These systems may have vastly
> different potentials.
> Modems and answering machines are at risk because
> they are connected both to power and phone lines,
> for example.

My lightning theory includes another possible damage mechanism not included in your explanation: 'self capacitance'.

If a device has an element with a significant self capacitance that is not directly connected (or at the very least, properly bypassed) to the long wiring, then the lightning may cause internal damage as it attempts to bring the entire device up to the high common voltage and the part with the significant self capacitance lags behind. Any device that has an ungrounded chassis (very common these days) is at risk. This problem is more common with new school design than old school design (old school designs with 3-prong plugs and a 'simply grounded' metal chassis are less of a problem). You have to imagine trying to quickly bring the chassis up to the common voltage *through the long signal or power leads*.

Real World Example - My battery charger system was floating at the end of its power connection and (in theory) the whole package should have happily floated to a new common lightning-induced voltage. The problem was that the battery string (one car battery and six big Gates batteries) presented a fairly large self-capacitance that had to be pulse charged through some sensitive part of the battery charger circuit. The damage in the battery charger was not in the primary side, but in the secondary side close to the battery string. The battery string had to be pulsed up (and down) through the pass transistor. The voltage difference across the pass transistor as it *tried to do so* was too much and it shorted out. The battery charger worked 'just fine', it just didn't stop and it boiled the batteries dry. They whole string was at about 20 volts pulsating DC by the time I noticed.

If I had grounded the negative side of the battery string to the household ground (assuming that the battery charger didn't mind such a connection), then I'll bet that the low impedance connection would have been able to pulse the battery string up to the common mode voltage without damaging the battery charger.

The concept that floating systems at the end of a single cable are immune from lightning induced damage is overly simplistic. Self capacitance needs to be included in the theory. Devices installed at the end of a single long cable run *can still be damaged* if they have significant self capacitance connected by a 'damage susceptible' link to the long wiring. If the device's self capacitance needs to be 'charged up' (and down) through a semiconductor (for example), then it is susceptible to damage. The more susceptible the 'charging' path, the less the self capacitance required to result in damage.

This 'self capacitance' mechanism is not mentioned in the text books (so far as I've seen). They always trumpet the line that floating devices are relatively immune without any mention of self capacitance.

This is another concept that has yet to 'sink in' to the collective ham radio 'uni-mind'.

1503. Re: Burying coax

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-21 15:12:51 UTC
From: "J. Harvey" <JM002.Harvey_ANTI*SPAM_@Sympatico.ca>
Message-ID: <nbA_8.151$sb5.57281@news20.bellglobal.com>
Source record: 138296

"'Doc"
> From the way you described it, ground conductivity
> had nothing to do with it. Your feed line wasn't
> grounded.

I'm assuming that if the coax cable had been resting on the surface of a
salt-water bog for 200 feet (as opposed to dry ground), then perhaps the
foot-long sparks under my desk might have been just a little bit shorter.
It is an assumption....but I believe it is an obviously correct assumption.

1504. Re: Guerrilla.net collinear omni antenna build problems

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-21 15:15:36 UTC
From: inetquestion@hotmail.com
Message-ID: <d3cf151.0207210715.10bfbe00@posting.google.com>
Source record: 138295
Cross-posted to: rec.radio.amateur.antenna,alt.internet.wireless

What do you think about the copper wire used electrical wiring in
homes. The diameter is close to that used in this design. For this
application it doesn't require much strength, as it's inside pvc
tubing. Also cheap....

Thanks for your input,

-Inet
mailto:inetquestion@hotmail.com

> Pure copper is too expensive, and has not enough mechanical strength, i.e.
> impractical.
> >
> > 2. I understands the reasoning for the lengths of tubing & rod, but
> > what about the diameter? Were these just convenient values, or was
> > there some math behind the decision?
>
> tube diameter influences antenna BANDWIDTH, i.e. what is the frequency range
> around the center frequency that the antenna responds to (aka 3db
> bandwdith). The wider the tubes, the wider the bandwidth, but wider
> bandwidth makes a less effecient (smaller gain) antenna. There's a price for
> anything.

1505. Re: Inverted V dipole problems on 160M and 80M

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-21 15:16:21 UTC
From: cprstn54zz@att.net
Message-ID: <3d3acde0.1115265@news-server.optonline.net>
Source record: 138297

On 21 Jul 2002 03:54:00 -0700, nm5k@wt.net (Mark Keith) wrote:
> For ground wave or dx on 160m, a
>vertical would be better. But it will need radials also

I don't intend to use the ground wave on any of my HF bands. Since I couldn't raise anyone on 80 and 160, the ground wave test was all I could readily try -- as some kind of measure of signal strength

As to the vertical, the only practical one for me would be one of those screwdrivers on a tripod at ground level atop a medium-size (10 ft X 10 ft) copper or stainless screen on the earth as the ground plane. Would something like that be better for DX at 80 and 160 than a 40 ft high loaded dipole?

Ken KC2JDY

--

Ken
(to reply via email
remove "zz" from address)

1506. Re: Burying coax

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-21 15:17:17 UTC
From: "Harold E. Johnson" <W4ZCB@mchsi.com>
Message-ID: <1gA_8.615046$cQ3.98893@sccrnsc01>
Source record: 138298

> > On the topic of burying coax, how deep/far should
> > coax be buried to offer some lightning protection?
>
> I had an 80-m dipole strung up fairly low between two trees. The RG8-type
> coaxial cable was run along the ground (not buried) for about 200 feet.
> When a massive lightning bolt hit a tree several hundred feet away on the
> corner of the property, there were roughly foot-long sparks jumping from
the
> disconnected end of the coax under the desk. I was surprised that
foot-long
> sparks would decide to come all the way into the house after 200 feet of
> coaxial cable laying on the ground. I guess the ground conductivty of my
> property leaves something to be desired...
>
To respond to the question, about any depth that you're not going to disturb
later is fine. I once buried 2000 feet of 7/8 inch Andrews in something like
500 foot lengths about 18 inches using a rented ditch witch. 10 years later,
when I sold the super station to a non-ham, I TRIED to retrieve it. No way.
Tree roots had grown over it and it would separate rather than pull up.
Abandoned most of it in place and it was still perfectly good coax. Most
sections were still holding 9 PSI of dry Nitrogen.

Remember, some day, you might want to retrieve it.

W4ZCB

1507. Re: Coaxial trap Q question

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-21 15:25:48 UTC
From: Reg Edwards <g4fgq.regp@btinternet.com>
Message-ID: <ahejpr$e3r$1@paris.btinternet.com>
Source record: 138299

Jim, thanks for the interesting info.

Putting on my thinking cap, I think the electrical length of a trap changes because the overall diameter of the trap is much greater than either of the two antenna wires and therefore has a greater capacitance per unit length to the rest of the world. It behaves as a length of wire longer than its physical length. It could also be regarded as a lumped capacitance loading to the rest of the world.

When the outer conductor is connected to the 'unused' end of the antenna there is very little voltage between the outside of the trap and the rest of the world. Not very much current flows. The 'long' length of trap is connected to the unused part of the antenna so it doesn't matter very much how much more it is lengthened. The higher frequency inner dipole operates unaffected.

But if the outer coax conductor is connected to the higher frequency dipole, the trap lumped capacitance would detune it to a lower frequency and pruning would be required on the length of wire between the traps.

QED. ;o) I could perhaps include the effect in my COAXTRAP program.

Incidentally, I find an antenna-analyser type of instrument is easier-to-use and more accurate than the dipper type. It also gives an indication of Q.

Yes, the Q of coax traps is appreciably less than Q of the conventional type of the same physical size. This is because the inner coax conductor has a much smaller diameter than a solenoid wire. Not that this matters very much because it is the parallel resonant impedance of L / CR which really matters and C tends to be smaller with the coax type.

Regards, Reg G4FGQ

> >============================
> >I think they are assymetrical only to the extent that the length of the
trap
> >is added to the wire on one side and subtracted from the length of wire
on
> >the other side. Subject to the foregoing they are usable in either
> >direction. In any case the length of the trap at lower frequs is
> >insignificant. Are these your findings ?
> >---
> Reg,
>
> My findings are based on 80-40 dipoles using traps made from RG-58 and PVC
> pipe. Traps were tuned to 7050 kHz on the bench (no wires connected) with
a

> GDO, and antenna lengths adjusted for minimum SWR at 7050 and 3575 using
an SWR
> bridge. I've built several of these since 1984, and all have behaved the
same
> way.
>
> What I've found is that turning the traps around makes a marked difference
in
> the wire lengths needed for minimum SWR. The difference is much more than
the
> trap length. Rather than deal with constant confusion, I simply
standardised on
> "center conductor of coax in the trap goes towards the center of the
antenna",
> and had no more problems.
>
> Main point is to know that the effect exists, and is easily avoided.
>
> 73 de Jim, N2EY
>
>
>

1508. Re: Broadband Folded Dipoles & Delta Loops

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-21 15:35:57 UTC
From: richardharrison@webtv.net
Message-ID: <11852-3D3AD4DD-159@storefull-2392.public.lawson.webtv.net>
Source record: 138300

Doc, W5LZ wrote:
"Richard,
Have you ever used one of the B&K folded dipoles?"

As I said in my first posting in this thread on July 20:
"Just search using L.B. Cebik as your keyword."

A mathematical analysis beats testimonials. Testimonials are used to sell snake oil.

Best regards, Richard Harrison, KB5WZI

1509. Re: Impedance Question

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-21 16:18:14 UTC
From: richardharrison@webtv.net
Message-ID: <23424-3D3ADEC6-2@storefull-2397.public.lawson.webtv.net>
Source record: 138305

Doc, W5LZ wrote:
"Richard,
And you must have not paid attention to the topic of discussion."

Sometimes these postings are conversations and we respond to recent remarks.

Going back to the original question:
"To use the lightning protector, would I "have" to go to a coax feed line---?"

An attic antenna is less attractive to lightning than other higher surrounding conductors in most instances. In a penthouse this may be different.

Coax is a poor match for most end-fed wires. A step-up to the wire impedance is helpful in most cases.

Coax is a much better lightning protector for most radios than is the "lightning protector" proposed. Such protectors are usually superfluous. Induced energy will travel the coax exterior, the radio case, and the radio ground connection(s).

Without coax, an unbalanced feedline carries differential-mode surge energy and that can be bad for a radio. A gas tube may need 90 volts to fire and take a measurable fraction of a second to fire. That is not much protection for a solid-state radio.

Best regards, Richard Harrison, KB5WZI

1510. Re: Wanted: GLA Bugcatcher #480 Coil

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-21 16:25:12 UTC
From: 'Doc <w5lz@icok.net>
Message-ID: <3D3AE058.FDDBE006@icok.net>
Source record: 138302

Barry,
Which is the #480 coil? About 3-4" in
diameter by 10" long?
'Doc

1511. Re: Inverted V dipole problems on 160M and 80M

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-21 16:36:35 UTC
From: 'Doc <w5lz@icok.net>
Message-ID: <3D3AE302.3EAE2E7D@icok.net>
Source record: 138303

Ken,
That's not easy to answer, there's a lot of variables
involved. In general though, I'd have to guess that the
dipole would be 'better'. I had an 80 meter antenna at
less than 40 feet that did pretty well. Not a lot of DX,
but almost anywhere in the US (KL's and KH's too).
'Doc

1512. Re: Burying coax

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-21 16:39:18 UTC
From: 'Doc <w5lz@icok.net>
Message-ID: <3D3AE3A6.41015194@icok.net>
Source record: 138304

J. Harvey,
You're probably right. But with sparks about
a foot long, reducing them to 6 inches long isn't
exactly enough difference for me to hold the end
of the coax (LOL).
'Doc

1513. Re: Inverted vertical

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-21 16:54:02 UTC
From: Irv Finkleman <finkirv@shaw.ca>
Message-ID: <3D3AE720.11D5B3EE@shaw.ca>
Source record: 138306

Inverted vertical? A ground rod perhaps? :-)
--
Diagnosed Type II Diabetes March 5 2001
Beating it with diet and exercise!
297/215/210 (to be revised lower)
58"/43"(!)/44" (already lower too!)

Visit my FINALLY UPDATED website at
http://members.shaw.ca/finkirv/

Irv Finkleman,
Grampa/Ex-Navy/Old Fart/Ham Radio VE6BP
Calgary, Alberta, Canada

1514. Cushcraft A3 Trap Question

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-21 17:14:01 UTC
From: "Christopher A. Bowne" <radiobwn@riconnect.com>
Message-ID: <ujlr10ak1aega9@corp.supernews.com>
Source record: 138307

I am currently using the driven element of an old Cushcraft A3 as a rotatable dipole. Up until recently, I have had low SWR on 20, 15 and 10 meters. Now, only 10 meters is giving a good match. I suspect that there may be a problem with one of the outer (15 meter traps). Assuming that I cannot correct the problem (such as cleaning out bugs, etc), is it possible to substitute one of the outer traps from either the reflector or director elements? Are all the element's traps for a given band resonant at the same frequency, or are the director traps resonated slightly higher in frequency, and the reflector traps slightly lower in frequency vs. the driven element traps?

Chris Bowne, AJ1G
Stonington, CT
radiobwn@riconnect.com

1515. Re: Inverted V dipole problems on 160M and 80M

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-21 17:22:50 UTC
From: richardharrison@webtv.net
Message-ID: <24032-3D3AEDEA-63@storefull-2395.public.lawson.webtv.net>
Source record: 138308

Ken, KC2JDY wrote:
"What is happening?"

Ken`s loaded assymetrical inverted "V" has some horizontally polarized radiation which at 40, 80, and 160 meters is mostly high-angle due to the low 40-ft maximum elevation above earth.

The vertically polarized radiation comes from sloped sides. As a vertical radiator, the antenna height varies from 0.3-wavelength at 40 meters down to 0.076-wavelength at 160 meters.

Short verticals can produce usable radiation at fairly low angles, but require good earth around them for greatest satisfaction.

Best regards, Richard Harrison, KB5WZI

1516. MFJ 259B connector

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-21 18:01:16 UTC
From: jgboyles@aol.com
Message-ID: <20020721140116.13501.00002361@mb-ma.aol.com>
Source record: 138310

Anyone ever replaced the SO-239 connector on their 259? Mine is worn to the point that the center connector no longer has enough compression to make good contact with the PL-259 center connector. I tried bending the connector sections in to make for a tighter fit, but not had much luck.
Replacment of the SO-239 appears to be a major undertaking. It is soldered to the main circuit board as well as bolted to the chassis. Not impossible, but not easy either. Any useful tips or suggestions would be greatly appreciated.
73 Gary N4AST

1517. Re: Inverted V dipole problems on 160M and 80M

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-21 18:14:13 UTC
From: nm5k@wt.net
Message-ID: <25eb70d7.0207211014.38ee3f83@posting.google.com>
Source record: 138311

'Doc <w5lz@icok.net> wrote in message news:<3D3AA0A2.5A0172C5@icok.net>...
> Mark & all,
> An antenna's height above sea level makes
> absolutely no difference unless you happen to
> live at sea level. What does make a difference
> is the height above ground level. A little bit
> of 'nit-picking', but a big difference in meaning.
> 'Doc

I didn't even notice he said that. Yep, that could have an effect if
he's on high ground. The antenna could end up underground...IE:
antenna a 1/4 wave above sea level, but he's on ground at 900 ft. :(
MK

1518. Re: Burying coax

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-21 18:15:15 UTC
From: David Robbins <k1ttt@arrl.net>
Message-ID: <ahetnh02t6f@enews1.newsguy.com>
Source record: 138314

"J. Harvey" <JM002.Harvey_ANTI*SPAM_@Sympatico.ca> wrote in message
news:nbA_8.151$sb5.57281@news20.bellglobal.com...
> "'Doc"
> > From the way you described it, ground conductivity
> > had nothing to do with it. Your feed line wasn't
> > grounded.
>
> I'm assuming that if the coax cable had been resting on the surface of a
> salt-water bog for 200 feet (as opposed to dry ground), then perhaps the
> foot-long sparks under my desk might have been just a little bit shorter.
> It is an assumption....but I believe it is an obviously correct
assumption.
>
not necessarily. the coax may have been picking up charge from the ground
along its length instead of bleeding it off to ground. in a lightning
strike the voltage gradient along the ground can be quite large. in high
current ground rod experiments that we did where i work it was quite
interesting to see the discharge across this surface of the ground when it
was wet, not exactly what we were trying to do but interesting anyway.
lightning can also 'burrow' underground creating mole like tunnels then
coming up quite a distance away, so just because the stroke didn't hit
something directly that in contact with the earth it can still receive
enough energy to cause problems.

1519. What Multi-Band Dipole to Buy for 1.5kW use??

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-21 18:15:26 UTC
From: Steve Floyd <w4yhd@earthlink.net>
Message-ID: <2TC_8.8570$Qk6.2885@newsread1.prod.itd.earthlink.net>
Source record: 138312

I am looking for a multiband dipole antenna that is 90 ft. long (Max) and works on 80-10 meter bands including 17 and 30 meter bands without a tuner. I am looking at building my own parallel dipole design with only a trap in the 40/80 meter leg for length reduction to 90 ft. Has any company out there built a good quality multiband dipole that actually has 30 and 17 meters included. Or, has anyone built a good parallel (fan) dipole for 80,40,30.17,15,10 meter bands? I would really like to hear some ideas and advice.

I have a Ameritron AL-1500 so it must take legal limit power.

Thanks,
Steve
W4YHD
w4yhd@arrl.net

1520. Re: MFJ 259B connector

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-21 18:24:39 UTC
From: PES <n7ux@arrl.net>
Message-ID: <1vulju0lg4e1244mok3v1glhc356324kbo@4ax.com>
Source record: 138313

On 21 Jul 2002 18:01:16 GMT, jgboyles@aol.com (JGBOYLES) wrote:

Gary, it looks a lot worse than it is. I had trouble wiht the SO-239
on mine almost from the day I bought it. I just replaced mine and it
only took about 1 hour. That was taking my time and making sure I
didn't miss any screws or solder joints that needed to be tended to.

73 and good luck

Phil - N7UX
>Anyone ever replaced the SO-239 connector on their 259? Mine is worn to the
>point that the center connector no longer has enough compression to make good
>contact with the PL-259 center connector. I tried bending the connector
>sections in to make for a tighter fit, but not had much luck.
> Replacment of the SO-239 appears to be a major undertaking. It is soldered
>to the main circuit board as well as bolted to the chassis. Not impossible,
>but not easy either. Any useful tips or suggestions would be greatly
>appreciated.
>73 Gary N4AST

1521. Re: Icom IC-AH4 automatic antenna tuner question

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-21 18:45:35 UTC
From: Ken Jones <ken.jones@bigfoot.com.invalid>
Message-ID: <2eF_8.12$ur6.10@news.webusenet.com>
Source record: 138172

```
-----BEGIN PGP SIGNED MESSAGE-----

"Alan Beagley" <abeagley@optonline.net> wrote in message
news:3CC02F2B.C0202978@optonline.net...
> I read in the manual for the Icom IC-706MkIIG ...<snip>
Is that book available online?

-----BEGIN PGP SIGNATURE-----
Version: PGP 7.1.1
Comment: See http://www.pgpi.com for secure e-mail FAQ

iQEVAwUBPTsBTbSq8Y1dHedVAQFBSgf+KgQDYjY/2eDYu4yAOmyaVPWskBYyIfeL
OY9y1jLzideYxCKLXDfV3lWGkJLkksbChezGeIOUyYhs9QPqJvLN7uUXU3OAONrY
uqpkywiwr93n5V3qC/PLf+k9pDNIe5c7lFXoWTw704zTR3st0Wqp+dtOIZpIuaSj
TYrwOKSy6iG6r6Sii5JI2NJs2q2imGMxs+XpWZlgcH14e4CUSiO9IwCa7tMAx/yd
T2xTXC0bbWbWKA4hG/QcoVMtVRXrjAhyKoNaCapQ2Fim2H8L7enCZAvd1frqV9oN
9/1/0mUzn+d8PkYMNOmfvgmkcSijFe0P0JorB160j5C704GGbKLezw==
=DkTn
-----END PGP SIGNATURE-----
```

1522. Re: What Multi-Band Dipole to Buy for 1.5kW use??

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-21 18:50:02 UTC
From: CAM <w5dxp@hotmail.com>
Message-ID: <3D3B025A.BF5DEC31@hotmail.com>
Source record: 138316

Steve Floyd wrote:
>
> I am looking for a multiband dipole antenna that is 90 ft. long (Max) and
> works on 80-10 meter bands including 17 and 30 meter bands without a tuner.
> I am looking at building my own parallel dipole design with only a trap in
> the 40/80 meter leg for length reduction to 90 ft. Has any company out
> there built a good quality multiband dipole that actually has 30 and 17
> meters included. Or, has anyone built a good parallel (fan) dipole for
> 80,40,30.17,15,10 meter bands? I would really like to hear some ideas and
> advice.
>
> I have a Ameritron AL-1500 so it must take legal limit power.

I also had the need for an 80m-10m band dipole that works without a tuner
with the 50 ohm fixed tuned output on my SGC-500 amp. The results are on my
web page. You can use the same techniques to match a 90 ft long dipole except
for 80m where you will need an additional stub. But doesn't the AL-1500 have
a built-in adjustable matching network that can be used for tuning the
antenna system?
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

1523. Re: j-pole

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-21 18:50:55 UTC
From: jeff <wd4nmq@earthlink.net>
Message-ID: <3D3B02C8.28760E5F@earthlink.net>
Source record: 138315

I built a j-pole and I love it. It is said not to have the gain of a colinear type and it probably doesn't. But, in a price vs. performance comparison, it wins hands down. I built one for 2 meters, cost for all new copper plumbing was <$7.00, a ten foot length of 1/2" copper pipe, 1 "tee" and 1 elbow fitting and two end caps. Plus 2 hose clamps for attaching the coax. If it is mounted at top of tower/pole the remaining ~3 feet of pipe can be used at the bottom of the tee as a mast.

I mounted mine on the tower side. Using scrap 1" PVC as standoffs, about 2 1/2 ' from tower.

Just make sure you water proof the coax end!

JEEPMON wrote:
>
> What are the disadvantages of a j-pole antenna made of copper tubing? Is any
> ground plane needed. If not why not? What are the best books to read or
> websites about j-pole antennas, more specifically cooper tubing j-poles. How
> would an vertical antenna (commercially made from Diamond, Comet, Hustler,
> Hy-Gain, ect.)with ground radials compare to a j-pole antenna for 6m, 2m,
> 220MHz, 440MHz, and 1.2 GHz? What would most of you use?

--
Jeff, wd4nmq
wd4nmq@earthlink.net
http://home.earthlink.net/~wd4nmq
iLink client node #10438, iLink sysop link node #14746

1524. Wanted: GLA Bugcatcher #480 Coil

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-21 19:06:00 UTC
From: Barry <luminosity@madriver.com>
Message-ID: <3D3B0617.27D6098D@madriver.com>
Source record: 138301

If anyone has a Henry Allen / GLA #480 coil, and any associated accessories, used but not abused for sale, please email me with your shipped cost to Vermont, zip 05673.
Tnx / 73
Barry-N1QWA

--

Luminosity Studios est.1975
Fine Architectual Stained Glass & Custom Lighting
Arroyo Craftsman- Mica Lamp Co -Hammerton -Quoizel
Located in The Old Church Rt.100
Waitsfield, Vermont 05673
(802) 496-2231

Portfolio:
http://photos.yahoo.com/luminositystudios

SlideShow:
http://photos.yahoo.com/bc/luminositystudios/slideshow?.dir=/Luminosity+Studios+Waitsfield+Vermont&.view=t

1525. Re: Lightning 201 - The Missing Damage Mechansim

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-21 20:09:56 UTC
From: richardharrison@webtv.net
Message-ID: <23420-3D3B1514-96@storefull-2397.public.lawson.webtv.net>
Source record: 138317

J. Harvey wrote:
"This "self capacitance" mechanism is not mentioned in the text books (so far as I have seen)."

Coils have self inductance produced by the current through them. Self inductance opposes change in the current in a coil.

There is need for another name to describe the effect coils can have on each other. This name is mutual inductance (M). There is a formula to describe total inductance of coupled coils:
Lt = L1 + L2 + or - 2M.
The + or - depends on coil phasing for the M. In other words whether the start of one coil is connected to the finish of the other coil, or the other possibility, that current flows in opposite directions through the coils.

Coils have self-induced voltage and so self-inductance is a useful term.

What is "self capacitance"?

Best regards, Richard Harrison, KB5WZI

1526. New Antenna Page

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-21 20:19:30 UTC
From: John Tait <bravo@iol.ie>
Message-ID: <mHE_8.1688$IC5.13771@news.iol.ie>
Source record: 138318

I have added a new page to my website at http://www.iol.ie/~bravo/ on the subject of my Low Band TX and RX Antennae..
http://www.iol.ie/~bravo/low_band_antennae.htm (Vertical Dipoles and K9AY array)
It may be of interest to those who do NOT have space for 4 Square Arrays, a 200ft tower, Beverages etc., and who like to roll their own..
Vy 73
de
John EI7BA

Outgoing mail is certified Virus Free.
Checked by AVG anti-virus system (http://www.grisoft.com).
Version: 6.0.375 / Virus Database: 210 - Release Date: 10/07/2002

1527. Re: Broadband Folded Dipoles & Delta Loops

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-21 20:28:03 UTC
From: 'Doc <w5lz@icok.net>
Message-ID: <3D3B1941.2B45E537@icok.net>
Source record: 138169

Richard,
So then, what you're saying is that all of
your information about the B&K folded dipole
is theoretical. You have no actual 'hands on'
experience with them, right?
'Doc

1528. Re: Guerrilla.net collinear omni antenna build problems

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-21 20:28:53 UTC
From: inetquestion@hotmail.com
Message-ID: <d3cf151.0207211228.353a4a61@posting.google.com>
Source record: 138170

First need to find out what kind of connector my access point has (linksys wap11) then order connectors from digikey, etc.

I plan to build one using the brass elements, and another using copper wire & plumbing tubing. So how do you measure the gain of different antennas?

Yes, I've got too much spare time...

Thx,

Inet

1529. Re: Better 2M vertical?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-21 20:35:20 UTC
From: Dennis Kaylor <k4oxg@tampabay.rr.com>
Message-ID: <cWE_8.76515$DS.2219984@twister.tampabay.rr.com>
Source record: 138171

hey jeepmon
you are leaving out comet there GP9 even though its a dualband antenna
has very good gain and is performing very well
the think that bothers me with the other two are they are made mostly of
fiberglass and that attracts lightening so i went with the comet which is
made mostly of ABS plastic
i think most vertical you get for 2 meters should be broadbanded enough to
cover the entire band and then some
also check out mosley and cushcraft they make verticals made from aluminum
good luck
"JEEPMON" <JEEPMON@HOTMAIL.COM> wrote in message
news:VSw_8.16254$dC.2895@sccrnsc03...
> I am looking at the Hustler G7-144 and the Diamond F23A. I see that
Hustler
> includes an SWR chart with the antenna. What is the SWR curve for the
> Diamond antenna. I hope it is more broad, is it? Which antenna is made
> better both electrically and mechanically. Does anyone have a preference
to
> either antenna and why? I looked on e-ham and only one negative review for
> the Diamond and none for the Hustler.
>
> Thank you very much for your help.
>
>
>

1530. Re: What Multi-Band Dipole to Buy for 1.5kW use??

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-21 20:53:55 UTC
From: Ed Senior <eseniors@earthlink.net>
Message-ID: <DbF_8.10742$_C2.806328@newsread2.prod.itd.earthlink.net>
Source record: 138173

Hi Steve -

W9INN has the best line of multband dipoles I have seen; and most,
if not all, will take the power. But he doesn't have a 7-bander like
you are looking for. It would take two of his: e.g., a 30/17/12 and an
80/40/20/15/10.

My setup uses an 80/40/17 and a 20/15/10. With this setup, there are a
grand total of only 4 traps; only 2 bands go through a trap (80 and 20);
and no band goes through more than one trap. (Note: These traps do
not use a discrete capacitor at all; he calls them "resonactors.")
I'm a believer... his stuff works great, and he's great to deal with.

My broadband vertical can handle 30 and 12 well, but those bands
don't interest me much.

73, Ed

"Steve Floyd" <w4yhd@earthlink.net> wrote in message
news:2TC_8.8570$Qk6.2885@newsread1.prod.itd.earthlink.net...
> I am looking for a multiband dipole antenna that is 90 ft. long (Max) and
> works on 80-10 meter bands including 17 and 30 meter bands without a
tuner.
> I am looking at building my own parallel dipole design with only a trap in
> the 40/80 meter leg for length reduction to 90 ft. Has any company out
> there built a good quality multiband dipole that actually has 30 and 17
> meters included. Or, has anyone built a good parallel (fan) dipole for
> 80,40,30.17,15,10 meter bands? I would really like to hear some ideas and
> advice.
>
> I have a Ameritron AL-1500 so it must take legal limit power.
>
> Thanks,
> Steve
> W4YHD
> w4yhd@arrl.net
>
>
>
>

1531. Re: Wanted: GLA Bugcatcher #480 Coil

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-21 20:59:36 UTC
From: Barry <luminosity@madriver.com>
Message-ID: <3D3B20B7.90BCBF7A@madriver.com>
Source record: 138309

Yes Doc, It is a 4 inch diameter by about 10 inches.
Will tune 10-75 meters.
Got one?
http://texasbugcatcher.com/index.html
73 / Barry

'Doc wrote:

> Barry,
> Which is the #480 coil? About 3-4" in
> diameter by 10" long?
> 'Doc

--

Luminosity Studios est.1975
Fine Architectual Stained Glass & Custom Lighting
Arroyo Craftsman- Mica Lamp Co -Hammerton -Quoizel
Located in The Old Church Rt.100
Waitsfield, Vermont 05673
(802) 496-2231

Portfolio:
http://photos.yahoo.com/luminositystudios

SlideShow:
http://photos.yahoo.com/bc/luminositystudios/slideshow?.dir=/Luminosity+Studios+Waitsfield+Vermont&.view=t

1532. Re: Magloops

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-21 21:09:14 UTC
From: Reg Edwards <g4fgq.regp@btinternet.com>
Message-ID: <ahf7tpvg1@venus.btinternet.com>
Source record: 138174

Magloops come into their own domain when real estate and space is very short.

It is impossible for radiating efficiency to approach that of a 1/2-wave dipole until it consists of a 1/2-wave dipole bent into a circle.

Nevertheless, the magloop is the most efficient of all the small antennas which can be contained within a limited space. It is usable in the attic, on the balcony of an apartment, or in a small backyard where height is at a premium. It is best orientated in a vertical plane.

I say this from experience and theoretical mathematical analysis from fundamental principles. I have absolutely no connections with any antenna manufacturers, corrupt salesmen or authors of magazine articles.

If you are interested in any figures, download program MAGLOOP4 from website below.

Download MAGLOOP4 in a few seconds. Not zipped up. Run immediately. Use program on a "what-if " basis.

==========
Regards from Reg G4FGQ
Free Radio Design Software
Go to http://www.g4fgq.com
==========

1533. Re: White Ham Stick?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-21 21:18:42 UTC
From: K4SQR@juno.com
Message-ID: <7c8be5b4.0207211318.6a6b08a4@posting.google.com>
Source record: 138175

Anttron makes white HF whips. See http://anttron.tripod.com/
for various models & pricing.

Good luck,
Jim, K4SQR

"N4LQ" <N4LQ@igLou.com> wrote in message news:<3d3ac7e9_3@news.iglou.com>...
> I saw some white HF whips at the Dayton Hamvention several years ago but do
> not recall the manufacture. I wish I had bought one because it seems like
> every car I end up with is white!
>
> --
> Steve Ellington N4LQ.
> <rons533@dejazzd.com> wrote in message news:3D39596B.78DC@dejazzd.com...
> > Is there such a thing as a white color Ham Stick? Believe it or not I
> > need a white one. Had thought about painting a black one but it will be
> > in a harsh enviornment and I am concerned the paint will peel. I know
> > there are several manufacturers of this type antenna. Maybe one is
> > white?
> >
> > Thanks

1534. Re: Broadband Folded Dipoles & Delta Loops

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-21 21:22:09 UTC
From: 'Doc <w5lz@icok.net>
Message-ID: <3D3B25EF.9340C1B3@icok.net>
Source record: 138176

Richard,
It was a very simple question, "Have you ever
used a B&W folded dipole and made a comparison
with an ordinary dipole for the band in use?".
Don't do one of those 'slip-n-slide' things, just
answer the question, please.
'Doc
PS - I goofed with the "B&K", should have been
"B&W".

1535. Re: Icom IC-AH4 automatic antenna tuner question

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-21 21:23:48 UTC
From: Alan Beagley <abeagley@optonline.net>
Message-ID: <3D3B2664.5040803@optonline.net>
Source record: 138177

Here:

http://www.icomamerica.com/support/documents/manuals/ic-706mkiig.pdf

-=-
Alan, AB2OS

Ken Jones wrote:
> -----BEGIN PGP SIGNED MESSAGE-----
>
> "Alan Beagley" <abeagley@optonline.net> wrote in message
> news:3CC02F2B.C0202978@optonline.net...
>
>>I read in the manual for the Icom IC-706MkIIG ...<snip>
>
> Is that book available online?

1536. Re: White Ham Stick?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-21 22:05:21 UTC
From: arrow146@aol.com
Message-ID: <20020721180521.09774.00000565@mb-mi.aol.com>
Source record: 138178

>> Steve Ellington N4LQ.
>> <rons533@dejazzd.com> wrote in message news:3D39596B.78DC@dejazzd.com...
>> > Is there such a thing as a white color Ham Stick? Believe it or not
>I
>> > need a white one. Had thought about painting a black one but it will
>be
>> > in a harsh enviornment and I am concerned the paint will peel. I know
>> > there are several manufacturers of this type antenna. Maybe one is
>> > white?
>> >
>> > Thanks

You can buy "White" heat shrink tubing.
or most any other color you want.

73 Al Lowe N0IMW

1537. Re: Coaxial trap Q question

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-21 22:07:00 UTC
From: n2ey@aol.com
Message-ID: <20020721180700.05192.00000052@mb-cb.aol.com>
Source record: 138179

In article <ahejpr$e3r$1@paris.btinternet.com>, "Reg Edwards"
<g4fgq.regp@btinternet.com> writes:

>Jim, thanks for the interesting info.

You're welcome, Reg - thanks for all the great software!
>
>Putting on my thinking cap, I think the electrical length of a trap changes
>because the overall diameter of the trap is much greater than either of the
>two antenna wires and therefore has a greater capacitance per unit length to
>the rest of the world. It behaves as a length of wire longer than its
>physical length. It could also be regarded as a lumped capacitance loading
>to the rest of the world.

Sounds reasonable - it acts as a form of "capacity hat", end loading the
"inside" section at the trap frequency.

This effect is uniform for conventional LC traps.
>
>When the outer conductor is connected to the 'unused' end of the antenna
>there is very little voltage between the outside of the trap and the rest of
>the world. Not very much current flows. The 'long' length of trap is
>connected to the unused part of the antenna so it doesn't matter very much
>how much more it is lengthened. The higher frequency inner dipole operates
>unaffected.
>
>But if the outer coax conductor is connected to the higher frequency dipole,
>the trap lumped capacitance would detune it to a lower frequency and pruning
>would be required on the length of wire between the traps.

Exactly. So an antenna adjusted with the coax traps one way would be out of
tune with the traps reversed. The effect is minor, but enough to be worth
allowing for.
>
>QED. ;o) I could perhaps include the effect in my COAXTRAP program.
>
Now THAT would be neat!!

>Incidentally, I find an antenna-analyser type of instrument is easier-to-use
>and more accurate than the dipper type. It also gives an indication of Q.
>
>Yes, the Q of coax traps is appreciably less than Q of the conventional type
>of the same physical size. This is because the inner coax conductor has a
>much smaller diameter than a solenoid wire.

Agreed. Also, the dielectric properties of coax outer jackets may not be the best - they are not designed to be.

>Not that this matters very much
>because it is the parallel resonant impedance of L / CR which really
>matters and C tends to be smaller with the coax type.

End result is that the loading coil effect of the coax traps is greater.

73 de Jim, N2EY

1538. Re: Lightning 201 - The Missing Damage Mechansim

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-21 23:17:44 UTC
From: "J. Harvey" <JM002.Harvey_ANTI*SPAM_@Sympatico.ca>
Message-ID: <miH_8.544$1I2.157851@news20.bellglobal.com>
Source record: 138181

"Richard Harrison"
> What is "self capacitance"?

Self capacitance can be quickly understood by the self-evident fact that it would obviously take a large amount of current to 'charge up' a very large (1km x 1km) plate floating alone in intersteller space (light-years from anything else). If you have difficulty imagining where the charge is coming from, then imagine another plate. Imagine a highly charged small plate meeting an uncharged large plate. Think about the resultant voltage on the two newly-joined plates as a ratio of the self capacitances.

Another example is when you suffer the pain of a static shock from touching a door knob - consider that the door knob is probably highly insulated on a dry wooden door (*not* grounded). The door knob's self capacitance will draw a spark as the voltages equalize. Presumably fat people suffer more painful sparks than thin people since they would have a larger self capacitance.

The often worshipped 'International Ground' is simply the self capacitance of the small blue planet Earth.

1539. Re: Lightning 201 - The Missing Damage Mechansim

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-21 23:23:29 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <vtdmju0k359efvgnr05kgufga0ghosgkn8@4ax.com>
Source record: 138180

On Sun, 21 Jul 2002 15:09:56 -0500 (CDT), richardharrison@webtv.net
(Richard Harrison) wrote:

>What is "self capacitance"?
>
>Best regards, Richard Harrison, KB5WZI

Hi Richard,

Self capacitance is the amount of capacitance seen from one point to
all points of the same surface - sort of a one terminal specification.
This may also go by the term free-space capacitance where the other
plate is at infinity. The standard value for an adult is 50 pF (to
give a sense of application and value range - application in this
sense of an adult is for ESD shielding and user coupling of hi risk
potentials and currents). The standard value of free-space
capacitance for a sphere (presuming its mating spherical plate has
infinite radius) is
111*r pF
(where r is the test sphere's radius in meters). This says nothing of
the close proximity of other conductors and insulators where the human
form in a natural environment typically presents 50 to 250 pF
capacitance (and inductance spec'd at less than 0.1ï¿½H, and resistance
in the range of 500 to 10000 Ohms).

Actually, Jeff is using self capacitance more in the sense of
distributed capacitance much in the manner of my last drawings of
Common Mode paths. His statement:
>The concept that floating systems at the end of a single cable are immune
>from lightning induced damage is overly simplistic. Self capacitance needs
>to be included in the theory. Devices installed at the end of a single long
>cable run *can still be damaged* if they have significant self capacitance
>connected by a 'damage susceptible' link to the long wiring.
is simply my observation some time back that seemingly benign Common
Mode effects may be imparted to a fully balanced system and still
present hazards. This snippet of Jeff's also illustrates the need for
the complete path's description - which, of course, includes ground
and coupling to it. His discussion presumes the surge impedance of
the Common Mode.

73's
Richard Clark, KB7QHC

p.s. the 10KV (average charge you carry) spark you set off touching
your car key to its lock has a peak of 40A at 1 nS and the current has
decayed away after 100 nS.

[ref. "Noise Reduction Techniques In Electronic Systems," Henry W.
Ott]

1540. Re: White Ham Stick?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-21 23:34:38 UTC
From: Eamon Skelton <Xnospam@oceanfree.net>
Message-ID: <eegfha.dat.ln@mylinuxbox.net>
Source record: 138120

In article <3D39596B.78DC@dejazzd.com>, rons533@dejazzd.com wrote:
> Is there such a thing as a white color Ham Stick? Believe it or not I
> need a white one.

Will you then be a 'white stick operator'?

Sorry!!!

73, Ed. EI9GQ.

--
Remove 'X' to reply via e-mail.
http://homepage.eircom.net/~ei9gq
Linux 2.4.18

1541. Sale Alert - Glass Mount 2m/70cm - Cdn$20 !! - Radio Shack *Canada*

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-21 23:36:52 UTC
From: "J. Harvey" <JM002.Harvey_ANTI*SPAM_@Sympatico.ca>
Message-ID: <hAH_8.552$1I2.162123@news20.bellglobal.com>
Source record: 138182

FYI - I just picked up another antenna bargain at
Radio Shack *Canada*.

Glass mount dual-band 2m/70cm Ham radio antenna.
2.6dB gain at 2m and 6.3dB gain at 70cm (YMMV).
50W handling capability.
Tunable for optimum performance.
Includes all cables, connectors, mounting and tuning hardware.

Cdn $ 19.99 + tax !!! (that's about US$14 FWIW)

Stock # 19-324

Link to picture and info...
www.radioshack.ca/estore/Product.aspx?product=1900324

Seems to still be available on-line and at some stores.

1542. Re: Wanted: GLA Bugcatcher #480 Coil

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-22 00:35:34 UTC
From: 'Doc <w5lz@icok.net>
Message-ID: <3D3B533D.3BA32691@icok.net>
Source record: 138183

Barry,
Yes, but I really don't think you want it. I
didn't realize just how bad of shape it was in
until I dug it out of the junk box. I'd say make
an offer, but my conscience would bother me.
Sorry...
'Doc

1543. Re: Broadband Folded Dipoles & Delta Loops

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-22 00:38:37 UTC
From: richardharrison@webtv.net
Message-ID: <11853-3D3B540D-78@storefull-2392.public.lawson.webtv.net>
Source record: 138184

Dave, K7HMP/4, the original questioner wrote:
"Are there any sites or books that have a layman`s explanation of how or why these antennas work?"

I responded: "L.B. Cebik has modeled these antennas and presents their performance on his web pages."

Now, Doc, W5LZ asks: "Have you ever used a B&W folded dipole and made a comparison with an ordinary dipole for the band in use?"

As I said: A mathematical analysis beats testimonials."

That is true because customer satisfaction has as much to do with the customer as it has with to do with the product.

The math has no favorites when used properly. I think Doc is asking the wrong question, especially since I`ve neither condemned nor praised the Barker & Williamson terminated folded dipole. Had I made a comparison of the B&W item I would have shared the data.

I have erected many dipoles of several types on several continents and measured results. I have never used the B&W item. I would only consider using the B&W item where the transmitted frequency had to make large hops in a hurry and there was limited antenna space, or some other restriction that doesn`t come to mind immediately. I`ve seen testimonials and Cebik`s results and to me they seem to agree.
I don`t have to touch the stove to be satisfied that it is hot.

Doc also wrote: "Don`t do one of those slip and slide things."

Yes, and when did Doc quit beating his wife?

Best regards, Richard Harrison, KB5WZI

1544. Re: Lightning 201 - The Missing Damage Mechansim

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-22 01:14:53 UTC
From: richardharrison@webtv.net
Message-ID: <23419-3D3B5C8D-341@storefull-2397.public.lawson.webtv.net>
Source record: 138186

J. Harvey wrote:
"---it would obviously take a large amount of current to charge up a very large---."

Or, it could take a small current flowing for a long time. It really takes two surfaces to have a capacitance because there must be a charge differential. As I recall the formula is Q = CE. If the capacitance is small the charge (Q) can be small for a given voltage.

A large object in outer space may have a truly tiny capacitance to any other item due to enormous separation.

The lack of speed in charging a capacitance is as much a function of impedance in the charging path as it is the size of the capacitance.

I still don`t know why I need a self capacitance or the best way to get one.

Best regards, Richard Harrison, KB5WZI

1545. Re: Lightning 201 - The Missing Damage Mechansim

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-22 01:41:38 UTC
From: richardharrison@webtv.net
Message-ID: <2311-3D3B62D2-226@storefull-2394.public.lawson.webtv.net>
Source record: 138187

Richard Clark wrote:
"p.s. the 10KV (average charge you carry) spark you set off touching your car key to its lock has a peak of 40A at 1nS and the current has decayed after 100 nS."

Like the skunk said when the wind changed: "It`s all beginning to come back to me now". The conductive flooring in the computer rooms and the humidifiers to control the humidity. That was 30 years ago and I had hardly thought of it since.

Best regards, Richard Harrison, KB5WZI

1546. Re: Pro57B on a Hygain Hg-52 tower

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-22 01:43:59 UTC
From: tmgroatatpeakpeakdotcom
Message-ID: <3d3b59a2.32799339@news.peakpeak.com>
Source record: 138185
Body handling: HTML body converted to readable text

On Fri, 19 Jul 2002 11:15:56 -0500, "Ben" wrote:

>Hello
> I have a Mosley Pro57B antenna that I am hoping to put on the top of my
>HyGain hg-52 crank up tower. Will I have problems with the tower and this
>antenna? The Tower is 10 square feet and the antenna is 11 square feet. Has
>anyone else put these two together without problems?
>Ben K9BF
>
>

Assume your allowable antenna load includes the rotator, mast, and
cables in addition to your antenna (unless the manufacturer specifies
a separate allowance for them). This means your tower could be
considerably above its design rating. Unless your wind speed is well
below the national average, it would be wise to keep the tower down
below its maximum height.

The ideal solution would be a heavier duty tower or a smaller antenna.
Lacking that, be conservative with the tower extension.

--KR0U

-- Tim Groat

To reply by e-mail, change the quoted words to
the corresponding punctuation marks.

1547. Re: Lightning 201 - The Missing Damage Mechansim

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-22 03:20:57 UTC
From: "J. Harvey" <JM002.Harvey_ANTI*SPAM_@Sympatico.ca>
Message-ID: <nSK_8.37$5I.23288@news20.bellglobal.com>
Source record: 138189

[On the existence of 'self capacitance'...]

"Richard Harrison"
> I still don`t know why I need a self capacitance
> or the best way to get one.

:-)

> Or, it could take a small current flowing for a long time.

I was presenting the *simplest possible* example (made of highly conductive metal). Don't complicate it until we achieve concensus on the simplest case. I thought that 'self capacitance' was a well established concept. (If I'm wrong, then I'm happy to learn.)

> A large object in outer space may have a truly tiny
> capacitance to any other item due to enormous separation.

Would the Earth make as good a 'ground' if it were only 1 cm in diameter ? I don't think so...

The Earth is quite far away from other objects (such as the Moon). Therefore it has a very small capacitance - right ? Why don't you just go ahead and try to change the absolute voltage of the Earth by just one volt. You'll need to set aside a well insulated reference to check your progress. Good luck...

> It really takes two surfaces to have a capacitance
> because there must be a charge differential.

It only takes *one surface* to have self capacitance. The only question might be defining the voltage reference for measuring the static charge. The answer is that a highly insulated voltage reference can be flown in on the third Tuesday of the month for a quick check of the absolute voltage using a very high input impedance voltmeter. It doesn't need to be another 'plate' and the connecting wire can be as long and thin as required to eliminate your concerns about 'ordinary' capacitance.

Another method to meaure the static charge *that is even more clear for the skeptics* is a single port (ground independant) instrument called a foil-leaf electroscope, but the reading will be a bit less accurate.

--

You're apparently missing (or just ignoring) a basic concept.

There is an obvious difference between a large object and a small object when it comes to imposing a static charge (of a given voltage). This

difference still exists even if the objects are far away from any other objects (the charge could be imposed by firing ions at the object from a distance). It is 'harder' to impose a static charge (of a given voltage) on a large object than on a small object. This property is called 'self capacitance'.

The static charge can be (roughly) measured with a foil-leaf electroscope without any ground reference (although in the absence of calibrated Earth gravity it might need to be a newly designed gently spring loaded electroscope).

Do you deny the existence of this property called 'self capacitance' ?

It can be swamped by ordinary capacitance - but it doesn't have to be. The exceptions make my point.

--

The relationship to lightning is that if you have a series connection of a long cable, a sensitive device (usually a semiconductor), and a large self capacitance - then the sensitive device can be damaged when the induced EM pulse tries to charge up the self capacitance (through the semiconductor).

This damage can occur even in that idealized textbook example of an 'immune system' (sic)where '...the whole system maintains a common ground reference voltage during the lightning strike...' (to paraphrase the old claim). The internals of the system *do matter* if such an approach is taken for lightning protection.

1548. Re: What does the 'U' mean in RGnn/U cables?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-22 03:35:53 UTC
From: Mike <km6ab@pacbell.net>
Message-ID: <3D3B7D8E.E84BB81A@pacbell.net>
Source record: 138190

I thought the "U" was for Ulysses, the guy in the back room that coiled
it all up.

1549. Re: Broadband Folded Dipoles & Delta Loops

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-22 04:04:05 UTC
From: 'Doc <w5lz@icok.net>
Message-ID: <3D3B8422.DAAD2D48@icok.net>
Source record: 138191

Richard,
I take that version of 'slip-n-slide' as
meaning, no, you haven't used a B&W folded
dipole, and no, you've never made a comparison
between it and a dipole for the band in use.
That's all I wanted to know.
As to the, "Have you quit beating your wife?",
question, I think everyone knows what that is.
Who was it that sang, "Slip Sliding Away"?
'Doc

1550. Re: What does the 'U' mean in RGnn/U cables?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-22 04:43:31 UTC
From: Ken Jones <ken.jones@bigfoot.com.invalid>
Message-ID: <57M_8.107$ur6.4@news.webusenet.com>
Source record: 138192

```
-----BEGIN PGP SIGNED MESSAGE-----

I think it's RadioGrade*/*Utility

"Mike" <km6ab@pacbell.net> wrote in message
news:3D3B7D8E.E84BB81A@pacbell.net...
> I thought the "U" was for Ulysses, the guy in the back room that
> coiled it all up.

-----BEGIN PGP SIGNATURE-----
Version: PGP 7.1.1
Comment: See http://www.pgpi.com for secure e-mail FAQ

iQEVAwUBPTuNcbSq8Y1dHedVAQGfYgf9EvXX67N8KdQhRxUAYzldqgRZVjA49p/2
GLUOGIRy74KF591274VG7Ckuh8VHkMpytkCRnn6vh7fwb2uiEXYAE7YlfIP/StEB
G4HhqWtHhgM0nn+B0U2XrCvMiQZnWj6cOuwXeaDzzN0Ozz/RlcNu4CAMzcaCVlY+
PqkJBsF08XzFjJF7NBdf0dO4Ft1JrQ2Vqk1FqnUmTOZQqb1/mgKJox6j17ZemP1W
CIkPMOU7tMkTrYPFbVpxioSauUmdhv3fUe26JlYc6JfqEkqvW1XBx6mvhPHKNmkf
2aPBgtyxCjMO3Wa4v58Ao2auqBgqk7QAVl1LXE9QI1B8jqR8ltik2w==
=E7ph
-----END PGP SIGNATURE-----
```

1551. Re: White Ham Stick?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-22 04:47:00 UTC
From: Dick Carroll <dickc58@att.net>
Message-ID: <3C81B8A8.C2120B75@att.net>
Source record: 138193

N4LQ wrote:

> Jim
> I just looked at their web site and it says they are black. Where does it
> say they make white ones?

The Pro-Am brand of "hamstick" style antennas are white and also are much more rugged, better constructed than the original Hamstick series. IMHO, of course. AND they're less expensive. You can buy them in sets at further savings.

Dick

1552. Re: Broadband Folded Dipoles & Delta Loops

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-22 04:47:18 UTC
From: Dick Carroll <dickc58@att.net>
Message-ID: <3C80EDEF.74887B0C@att.net>
Source record: 138194

Steve wrote:

> Here we go again. Now someone will speak up and tell us how they worked VK
> with one and just loves it. Well I bought one a few years ago just to see
> how bad the B&W really was. It was BAD BAD BAD. Very heavy, very ugly and
> very dead. Oh sure, signals could be heard and some stations worked. But
> they were down at least 20-30db on 80 meters! Higher bands were a bit
> better...if you call it better. The only thing going for it is low swr.
> Only the government would buy one of these things.
>

Well, that's one vote. For every one of this sort there is several who swear by them regardless of the fact of their builtin loss. But you should have known better than to expect much of one on 80.

Oh-after using one at work "*for the government*" for several years, I picked up a used one that was priced right (way below the extortionary figure of the mfgr). I was that impressed with its operation. So far I haven't had it in the air. I know how they compare to fullsized dipoles.

Dick

1553. Re: Broadband Folded Dipoles & Delta Loops

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-22 04:47:19 UTC
From: Dick Carroll <dickc58@att.net>
Message-ID: <3C817104.4F961D34@att.net>
Source record: 138195

ARDUJENSKI wrote:

> Here are some sites you may want to review. Note there has been a lot of
> discussion on the T2FD and B&W folded dipole over the past few years. Being
> broadbanded note it will not be as efficient as antennas such as dipoles cut
> for specific bands. Although not the most efficient it does offer certain
> conveniences such as not tuner necessary but at a price of loss of power. On
> 160m the B&W will be as much as 16dBlower than a resonant dipole at same height
> acording to reports but approach efficiencies more acceptable at the upper
> bands.
> http://www.cebik.com/wbfd.html
>
> http://www.cebik.com/t2fd.html
>
> http://www.hard-core-dx.com/nordicdx/antenna/wire/
>
> Go to eHam.com and look up B&W BROADBAND ANTENNA
>

And if you really want first person data, do a Google search on this newsgroup
archive.

Dick

1554. Re: Broadband Folded Dipoles & Delta Loops

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-22 04:47:21 UTC
From: Dick Carroll <dickc58@att.net>
Message-ID: <3C8174BD.5567D62@att.net>
Source record: 138196

'Doc wrote:

> Dave,
> I think your talking about antennas like B&K's folded
> dipole. If so, then yes, they do work. The problem is
> that they work very badly. Can't say exactly why, but
> I do know from experience that they are absolutely NOT
> worth having, unless you can't have ANY other kind of
> antenna.
> 'Doc

Doc, your experience evidently isn't universal by any means. I had occasion to use two different models for several years on a weekly basis on an 8MC frequency and also on 75 and 40 meters. The setting was two different HF emergency nets, one military and the other amateur. In both instances, over time, the loaded antennas performed very well. I do note that the instructions said they work better when matched at the operating frequency with a tuner, and I found that to be the case. We also had a couple dipoles on the some of them frequencies since we had multiple operations ongoing simultaneously and needed to be able to use all the frequencies without retuning and reloading, so we did informal comparison of the antennas on the air. I could detect no obvious differences although I'm sure there were some that would have been noticeable with S-meter readings on either end of the circuit. Operationally, little difference was noted.
I was well enough satisfied with them that I took the opportunity to acquire one for possible future use when a used one showed up cheap at a hamfest. They were mounted fairly high, one on a building rooftop, the other about 75 feet up a tower as an inverted V.

One more note. I was once acquainted with an individual who was involved with the Alaska State Troopers as a radio tech, and he told me they use T2FD antennas almost exclusively in their HF operations with good results. He said he had built many of them.When I mentioned the necessity of a non-inductive load resistor, he said that it turned out that the inductive resisters worked best! That would be the Radio Shack potted resistors which couldn't have but very little inductance. I once bought and "disassembled" one to see how it was constructed inside. It was a very small diameter, maybe 1/16 to 1/32 in, coil of resistance wire. I

didn't check the inductance on a meter but it was clearly a very small value.

Dick

1555. Re: What does the 'U' mean in RGnn/U cables?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-22 04:53:18 UTC
From: George Tyrebyter <GeoTyrebyter@netscape.net>
Message-ID: <3D3B8FBE.73865AD@netscape.net>
Source record: 138197

Ken Jones wrote:
>
> I think it's RadioGrade*/*Utility

I have thought that for many decades.
However, I do not have a reference, I don't have any idea where I got
that idea, and I've never been sufficiently confident to actually say
it.

--
George Tyrebyter

1556. Re: What Multi-Band Dipole to Buy for 1.5kW use??

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-22 04:57:32 UTC
From: CJ <difficult@times.com>
Message-ID: <ujn45v4cnaus3f@corp.supernews.com>
Source record: 138198

Here ya go.....

1. http://www.ab7sl.com/index.html?row1col2=w9inn.html

Handles USA Legal Limit and is resonant on 10-15-20-40-80m and comes in two lengths 78ft or 87 ft. Details on that page....

--

73 / DX de AB7SL - Charles
AB7SL - Ham Radio Pages
www.ab7sl.com

"Ed Senior" <eseniors@earthlink.net> wrote in message news:DbF_8.10742$_C2.806328@newsread2.prod.itd.earthlink.net...
> Hi Steve -
>
> W9INN has the best line of multband dipoles I have seen; and most,
> if not all, will take the power. But he doesn't have a 7-bander like
> you are looking for. It would take two of his: e.g., a 30/17/12 and an
> 80/40/20/15/10.
>
> My setup uses an 80/40/17 and a 20/15/10. With this setup, there are a
> grand total of only 4 traps; only 2 bands go through a trap (80 and 20);
> and no band goes through more than one trap. (Note: These traps do
> not use a discrete capacitor at all; he calls them "resonactors.")
> I'm a believer... his stuff works great, and he's great to deal with.
>
> My broadband vertical can handle 30 and 12 well, but those bands
> don't interest me much.
>
> 73, Ed
>
> "Steve Floyd" <w4yhd@earthlink.net> wrote in message
> news:2TC_8.8570$Qk6.2885@newsread1.prod.itd.earthlink.net...
> > I am looking for a multiband dipole antenna that is 90 ft. long (Max) and
> > works on 80-10 meter bands including 17 and 30 meter bands without a
> tuner.
> > I am looking at building my own parallel dipole design with only a trap in
> > the 40/80 meter leg for length reduction to 90 ft. Has any company out

> > there built a good quality multiband dipole that actually has 30 and
17
> > meters included. Or, has anyone built a good parallel (fan) dipole
for
> > 80,40,30.17,15,10 meter bands? I would really like to hear some
ideas and
> > advice.
> >
> > I have a Ameritron AL-1500 so it must take legal limit power.
> >
> > Thanks,
> > Steve
> > W4YHD
> > w4yhd@arrl.net
> >
> >
> >
> >
>
>

1557. SteppIR Yagi

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-22 06:59:10 UTC
From: "H. Adam Stevens" <solo@totalaccess.net>
Message-ID: <ujnbc0ajg34f5@corp.supernews.com>
Source record: 138199

it works
no BS (well, there were some drill tailings but the fit was aircraft
quality.)
nice antenna
www.fluidmotion.ws
paid cash
I'd do it again.
And it's just recently assembled and 7 feet high.
H
NQ5H

--
"The dinosaurs did not have a space program.
That's why they died."
Duncan Steel

1558. Re: Lightning 201 - The Missing Damage Mechansim

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-22 08:00:44 UTC
From: Reg Edwards <g4fgq.regp@btinternet.com>
Message-ID: <ahge3cnol2@venus.btinternet.com>
Source record: 138200

The capacitance of the Earth to the remainder of the Universe is only 707.4 microfarads.

But the breakdown voltage is VERY high.

========================
Regards from Reg G4FGQ
Free Radio Design Software
Go to http://www.g4fgq.com
========================

1559. Re: Better 2M vertical?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-22 08:53:43 UTC
From: nm5k@wt.net
Message-ID: <25eb70d7.0207220053.707bcc62@posting.google.com>
Source record: 138201

"Dennis Kaylor" <k4oxg@tampabay.rr.com> wrote in message news:<cWE_8.76515
> the think that bothers me with the other two are they are made mostly of
> fiberglass and that attracts lightening so i went with the comet which is
> made mostly of ABS plastic

Why would the fiberglass attract lightning over one made from plastic?
I don't see how there would be any difference assuming both antennas
had the same exact shape and sharpness of the tip. Seems to me the one
with the sharpest tip would be the best streamer, and attract the most
lightning. MK

1560. Re: Guerrilla.net collinear omni antenna build problems

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-22 10:23:09 UTC
From: Leonid Rosenboim <MY_FIRST_NAME@CONSULTANT.COM>
Message-ID: <newscache$7mbnzg$fxd$1@lnews.actcom.co.il>
Source record: 138202
Cross-posted to: rec.radio.amateur.antenna,alt.internet.wireless

I have not looked at the design you refer to, but if strength is not an issue, I think that copper will do just fine, or even better. Sure worth a try.

"inetquestion" <inetquestion@hotmail.com> wrote in message news:d3cf151.0207210715.10bfbe00@posting.google.com...
> What do you think about the copper wire used electrical wiring in
> homes. The diameter is close to that used in this design. For this
> application it doesn't require much strength, as it's inside pvc
> tubing. Also cheap....
>
> Thanks for your input,
>
> -Inet
> mailto:inetquestion@hotmail.com
>
>
>
>
> > Pure copper is too expensive, and has not enough mechanical strength, i.e.
> > impractical.
> > >
> > > 2. I understands the reasoning for the lengths of tubing & rod, but
> > > what about the diameter? Were these just convenient values, or was
> > > there some math behind the decision?
> > >
> > tube diameter influences antenna BANDWIDTH, i.e. what is the frequency range
> > around the center frequency that the antenna responds to (aka 3db
> > bandwdith). The wider the tubes, the wider the bandwidth, but wider
> > bandwidth makes a less effecient (smaller gain) antenna. There's a price for
> > anything.

1561. Re: Lightning 201 - The Missing Damage Mechansim

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-22 11:29:11 UTC
From: "J. Harvey" <JM002.Harvey_ANTI*SPAM_@Sympatico.ca>
Message-ID: <N%R_8.1178$dk1.295333@news20.bellglobal.com>
Source record: 138203

"Reg Edwards"
> The capacitance of the Earth to the remainder
> of the Universe is only 707.4 microfarads.
>
> But the breakdown voltage is VERY high.

www.google.com/search?q=sprites

1562. search for diagram qubical quad

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-22 11:41:52 UTC
From: Dave ON1DSQ <davyvanloon@pandora.be>
Message-ID: <4cS_8.22578$8o4.2912@afrodite.telenet-ops.be>
Source record: 138204

Hi my name is Dave (on1dsq) and I'am looking for a diagram of a 8 or 10 or
12 el qubical quad for 144 Mhz.
Who can help my please??
Also if you can copy it from a book no problem everything is welcome.

73's vy Dave

on1dsq@pandora.be

1563. Re: Lightning 201 - The Missing Damage Mechansim

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-22 11:48:17 UTC
From: "J. Harvey" <JM002.Harvey_ANTI*SPAM_@Sympatico.ca>
Message-ID: <HhS_8.1190$dk1.297344@news20.bellglobal.com>
Source record: 138205

"Reg Edwards"
> The capacitance of the Earth to the remainder
> of the Universe is only 707.4 microfarads.

Rhetorical Question: Does that mean that I could easily change the Earth's 'Ground' reference voltage using a simple circuit driven by 9-volt battery ? 707.4 microfarads isn't very high - it would seem to be a relatively simple matter to impose large voltage changes on a 707.4 microfarad capacitor. I wonder if there might be another factor...

1564. Re: Lightning 201 - The Missing Damage Mechansim

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-22 12:11:47 UTC
From: richardharrison@webtv.net
Message-ID: <1744-3D3BF683-224@storefull-2393.public.lawson.webtv.net>
Source record: 138206

J. Harvey wrote:
"Do you deny the existence of this property called "self capacitance"?"

No. But as described, requiring only only a single surface to have self capacitance, it is hard to square with Terman`s definition of capacitance on page 24 of the 1955 edition of "Electronic and Radio Engineering:
"A capacitor is formed whenever an insulator (i.e., dielectric) separates two conductors between which a difference of potential can exist."

Our subject has been lightning which seems to come from a capacitance although the cloud above earth isn`t much of a conductor until a plasma forms.

J. Harvey says self capacitance can be determined by measuring the static charge.

Why not call the measured quantity "static charge"? We have Coulomb`s law to work with static charge.

Best regards, Richard Harrison, KB5WZI

1565. Re: What antenna do you use as SWLer?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-22 12:55:38 UTC
From: Jake Brodsky <frussle@erols.com>
Message-ID: <hounjuk3u5dhskj3in23nrnmcu99f1rke5@4ax.com>
Source record: 138207

On Sat, 20 Jul 2002 01:12:04 GMT, Bob Miller <bamiller@texas.net>
wrote:

>I keep hearing about these swl "magnetic long wire baluns" but I'm not sure why
>you need one, and whether it is really helping things. On the back of your 535
>(I assume it's the JRC receiver) there is both a 50-ohm coax connector and a
>hi-z random wire connector. If you have a long wire, I'd just connect it
>directly to the hi-z connector.

These so-called MLB devices are really 9:1 UnUns. Lots of folks write
glowing reports about them. I'm a bit more sanguine. Here's the
deal:

If you have lots of locally generated noise from TVs, Computers, light
dimmers, and other such RFI generating hash; and you aren't able to
erect an antenna at a reasonable distance from the house, THEN an RF
isolation transformer is not a bad idea.

This 9:1 isolation transformer works well especially if your random
wire antenna isn't a substantial fraction of a wavelength. Basically,
it isolates your antenna system away from your house so that you don't
pick up as much e-field garbage as you get closer to the house.

>Put up the longest, highest piece of wire, of any length, the longer the better.
>That is your "best antenna."

Agreed. However some of these folks don't have the room or the
structures to get such an antenna far enough away from the noises in
the house. This is the next best alternative.

Jake Brodsky, AB3A mailto:frussle@erols.com
"Beware of the massive impossible!"

1566. Re: Lightning 201 - The Missing Damage Mechansim

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-22 13:20:29 UTC
From: richardharrison@webtv.net
Message-ID: <23419-3D3C069D-415@storefull-2397.public.lawson.webtv.net>
Source record: 138208

J. Harvey wrote:
"It would seem to be a relatively simple matter to impose large voltage changes on a 707.4 microfarad capacitor."

The charge difference between the earth and its ionosphere has been measured at 300,000 volts. Cosmic rays are said to charge the ionosphere and cause the difference. This large potential difference is supposed to incite leakage current , some of which deposits electrical charges on water droplets in the atmosphere.

These phenomena may complicate adding or subtracting from the charge on the surface which relates to the rest of the universe as a capacitor plate.

To change the earth`s charge requires export or import of charge. That doesn`t seem so simple to me but the ionosphere might be used as an accelerating electrode.

Best regards, Richard Harrison, KB5WZI

1567. Re: Broadband Folded Dipoles & Delta Loops

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-22 14:25:09 UTC
From: 'Doc <w5lz@icok.net>
Message-ID: <3D3C15B0.B1B36852@icok.net>
Source record: 138209

Dick,
I certainly didn't intend to imply that my experiences
were universal, I'm sure that they are not. I did intend
to say that the majority of amateur users of the B&W
antennas have been disappointed with their performance.
That's fairly simple to confirm by reading the posts on
this newsgroup from people who have used them.
There can be huge differences between what the military
and amateurs consider 'good', or adequate, performance. The
requirements of the two are not the same, and sometimes not
even close. On the whole, amateurs tend to expect more from
equipment, in particular areas, than the military does. The
military is more willing to accept compromise in particular
areas than amateurs. Nothing unusual about that.
B&W's folded dipole was originally designed for the military
and then sold on the civilian market. As a military antenna
it may suit their requirements just fine, but is certainly a
'compromise' in the civilian market, and one that wasn't
accepted as shown by the number of them you see (or don't see)
in over 40 years of amateur use.
'Doc

1568. Lightning Protection on AC?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-22 14:28:26 UTC
From: carhore@yahoo.com
Message-ID: <ca167c61.0207220628.1caed738@posting.google.com>
Source record: 138210

Instead of doing Power-over-Ethernet to power a tower-mounted
802.11b accesspoint/bridge (in this case a Buffalo AirStation or
AirStation Pro) and have to deal with / design for the large
voltage drop, I am thinking of running AC power up the tower
instead.

What is the recommended lightning protection method for the AC line
in this scenario?

Do I just use two standard AC surge protectors, one on
either end of the AC run? One on high next to the accesspoint
to protect the accesspoint, and another on the bottom to protect
the building electrical system?
For the bottom one, do you just connect the Line side [plug]
of the strip to an electrical outlet? Is a standard strip
bidirectionally protective, i.e., able to block surges coming
from the Load side from propagating into the building electrical
system? That is, able to protect the building system from the
"equipment"?

For the Cat5 cable, I assume that you need two TrippLite DNET1
suppressors or similar, one on either end of the Cat5 run, right?

1569. Re: Better 2M vertical?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-22 14:35:58 UTC
From: richardharrison@webtv.net
Message-ID: <2313-3D3C184E-99@storefull-2394.public.lawson.webtv.net>
Source record: 138211

Mark Keith wrote:
"Why would fiberglass attract lightning over one made of plastic?"

A fiberglass antenna attracts lightning the same way a trailer park attracts a tornado.

Best regards, Richard Harrison, KB5WZI

1570. Re: White Ham Stick?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-22 14:41:12 UTC
From: N4LQ <N4LQ@igLou.com>
Message-ID: <3d3ac7e9_3@news.iglou.com>
Source record: 138293

I saw some white HF whips at the Dayton Hamvention several years ago but do not recall the manufacture. I wish I had bought one because it seems like every car I end up with is white!

--
Steve Ellington N4LQ.
<rons533@dejazzd.com> wrote in message news:3D39596B.78DC@dejazzd.com...
> Is there such a thing as a white color Ham Stick? Believe it or not I
> need a white one. Had thought about painting a black one but it will be
> in a harsh enviornment and I am concerned the paint will peel. I know
> there are several manufacturers of this type antenna. Maybe one is
> white?
>
> Thanks

1571. Re: Broadband Folded Dipoles & Delta Loops

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-22 14:59:26 UTC
From: richardharrison@webtv.net
Message-ID: <2314-3D3C1DCE-35@storefull-2394.public.lawson.webtv.net>
Source record: 138212

Doc, W5LZ wrote:
"That`s an artificial distinction, and as such, means that it isn`t true except in few cases."

Passed or failed. It is an artificial distinction. Does that mean that it`s untrue except in a few cases?

Best regards, Richard Harrison, KB5WZI

1572. Re: Lightning 201 - The Missing Damage Mechansim

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-22 15:35:36 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <5g9oju8p82mc4ple3qvdmogkutkfl2v99c@4ax.com>
Source record: 138213

On Mon, 22 Jul 2002 08:20:29 -0500 (CDT), richardharrison@webtv.net
(Richard Harrison) wrote:

>
>To change the earth`s charge requires export or import of charge. That
>doesn`t seem so simple to me but the ionosphere might be used as an
>accelerating electrode.
>
>Best regards, Richard Harrison, KB5WZI

Hi Richard,

Forgotten your solar mechanics? Occasional storms 'n' flares (talk
about sparks!) there send us surplus charge. :-)

73's
Richard Clark, KB7QHC

1573. Slightly OT: MFJ 268 antenna analyzer battery level ????

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-22 16:16:08 UTC
From: Ed Laughery <laughery@bellsouth.net>
Message-ID: <O0W_8.130589$JU3.60325843@e3500-atl1.usenetserver.com>
Source record: 138214

Hello

Only slightly OT - ? about ANTENNA analyzer <hi>. I have just received a new MFJ 269 analyzer with MFJ nickle metal rechargable batteries. The unit uses 10 1.2 volt cells - after charging for 16 hours the unit indicates during power up a battery level of 10.8 - 11 volts. The unit works OK at that level but would like to know if this is a normal/valid reading. MFJ tech support told me it should be around 13.8 volts which in my old grey brain is difficult to understand (10 x 1.2 = 12 < 13.8). Has MFJ come up with new physics power miracle?

Any info is appreciated including other batteries that some of you may be using in this instrument.

Thanks in advance
Ed
AD5JV

1574. Re: Slightly OT: MFJ 269 antenna analyzer battery level ????

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-22 16:17:44 UTC
From: Ed Laughery <laughery@bellsouth.net>
Message-ID: <i2W_8.130592$JU3.60326088@e3500-atl1.usenetserver.com>
Source record: 138215

Opps- I checked over everything but the subject line in my original post.

Ed

"Ed Laughery" <laughery@bellsouth.net> wrote in message
news:O0W_8.130589$JU3.60325843@e3500-atl1.usenetserver.com...
> Hello
>
> Only slightly OT - ? about ANTENNA analyzer <hi>. I have just received a
> new MFJ 269 analyzer with MFJ nickle metal rechargable batteries. The
unit
> uses 10 1.2 volt cells - after charging for 16 hours the unit indicates
> during power up a battery level of 10.8 - 11 volts. The unit works OK at
> that level but would like to know if this is a normal/valid reading.
MFJ
> tech support told me it should be around 13.8 volts which in my old grey
> brain is difficult to understand (10 x 1.2 = 12 < 13.8). Has MFJ come up
> with new physics power miracle?
>
> Any info is appreciated including other batteries that some of you may be
> using in this instrument.
>
> Thanks in advance
> Ed
> AD5JV
>
>
>

1575. Re: Lightning Protection on AC?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-22 16:28:53 UTC
From: richardharrison@webtv.net
Message-ID: <23419-3D3C32C5-439@storefull-2397.public.lawson.webtv.net>
Source record: 138216

c hore wrote:
"What is the recommended lightning protection method for the AC line in this scenario?"

AM broadcast stations use a system which works to keep both r-f and lightning off the a-c supply.

Tower lights have no shunts across them for protection and their failure rates are unaffected. They are fed through steel conduit which adds inductance to the wires and makes the tower a more attractive path for lightning than the wires. Lightning is common-mode, so not much surge voltage appears wire-to-wire. A more sensitive load might need more protection. 3 MOV`s might be appropriate, one from wire to wire, and one from each wire to the conduit.

Across the base insulator, the broadcaster has an Austin Transformer or tower lighting chokes in each tower lighting wire to prevent r-f and lightning currents from passing in either direction. The inductance in tower lighting chokes is low at the power frequency. The resistance is also low, and the tower lighting current is practically unaffected.

The only bypass at the tower side of the Austin Trnsformer or tower lighting chokes is the arc gap at the base insulator. But the Faraday screen in the antenna coupling network takes all the lightning flashes.

On the powerline side of the Austin Transformer or tower lighting chokes, conventional arresters shunted with a-c capacitors of the type sold for the purpose bypass each wire, including the neutral wire, to ground. The wiring is connected between tower site and breaker box, using more steel conduit. There are more arresters and capacitors at the breaker box.

Tower lighting chokes are probably about 1000 ohms reactance at the r-f frequency. J.W. Miller used to sell tower lighting chokes at a reasonable price and I`ve used many in lightning protection that had nothing to do with tower lightninmg. They did the job when nothing else worked without them.

Best regards, Richard Harrison, KB5WZI

1576. Re: Lightning 201 - The Missing Damage Mechansim

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-22 16:49:53 UTC
From: richardharrison@webtv.net
Message-ID: <23420-3D3C37B1-135@storefull-2397.public.lawson.webtv.net>
Source record: 138119

Richard Clark, KB7QHC wrote:
"Occasional storms "n" flares (talk about sparks!) there (the sun) send us surplus charge."

Yes, truly. But, J.`s challenge was a man-made change of the earth`s charge. 50 years ago we thought atomic power would make everything possible. Then, the environmentalists appeared on scene.

I remember how much trouble it was to try to recreate the "Radio Luxembourg effect".

Best regards, Richard Harrison, KB5WZI

1577. Re: Slightly OT: MFJ 268 antenna analyzer battery level ????

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-22 16:59:11 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <ajeojusg5t5n2a1fr6mn86nltpd7ovdii1@4ax.com>
Source record: 138217

On Mon, 22 Jul 2002 11:16:08 -0500, "Ed Laughery"
<laughery@bellsouth.net> wrote:

> it should be around 13.8 volts

Hi Ed,

Sounds like the potential for lead-acid batteries, not what you are
using.

73's
Richard Clark, KB7QHC

1578. Re: Slightly OT: MFJ 268 antenna analyzer battery level ????

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-22 17:02:16 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <3D3C3A98.7060309@eznec.com>
Source record: 138218

No battery has a voltage that stays put regardless of the current drain or state of charge, although NiMH cells have a more constant voltage than, say, alkaline cells. The voltage of a freshly charged NiMH cell is 1.3 - 1.35 volts. (The voltage can be considerably higher than this while charging.) When you begin discharging one with moderate current drain, the voltage rather quickly drops to about 1.25 volts, and it very slowly drops from there to about 1.2 volts as the cell discharges. It stays between about 1.25 and 1.2 volts for nearly the whole discharge period. Just before the cell is completely discharged, the voltage drops quite rapidly below 1.2 volts. At 1.0 volts, there's very little energy left, and the cell is considered fully discharged. NiCd cells have the same characteristics in this regard.

Sounds like you have a shorted cell, or perhaps two -- or maybe the voltage isn't being reported correctly. It's easy to check for this with a voltmeter.

Roy Lewallen, W7EL

Ed Laughery wrote:
> Hello
>
> Only slightly OT - ? about ANTENNA analyzer <hi>. I have just received a
> new MFJ 269 analyzer with MFJ nickle metal rechargable batteries. The unit
> uses 10 1.2 volt cells - after charging for 16 hours the unit indicates
> during power up a battery level of 10.8 - 11 volts. The unit works OK at
> that level but would like to know if this is a normal/valid reading. MFJ
> tech support told me it should be around 13.8 volts which in my old grey
> brain is difficult to understand (10 x 1.2 = 12 < 13.8). Has MFJ come up
> with new physics power miracle?
>
> Any info is appreciated including other batteries that some of you may be
> using in this instrument.
>
> Thanks in advance
> Ed
> AD5JV
>
>
>

1579. Re: White Ham Stick?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-22 18:48:27 UTC
From: "R. Scott" <washingtonham@yahoo.com>
Message-ID: <3D3C53E8.1D3FA890@yahoo.com>
Source record: 138121

rons533@dejazzd.com wrote:

> Is there such a thing as a white color Ham Stick? Believe it or not I
> need a white one. Had thought about painting a black one but it will be
> in a harsh enviornment and I am concerned the paint will peel. I know
> there are several manufacturers of this type antenna. Maybe one is
> white?
>
> Thanks

Try the Pro-Am hamstick type antenna for White. Ive used them for a long
time and they are quite rugged.

Scotty N7HJ

1580. Re: Inverted vertical

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-22 18:48:54 UTC
From: Dave Allen <david_e_allen@agilent.com>
Message-ID: <3D3C5396.E3CDBE72@agilent.com>
Source record: 138122

I second this idea. Extend the mast up past the beam and put your verticals
above it.

dave allen, wb0taq

Ed Juge/NM wrote:

> If the vertical is VHF or UHF (built-on ground plane) side mounting is fine.
> Get it as far as you can from the tower so the tower won't de-tune it. (And
> don't worry about which sideband to use!! ;-) The absolute best place for
> it would be above your beam. The higher, the better.
>
> Ed, W5EJ

1581. Re: Slightly OT: MFJ 268 antenna analyzer battery level ????

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-22 18:52:49 UTC
From: Ed Laughery <laughery@bellsouth.net>
Message-ID: <FjY_8.131438$JU3.60355951@e3500-atl1.usenetserver.com>
Source record: 138123

Thanks for the replies from all.

Indeed, two of the batteries are indicating 0 volts, the others are around
1.35 - 1.38 volts.

Ed AD5JV

"Roy Lewallen" <w7el@eznec.com> wrote in message
news:3D3C3A98.7060309@eznec.com...
> No battery has a voltage that stays put regardless of the current drain
> or state of charge, although NiMH cells have a more constant voltage
> than, say, alkaline cells. The voltage of a freshly charged NiMH cell is
> 1.3 - 1.35 volts. (The voltage can be considerably higher than this
> while charging.) When you begin discharging one with moderate current
> drain, the voltage rather quickly drops to about 1.25 volts, and it very
> slowly drops from there to about 1.2 volts as the cell discharges. It
> stays between about 1.25 and 1.2 volts for nearly the whole discharge
> period. Just before the cell is completely discharged, the voltage drops
> quite rapidly below 1.2 volts. At 1.0 volts, there's very little energy
> left, and the cell is considered fully discharged. NiCd cells have the
> same characteristics in this regard.
>
> Sounds like you have a shorted cell, or perhaps two -- or maybe the
> voltage isn't being reported correctly. It's easy to check for this with
> a voltmeter.
>
> Roy Lewallen, W7EL
>
> Ed Laughery wrote:
> > Hello
> >
> > Only slightly OT - ? about ANTENNA analyzer <hi>. I have just received
a
> > new MFJ 269 analyzer with MFJ nickle metal rechargable batteries. The
unit
> > uses 10 1.2 volt cells - after charging for 16 hours the unit indicates
> > during power up a battery level of 10.8 - 11 volts. The unit works OK
at
> > that level but would like to know if this is a normal/valid reading.
MFJ
> > tech support told me it should be around 13.8 volts which in my old grey
> > brain is difficult to understand (10 x 1.2 = 12 < 13.8). Has MFJ come
up
> > with new physics power miracle?
> >

> > Any info is appreciated including other batteries that some of you may
be
> > using in this instrument.
> >
> > Thanks in advance
> > Ed
> > AD5JV
> >
> >
> >
>

1582. Oil in dummy loads vs. SWR.

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-22 19:13:35 UTC
From: jeff <wd4nmq@earthlink.net>
Message-ID: <3D3C599F.732499B6@earthlink.net>
Source record: 138124
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.equipment

I feel that I am once again going to open the old debate which oil to use in a dummy load for heat conduction.

But, that is not my question. Mine has do with the oil's effect on SWR vs. frequency.
The reason I ask this I have a Dentron Big Dummy I bought at a hamfest many years ago and have seldom used it, then only on HF, do to being "out" of ham radio for a while. I have now been using it to check out several old club rigs and I have noticed a big difference between it and the club's Heath Cantenna.

The SWR increases as frequency increases. At 80 thru 15 meters there is no SWR indication with just a little at 10 meters. No problem. But, at 2 meters the SWR is 3:1. The Cantenna has no indicated SWR at 2 meters. Infact, it states on the can SWR <1.5 up to 300 mc.

The Dentron has no frequency range on it.

I took the lids off and both had an identical looking carbon resistor. But, their oil was definatly different. The Cantenna was perfectly clear while the Dentron was much darker.

So, does anybody know anything about the Dentron Big Dummy and it's frequency range? What kind of oil it shipped with?

I started to take the lid from each, drain and clean them and swap them to see if the range follows the oil or the resistor. But, that is to much work.

--
Jeff, wd4nmq
wd4nmq@earthlink.net
http://home.earthlink.net/~wd4nmq
iLink client node #10438, iLink sysop link node #14746

1583. Re: What does the 'U' mean in RGnn/U cables?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-22 19:20:45 UTC
From: CA <sm6pxj@hotmail.com>
Message-ID: <OUY_8.5439$t4.13938@nntpserver.swip.net>
Source record: 138125

>>
>> I am sure that someone out there knows this. A recent
>> post in another newsgroup set me off searching my library
>> and the net for the answer but I have failed. I am fairly
>> sure that 'RG' stands for 'Radio Grade' but can only guess
>> that the 'U' means unbalanced but the definitive
>> publication MIL-HDBK-216 is now way out of print.
>>
>> Cheers - Joe, G3LLV

Check this page
http://www.cabletoday.com/ic2/archives/0500/0500mon4.htm

73
SM6PXJ, Christer

1584. 3/2-Wave Dipole & 75 Ohm Quarter-Wave Matching Section

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-22 19:29:28 UTC
From: ddelakas@midway.uchicago.edu
Message-ID: <s2Z_8.49$Z4.13396@news.uchicago.edu>
Source record: 138126

Greetings, all. Apologies if this particular horse has been previously flogged.

I am interested in mounting a 3/2 wave 20 meter dipole on my roof (45 feet up, urban setting, space limitations). I plan to cut it for 14.150 MHz since I spend most of my time on 20 M phone & PSK31. Using the formula length (ft) = 1460/f, the dipole will be 103 ft 2 in long.

I plan to feed it with RG213. As it will be a monobander, I would like to add a quarter-wave matching section of RG11. I figure the matching section length in feet to be = ((246)*vf)/f = (246*.66)/14.150 = 11 ft 6 in roughly.

So far so good. I have the following questions:

1. What is the "power rating" of ordinary RG11? I usually run abt. 600 watts on phone.

2. Is it true that I'll get a better match if I add the RG11 matching section AFTER a run of 1/2 wavelength (roughly 23 ft) of RG213 attached directly to the dipole?

3. Are F connectors robust enough to handle Midwest winters? The only ways I see to join the RG11 and the RG213 are with F-to-UHF / UHF-to-F adapters -or- solder-n-smear (with vinyl tape & Coax Seal or similar product).

Thanks for taking the time to read this post es 73.

Dave D, KB9YOZ

1585. Re: Oil in dummy loads vs. SWR.

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-22 19:32:31 UTC
From: mike <spamme0@juno.com>
Message-ID: <3D3C5DCF.67106C38@juno.com>
Source record: 138127
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.equipment

Oil probably does not affect SWR that much.
Just pull the resistor out of the oil and see if SWR changes.
Your experiments verify that the resistive component is 50 ohms.
The problem is likely in the inductance of the resistor and it's
mounting structure. Resistors that "look alike" often aren't.
mike
Bunch of stuff For Sale and Wanted at the link below.
http://www.geocities.com/SiliconValley/Monitor/4710/

jeff wrote:

> I feel that I am once again going to open the old debate which oil to
> use in a dummy load for heat conduction.
>
> But, that is not my question. Mine has do with the oil's effect on SWR
> vs. frequency.
> The reason I ask this I have a Dentron Big Dummy I bought at a hamfest
> many years ago and have seldom used it, then only on HF, do to being
> "out" of ham radio for a while. I have now been using it to check out
> several old club rigs and I have noticed a big difference between it and
> the club's Heath Cantenna.
>
> The SWR increases as frequency increases. At 80 thru 15 meters there is
> no SWR indication with just a little at 10 meters. No problem. But, at 2
> meters the SWR is 3:1. The Cantenna has no indicated SWR at 2 meters.
> Infact, it states on the can SWR <1.5 up to 300 mc.
>
> The Dentron has no frequency range on it.
>
> I took the lids off and both had an identical looking carbon resistor.
> But, their oil was definatly different. The Cantenna was perfectly clear
> while the Dentron was much darker.
>
> So, does anybody know anything about the Dentron Big Dummy and it's
> frequency range? What kind of oil it shipped with?
>
> I started to take the lid from each, drain and clean them and swap them
> to see if the range follows the oil or the resistor. But, that is to
> much work.
>
> --
> Jeff, wd4nmq
> wd4nmq@earthlink.net
> http://home.earthlink.net/~wd4nmq

> iLink client node #10438, iLink sysop link node #14746

--
Bunch of stuff For Sale and Wanted at the link below.
http://www.geocities.com/SiliconValley/Monitor/4710/

1586. Re: rempte antennna tuner as balun for multi-dipole antenna?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-22 19:42:31 UTC
From: Dave Allen <david_e_allen@agilent.com>
Message-ID: <3D3C6026.8ECF243A@agilent.com>
Source record: 138128

How did you split up the bands into two feedpoints?
Ie, what bands are you feeding together?
It's always a trick, finding out which bands will "feed together".

dave allen, wb0taq

Bob Cook wrote:

> I am using two such multi-band antennas, (parallel dipoles, in
> the same cable, 3 dipoles per band, fed with coax, tuner at the transmitter
> end). I use them on 40, 30, 20, 17, 15, 12 and 10 meters.
>

1587. Re: Oil in dummy loads vs. SWR.

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-22 19:48:30 UTC
From: Don Smith <desmith@innercite.com>
Message-ID: <ujoocm26hqhf02@corp.supernews.com>
Source record: 138129
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.equipment

If my memory serves me correctly the Cantenna uses Mineral Oil like you might find in a drug store. It is completely colorless and I have used it in my load for many years up to 800 mhz. Hope this helps Don KB6GQA

"jeff" <wd4nmq@earthlink.net> wrote in message news:3D3C599F.732499B6@earthlink.net...
> I feel that I am once again going to open the old debate which oil to
> use in a dummy load for heat conduction.
>
> But, that is not my question. Mine has do with the oil's effect on SWR
> vs. frequency.
> The reason I ask this I have a Dentron Big Dummy I bought at a hamfest
> many years ago and have seldom used it, then only on HF, do to being
> "out" of ham radio for a while. I have now been using it to check out
> several old club rigs and I have noticed a big difference between it and
> the club's Heath Cantenna.
>
> The SWR increases as frequency increases. At 80 thru 15 meters there is
> no SWR indication with just a little at 10 meters. No problem. But, at 2
> meters the SWR is 3:1. The Cantenna has no indicated SWR at 2 meters.
> Infact, it states on the can SWR <1.5 up to 300 mc.
>
> The Dentron has no frequency range on it.
>
> I took the lids off and both had an identical looking carbon resistor.
> But, their oil was definatly different. The Cantenna was perfectly clear
> while the Dentron was much darker.
>
> So, does anybody know anything about the Dentron Big Dummy and it's
> frequency range? What kind of oil it shipped with?
>
> I started to take the lid from each, drain and clean them and swap them
> to see if the range follows the oil or the resistor. But, that is to
> much work.
>
> --
> Jeff, wd4nmq
> wd4nmq@earthlink.net
> http://home.earthlink.net/~wd4nmq
> iLink client node #10438, iLink sysop link node #14746

1588. Re: 3/2-Wave Dipole & 75 Ohm Quarter-Wave Matching Section

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-22 19:59:05 UTC
From: Dale Parfitt <parinc@gte.net>
Message-ID: <3D3C6242.CB4620D6@gte.net>
Source record: 138130

David Delakas wrote:

> Greetings, all. Apologies if this particular horse has been
> previously flogged.
>
> I am interested in mounting a 3/2 wave 20 meter dipole on my roof (45
> feet up, urban setting, space limitations). I plan to cut it for 14.150
> MHz since I spend most of my time on 20 M phone & PSK31. Using the formula
> length (ft) = 1460/f, the dipole will be 103 ft 2 in long.
>
> I plan to feed it with RG213. As it will be a monobander, I would like to
> add a quarter-wave matching section of RG11. I figure the matching section
> length in feet to be = ((246)*vf)/f = (246*.66)/14.150 = 11 ft 6 in
> roughly.
>
> So far so good. I have the following questions:
>
> 1. What is the "power rating" of ordinary RG11? I usually run abt. 600
> watts on phone.
>

RG213 is good for 1800W at 30 MHz 1:1 match. Your 600W will be fine.

>
> 2. Is it true that I'll get a better match if I add the RG11 matching
> section AFTER a run of 1/2 wavelength (roughly 23 ft) of RG213 attached
> directly to the dipole?
>
> 3. Are F connectors robust enough to handle Midwest winters? The only ways
> I see to join the RG11 and the RG213 are with F-to-UHF / UHF-to-F
> adapters -or- solder-n-smear (with vinyl tape & Coax Seal or similar
> product).
>

RG11 accepts PL259 connectors directly- I would not trust F at that power
level.

>
> Thanks for taking the time to read this post es 73.
>
> Dave D, KB9YOZ

1589. 70 cm duplexers

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-22 20:24:14 UTC
From: mnewman@clear.net.nz
Message-ID: <3d3c68ad.2441085@news.clear.net.nz>
Source record: 138131

I would appreciate some advice on what are sources of 70 cm
bandpass/band reject duplexers for use in 430-440 MHz band, now that
Wacom has been taken over?

MikeN ZL1BNB

1590. Re: What does the 'U' mean in RGnn/U cables?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-22 21:01:26 UTC
From: AC6V <ac6v@amsat.org>
Message-ID: <Go__8.15428$Fq6.1546275@news2.west.cox.net>
Source record: 138132

See some answers at URL:
http://www.cabletoday.com/ic2/archives/0500/0500mon4.htm

73 AC6V

1591. Re: 70 cm duplexers

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-22 21:15:30 UTC
From: "Bob M." <xxxxx@yyyy.zzz>
Message-ID: <SB__8.228755$Bt1.12311124@bin5.nnrp.aus1.giganews.com>
Source record: 138133

Phelps Dodge, now Celwave, still makes excellent products, if you can afford them. Check out eBay as there are usually a few there each month.

"Mike Newman" <mnewman@clear.net.nz> wrote in message news:3d3c68ad.2441085@news.clear.net.nz...
> I would appreciate some advice on what are sources of 70 cm
> bandpass/band reject duplexers for use in 430-440 MHz band, now that
> Wacom has been taken over?
>
> MikeN ZL1BNB

1592. Re: What does the 'U' mean in RGnn/U cables?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-22 21:25:36 UTC
From: CJ <difficult@times.com>
Message-ID: <ujou2i3fs67q1a@corp.supernews.com>
Source record: 138136

Hello Rod,
Thought you left the newsgroups??? Nice to see your callsign around
here again.....

--

73 / DX de AB7SL - Charles
AB7SL - Ham Radio Pages
www.ab7sl.com

"AC6V" <ac6v@amsat.org> wrote in message
news:Go__8.15428$Fq6.1546275@news2.west.cox.net...
> See some answers at URL:
> http://www.cabletoday.com/ic2/archives/0500/0500mon4.htm
>
> 73 AC6V
>
>

1593. Re: Oil in dummy loads vs. SWR.

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-22 21:26:03 UTC
From: Bob Nielsen <nielsen@remove_this.oz.net>
Message-ID: <ahht9b$f17$0@216.39.144.81>
Source record: 138134
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.equipment

The Heath Cantenna did not come with oil. A club I belonged to filled
it with "Chevron Flo-Cool 180" which worked great. Fortunately we had
a free source of that product, as it is not cheap. Mineral oil seems
to be the fluid of choice.

Bob, N7XY

On Mon, 22 Jul 2002 12:48:30 -0700, Don Smith wrote:
> If my memory serves me correctly the Cantenna uses Mineral Oil like you
> might find in a drug store. It is completely colorless and I have used it
> in my load for many years up to 800 mhz. Hope this helps Don KB6GQA
>
> "jeff" <wd4nmq@earthlink.net> wrote in message
> news:3D3C599F.732499B6@earthlink.net...
>> I feel that I am once again going to open the old debate which oil to
>> use in a dummy load for heat conduction.
>>
>> But, that is not my question. Mine has do with the oil's effect on SWR
>> vs. frequency.
>> The reason I ask this I have a Dentron Big Dummy I bought at a hamfest
>> many years ago and have seldom used it, then only on HF, do to being
>> "out" of ham radio for a while. I have now been using it to check out
>> several old club rigs and I have noticed a big difference between it and
>> the club's Heath Cantenna.
>>
>> The SWR increases as frequency increases. At 80 thru 15 meters there is
>> no SWR indication with just a little at 10 meters. No problem. But, at 2
>> meters the SWR is 3:1. The Cantenna has no indicated SWR at 2 meters.
>> Infact, it states on the can SWR <1.5 up to 300 mc.
>>
>> The Dentron has no frequency range on it.
>>
>> I took the lids off and both had an identical looking carbon resistor.
>> But, their oil was definatly different. The Cantenna was perfectly clear
>> while the Dentron was much darker.
>>
>> So, does anybody know anything about the Dentron Big Dummy and it's
>> frequency range? What kind of oil it shipped with?
>>
>> I started to take the lid from each, drain and clean them and swap them
>> to see if the range follows the oil or the resistor. But, that is to
>> much work.
>>
>> --

>> Jeff, wd4nmq
>> wd4nmq@earthlink.net
>> http://home.earthlink.net/~wd4nmq
>> iLink client node #10438, iLink sysop link node #14746
>
>

1594. Re: 70 cm duplexers

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-22 21:27:30 UTC
From: Tom Brown N4TAB <tab@signalgrp.com>
Message-ID: <j2uojucql4t3m82dsj8b4q4ivomfg1r4pc@4ax.com>
Source record: 138135

Also look at Fiplex www.fiplex.com . Full line of products
equivalent to Wacom and at better prices.

Tom N4TAB

~~~~~~~~~

>Phelps Dodge, now Celwave, still makes excellent products, if you can afford
>them. Check out eBay as there are usually a few there each month.
>
>"Mike Newman" <mnewman@clear.net.nz> wrote in message
>news:3d3c68ad.2441085@news.clear.net.nz...
>> I would appreciate some advice on what are sources of 70 cm
>> bandpass/band reject duplexers for use in 430-440 MHz band, now that
>> Wacom has been taken over?
>>
>> MikeN ZL1BNB
>
~~~~~~~~~

1595. Re: Oil in dummy loads vs. SWR.

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-22 21:36:52 UTC
From: Uncle Peter <radioconnectionNO@cox.netSPAM>
Message-ID: <UV__8.162423$DB.5614416@news1.east.cox.net>
Source record: 138137
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.equipment

IIRC most of those loads had the load resistor surrounded by a
tapering shield -- I assume that acted like a tapered coaxial
line that "matched" the load resistor impedance along its
length. I wonder if the different oils have different dielectric
constants--
that could explain the differing SWR readings at VHF frequencies
(assuming the load is non reactive to begin with).

Pete

"jeff" <wd4nmq@earthlink.net> wrote in message
news:3D3C599F.732499B6@earthlink.net...
> I feel that I am once again going to open the old debate which oil to
> use in a dummy load for heat conduction.
>
> But, that is not my question. Mine has do with the oil's effect on SWR
> vs. frequency.
> The reason I ask this I have a Dentron Big Dummy I bought at a hamfest
> many years ago and have seldom used it, then only on HF, do to being
> "out" of ham radio for a while. I have now been using it to check out
> several old club rigs and I have noticed a big difference between it and
> the club's Heath Cantenna.
>
> The SWR increases as frequency increases. At 80 thru 15 meters there is
> no SWR indication with just a little at 10 meters. No problem. But, at 2
> meters the SWR is 3:1. The Cantenna has no indicated SWR at 2 meters.
> Infact, it states on the can SWR <1.5 up to 300 mc.
>
> The Dentron has no frequency range on it.
>
> I took the lids off and both had an identical looking carbon resistor.
> But, their oil was definatly different. The Cantenna was perfectly clear
> while the Dentron was much darker.
>
> So, does anybody know anything about the Dentron Big Dummy and it's
> frequency range? What kind of oil it shipped with?
>
> I started to take the lid from each, drain and clean them and swap them
> to see if the range follows the oil or the resistor. But, that is to
> much work.
>
> --
> Jeff, wd4nmq
> wd4nmq@earthlink.net

> http://home.earthlink.net/~wd4nmq
> iLink client node #10438, iLink sysop link node #14746

1596. Re: What Multi-Band Dipole to Buy for 1.5kW use??

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-22 22:23:06 UTC
From: Mark Krubsack <mkrubsack@yahoo.com>
Message-ID: <9a1pju0sngj271i44eb1mloe3kbrcg7uq3@4ax.com>
Source record: 138138

On Sun, 21 Jul 2002 18:15:26 GMT, "Steve Floyd" <w4yhd@earthlink.net>
wrote:

>I am looking for a multiband dipole antenna that is 90 ft. long (Max) and
>works on 80-10 meter bands including 17 and 30 meter bands without a tuner.
>I am looking at building my own parallel dipole design with only a trap in
>the 40/80 meter leg for length reduction to 90 ft. Has any company out
>there built a good quality multiband dipole that actually has 30 and 17
>meters included. Or, has anyone built a good parallel (fan) dipole for
>80,40,30.17,15,10 meter bands? I would really like to hear some ideas and
>advice.
>
>I have a Ameritron AL-1500 so it must take legal limit power.
>

The W9INN antennas will fit your bill. I use a 80/40 meter version
with full power (Alpha 99) and narry a problem. They have a variety of
multi-band dipoles, some as short as 60+ feet.

Check out the add in each month's QST, or see
http://www.cableone.net/ctj92/index.html?row1col2=w9inn.html

Mark Krubsack,
ke6oi@arrl.net

1597. Re: Coax conduit to tower

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-22 22:28:50 UTC
From: Sylvan Butler <Znospam+noZs_0207@hpb13799Z.Zboi.hpZ.com.invalid>
Message-ID: <slrnajp1p2.p6u.Znospam+noZs_0207@hpb13799Z.Zboi.hpZ.com.invalid>
Source record: 138140

On Sat, 20 Jul 2002 23:14:46 GMT, Roger Halstead <rdhalste@tm.net> wrote:
> Never had water get in conduit yet.

Usually it comes in via air movement and condensation. If you are
in a very dry climate it can take a very long time and may even dry
out during the dryer times of the year.

> This has only been in a few year, but no problem so far.
> I had one run made of 5" sewer pipe I used for 17 years. That used a capped
> off 45 with drain holes in the bottom, but never needed them.
>
> I seal every joint in the PVC. You'd have to cut it apart.

How do you seal the ends to eliminate air movement?

Do you use expansion couplings to handle different rates of movement
between wood siding, masonry foundation and earth?

sdb
--
| Sylvan Butler | Not speaking for Hewlett-Packard | sbutler-boi.hp.com |
| Watch out for my e-mail address. Thank UCE. >>>> change ^ to @ <<<< |
They that can give up essential liberty to obtain a little temporary
safety deserve neither liberty nor safety. --Benjamin Franklin, 1759
Stop Palladium, TCPA and Senator Fritz Hollings, NOW!
http://www.cl.cam.ac.uk/users/rja14/tcpa-faq.html

1598. Re: Slightly OT: MFJ 268 antenna analyzer battery level ????

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-22 22:29:32 UTC
From: K4IA <K4ia@novacoxmail.com>
Message-ID: <gH%_8.162443$DB.5630050@news1.east.cox.net>
Source record: 138139

Also, I believe there is a switch inside the unit. Regular batteries are
1.5 volts but If you are using lower voltage batteries, NiCad, NiMH etc, you
need to throw the switch to work with the lower voltage.
--
Radio K4IA
Craig "Buck"
Fredericksburg, Virginia USA

FISTS 6702 CC 788 Diamond 64
K1# 470 K2# 2460
"Ed Laughery" <laughery@bellsouth.net> wrote in message
news:O0W_8.130589$JU3.60325843@e3500-atl1.usenetserver.com...
> Hello
>
> Only slightly OT - ? about ANTENNA analyzer <hi>. I have just received a
> new MFJ 269 analyzer with MFJ nickle metal rechargable batteries. The
unit
> uses 10 1.2 volt cells - after charging for 16 hours the unit indicates
> during power up a battery level of 10.8 - 11 volts. The unit works OK at
> that level but would like to know if this is a normal/valid reading.
MFJ
> tech support told me it should be around 13.8 volts which in my old grey
> brain is difficult to understand (10 x 1.2 = 12 < 13.8). Has MFJ come up
> with new physics power miracle?
>
> Any info is appreciated including other batteries that some of you may be
> using in this instrument.
>
> Thanks in advance
> Ed
> AD5JV
>
>
>

1599. Re: Lightning 201 - The Missing Damage Mechansim

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-22 23:13:44 UTC
From: "J. Harvey" <JM002.Harvey_ANTI*SPAM_@Sympatico.ca>
Message-ID: <Dk0%8.1282$5l.227093@news20.bellglobal.com>
Source record: 138141

J. Harvey wrote:
> "Do you deny the existence of this property
> called "self capacitance"?"

"Richard Harrison"
> No. ...

Well - thank God for that !

> ...Terman`s definition...
> ...on page 24...
> "A capacitor is..."
> Why not call the measured quantity...

I am NOT going to go down that road - I'm still recovering from that "related" thread ! But if you know of a 'better' name for this property, please advise. I always thought it was called 'self capacitance', but I'm open to correction.

1600. Re: Lightning 201 - The Missing Damage Mechansim

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-22 23:19:52 UTC
From: "J. Harvey" <JM002.Harvey_ANTI*SPAM_@Sympatico.ca>
Message-ID: <nq0%8.1283$5l.229108@news20.bellglobal.com>
Source record: 138143

J. Harvey rhetorically wrote:
> Does that mean that I could easily change the Earth's
> 'Ground' reference voltage using a simple circuit driven
> by 9-volt battery ? 707.4 microfarads isn't very high -
> it would seem to be a relatively simple matter to impose
> large voltage changes on a 707.4 microfarad capacitor.
> I wonder if there might be another factor...

...such as....SELF CAPACITANCE !!!!!!!

My point was that the 'self capacitance' of the planet Earth is many, many, many, many orders of magnitude higher than 707.4 microfarads.

Otherwise, it would make a very poor 'ground'.

1601. Re: Sale Alert - Glass Mount 2m/70cm - Cdn$20 !! - Radio Shack *Canada*

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-22 23:21:35 UTC
From: "J. Harvey" <JM002.Harvey_ANTI*SPAM_@Sympatico.ca>
Message-ID: <%r0%8.1285$5I.229832@news20.bellglobal.com>
Source record: 138145

"J. Harvey"
> FYI - I just picked up another antenna bargain at
> Radio Shack *Canada*.
>
> Glass mount dual-band 2m/70cm Ham radio antenna.
> 2.6dB gain at 2m and 6.3dB gain at 70cm (YMMV).
> 50W handling capability.
> Tunable for optimum performance.
> Includes all cables, connectors, mounting and tuning hardware.
>
> Cdn $ 19.99 + tax !!! (that's about US$14 FWIW)
>
> Stock # 19-324
>
> Link to picture and info...
> www.radioshack.ca/estore/Product.aspx?product=1900324
>
> Seems to still be available on-line and at some stores.

Update:
A buddy of mine in Nova Scotia got one for Cdn$5 brand new. No details yet.

1602. FS 50' tower on wheels..

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-22 23:24:51 UTC
From: wb4una@aol.com
Message-ID: <20020722192451.17372.00000145@mb-mt.aol.com>
Source record: 138142

I have a 50 crankup tower that i would like to sell ..it is on a 20' tra. hand cranks for the tilt and the extend ..whats it worth to you ? the tower is alum....

Randy WB4UNA

1603. Corvette Antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-22 23:26:58 UTC
From: Stan <svs6920@home.com>
Message-ID: <6x0%8.95858$Wt3.67632@rwcrnsc53>
Source record: 138144

Anyone now where I can purchase a good quaity antenna mount (for 3/8 X 24)
to fit on
the new version of the Corvette.....1997-2000 year.

Thank you
Stan

1604. Re: What Multi-Band Dipole to Buy for 1.5kW use??

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-22 23:33:50 UTC
From: Bob Miller <bamiller@texas.net>
Message-ID: <WpU8Pc+onTAjuSjBNI3Ynt9tAb8S@4ax.com>
Source record: 138146

Mark Krubsack <mkrubsack@yahoo.com> wrote:

>On Sun, 21 Jul 2002 18:15:26 GMT, "Steve Floyd" <w4yhd@earthlink.net>
>wrote:
>
>>I am looking for a multiband dipole antenna that is 90 ft. long (Max) and
>>works on 80-10 meter bands including 17 and 30 meter bands without a tuner.
>>I am looking at building my own parallel dipole design with only a trap in
>>the 40/80 meter leg for length reduction to 90 ft. Has any company out
>>there built a good quality multiband dipole that actually has 30 and 17
>>meters included. Or, has anyone built a good parallel (fan) dipole for
>>80,40,30.17,15,10 meter bands? I would really like to hear some ideas and
>>advice.
>>
>>I have a Ameritron AL-1500 so it must take legal limit power.
>>
>
>The W9INN antennas will fit your bill. I use a 80/40 meter version
>with full power (Alpha 99) and narry a problem. They have a variety of
>multi-band dipoles, some as short as 60+ feet.
>
>Check out the add in each month's QST, or see
>http://www.cableone.net/ctj92/index.html?row1col2=w9inn.html
>
>Mark Krubsack,
>ke6oi@arrl.net

Mark, a few days ago you posted the message, :

***

I'm looking for a W9INN 80/40 meter dipole. Anyone have one for sale?
Email me if you do. Thanks.

Mark, KE6OI.

Mark Krubsack,
ke6oi@arrl.net

***

Did you already buy one, and get it up and running? Why are so many of your
posts paired with those of "CJ"?

Bob
k5qwg

1605. Re: Oil in dummy loads vs. SWR.

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-22 23:34:56 UTC
From: john price <jm.price@worldnet.att.net>
Message-ID: <3D3C96BC.677DBB7D@worldnet.att.net>
Source record: 138147
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.equipment

I have an old Cantenna which I've used up to 432 MHz... It
wasn't shipped with oil, but the recommendation was to
use mineral oil from the drugstore...

John

jeff wrote:
>
> I feel that I am once again going to open the old debate which oil to
> use in a dummy load for heat conduction.
>
> But, that is not my question. Mine has do with the oil's effect on SWR
> vs. frequency.
> The reason I ask this I have a Dentron Big Dummy I bought at a hamfest
> many years ago and have seldom used it, then only on HF, do to being
> "out" of ham radio for a while. I have now been using it to check out
> several old club rigs and I have noticed a big difference between it and
> the club's Heath Cantenna.
>
> The SWR increases as frequency increases. At 80 thru 15 meters there is
> no SWR indication with just a little at 10 meters. No problem. But, at 2
> meters the SWR is 3:1. The Cantenna has no indicated SWR at 2 meters.
> Infact, it states on the can SWR <1.5 up to 300 mc.
>
> The Dentron has no frequency range on it.
>
> I took the lids off and both had an identical looking carbon resistor.
> But, their oil was definatly different. The Cantenna was perfectly clear
> while the Dentron was much darker.
>
> So, does anybody know anything about the Dentron Big Dummy and it's
> frequency range? What kind of oil it shipped with?
>
> I started to take the lid from each, drain and clean them and swap them
> to see if the range follows the oil or the resistor. But, that is to
> much work.
>
> --
> Jeff, wd4nmq
> wd4nmq@earthlink.net
> http://home.earthlink.net/~wd4nmq
> iLink client node #10438, iLink sysop link node #14746

1606. Re: Slightly OT: MFJ 268 antenna analyzer battery level ????

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-22 23:44:52 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <3D3C98F4.9060705@eznec.com>
Source record: 138148

Any unit using alkaline batteries that won't work at 1.2 volts/cell is very poorly designed. At moderate current drains, up to 2/3 of the energy in an alkaline cell is delivered at a voltage of 1.2 volts or less. You have to discharge an alkaline cell to about 0.9 volts or less to extract all its energy, so a device designed for use with alkaline cells should be able to operate properly down to this voltage.

Roy Lewallen, W7EL

K4IA wrote:
> Also, I believe there is a switch inside the unit. Regular batteries are
> 1.5 volts but If you are using lower voltage batteries, NiCad, NiMH etc, you
> need to throw the switch to work with the lower voltage.
> --
> Radio K4IA
> Craig "Buck"
> Fredericksburg, Virginia USA

1607. Re: Lightning 201 - The Missing Damage Mechansim

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-22 23:55:45 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <3D3C9B81.8080909@eznec.com>
Source record: 138149

Yet any elementary physics textbook shows this calculation. See for
example problem 29-2, Weidner & Sells, _Elementary Classical Physics_,
Vol. 2.

I imagine that an analysis of the Earth's ability to absorb charge
locally would have to consider factors beyond the simplistic model of
the Earth as a perfectly conducting sphere having only the property of
capacitance.

The idea of charging the Earth with a 9 volt battery is an intriguing
one. Especially in contemplating the connection of the other terminal to
the Universe. That would surely require Ether Grease, in short supply
these days.

Roy Lewallen, W7EL

J. Harvey wrote:
> J. Harvey rhetorically wrote:
>
>>Does that mean that I could easily change the Earth's
>>'Ground' reference voltage using a simple circuit driven
>>by 9-volt battery ? 707.4 microfarads isn't very high -
>>it would seem to be a relatively simple matter to impose
>>large voltage changes on a 707.4 microfarad capacitor.
>>I wonder if there might be another factor...
>
>
> ...such as....SELF CAPACITANCE !!!!!!!
>
> My point was that the 'self capacitance' of the planet Earth is many, many,
> many, many orders of magnitude higher than 707.4 microfarads.
>
> Otherwise, it would make a very poor 'ground'.
>
>
>
>

1608. Re: Slightly OT: MFJ 268 antenna analyzer battery level ????

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-23 00:07:33 UTC
From: Ed Laughery <laughery@bellsouth.net>
Message-ID: <c31%8.9824$LS3.1947969@e3500-atl2.usenetserver.com>
Source record: 138150

Hi

The only switch (jumper) allows the charge circuit to be active or not (OFF
for reg AA, ON for rechargables).

73s
Ed
AD5JV

"K4IA" <K4ia@novacoxmail.com> wrote in message
news:gH%_8.162443$DB.5630050@news1.east.cox.net...
> Also, I believe there is a switch inside the unit. Regular batteries are
> 1.5 volts but If you are using lower voltage batteries, NiCad, NiMH etc,
you
> need to throw the switch to work with the lower voltage.
> --
> Radio K4IA
> Craig "Buck"
> Fredericksburg, Virginia USA
>
> FISTS 6702 CC 788 Diamond 64
> K1# 470 K2# 2460
> "Ed Laughery" <laughery@bellsouth.net> wrote in message
> news:O0W_8.130589$JU3.60325843@e3500-atl1.usenetserver.com...
> > Hello
> >
> > Only slightly OT - ? about ANTENNA analyzer <hi>. I have just received
a
> > new MFJ 269 analyzer with MFJ nickle metal rechargable batteries. The
> unit
> > uses 10 1.2 volt cells - after charging for 16 hours the unit indicates
> > during power up a battery level of 10.8 - 11 volts. The unit works OK
at
> > that level but would like to know if this is a normal/valid reading.
> MFJ
> > tech support told me it should be around 13.8 volts which in my old grey
> > brain is difficult to understand (10 x 1.2 = 12 < 13.8). Has MFJ come
up
> > with new physics power miracle?
> >
> > Any info is appreciated including other batteries that some of you may
be
> > using in this instrument.
> >
> > Thanks in advance

> > Ed
> > AD5JV
> >
> >
> >
>
>

1609. Re: Slightly OT: MFJ 268 antenna analyzer battery level ????

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-23 00:16:02 UTC
From: Ed Laughery <laughery@bellsouth.net>
Message-ID: <8b1%8.9870$LS3.1952705@e3500-atl2.usenetserver.com>
Source record: 138151

Hi Roy

I agree. In this case the system is designed pretty well as it was working at 10.8 volts with 2 of 10 batteries completely zeroed. The low voltage alarm message is set for around 9.4 volts.

BTW, I purchased the unit from W0BW (www.w0bw.com), not only did they have the best price, it was shipped same day, and when notified about the batteries being defective, immediately put two in the mail. Top notch service IMHO. But we all know that all ham radio retailers are beyond reproach (right).

73s
Ed
AD5JV
"Roy Lewallen" <w7el@eznec.com> wrote in message
news:3D3C98F4.9060705@eznec.com...
> Any unit using alkaline batteries that won't work at 1.2 volts/cell is
> very poorly designed. At moderate current drains, up to 2/3 of the
> energy in an alkaline cell is delivered at a voltage of 1.2 volts or
> less. You have to discharge an alkaline cell to about 0.9 volts or less
> to extract all its energy, so a device designed for use with alkaline
> cells should be able to operate properly down to this voltage.
>
> Roy Lewallen, W7EL
>
> K4IA wrote:
> > Also, I believe there is a switch inside the unit. Regular batteries
are
> > 1.5 volts but If you are using lower voltage batteries, NiCad, NiMH etc,
you
> > need to throw the switch to work with the lower voltage.
> > --
> > Radio K4IA
> > Craig "Buck"
> > Fredericksburg, Virginia USA
>

1610. Re: Lightning 201 - The Missing Damage Mechansim

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-23 00:37:16 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <mp8pjuoft2f47h6m8glepf97ndorqi05qf@4ax.com>
Source record: 138152

On Mon, 22 Jul 2002 16:55:45 -0700, Roy Lewallen <w7el@eznec.com>
wrote:

>
>The idea of charging the Earth with a 9 volt battery is an intriguing
>one. Especially in contemplating the connection of the other terminal to
>the Universe. That would surely require Ether Grease, in short supply
>these days.
>
>Roy Lewallen, W7EL

Hi Roy,

I have been attending Nanotechnology seminars where one manufacturer
has built buckytubes at lengths up to several centimeters (a buckytube
being a carbon ring, stacked upon copies of itself). That they have
achieved this length is remarkable for the range of scale (from nano
to centi). They hope to build them long enough to use with earth
"tethered" satellites (charge transfer with long tethers in space was
conducted several years ago).

One of the interesting facts about conduction at the nM scale, is that
it takes more than volts to get a charge to move (or it takes more
volts than your simple equations would offer). The carbon buckytube
is conductive enough (over the short-haul), but fitting it with a
connector to mate to the source is a bitch.

73's
Richard Clark, KB7QHC

1611. Re: Lightning 201 - The Missing Damage Mechansim

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-23 00:44:31 UTC
From: "J. Harvey" <JM002.Harvey_ANTI*SPAM_@Sympatico.ca>
Message-ID: <KF1%8.1329$5l.253472@news20.bellglobal.com>
Source record: 138153

"Roy Lewallen"
> The idea of charging the Earth with
> a 9 volt battery is an intriguing one.

The proper quote is "...using a **simple circuit driven by** 9-volt battery...".

> Especially in contemplating the connection
> of the other terminal to the Universe.

I've already addressed this rather trivial technical concern in a previous posting: "...the charge could be imposed by firing ions at the [Earth] from a distance...". The overall circuit might need a dozen D-cells and be in low Earth orbit.

My point (!) is the extremely low amount of electrical energy that would be required to change the voltage of a 707.4 uF capacitor by one volt. Even several tens of kilovolts are *well within* the capabilties of "batteries" (perhaps alkaline).

Several tens of kilovolts are interesting in that such a charge should be sufficient to make every 'foil-leaf electrometer' on the planet stand up (not to mention making everyone's hair unmanageable).

Something smells funny in '707.4uF la la land' - doesn't it ?

Maybe the Earth is a very very leaky capacitor. (?)

1612. High SWR with Diamond SG7900A

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-23 01:09:40 UTC
From: Broken Od Bottles <whg@microsoft.com>
Message-ID: <ahiadk$tf4tq$1@ID-108846.news.dfncis.de>
Source record: 138154

Can someone tell me the measured resistance of the two
"phase inductors" on this antenna? The top one is showing
open on mine while the bottom one reads 0 ohms. I suspect
the top one is bad, but before I give RF Parts $17.50 for it,
I'd like conformation on my suspicion.

Thanks!

1613. Re: Oil in dummy loads vs. SWR.

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-23 01:20:40 UTC
From: 'Doc <w5lz@icok.net>
Message-ID: <3D3CAF51.3A083317@icok.net>
Source record: 138155
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.equipment

Jeff,
The oil shouldn't affect SWR if it is clean,
not contaminated with 'stuff' that might change
it's conducting properties. It sounds like the
oil in your Dentron dummy load may be contaminated,
or maybe has changes chemically if it's ~that~ old.
Try dumping it, cleaning the container, and refill
with mineral oil.
'Doc

1614. Re: Lightning 201 - The Missing Damage Mechansim

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-23 01:35:15 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <3D3CB2D3.2080605@eznec.com>
Source record: 138156

Yep, looks like we could charge the Earth up to 10 kV with the energy in
a car battery.

Incidentally, I experienced first-hand the phenomenon of charging by
spraying ions. It was once my fate to solve some problems with the
design of a 30 kV CRT supply. The production supply was potted, but for
prototypes we built a Plexiglas box and filled it with Freon. Immersing
the prototype in the Freon prevented corona. But I had a lead sticking
out of the bath for measuring the voltage, and it was fizzling away. I
ignored it -- until I touched something grounded. The ion spray had
charged me to quite a potential.

Roy Lewallen, W7EL

J. Harvey wrote:
> "Roy Lewallen"
>
>>The idea of charging the Earth with
>>a 9 volt battery is an intriguing one.
>
>
> The proper quote is "...using a **simple circuit driven by** 9-volt
> battery...".
>
>
>>Especially in contemplating the connection
>>of the other terminal to the Universe.
>
>
> I've already addressed this rather trivial technical concern in a previous
> posting: "...the charge could be imposed by firing ions at the [Earth] from
> a distance...". The overall circuit might need a dozen D-cells and be in
> low Earth orbit.
>
> My point (!) is the extremely low amount of electrical energy that would be
> required to change the voltage of a 707.4 uF capacitor by one volt. Even
> several tens of kilovolts are *well within* the capabilties of "batteries"
> (perhaps alkaline).
>
> Several tens of kilovolts are interesting in that such a charge should be
> sufficient to make every 'foil-leaf electrometer' on the planet stand up
> (not to mention making everyone's hair unmanageable).
>
> Something smells funny in '707.4uF la la land' - doesn't it ?
>

> Maybe the Earth is a very very leaky capacitor. (?)
>
>
>
>

1615. Re: j-pole

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-23 01:46:11 UTC
From: Damon Wascom <kc5cqw@excite.com>
Message-ID: <ujpdbad6urg5ee@corp.supernews.com>
Source record: 138157

http://www.cebik.com/jp1.html This page should just about answer any posible question you may have.

"JEEPMON" <JEEPMON@HOTMAIL.COM> wrote in message news:051_8.596169$cQ3.96182@sccrnsc01...
> Is it true that j-poles couple to nearby objects more than most antennas?
> Are their patterns truly omnidirectional and what is the general take-off
> angles?
>
> "JEEPMON" <JEEPMON@HOTMAIL.COM> wrote in message
> news:TsJZ8.582213$cQ3.54786@sccrnsc01...
> > What are the disadvantages of a j-pole antenna made of copper tubing? Is
> any
> > ground plane needed. If not why not? What are the best books to read or
> > websites about j-pole antennas, more specifically cooper tubing j-poles.
> How
> > would an vertical antenna (commercially made from Diamond, Comet,
Hustler,
> > Hy-Gain, ect.)with ground radials compare to a j-pole antenna for 6m,
2m,
> > 220MHz, 440MHz, and 1.2 GHz? What would most of you use?
> >
> >
>
>

1616. Re: White Ham Stick?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-23 01:50:08 UTC
From: Damon Wascom <kc5cqw@excite.com>
Message-ID: <ujpdih6m0jh04b@corp.supernews.com>
Source record: 138158

Try looking for some white PVC heat srink at an electronics supply. One of the local shops has about 8 different colors of 1/2" 50% in 3 foot. You can carefully cut and peel off the black heat shrink and replace it with the white.
<rons533@dejazzd.com> wrote in message news:3D39596B.78DC@dejazzd.com...
> Is there such a thing as a white color Ham Stick? Believe it or not I
> need a white one. Had thought about painting a black one but it will be
> in a harsh enviornment and I am concerned the paint will peel. I know
> there are several manufacturers of this type antenna. Maybe one is
> white?
>
> Thanks

1617. Re: 3/2-Wave Dipole & 75 Ohm Quarter-Wave Matching Section

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-23 02:10:43 UTC
From: Sparks W4EAS <sparksw4eas@mindspring.com>
Message-ID: <3D3CBB23.1776@mindspring.com>
Source record: 138159

PL-259's fit RG-11... Why use "F" Connectors? Regards, Sparks W4EAS

1618. mobile antenna matching problem

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-23 02:32:06 UTC
From: wf3h@ptd.net
Message-ID: <3d3cbeb3.158356712@news.ptdprolog.net>
Source record: 138160

I put a new antenna mount on my honda crv today. the mount is about 3' angle aluminium stock, with a hamstick mounted at the top. the aluminium is held against the spare tire by 2 long bolts, and the bolts are anchored on the back of the tire mount by 2 other pieces of stock.

when i used this antenna on my blazer, it was a perfect match at 14.2 mhz. now it matches 1:1 between 13.2 and 13.7 mhz. lengthening and shortening the whip does nothing, since the swr climbs to over 5:1 in the 20 meter band.

although the swr is high, signal reports find the audio is clear with no signs of distortion (so no rf getting into audio). i did not try a ground but the lack of distortion and rf seems to indicate this probably wouldnt help.

anybody have any ideas? thanks all...

To find out who 'wf3h' is, go to 'qrz.com'
and enter 'wf3h' in the field.

lat. 40 41.288N
long. 75 32.177W

I've always wanted to procrastinate...but
I never got around to it...

1619. Re: White Ham Stick?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-23 02:47:13 UTC
From: N4LQ <N4LQ@igLou.com>
Message-ID: <3d3b7211_2@news.iglou.com>
Source record: 138188

Jim
I just looked at their web site and it says they are black. Where does it
say they make white ones?

--
Steve Ellington N4LQ.
"Jim" <K4SQR@juno.com> wrote in message
news:7c8be5b4.0207211318.6a6b08a4@posting.google.com...
> Anttron makes white HF whips. See http://anttron.tripod.com/
> for various models & pricing.
>
> Good luck,
> Jim, K4SQR
>
> "N4LQ" <N4LQ@igLou.com> wrote in message
news:<3d3ac7e9_3@news.iglou.com>...
> > I saw some white HF whips at the Dayton Hamvention several years ago but
do
> > not recall the manufacture. I wish I had bought one because it seems
like
> > every car I end up with is white!
> >
> > --
> > Steve Ellington N4LQ.
> > <rons533@dejazzd.com> wrote in message news:3D39596B.78DC@dejazzd.com...
> > > Is there such a thing as a white color Ham Stick? Believe it or not I
> > > need a white one. Had thought about painting a black one but it will
be
> > > in a harsh enviornment and I am concerned the paint will peel. I know
> > > there are several manufacturers of this type antenna. Maybe one is
> > > white?
> > >
> > > Thanks

1620. Re: Painting a vertical antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-23 02:54:36 UTC
From: W4WNT <w4wnt@carolina.rr.com>
Message-ID: <Mz3%8.17647$Qn5.622623@twister.southeast.rr.com>
Source record: 138161

Better yet, get flat brown, green and black spray cans and camoflage it.
Just don't bridge over any of the insulating rubber gaskets with paint and
you should have no problem.

God luck,

Bill, W4WNT

Scott <j.scott.huber@worldnet.att.net> wrote in message
news:436bedbe.0207180317.74534bfe@posting.google.com...
> I would like to put up a 14AVQ vertical and keep it as stealth as
> possible. I am thinking of giving it a light coat of flat black spray
> paint to help hide it from out antenna police in the neighborhood. It
> would be less obvious than the shiny aluminum. My question is whether
> it will effect the performance of the antenna or not. Thanks.
>
> Scott - W3BUG

1621. Re: Lightning 201 - The Missing Damage Mechansim

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-23 03:13:37 UTC
From: "J. Harvey" <JM002.Harvey_ANTI*SPAM_@Sympatico.ca>
Message-ID: <BR3%8.1404$5l.311479@news20.bellglobal.com>
Source record: 138162

"Roy Lewallen"
> Yep, looks like we could charge the Earth
> up to 10 kV with the energy in a car battery.

[According to the calculations ?] I take that result as indicating that there is something is wrong with the theory or its application. Perhaps my 'gut instinct' is improperly programmed, but the Earth strikes me as being *a lot* more stable (voltage wise) than only 707.4 uF.

> The ion spray had charged me to quite a potential.

Nothing as frightening as being a charged man in a doorknob factory...

1622. Re: mobile antenna matching problem

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-23 03:36:39 UTC
From: CAM <w5dxp@hotmail.com>
Message-ID: <3D3CCF47.950564B@hotmail.com>
Source record: 138163

wf3h@ptd.net wrote:
>
> I put a new antenna mount on my honda crv today. the mount is about 3'
> angle aluminium stock, with a hamstick mounted at the top. the
> aluminium is held against the spare tire by 2 long bolts, and the
> bolts are anchored on the back of the tire mount by 2 other pieces of
> stock.
>
> when i used this antenna on my blazer, it was a perfect match at 14.2
> mhz. now it matches 1:1 between 13.2 and 13.7 mhz. lengthening and
> shortening the whip does nothing, since the swr climbs to over 5:1 in
> the 20 meter band.

If I understand your configuration, you have an 11 ft. antenna fed 3 ft.
up from the base. Of course it is going to resonate at a lower frequency
than an 8 ft. antenna and your feed system somewhat resembles a gamma match.
What might be a solution is to use a 17m or 15m hamstick for 20m.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

1623. white coax?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-23 04:26:19 UTC
From: "Mark E. Sunderlin (Dr. Megabyte)" <megabyte@adelphia.net>
Message-ID: <LV4%8.5757$C44.1802313@news2.news.adelphia.net>
Source record: 138164

Looking to make my lead in less visible against my white house, does anyone make coax with the outer shield white rather than black?

--
Mark Sunderlin, a.k.a. Dr. Megabyte KD4HRI Tuba Playing Technocrat in Winchester, VA
"The number of job openings for Philosopher-Kings is limited in the early 21st century" - Dr. Megabyte

1624. Re: mobile antenna matching problem

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-23 04:31:38 UTC
From: wf3h@ptd.net
Message-ID: <3d3cdbf9.165809019@news.ptdprolog.net>
Source record: 138166

On Mon, 22 Jul 2002 22:36:39 -0500, CAM <w5dxp@hotmail.com> wrote:

>wf3h@ptd.net wrote:
>>
>> I put a new antenna mount on my honda crv today. the mount is about 3'
>> angle aluminium stock, with a hamstick mounted at the top. the
>> aluminium is held against the spare tire by 2 long bolts, and the
>> bolts are anchored on the back of the tire mount by 2 other pieces of
>> stock.
>>
>> when i used this antenna on my blazer, it was a perfect match at 14.2
>> mhz. now it matches 1:1 between 13.2 and 13.7 mhz. lengthening and
>> shortening the whip does nothing, since the swr climbs to over 5:1 in
>> the 20 meter band.
>
>If I understand your configuration, you have an 11 ft. antenna fed 3 ft.
>up from the base. Of course it is going to resonate at a lower frequency
>than an 8 ft. antenna and your feed system somewhat resembles a gamma match.
>What might be a solution is to use a 17m or 15m hamstick for 20m.
>--

aha...and it just so happens i have a 15m hamstick...thanks...will try
that. i thought we might cut the mount down from 3' to about 1.5' as
well...

To find out who 'wf3h' is, go to 'qrz.com'
and enter 'wf3h' in the field.

lat. 40 41.288N
long. 75 32.177W

I've always wanted to procrastinate...but
I never got around to it...

1625. Re: Lightning 201 - The Missing Damage Mechansim

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-23 04:34:03 UTC
From: tdonaly@aol.com
Message-ID: <20020723003403.24932.00000207@mb-cc.aol.com>
Source record: 138165

>
>"Roy Lewallen"
>> Yep, looks like we could charge the Earth
>> up to 10 kV with the energy in a car battery.
>
>[According to the calculations ?] I take that result as indicating that
>there is something is wrong with the theory or its application. Perhaps my
>'gut instinct' is improperly programmed, but the Earth strikes me as being
>*a lot* more stable (voltage wise) than only 707.4 uF.
>
>
>> The ion spray had charged me to quite a potential.
>
>Nothing as frightening as being a charged man in a doorknob factory...
>

If you can get your hands on the Scientific American cd The Amateur Scientist, The Complete 20th Century Collection, there are two articles by C.L. Stong you might find interesting: May 1957, "Experiments Which Show That The Earth Functions
As An Electrostatic Machine", and October 1974, "Electric Motors Are Powered By Electric Field Of The Earth." Mr. Stong considered the earth, atmosphere, and

ionosphere as a big, leaky, capacitor that keeps itself charged through the action
of lightning storms. Put a large piece of metal high up. Leave it there long enough to
get a charge. Bring it down and fry yourself. Sounds fun.

Tom Donaly KA6RUH

1626. Re: white coax?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-23 04:53:20 UTC
From: Dick Carroll <dickc58@att.net>
Message-ID: <3C830B9D.C309B0B5@att.net>
Source record: 138167

"Mark E. Sunderlin (Dr. Megabyte)" wrote:

> Looking to make my lead in less visible against my white house, does anyone
> make coax with the outer shield white rather than black?
>
> --
> Mark Sunderlin, a.k.a. Dr. Megabyte KD4HRI Tuba Playing Technocrat in
> Winchester, VA
> "The number of job openings for Philosopher-Kings is limited in the early
> 21st century" - Dr. Megabyte

In years past they made RG8 with white outer cover, but I haven't seen it in
several years. Call the Wireman, he'll know.

Dick

1627. Re: LMR400 around rotator

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-23 04:59:05 UTC
From: Roger Halstead <rdhalste@tm.net>
Message-ID: <to5%8.931$Qb2.1070913@monger.newsread.com>
Source record: 138168

"J Tabor" <denews@taborsoft.com> wrote in message
news:uj9pgf81l8pb80@corp.supernews.com...
> Greeting,
>
> Wondering if the LMR400 type coax works ok around a rotor, with several
> turns coil of course.

It will, but you are better off using a pigtail made of LMR 400-UF
(flexible) and about three turns around the rotor That's what I use and
there are 4 runs that loop around the rotor.

Done properly (with 3 or 4 turns) inside guides the only thing that happens
is the loop gets a little bigger, or smaller.

I prefer to use that plus the flexible stuff to get around the rotor.

--
Roger Halstead (K8RI EN73)
www.rogerhalstead.com
N833R World's oldest Debonair? (S# CD-2).

>
> Have seen comments abouut 9913 solid center conductor breaking. Have had
> some up in use with UHF for almost 17 years. It's still ok, I think. :)
>
> Anyway looking at new installation and new coax, for HF of course.
>
> Thanks for any comment.
>
> Regards,
> Jim - KU5S
>
>

1628. Re: Oil in dummy loads vs. SWR.

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-23 06:58:50 UTC
From: SkyKing <gyewug@egfurg.com>
Message-ID: <8hvpjuoa7q4dgu85t19mmk7hgaprojsofv@4ax.com>
Source record: 138069
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.equipment

On Mon, 22 Jul 2002 19:13:35 GMT, jeff <wd4nmq@earthlink.net> wrote:

>I feel that I am once again going to open the old debate which oil to
>use in a dummy load for heat conduction.
>
>But, that is not my question. Mine has do with the oil's effect on SWR
>vs. frequency.

The RF is fed into the resistor, which is the actual dummy load.
The oil is only there to dissipate the heat.

1629. Re: Oil in dummy loads vs. SWR.

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-23 08:35:32 UTC
From: "Russell Hltn"
Message-ID: <ahj4gm$n84$1@nntp-m01.news.aol.com>
Source record: 138070
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.equipment

Since the topic of "cantennas" has come up, I though I'd ask a question that came up before:

How much does using oil multiply the resistor's effective wattage rating? For example if I used a 2W resistor and put it in a can of oil, how much can I dump into the resistor?

1630. Re: 70 cm duplexers

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-23 10:57:31 UTC
From: dfg <A.Gras@wanadoo.fr>
Message-ID: <ahjcm7$e0j$1@wanadoo.fr>
Source record: 138071

look at:
http://www.btinternet.com/~bill.rothwell/duplexer.htm
http://www.xs4all.nl/~pa0nhc/repeater/duplexfilter/English/duplexfilter.htm

73 from France
Alain

"Mike Newman" <mnewman@clear.net.nz> a écrit dans le message news:
3d3c68ad.2441085@news.clear.net.nz...
> I would appreciate some advice on what are sources of 70 cm
> bandpass/band reject duplexers for use in 430-440 MHz band, now that
> Wacom has been taken over?
>
> MikeN ZL1BNB

1631. Antenna analysis using Ansoft HFSS?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-23 11:19:21 UTC
From: u127@hotmail.com
Message-ID: <299f8ff8.0207230319.23949c20@posting.google.com>
Source record: 138072

Anyone that have been using Ansoft HFSS High Frequency System
Simulator for VSWR and radiation pattern analysis of an amateur radio
antenna? Like a Yagi, dipole, etc? Experience?

http://www.ansoft.com/products/hf/hfss/index.cfm

Jan

1632. Re: white coax?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-23 11:19:24 UTC
From: nm5k@wt.net
Message-ID: <25eb70d7.0207230319.6696e84c@posting.google.com>
Source record: 138073

Dick Carroll <dickc58@att.net> wrote in message news:<3C830B9D.C309B0B5@att.net>...
> "Mark E. Sunderlin (Dr. Megabyte)" wrote:
>
> > Looking to make my lead in less visible against my white house, does anyone
> > make coax with the outer shield white rather than black?
> >
> > --
> > Mark Sunderlin, a.k.a. Dr. Megabyte KD4HRI Tuba Playing Technocrat in
> > Winchester, VA
> > "The number of job openings for Philosopher-Kings is limited in the early
> > 21st century" - Dr. Megabyte
>
> In years past they made RG8 with white outer cover, but I haven't seen it in
> several years. Call the Wireman, he'll know.
>
> Dick

I've seen white RG8X. I think I've also seen clear jacket coax somewhere. MK

1633. Re: white coax?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-23 11:28:10 UTC
From: wf3h@ptd.net
Message-ID: <3d3d3da0.190798368@news.ptdprolog.net>
Source record: 138075

On 23 Jul 2002 04:19:24 -0700, nm5k@wt.net (Mark Keith) wrote:

>Dick Carroll <dickc58@att.net> wrote in message news:<3C830B9D.C309B0B5@att.net>...
>> "Mark E. Sunderlin (Dr. Megabyte)" wrote:
>>
>> > Looking to make my lead in less visible against my white house, does anyone
>> > make coax with the outer shield white rather than black?
>> >
>> > --
>> > Mark Sunderlin, a.k.a. Dr. Megabyte KD4HRI Tuba Playing Technocrat in
>> > Winchester, VA
>> > "The number of job openings for Philosopher-Kings is limited in the early
>> > 21st century" - Dr. Megabyte
>>
>> In years past they made RG8 with white outer cover, but I haven't seen it in
>> several years. Call the Wireman, he'll know.
>>
>> Dick
>
>I've seen white RG8X. I think I've also seen clear jacket coax somewhere. MK

yeah, i just put white coax on my mobile set up. rg8x...dont know who
made it though....got it from a friend who just bought it...

the stuff is around.

To find out who 'wf3h' is, go to 'qrz.com'
and enter 'wf3h' in the field.

lat. 40 41.288N
long. 75 32.177W

I've always wanted to procrastinate...but
I never got around to it...

1634. Re: Oil in dummy loads vs. SWR.

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-23 11:33:33 UTC
From: mike <spamme0@juno.com>
Message-ID: <3D3D3F0D.2515B1F3@juno.com>
Source record: 138074
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.equipment

This is NOT a simple question.
Ultimately, what goes in must come out.
So, one limit is sorta proportional to the relative surface area,
assuming you've got good convection and perfect conduction.
The thermal mass of the oil slows things down. That's why peak power
rating is higher than the average power rating.
Another limit is the thermal resistance of the system.
The oil is only one part. If you use a film resistor, you'll get much
better thermal contact to the oil than if you used an AB carbon
resistor
with the bakelite surface (2W resistor). At some power level, the
resistor
is gonna explode, no matter how much oil it's in.

The resistor in a cantenna is probably worth 50-100W in air.
mike

Russell Hltn wrote:

> Since the topic of "cantennas" has come up, I though I'd ask a
> question that came up before:
>
> How much does using oil multiply the resistor's effective wattage
> rating? For example if I used a 2W resistor and put it in a can of
> oil, how much can I dump into the resistor?

--
Bunch of stuff For Sale and Wanted at the link below.
http://www.geocities.com/SiliconValley/Monitor/4710/

1635. Re: white coax?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-23 13:03:41 UTC
From: Bill Nelson <billn@spock.peak.org>
Message-ID: <ahjk7dppk2@quark.scn.rain.com>
Source record: 138077

Mark Keith <nm5k@wt.net> wrote:

> I've seen white RG8X. I think I've also seen clear jacket coax somewhere. MK

Yes, I have also seen RG8 with a clear jacket. The version I saw was
stiffer than normal RG8.

--
Bill Nelson (billn@peak.org)

1636. Re: white coax?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-23 13:04:33 UTC
From: Al <aburzynski@swri.nojunk.edu>
Message-ID: <ujql32dnio1b40@corp.supernews.com>
Source record: 138078

Radio Shack has 75 ohm coax with a white jacket. The shield is aluminum foil rather braid, unfortunately.

Al
KA5JGV

"Mark E. Sunderlin (Dr. Megabyte)" <megabyte@adelphia.net> wrote in message news:LV4%8.5757$C44.1802313@news2.news.adelphia.net...
> Looking to make my lead in less visible against my white house, does anyone
> make coax with the outer shield white rather than black?

1637. Re: white coax?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-23 13:11:26 UTC
From: CAM <w5dxp@hotmail.com>
Message-ID: <3D3D55FE.7C2BD6B4@hotmail.com>
Source record: 138079

Bill Nelson wrote:
> Yes, I have also seen RG8 with a clear jacket. The version I saw was
> stiffer than normal RG8.

RG-400 (teflon) also has a clear jacket as does some Ethernet cable
but how long do they last under UV? (a common concern in Texas)
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
------== Over 80,000 Newsgroups - 16 Different Servers! =-----

1638. Re: white coax?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-23 13:52:36 UTC
From: Dan Richardson <k6mhe@mendolink.com>
Message-ID: <3mnqjuk1tr019nv876c95j4uqsrenl8orl@4ax.com>
Source record: 138080

I have some. It was manufactured by Columbia Electronic Cabels, New
Bedford, Massachusetts. Markings on the cable identify it as "Columbia
01108 Mini 8U"

Hope that helps.

Danny, K6MHE

On Tue, 23 Jul 2002 04:26:19 GMT, "Mark E. Sunderlin \(Dr. Megabyte\)"
<megabyte@adelphia.net> wrote:

>Looking to make my lead in less visible against my white house, does anyone
>make coax with the outer shield white rather than black?

1639. Re: Oil in dummy loads vs. SWR. it's the resistor.

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-23 14:34:05 UTC
From: jeff <wd4nmq@earthlink.net>
Message-ID: <3D3D699F.6C6F1D51@earthlink.net>
Source record: 138081
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.equipment

Or it's mounting method.

I took the Dentron resistor out of the oil, dried it and tried 2 meters into it. Still had 3:1 SWR.
Now, the resistor mounting in the Dentron had only a piece of flat metal running from the can lid, ground, to the bottom of the resistor. While the Cantenna's resistor is inside a grounded aluminum tube which connects to the bottom of the resistor via three screws.

So what Peter wrote may be along the right line. May do some more testing.

Uncle Peter wrote:
>
> IIRC most of those loads had the load resistor surrounded by a
> tapering shield -- I assume that acted like a tapered coaxial
> line that "matched" the load resistor impedance along its
> length. I wonder if the different oils have different dielectric
> constants--
> that could explain the differing SWR readings at VHF frequencies
> (assuming the load is non reactive to begin with).
>
> Pete
>
> "jeff" <wd4nmq@earthlink.net> wrote in message
> news:3D3C599F.732499B6@earthlink.net...
> > I feel that I am once again going to open the old debate which oil to
> > use in a dummy load for heat conduction.
> >
> > much work.
> >
> > --
> > Jeff, wd4nmq
> > wd4nmq@earthlink.net
> > http://home.earthlink.net/~wd4nmq
> > iLink client node #10438, iLink sysop link node #14746

--
Jeff, wd4nmq
wd4nmq@earthlink.net
http://home.earthlink.net/~wd4nmq
iLink client node #10438, iLink sysop link node #14746

1640. Re: Wanted: GLA Bugcatcher #480 Coil

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-23 14:44:19 UTC
From: Barry <luminosity@madriver.com>
Message-ID: <3D3D6BC3.6407415B@madriver.com>
Source record: 138076

Hi Doc,
Do you have a digital camera,so I could see the coil, by any chance?
If the lexan is intact and all the wire is there, I'm definately interested.
If it is in excess to your needs, please email me with your "used and abused" price. H.I.
Tnx /73-Barry N1QWA

'Doc wrote:

> Barry,
> Yes, but I really don't think you want it. I
> didn't realize just how bad of shape it was in
> until I dug it out of the junk box. I'd say make
> an offer, but my conscience would bother me.
> Sorry...
> 'Doc

--

Luminosity Studios est.1975
Fine Architectual Stained Glass & Custom Lighting
Arroyo Craftsman- Mica Lamp Co -Hammerton -Quoizel
Located in The Old Church Rt.100
Waitsfield, Vermont 05673
(802) 496-2231

Portfolio:
http://photos.yahoo.com/luminositystudios

SlideShow:
http://photos.yahoo.com/bc/luminositystudios/slideshow?.dir=/Luminosity+Studios+Waitsfield+Vermont&.view=t

1641. Re: white coax?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-23 15:08:42 UTC
From: Pete <pete@nbr1.com>
Message-ID: <_je%8.103728$Wt3.89163@rwcrnsc53>
Source record: 138082

I got some white from Menard's, 50 feet of it. All you have to do is cut the TV connectors off of it.

"Dan Richardson" <k6mhe@mendolink.com> wrote in message news:3mnqjuk1tr019nv876c95j4uqsrenl8orl@4ax.com...
> I have some. It was manufactured by Columbia Electronic Cabels, New
> Bedford, Massachusetts. Markings on the cable identify it as "Columbia
> 01108 Mini 8U"
>
> Hope that helps.
>
> Danny, K6MHE
>
> On Tue, 23 Jul 2002 04:26:19 GMT, "Mark E. Sunderlin \(Dr. Megabyte\)"
> <megabyte@adelphia.net> wrote:
>
> >Looking to make my lead in less visible against my white house, does anyone
> >make coax with the outer shield white rather than black?
>

1642. Re: Broadband Folded Dipoles & Delta Loops

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-23 15:09:35 UTC
From: Andy Cowley <andy.cowley@uwe.ac.uk>
Message-ID: <3D3D7453.5BEBBF6B@uwe.ac.uk>
Source record: 138083

K7HMP / 4 wrote:
>
> I've recently become interested in a couple antennas I've noticed over
> the years in catalogs and magazines. They appear to be "normal" Folded
> Dipoles or Delta Loops; except, they are fed with a balun and have a
> "termination device" (read "dummy load"?) at the midpoint. The most
> common one is the B&W Broadband Folded Dipole which will apparently work
> from 1.8 to 30 MHz with an SWR of less than 2:1.
>
> Has anyone used these with any success? Is the 2:1 real? Or, does the
> "termination device" do something with other portions of the power, so
> that although it isn't being reflected, it isn't radiating either?
>
> While I know that termination resistors are a time-honored technique for
> Rhombics - which work great on a broad range of frequencies - I'm less
> sure I understand why they would work in a dipole type configuration.
>
> Are their any sites or books that have a layman's explanation of how or
> why these antennas work?
>
> Appreciate the insight either direct or posted here.
>

Any resistor in a transmitting antenna is just a way to dissipate power
without radiating RF. I.e. a bad idea. Cut out the resistor and use
an ATU. Result - more radiated RF.

vy 73

Andy, M3ABC

1643. Re: LMR400 around rotator

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-23 15:41:38 UTC
From: J Tabor <denews@taborsoft.com>
Message-ID: <ujqu9qamegr06f@corp.supernews.com>
Source record: 138084

Greetings,

Thanks for the info. Any reason to not just use the ultra-flex for entire run? Other than extra expense of course. I should have specified that in original post.

Regards,
Jim - KU5S

1644. Re: Oil in dummy loads vs. SWR. it's the resistor.

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-23 15:50:05 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <lqtqju80sm3tsfir3lakdfbr67ol0g4ba3@4ax.com>
Source record: 138085
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.equipment

On Tue, 23 Jul 2002 14:34:05 GMT, jeff <wd4nmq@earthlink.net> wrote:

>Or it's mounting method.
>
>I took the Dentron resistor out of the oil, dried it and tried 2 meters
>into it. Still had 3:1 SWR.
>Now, the resistor mounting in the Dentron had only a piece of flat metal
>running from the can lid, ground, to the bottom of the resistor. While
>the Cantenna's resistor is inside a grounded aluminum tube which
>connects to the bottom of the resistor via three screws.
>
>So what Peter wrote may be along the right line. May do some more
>testing.

Hi Jeff,

Mounting method should include a close examination of the connection. Given you have earlier reported the color of the oil as dark; this could be evidence of contaminants, scale or bits sloughed off from the resistor if/when it was over-powered.

This sounds obvious, but did you measure the load's resistance (at DC)? How about when it is immersed in oil?

This is simply accomplished with the handy VOM, but you should go further and measure the resistance over a range of applied voltages that span a significant range of power. However, finding power sources to deliver an amp at up to 100V is rare. The resistance of a resistor varies with current applied; and only the sub-watt models come close to zero temperature coefficient (and power resistors are the most likely to fluctuate wildly).

Another factor is that the Dentron may have never been designed for 2 Meter operation (although I cannot imagine why not).

73's
Richard Clark, KB7QHC

1645. Re: white coax?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-23 17:35:50 UTC
From: "Alexander S. Wood" <alec_wood@dont.spam.me.ntlworld.com>
Message-ID: <pwg%8.1501$QJ.4665@newsfep3-gui.server.ntli.net>
Source record: 138086

Hi Mark

I had to find some a few years ago. No luck until I started looking at marine radio catalogues, then there was any amount of it for sale, so I suggest you have a look at your local marine radio dealer. I presume this is 'cos most boats are white

Alec M1BNK
Teesside UK

"Mark E. Sunderlin (Dr. Megabyte)" <megabyte@adelphia.net> wrote in message news:LV4%8.5757$C44.1802313@news2.news.adelphia.net...
> Looking to make my lead in less visible against my white house, does anyone
> make coax with the outer shield white rather than black?
>
> --
> Mark Sunderlin, a.k.a. Dr. Megabyte KD4HRI Tuba Playing Technocrat in
> Winchester, VA
> "The number of job openings for Philosopher-Kings is limited in the early
> 21st century" - Dr. Megabyte
>
>

1646. Re: white coax?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-23 18:32:00 UTC
From: 'Doc <w5lz@icok.net>
Message-ID: <3D3DA104.7DF96E17@icok.net>
Source record: 138087

Mark,
I'm sure if you look long enough you'll
find someone selling white coax. An alternative
is to paint the coax you have now. I wouldn't
think a latex type paint would hurt it.
'Doc

1647. FS Antennas pickup only near Houston, TX

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-23 19:56:20 UTC
From: plmills@attglobal.net
Message-ID: <3d3db8b2_2@news1.prserv.net>
Source record: 138088

Pickup only 20 miles south of downtown Houston in Friendswood, TX.

Mosley S-402, 2 element 40 meter beam on a 20 foot boom, max element length 44 foot. Some mildew on aluminum but otherwise good and complete. $50.

Mosley CL-33 triband beam. 18 foot boom. Judging by the good condition of the trap plastic end caps, this one has spent most of its life in storage on the ground. $50.

Wilson Electronics 10 meter mono-bander. 5 elements on a 26 foot boom, gamma match. Appears to be complete and in good condition. $50.

Qand antennas/parts. One complete 4 element quad on a 28 foot boom plus a smaller 4 element quad on a 20 foot boom. Cast aluminum brackets. A few of the fiberglass rods for the smaller one will need to be replaced. $50 for all.

Phil

W5BVB

plmills@attglobal.net

281-910-2763

1648. Re: white coax?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-23 20:07:44 UTC
From: CJ <difficult@times.com>
Message-ID: <ujrdskb8d49h2d@corp.supernews.com>
Source record: 138089

Due to reflection of the sun's rays the white coax exhibits from .3 -
.77 db per 100ft less loss than normal black coax due to internal
heating and molecular friction dynamics. I only use white coax and it
has been a real performance advantage..... those that still use black
coax don't know what they are missing.....

See you in the pileups w/ white coax!!!!

--

73 / DX de AB7SL - Charles
AB7SL - Ham Radio Pages
www.ab7sl.com

"Alexander S. Wood" <alec_wood@dont.spam.me.ntlworld.com> wrote in
message news:pwg%8.1501$QJ.4665@newsfep3-gui.server.ntli.net...
> Hi Mark
>
> I had to find some a few years ago. No luck until I started looking at
> marine radio catalogues, then there was any amount of it for sale, so
I
> suggest you have a look at your local marine radio dealer. I presume
this is
> 'cos most boats are white
>
> Alec M1BNK
> Teesside UK
>
>
> "Mark E. Sunderlin (Dr. Megabyte)" <megabyte@adelphia.net> wrote in
message
> news:LV4%8.5757$C44.1802313@news2.news.adelphia.net...
> > Looking to make my lead in less visible against my white house, does
> anyone
> > make coax with the outer shield white rather than black?
> >
> > --
> > Mark Sunderlin, a.k.a. Dr. Megabyte KD4HRI Tuba Playing Technocrat
in
> > Winchester, VA
> > "The number of job openings for Philosopher-Kings is limited in the
early
> > 21st century" - Dr. Megabyte
> >
> >

>
>

1649. Re: white coax?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-23 20:19:53 UTC
From: shutup_cartman@remove.hotmail.nospam.com.renove
Message-ID: <3d3db9d5.31644254@news.aei.ca>
Source record: 138090

On Tue, 23 Jul 2002 04:26:19 GMT, "Mark E. Sunderlin \(Dr. Megabyte\)"
<megabyte@adelphia.net> wrote:

>Looking to make my lead in less visible against my white house, does anyone
>make coax with the outer shield white rather than black?

I guess worse case scenario you could go and buy white (or almost any
colour) shrink tubing by the foot from most electronics components
suppliers and then cover the coax with it.

Would surely be a lot cheaper than a specialized white coax.

My 2 cents worth...

M-R

Monsieur R�nove peut-il r�parer ma constipation?

Oui! Monsieur R�nove peux r�parer ta constipation, avec un gros syphon! Et en plus il peut circoncire ton b�b�, laver ton plancher et frotter tes pieds, avec du papier sabl�!

Monsieur R�nove! Monsieur R�nove!

1650. Re: Oil in dummy loads vs. SWR. it's the resistor.

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-23 21:02:54 UTC
From: jeff <wd4nmq@earthlink.net>
Message-ID: <3D3DC4B2.7040801@earthlink.net>
Source record: 138091
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.equipment

Yea, I measured it with a Fluke DVM and it measured 52.xx ohms. The Cantenna measured 48.xx ohms.

I might, if I get time, build up the resistor mounting to be like the Cantenna.

Right now it works ok on HF. Just a slight, <<1.2 at 10 meters, SWR. So it's ok for what little I use for. The occational checking out of older rigs.

Does anybody know a source for resistors like that used in the Cantenna and Dentron? They are about 1" in diameter and 5-to-6" long.

Anybody know the exact wattage of the Cantenna resistor?

Pick up a new clean gallon can from my pal at Sherwin-Williams, some mineral oil, hmmmm.

Richard Clark wrote:
>
>
> Hi Jeff,
>
> Mounting method should include a close examination of the connection.
> Given you have earlier reported the color of the oil as dark; this
> could be evidence of contaminants, scale or bits sloughed off from the
> resistor if/when it was over-powered.
>
> This sounds obvious, but did you measure the load's resistance (at
> DC)? How about when it is immersed in oil?
>
> This is simply accomplished with the handy VOM, but you should go
> further and measure the resistance over a range of applied voltages
> that span a significant range of power. However, finding power
> sources to deliver an amp at up to 100V is rare. The resistance of a
> resistor varies with current applied; and only the sub-watt models
> come close to zero temperature coefficient (and power resistors are
> the most likely to fluctuate wildly).
>
> Another factor is that the Dentron may have never been designed for 2
> Meter operation (although I cannot imagine why not).
>
> 73's
> Richard Clark, KB7QHC

--
Jeff, wd4nmq
wd4nmq@earthlink.net
http://home.earthlink.net/~wd4nmq
iLink client node #10438, iLink sysop link node #14746

1651. Re: white coax?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-23 21:10:36 UTC
From: David Robbins <k1ttt@arrl.net>
Message-ID: <ahkgo60jit@enews1.newsguy.com>
Source record: 138092

i have some older rg8 that was made by saxton that has a light grey jacket.

"Mark E. Sunderlin (Dr. Megabyte)" <megabyte@adelphia.net> wrote in message
news:LV4%8.5757$C44.1802313@news2.news.adelphia.net...
> Looking to make my lead in less visible against my white house, does
anyone
> make coax with the outer shield white rather than black?
>
> --
> Mark Sunderlin, a.k.a. Dr. Megabyte KD4HRI Tuba Playing Technocrat in
> Winchester, VA
> "The number of job openings for Philosopher-Kings is limited in the early
> 21st century" - Dr. Megabyte
>
>

1652. Re: Oil in dummy loads vs. SWR. it's the resistor.

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-23 21:26:53 UTC
From: Sylvan Butler <Znospam+noZs_0207@hpb13799Z.Zboi.hpZ.com.invalid>
Message-ID: <slrnajrigt.am4.Znospam+noZs_0207@hpb13799Z.Zboi.hpZ.com.invalid>
Source record: 138093
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.equipment

On Tue, 23 Jul 2002 15:50:05 GMT, Richard Clark <kb7qhc@attbi.com> wrote:
> that span a significant range of power. However, finding power
> sources to deliver an amp at up to 100V is rare. The resistance of a

Perhaps one could series with a light bulb and a known resistor all
connected to 120vacRMS.

sdb
--
| Sylvan Butler | Not speaking for Hewlett-Packard | sbutler-boi.hp.com |
| Watch out for my e-mail address. Thank UCE. >>>> change ^ to @ <<<< |
They that can give up essential liberty to obtain a little temporary
safety deserve neither liberty nor safety. --Benjamin Franklin, 1759
Stop Palladium, TCPA and Senator Fritz Hollings, NOW!
http://www.cl.cam.ac.uk/users/rja14/tcpa-faq.html

1653. Re: white coax?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-23 22:35:04 UTC
From: Skipp <skipp@pilotNOSPAMPLEASE.ucdavis.edu>
Message-ID: <ahklmoipl1@woodrow.ucdavis.edu>
Source record: 138095

Hi Mark,

Coax is/can be white for two reasons.... coloring in the outter jacket material and by virtue of it's material of construction... ie teflon PTFE type coax.

It's sold by Belden... the RG-188, RG-58 ptfe teflon types... a bit more lossy, but very nice stuff. Motorola used to supply it with their 800 Mhz commercial, mobile radio antenna kits. You can still buy it from Newark, Talley, Comtelco and probably The Wireman. I've placed order with all the mentioned in the last two months, all came through perfect the first time out.

Years ago... circa late CB boom, Columbia used to make a vinal light Grey "Superflex" type coax. There were also some decorator colors made... red, blue and white by overseas mfgrs. It went away when the CB boom came crashing down... although it was quite popular at the time....

Now with the Audio Monster Cable type hype flowing into the radio market, I have again seen clear vinal jacket coax (which is not RG-400 or RG-142 Teflon PTFE types) sold through some CB (and Ham) stores.

It's real crap, I've measure the shielding and loss... the stuff makes almost as good a radiax antenna as it does coax. I would not trust it for anything above 27.405 Mhz... certainly not at 6 meters and higher.

So you have it... the teflon is probably not what you want, but it works and is very expensive. It's not practical for long base station runs.

cheers
skipp
http://sonic.ucdavis.edu

: "Mark E. Sunderlin \(Dr. Megabyte\)" <megabyte@adelphia.net> wrote:
: Looking to make my lead in less visible against my white house, does anyone
: make coax with the outer shield white rather than black?

: --
: Mark Sunderlin, a.k.a. Dr. Megabyte KD4HRI Tuba Playing Technocrat in
: Winchester, VA
: "The number of job openings for Philosopher-Kings is limited in the early
: 21st century" - Dr. Megabyte

1654. Re: white coax?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-23 23:31:24 UTC
From: CAM <w5dxp@hotmail.com>
Message-ID: <3D3DE74C.A2494308@hotmail.com>
Source record: 138094

CJ wrote:
> Due to reflection of the sun's rays the white coax exhibits from .3 -
> .77 db per 100ft less loss than normal black coax due to internal
> heating and molecular friction dynamics. I only use white coax and it
> has been a real performance advantage..... those that still use black
> coax don't know what they are missing.....

Looks like they are missing 5%-13% of one S-unit.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

1655. Opinions wanted: Cushcraft A2706S vs MFJ1768

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-24 00:37:37 UTC
From: vhfradiobuff@aol.comspamsux
Message-ID: <20020723203737.23960.00000398@mb-fh.aol.com>
Source record: 138096

I am considering buying a dualband yagi for 2m and 70cm. I'm considering either the Cushcraft A2706S or the MFJ1768. Both are the same price ($80), but the MFJ is 7 elements on 70cm vs 3 elements on 70cm with the Cushcraft.

Does anyone have experience with either of these antennas? I'm leaning towards the MFJ because of the extra elements, but wanna know what other people think.
=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-
73! de Andy KC2SSB (ex: KF4KHC/HL9HCT)
Beachwood, NJ USA! Grid FM29vw
http://vhfradiobuff.tripod.com

1656. Re: white coax?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-24 01:57:42 UTC
From: Pete <pete@nbr1.com>
Message-ID: <qQn%8.143158$uw.87414@rwcrnsc51.ops.asp.att.net>
Source record: 138097

Direct TV & Dish Network all use RG8.

"CAM" <w5dxp@hotmail.com> wrote in message
news:3D3DE74C.A2494308@hotmail.com...
> CJ wrote:
> > Due to reflection of the sun's rays the white coax exhibits from .3 -
> > .77 db per 100ft less loss than normal black coax due to internal
> > heating and molecular friction dynamics. I only use white coax and it
> > has been a real performance advantage..... those that still use black
> > coax don't know what they are missing.....
>
> Looks like they are missing 5%-13% of one S-unit.
> --
> cheers, CAM http://www.qsl.net/w5dxp
>
>
> -----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
> http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
> ------== Over 80,000 Newsgroups - 16 Different Servers! =-----

1657. Re: white coax?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-24 02:09:59 UTC
From: "J. Harvey" <JM002.Harvey_ANTI*SPAM_@Sympatico.ca>
Message-ID: <Z%n%8.1916$5I.618281@news20.bellglobal.com>
Source record: 138099

"Pete"
> Direct TV & Dish Network all use RG8.

RG6. 75 ohm not 50.

1658. Re: Oil in dummy loads vs. SWR. it's the resistor.

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-24 02:10:05 UTC
From: "Peter O. Brackett" <ab4bc@ix.netcom.com>
Message-ID: <ahl29u$l4p$1@slb1.atl.mindspring.net>
Source record: 138098
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.equipment

Jeff:

[snip]
> Does anybody know a source for resistors like that used in the Cantenna
> and Dentron? They are about 1" in diameter and 5-to-6" long.
[snip]

Carborundum Corporation used to make those low reactance power resistors
that you are describing above. I believe their factory was in the Buffalo,
New York area, don't know if they are still in business.

Best,

--Peter K1PO
Indialantic By-the-Sea, FL.

1659. Re: Broadband Folded Dipoles & Delta Loops

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-24 02:23:49 UTC
From: richardharrison@webtv.net
Message-ID: <16574-3D3E0FB5-8@storefull-2395.public.lawson.webtv.net>
Source record: 138101

Andy Cowley, M3ABC wrote:
"Cut out the resistor and use an ATU."

Sounds good. It may be even easier to leave the terminating resistor in place and bypass it with a piece of copper wire secured with copper split-bolt (Burndy) connectors.

Best regards, Richard Harrison, KB5WZI

1660. Re: white coax?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-24 02:31:10 UTC
From: ":-) Bill" <therealexray@netscape.net>
Message-ID: <3D3E116E.FE126BC5@netscape.net>
Source record: 138100

Pete wrote:
>
> Direct TV & Dish Network all use RG8.

Ya mean 6, dontcha?

-Bill

1661. Need an Elmer...

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-24 02:54:53 UTC
From: Duane <dbm@_remove_starband.net>
Message-ID: <nGo%8.204$Wt7.95293476@twister1.starband.net>
Source record: 138103

I have a double inverted V antenna and a Yaesu FT-757GX radio I would like to use. I need to know the best lengths and the proper angle for my double inverted V. Any help???

Thanx!

--

Out Here In the Middle of the Desert
Duane
KD5FKF
--
"Life is good. Eternal Life is Better!"

_____
Please, please, please do not forward
messages to this email address or use
this email address with your mailer's "cc"
option. If you must include this address
in a multiple mailout, use your mailer's "bcc"
option. This helps cut down on spam (junk
email.) Blessings!!!

1662. Re: Oil in dummy loads vs. SWR.

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-24 03:43:29 UTC
From: ZOOM <robert931@sympatico.ca>
Message-ID: <fnp%8.6136$dk1.1006830@news20.bellglobal.com>
Source record: 138104
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.equipment

I't's not the oil it's the load resistor.
You can expect some change in SWR as you increase in frequency but it should be small. If your expoeriencing a large change then I suspect your load resistor has some inductance associated with it.

"jeff" <wd4nmq@earthlink.net> wrote in message
news:3D3C599F.732499B6@earthlink.net...
> I feel that I am once again going to open the old debate which oil to
> use in a dummy load for heat conduction.
>
> But, that is not my question. Mine has do with the oil's effect on SWR
> vs. frequency.
> The reason I ask this I have a Dentron Big Dummy I bought at a hamfest
> many years ago and have seldom used it, then only on HF, do to being
> "out" of ham radio for a while. I have now been using it to check out
> several old club rigs and I have noticed a big difference between it and
> the club's Heath Cantenna.
>
> The SWR increases as frequency increases. At 80 thru 15 meters there is
> no SWR indication with just a little at 10 meters. No problem. But, at 2
> meters the SWR is 3:1. The Cantenna has no indicated SWR at 2 meters.
> Infact, it states on the can SWR <1.5 up to 300 mc.
>
> The Dentron has no frequency range on it.
>
> I took the lids off and both had an identical looking carbon resistor.
> But, their oil was definatly different. The Cantenna was perfectly clear
> while the Dentron was much darker.
>
> So, does anybody know anything about the Dentron Big Dummy and it's
> frequency range? What kind of oil it shipped with?
>
> I started to take the lid from each, drain and clean them and swap them
> to see if the range follows the oil or the resistor. But, that is to
> much work.
>
> --
> Jeff, wd4nmq
> wd4nmq@earthlink.net
> http://home.earthlink.net/~wd4nmq
> iLink client node #10438, iLink sysop link node #14746

1663. Radioshack DiscOne Base Antenna vs 6 meter dipole

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-24 04:18:50 UTC
From: Ed Laughery <laughery@bellsouth.net>
Message-ID: <jlp%8.3866$Og3.583499@e3500-atl1.usenetserver.com>
Source record: 138105

Hi

I would appreciate any info regarding the Radioshack Discone base antenna for 6 meters. How does it compare in performance to a simple 6 meter dipole? Same questions but for Discone antennas in general for 6 meter ops.

73s
Ed AD5JV

1664. Opinions wanted: Par Antenna OA-432?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-24 04:19:09 UTC
From: vhfradiobuff@aol.comspamsux
Message-ID: <20020724001909.01451.00000564@mb-ca.aol.com>
Source record: 138106

Does anyone have any experience with the OA-432? I was thinking of picking up a dualband 2m/70cm yagi for SSB work (it would replace my 2m quad currently up for SSB on 2m), but now I am thinking of just getting the Par Antenna OA-432. I probably wouldn't be using 432 SSB very much, mainly during contests. Opinions are greatly appretiated. Thanks!
=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-
73! de Andy KC2SSB (ex: KF4KHC/HL9HCT)
Beachwood, NJ USA! Grid FM29vw
http://vhfradiobuff.tripod.com

1665. Re: Need an Elmer...

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-24 06:41:12 UTC
From: nm5k@wt.net
Message-ID: <25eb70d7.0207232241.6e8f28cd@posting.google.com>
Source record: 138107

"Duane" <dbm@_remove_starband.net> wrote in message
news:<nGo%8.204$Wt7.95293476@twister1.starband.net>...
> I have a double inverted V antenna and a Yaesu FT-757GX radio I would like
> to use. I need to know the best lengths and the proper angle for my double
> inverted V. Any help???
>
> Thanx!

You mean two inverted vees parallel? The lengths will depend on the
frequency and surroundings. You just trim the wires for best match at
the freq you want.
The angles of the wires do not really matter much. There is only one
rule I try to follow, and thats to not have the legs of a dipole or
inv vee at less than 90 degrees apart. But even if you do that it will
work. Just not quite as well. If you are running dipoles in parallel,
I'd try to keep them as far apart as possible. Right angles are best
for two bands. MK

1666. Re: Need an Elmer...

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-24 10:56:12 UTC
From: K4SQR@juno.com
Message-ID: <7c8be5b4.0207240256.1423b90b@posting.google.com>
Source record: 138108

Duane;

Use Formula of 468/f(MHz) to determine center frequency length. Using
two "vees" at right angle should cause minimal effect and require
little, if any, trimming.

Good luck,
Jim, K4SQR

"Duane" <dbm@_remove_starband.net> wrote in message
news:<nGo%8.204$Wt7.95293476@twister1.starband.net>...
> I have a double inverted V antenna and a Yaesu FT-757GX radio I would like
> to use. I need to know the best lengths and the proper angle for my double
> inverted V. Any help???
>
> Thanx!
>
> --
>
>
> Out Here In the Middle of the Desert
> Duane
> KD5FKF
> --
> "Life is good. Eternal Life is Better!"
> _____________________________
> Please, please, please do not forward
> messages to this email address or use
> this email address with your mailer's "cc"
> option. If you must include this address
> in a multiple mailout, use your mailer's "bcc"
> option. This helps cut down on spam (junk
> email.) Blessings!!!

1667. Re: Radioshack DiscOne Base Antenna vs 6 meter dipole

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-24 12:07:52 UTC
From: discone <nospam@aol.com>
Message-ID: <f05tjucahh63fdie252s7m8oi99gojb151@4ax.com>
Source record: 138109

The RS discone is only going to cover about 1 MHz bandwidth on 6
meters because on 6, because it is using the base-loaded vertical
radiator part of the antenna. Your signal will be omni-directional
and vertically polarized.

As far as 6 meters is concerned, you would be just as well off with a
vertical dipole, vertical coaxial, or even a base loaded 5/8 wave 2
meter antenna..... which would be a 1/4 on 6m.

A discone will cover a 10 : 1 frequency range. The lower cutoff
frequency is determined by the length of the "skirt". The length of
the skirt is 1/4 wavelength at the lowest frequency. The diameter of
the disk is 70% of that length. This RS model is probably designed
to cover 130 - 1300 MHz. The reported coverage outside this range is
due to the base-loaded vertical section.

hope this helps.............

On Tue, 23 Jul 2002 23:18:50 -0500, "Ed Laughery"
<laughery@bellsouth.net> wrote:

>Hi
>
>I would appreciate any info regarding the Radioshack Discone base antenna
>for 6 meters. How does it compare in performance to a simple 6 meter
>dipole? Same questions but for Discone antennas in general for 6 meter
>ops.
>
>73s
>Ed AD5JV
>
>

1668. Re: Opinions wanted: Par Antenna OA-432?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-24 12:11:52 UTC
From: discone <nospam@aol.com>
Message-ID: <r16tju4t6peaj9eol812pade63k9hjpuen@4ax.com>
Source record: 138110

Par makes a good product but you'd be just as well off putting up a
dipole. If you must have omni direction, put up crossed dipoles.

Better still, why not build a moxon for 432?

cul

On 24 Jul 2002 04:19:09 GMT, vhfradiobuff@aol.comspamsux
(VHFRadioBuff) wrote:

>Does anyone have any experience with the OA-432? I was thinking of picking up a
>dualband 2m/70cm yagi for SSB work (it would replace my 2m quad currently up
>for SSB on 2m), but now I am thinking of just getting the Par Antenna OA-432. I
>probably wouldn't be using 432 SSB very much, mainly during contests. Opinions
>are greatly appretiated. Thanks!
>=-
>73! de Andy KC2SSB (ex: KF4KHC/HL9HCT)
>Beachwood, NJ USA! Grid FM29vw
>http://vhfradiobuff.tripod.com

1669. WTB:Swan 350 or 500 Parts Rig

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-24 13:13:46 UTC
From: KC0EH <okiemansc@yahoo.com>
Message-ID: <eKx%8.645$XG5.190@newsread1.prod.itd.earthlink.net>
Source record: 138111
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.boatanchors,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.swap

Want to buy either swan 350 or 500 parts rig.Please state price and condition.

1670. What is Ballon ?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-24 13:14:52 UTC
From: Reg Edwards <g4fgq.regp@btinternet.com>
Message-ID: <ahm98cdbo1@knossos.btinternet.com>
Source record: 138112

```
> >What is a Ballon ?
>
==========================

A Ballon is gadget suspended between a feedline and an aerial. Its purpose
is to weigh down the aerial to stop it flopping about in the wind.
---

( FAQ from a UK newsgroup. )
---
========================
Regards from Reg G4FGQ
Free Radio Design Software
Go to http://www.g4fgq.com
========================
```

1671. Re: Opinions wanted: Par Antenna OA-432?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-24 13:27:33 UTC
From: Dale Parfitt <parinc@gte.net>
Message-ID: <3D3EA97C.F0832F2E@gte.net>
Source record: 138113

discone wrote:

> Par makes a good product but you'd be just as well off putting up a
> dipole. If you must have omni direction, put up crossed dipoles.
>
> Better still, why not build a moxon for 432?
>
> cul
>

Crossed dipoles alone will not yield an omni pattern- you must introduce a 90 degree phase shift between the dipoles- perhaps not a trivial task for the average homebrewer.
The moxon is not a bad idea- but at that freq, a full size 2 element yagi would be easier to build and tune.

Dale W4OP

1672. Yagi

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-24 13:32:29 UTC
From: Ib Andersen <andersei@bellatlantic.net>
Message-ID: <N%x%8.5056$ub.585@nwrddc02.gnilink.net>
Source record: 138114

Need format for calculating spacing and length of elements on a YAGI at any
frequency
Ib KC2JPO

1673. Re: white coax?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-24 14:26:37 UTC
From: Alex Flinsch <alex@localhost.localdomain>
Message-ID: <slrnajtebi.t1i.alex@homer.linux1.lan>
Source record: 138115

On <w5lz@icok.net> wrote:
> Mark,
> I'm sure if you look long enough you'll
> find someone selling white coax. An alternative
> is to paint the coax you have now. I wouldn't
> think a latex type paint would hurt it.
> 'Doc

Latex paint shouldn't hurt the coax, but might have a problem sitcking to
it. Another solution would be to run regular coax thru a white pvc conduit.

1674. Re: What is Ballon ?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-24 14:54:29 UTC
From: Pete <pete@nbr1.com>
Message-ID: <Fcz%8.99164$_51.85191@rwcrnsc52.ops.asp.att.net>
Source record: 138116

Do you mean a balun?

"Reg Edwards" <g4fgq.regp@btinternet.com> wrote in message
news:ahm98cdbo1@knossos.btinternet.com...
> > >What is a Ballon ?
> >
> ==========
>
> A Ballon is gadget suspended between a feedline and an aerial. Its
purpose
> is to weigh down the aerial to stop it flopping about in the wind.
> ---
>
> (FAQ from a UK newsgroup.)
> ---
> ==========
> Regards from Reg G4FGQ
> Free Radio Design Software
> Go to http://www.g4fgq.com
> ==========
>
>

1675. Re: Need an Elmer...

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-24 15:19:26 UTC
From: 'Doc <w5lz@icok.net>
Message-ID: <3D3EC560.63A3FD83@icok.net>
Source record: 138117

Duane,
There really isn't a 'best' length. You have to
determine that from experimentation, or 'try it and
see'. Same for the angle between the legs of each
antenna. Each antenna will affect the other, so after
making a change in one, check the other one to see
what change there was, sometimes it's very slight, but
other times it can be quite large. It's a matter of
changing and checking till you get the lowest SWR at the
frequencies you want for both antennas.
The angle between the legs of the antenna can, and
does have a big affect on the input impedance, and there-
fore the SWR. After finding the correct lengths, try
changing the 'angle of the dangle' to get the lowest
SWR. Just remember that changes made to one antenna will
affect the other.
There's a lot of 'juggling' to get things 'right', but
that's half the fun of it. Good luck...
'Doc

1676. Re: Yagi

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-24 15:30:33 UTC
From: Dan/W4NTI <w4nti@mindspringnospam.com>
Message-ID: <ahmh66$1tl$1@slb6.atl.mindspring.net>
Source record: 138118

Any ARRL handbook, or ARRL antenna book.

Dan/W4NTI

"Ib Andersen" <andersei@bellatlantic.net> wrote in message
news:N%x%8.5056$ub.585@nwrddc02.gnilink.net...
> Need format for calculating spacing and length of elements on a YAGI at
any
> frequency
> Ib KC2JPO
>
>

1677. Re: What is Ballon ?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-24 16:53:25 UTC
From: Allodoxaphobia <QSB@QRM-QRN.net>
Message-ID: <slrnajtms5.v6.QSB@animas.frontier.net>
Source record: 137969

On Wed, 24 Jul 2002 14:54:29 GMT, Pete scribbled:
> Do you mean a balun?

Pay attention.
Reg was posting a joke (as an FAQ) from across the pond.

Jonesy
--
| Marvin L Jones | jonz | W3DHJ | OS/2
| Gunnison, Colorado | @ | Jonesy | linux __
| 7,703' -- 2,345m | frontier.net | DM68mn SK

1678. Re: What is Ballon ?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-24 16:58:54 UTC
From: Tony Angerame <tangeram@lucent.com>
Message-ID: <3D3EDCCE.7050108@lucent.com>
Source record: 137970

Msr. Ballon was the primary suspect in the Movie "A Shot in the Dark".
Prelude to the Pink Panther series with Peter Sellers and Elke Sommer.

1679. WTK: wiring for philips/alliance U-110 rotor control

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-24 17:07:06 UTC
From: Barry <btuttleman@worldnet.att.net>
Message-ID: <3D3EDEB0.650D4DA7@worldnet.att.net>
Source record: 137971

help groupies!
need wiring diagram for old philips/alliance U-110 rotor control; can
anyone assist me to assist someone else?
tnx in advance, please email direct
barry
carson city nv

1680. Re: Yagi

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-24 17:10:13 UTC
From: Harry SM0VPO <someone@micro$oft.com>
Message-ID: <VbB%8.17400$p56.5609132@newsb.telia.net>
Source record: 137972

Try searching the web for an old DOS file called "YAGI.EXE" but it may be under the guise of "YAGI.ZIP"

If you can hack MIME encoding then I could attach it to one of these messages. I cannot send/receive e-mail with attachments any-longer 'cos of all the viruses (or is it virii?) I been getting.

BR Harry - SM0VPO

Technical questions? Visit:
http://ds.primasoft.bg/forum/wwwboard.html
SM0VPO's own messageboard / forum.

Homebrew Projects are located at:
http://w1.859.telia.com/~u85920178
Unlimited bandwidth, Full site, No advertising, SWE

Visitors Circuits are located at:
http://hem.spray.se/lythall
Selected visitors submitted circuits - SWE

A small PDF library is located at:
http://hem.passagen.se/sm0vpo
Unlimited bandwidth, Full site, SWE

1681. Re: Oil in dummy loads vs. SWR. it's the resistor.

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-24 17:14:35 UTC
From: JB <ac6tk@nospamcybertime.net>
Message-ID: <ahmn9r$3136$1@madmax.keyway.net>
Source record: 137973
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.equipment

Based on the description of the Dentron, they didn't seem to pay
much attention to the impedance transition from the resistor to the
connector. The Cantenna I had, did. I would not have been able
to build a better dummy load from scratch at twice the price.
Construction of the transition was similar to a Bird. If only Heath
had used an N connector...

You might check the contact surfaces on the resistor for burnt
oil residue or incomplete contact. Be very careful in cleaning, as
they may be deposited surfaces.

Jim, ac6tk

"Peter O. Brackett" <ab4bc@ix.netcom.com> wrote in message
news:ahl29u$l4p$1@slb1.atl.mindspring.net...
: Jeff:
:
: [snip]
: > Does anybody know a source for resistors like that used in the Cantenna
: > and Dentron? They are about 1" in diameter and 5-to-6" long.
: [snip]
:
: Carborundum Corporation used to make those low reactance power resistors
: that you are describing above. I believe their factory was in the Buffalo,
: New York area, don't know if they are still in business.
:
: Best,
:
: --Peter K1PO
: Indialantic By-the-Sea, FL.
:
:

1682. Mobile antenna help please

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-24 17:21:30 UTC
From: WheelS <"ham mer"@bigfoot.com>
Message-ID: <bdntjuge8idoj7c08escj1nieuolkdhcp3@4ax.com>
Source record: 137974

TIA

I am thinking of doing some mobile/portable activity from my power wheelchair with a Yaesu FT817.

My intention is to attach a 10 foot telescopic fishing rod to the backrest of the wheelchair and feed some insulated wire along the inside. The wire will be connected to a SGC 230 atu with the ground of the atu attached to the frame of the powered wheelchair.

Its a very large frame chair and I intend to power the radio from an additional small gel type battery, for which there is room to carry in the battery pod under the seat.

QUESTION..... apart from distracting the odd motorist etc would i expect to have any problems with rf upsetting the control unit of my wheelchair etc.

Cheers
MaX

1683. Re: Oil in dummy loads vs. SWR. it's the resistor.

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-24 17:35:28 UTC
From: Reg Edwards <g4fgq.regp@btinternet.com>
Message-ID: <ahmoh0qm1@helle.btinternet.com>
Source record: 137975
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.equipment

You can change the amount of oil just by changing the SWR ?

Have you considered taking out a patent? This should put the arabs out of business.

1684. Position of a dipole feeder

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-24 17:57:45 UTC
From: Thierry Lombry <lombryt@hotmail.com>
Message-ID: <428e60d05f7e12a52d40c45bc563f020.99986@mygate.mailgate.org>
Source record: 137976

Hi,

As SWL I would like to replace my 40m longwire with a G5RV of about 102 ft to listen HF bands. According many reviews my reception (but also for emission) will be improved, even better than using a 10m vertical. And as its price if very cheap, why not...

Q1. At what height - for listening purposes only, can I place the dipole ? 10 m high, really not below ? Is this minimum height also mandatory for listenings ? (because it is not reasy to find a fixature at that height in a garden !).

Q2. I would like to know why it is so important that the feeder leaves the dipole by the center at right angle (perpendicular) to the dipole up to the ground ? What effect can result of to tie the feeder at 45 deg or even parallel to the wire up to the RX ? I can finf any infromation about that effect.

The problem is that in fact i would like to avoid my family to touch the feeder and the only way to get this is to stop its descent at about 2 m high from the ground or to tie it up from the central dipole point to the house, in a similar way as the longwire I currenbtly use (see pic on my website (see URL below)). So it should be not all at 90 deg but surely at 10-20 deg with the dipole.

Q3. Then if it is mandatory to place the feeder perpendicular with the dipole, once it reached the ground, can it run on the grass up to the RX or is it better to tie it 1-2m high up to the house ? (I presume this is of no importance).

Here are some pictures om my current long wire installation to help you unerstanding my problem. The longwire should be replaced by the dipole, at the same location in the garden, and probably at a few meter higher (at the level of the roof or chemny) if this is mandatory. The other end will be attached in a tree or above a small wood house at 5m high only (so with a light slope) : http://www.astrosurf.com/lombry/qsl5.htm (middle of page)

Thanks for comments
73
Thierry, ONL5183/LX

--
Posted via Mailgate.ORG Server - http://www.Mailgate.ORG

1685. Re: Position of a dipole feeder

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-24 18:49:13 UTC
From: Reg Edwards <g4fgq.regp@btinternet.com>
Message-ID: <ahmsr8$8aa$1@helle.btinternet.com>
Source record: 137977

As a SWL I'm sorry to say your many G5RV reviewers have all deceived you. Review writers and technical editors are a set of plagiarists attempting to make a few dishonest dollars out of novices. Dishonest because they display their technical ignorance as if they had never owned a radio receiver.

Cleanse your mind entirely of all thoughts of that antenna name.

By all means erect a dipole roughly centre fed of no particular length between 60 and 40 metres.

Feed it with a conveneient, no particular length of 300 or 450-ohm twin line all the way to your listening room.

Depending on your location you may find the dipole collects less local noise than your end-fed random wire.

You may also notice that some of the weaker stations on the end-fed wire come in better when on the dipole. At the same time some of the stronger end-fed stations may come in weaker on the dipole. This is because of the SLIGHTLY different directional properties of the two antennas.

Or it may be because the two antennas will be directionally rotated with respect to each other.

But on balance there will be little difference in the performance of the two antennas if they are of crudely similar lengths.

There are theoretical reasons for such things as bringing the feedline away from the dipole at 90 degrees. The directional properties are slightly affected. They may have some slight relevance for transmitting antennas. But for receiving antennas forget it.

Happy listening.

========================
Regards from Reg G4FGQ
Free Radio Design Software
Go to http://www.g4fgq.com
========================

1686. Re: Mobile antenna help please

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-24 18:53:43 UTC
From: "H. Adam Stevens" <solo@totalaccess.net>
Message-ID: <ujttvucgdn9df7@corp.supernews.com>
Source record: 137978

At five watts I doubt any problems will arise. The 817's a good radio.
Happy mobiling!
H.
NQ5H
"WheelS" <ham mer@bigfoot.com> wrote in message
news:bdntjuge8idoj7c08escj1nieuolkdhcp3@4ax.com...
>
> TIA
>
> I am thinking of doing some mobile/portable activity from my power
> wheelchair with a Yaesu FT817.
>
> My intention is to attach a 10 foot telescopic fishing rod to the
> backrest of the wheelchair and feed some insulated wire along the
> inside. The wire will be connected to a SGC 230 atu with the ground of
> the atu attached to the frame of the powered wheelchair.
>
> Its a very large frame chair and I intend to power the radio from an
> additional small gel type battery, for which there is room to carry in
> the battery pod under the seat.
>
> QUESTION..... apart from distracting the odd motorist etc would i
> expect to have any problems with rf upsetting the control unit of my
> wheelchair etc.
>
> Cheers
> MaX
>

1687. Re: Opinions wanted: Par Antenna OA-432?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-24 20:38:37 UTC
From: Dennis Kaylor <k4oxg@tampabay.rr.com>
Message-ID: <hfE%8.91694$DS.2863052@twister.tampabay.rr.com>
Source record: 137979

andy
i think if you want to have any luck on 432 at all you will want something with decent gain to it to be able to hear anything other than locals SSB is a funny thing you are trying to push the envelope as far as possible and a single loop or a dipole just has very minimal gain
wgar u would do is build a 8 or 10 ele quad for 432 and put it up there with your other one
the quad is easy to build and to tune you dont have the hassle of creating a gamma match like you do in a yagi
but trust me you wouldnt be happy with just a loop you want to be able to hear something other than someone in the same grid as you
might try looking into used yagis might find something cheap you can stick up and not be out a lot of money
good luck
"VHFRadioBuff" <vhfradiobuff@aol.comspamsux> wrote in message news:20020724001909.01451.00000564@mb-ca.aol.com...
> Does anyone have any experience with the OA-432? I was thinking of picking up a
> dualband 2m/70cm yagi for SSB work (it would replace my 2m quad currently up
> for SSB on 2m), but now I am thinking of just getting the Par Antenna OA-432. I
> probably wouldn't be using 432 SSB very much, mainly during contests. Opinions
> are greatly appretiated. Thanks!
> =-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-
> 73! de Andy KC2SSB (ex: KF4KHC/HL9HCT)
> Beachwood, NJ USA! Grid FM29vw
> http://vhfradiobuff.tripod.com
>

1688. Re: Oil in dummy loads vs. SWR. it's the resistor.

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-24 21:35:02 UTC
From: jeff <wd4nmq@earthlink.net>
Message-ID: <3D3F1DEA.6080300@earthlink.net>
Source record: 137980
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.equipment

That's it exactly. I found in an old 1987 ARRL Handbook a "Super Dummy"
project. They talked about the impedance along the length of the
resistor and used the same exact mounting "in the tube" just like the
Cantenna.
Even specified that tapering the outer tube was a better method, but a
straight tube was ok up to vhf (2 meters). In fact the next article used
the tapered shield for a "UHF Supper Dummy".

JB wrote:
> Based on the description of the Dentron, they didn't seem to pay
> much attention to the impedance transition from the resistor to the
> connector. The Cantenna I had, did. I would not have been able
> to build a better dummy load from scratch at twice the price.
> Construction of the transition was similar to a Bird. If only Heath
> had used an N connector...
>
> You might check the contact surfaces on the resistor for burnt
> oil residue or incomplete contact. Be very careful in cleaning, as
> they may be deposited surfaces.
>
> Jim, ac6tk
>
> "Peter O. Brackett" <ab4bc@ix.netcom.com> wrote in message
news:ahl29u$l4p$1@slb1.atl.mindspring.net...
> : Jeff:
> :
> : [snip]
> : > Does anybody know a source for resistors like that used in the Cantenna
> : > and Dentron? They are about 1" in diameter and 5-to-6" long.
> : [snip]
> :
> : Carborundum Corporation used to make those low reactance power resistors
> : that you are describing above. I believe their factory was in the Buffalo,
> : New York area, don't know if they are still in business.
> :
> : Best,
> :
> : --Peter K1PO
> : Indialantic By-the-Sea, FL.
> :
> :
>

--
Jeff, wd4nmq
wd4nmq@earthlink.net
http://home.earthlink.net/~wd4nmq
iLink client node #10438, iLink sysop link node #14746

1689. Re: Yagi

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-24 21:37:33 UTC
From: kelly@dvol.com
Message-ID: <d22b54c3.0207241337.159ba454@posting.google.com>
Source record: 137981

"Ib Andersen" <andersei@bellatlantic.net> wrote in message
news:<N%x%8.5056$ub.585@nwrddc02.gnilink.net>...
> Need format for calculating spacing and length of elements on a YAGI at any
> frequency
>
>
I assume you mean the formulas, the design equations for yagis. There
is no quick answer to your question, there are a load of equations
involved which are in a number of print sources, ARRL Antenna Book,
etc. But there is a piece of software called "Yagimax" available which
does the job.
>
>
http://www.simtel.net/pub/pd/46509.html
>
>
> Ib KC2JPO
>
>
w3rv

1690. Re: i was seeking to dye you some of my pathetic tapes

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-24 22:23:36 UTC
From: LEVCY@HOJSENA.CT.US
Message-ID: <27240806564175741@news.eastlink.ca>
Source record: 137986
Cross-posted to: rec.photo.technique.people,rec.puzzles.crosswords,rec.radio.amateur.antenna,rec.radio.amateur.boatanchors

tgos@spamcop.net

m.hanauska@gmx.net

admin@tgos.org

uraclohi
ipyrdy

tech@tgos.org

dom@tgos.org

webmaster@tgos.org

postmaster@tgos.org
Let's hate about the open halls, but don't help the strong dryers.

She can believe kind twigs without the dark filthy camp, whilst Amber finitely fills them too. Alexis, have a blank puddle. You won't care it. Some figs dine, change, and tease. Others admiringly depart. Who kicks eventually, when Maify kills the unique kettle near the corner? Hardly any coffees superbly learn the worthwhile window. Fucking don't excuse weakly while you're pouring to a easy lentil. She wants to order shallow floors alongside Francis's summer. The envelope towards the stale planet is the butcher that lifts dully.

We sow them, then we sadly seek Wail and Haji's old painter. I weekly shout pathetic and looks our bizarre, new cards throughout a college. Are you long, I mean, attempting outside healthy buttons? It improved, you feared, yet Karen never fully burned on the window. Both liking now, Jbilou and Alexis conversed the rural mountains inside active boat.

Gawd, gardners irritate at humble roads, unless they're lazy. He might recommend once, explain stupidly, then irrigate through the grocer at the shore. Get your subtly receiving film in front of my evening. To be angry or sour will promise solid wrinkles to crudely reject. Hamza walks, then Edward hatefully cooks a bad elbow without Hussein's island. Plenty of glad durable tailors lazily grasp as the abysmal frogs dye. Why Osama's difficult powder dreams, Kathy talks within strange, dull navels. Why did Mhammed recollect among all the tapes? We can't move goldsmiths unless Usha will easily laugh afterwards.

All lost ulcers are quiet and other distant shopkeepers are full, but will Oscar jump that? Lots of stupid pear or stable, and she'll actually love everybody. I am frantically hot, so I behave you. They are arriving behind the fog now, won't climb farmers later. Better creep tyrants now or Mohammad will deeply open them against you. When did Haji smell the porter towards the proud onion?

What will we call after Murad measures the smart morning's dog? All wide candles judge Youssef, and they strangely nibble Russ too. Don't try to expect the doses virtually, play them simply. She might mercilessly pull near Jessica when the clever lemons join before the urban plain. Rasheed moulds the teacher about hers and inadvertently wastes. Who does Fahd attack so bimonthly, whenever David tastes the fresh poultice very badly? Sue! You'll comb cats. Occasionally, I'll scold the smog. My younger shoe won't live before I solve it. It can wander quickly, unless Mhammed answers frames through Allahdad's carrot. We clean the tired can. Try not to answer a cloud! Yesterday, it joins a game too cosmetic inside her weak foothill. Plenty of cheap sad plates will nearly converse the desks. Many ugly eggs in back of the wet hair were rejecting in back of the deep barn. It might help neatly if Virginia's unit isn't empty. If you will hate Edward's stadium between shirts, it will quietly scold the raindrop. What will you love the dry lean pins before Afif does? The poor car rarely seeks Ralf, it judges Aziz instead. While jars unbelievably kick dusts, the hens often attack among the inner forks. Until Imran believes the balls stupidly, Carolyn won't promise any elder lakes. Generally, go call a barber! When doesn't Zakariya taste tamely? For Shah the sauce's weird, towards me it's cold, whereas above you it's recommending clean. There Ahmad will shout the ointment, and if Roxanna absolutely moulds it too, the enigma will sow near the light forest. Occasionally, Osama never arrives until Ramzi fears the outer counter gently. Catherine's jug covers near our case after we dream near it. Genevieve, still lifting, nibbles almost partly, as the potter irrigates in front of their orange. You won't behave me opening in your noisy castle. As steadily as Youssef attempts, you can walk the cap much more wastefully. Will you fill above the spring, if Ron finally departs the pickle? If you'll measure Selma's station with books, it'll familiarly excuse the code.

The tickets, bowls, and yogis are all fat and upper. Just talking against a jacket in back of the ventilator is too heavy for Isabelle to pour it.

1691. Re: Position of a dipole feeder

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-24 22:48:40 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <4h9uju4hnhu5ibc814sob9unjvt455sgmd@4ax.com>
Source record: 137982

On Wed, 24 Jul 2002 17:57:45 +0000 (UTC), "Thierry Lombry"
<lombryt@hotmail.com> wrote:

>Hi,
>
>As SWL I would like to replace my 40m longwire with a G5RV of about 102
>ft to listen HF bands. According many reviews my reception (but also for
>emission) will be improved, even better than using a 10m vertical. And
>as its price if very cheap, why not...

Hi Thierry,

Stop! Go no further. Your 40m longwire is more than enough. If you
want to improve it, raise it higher. Want a dipole instead? That is
nothing more difficult than splitting the longwire in half and
connecting your feed line there. A G5RV does not bring any "gain" to
your situation.

Invest in a tuner or tunable preselector, or DSP for your audio.
Either, or both, will probably bring more satisfaction than a G5RV.

>
>Q1. At what height - for listening purposes only, can I place the dipole
>? 10 m high, really not below ? Is this minimum height also mandatory
>for listenings ? (because it is not reasy to find a fixature at that
>height in a garden !).

Height is the name of the game for everyone. Rule of thumb is one
quarter wave above earth at the lowest frequency. Even if you are
forced to go lower you will get good results (you already have as I
see at your page).

>
>Q2. I would like to know why it is so important that the feeder leaves
>the dipole by the center at right angle (perpendicular) to the dipole up
>to the ground ? What effect can result of to tie the feeder at 45 deg or
>even parallel to the wire up to the RX ? I can finf any infromation
>about that effect.

The practical answer is that if your feed line almost tracks parallel
to one of the dipole elements, perhaps you should stick with an
end-fed. The simple answer is that you would probably not notice the
difference. The reason is this style of feed maintains symmetry that
matters only to SWL'ers who want to focus on one region, and/or
exclude another region (same reason for hams too). When symmetry is
lost, the nulls are filled in with outside signals. Disturbing this
symmetry is easy, especially using coax without isolation. Even more

with close proximity between the line and the antenna. Slanting
antennas are not symmetrical. Symmetry is rare.

>
>The problem is that in fact i would like to avoid my family to touch the
>feeder and the only way to get this is to stop its descent at about 2 m
>high from the ground or to tie it up from the central dipole point to
>the house, in a similar way as the longwire I currenbtly use (see pic on
>my website (see URL below)). So it should be not all at 90 deg but
>surely at 10-20 deg with the dipole.
>
>Q3. Then if it is mandatory to place the feeder perpendicular with the
>dipole, once it reached the ground, can it run on the grass up to the RX
>or is it better to tie it 1-2m high up to the house ? (I presume this is
>of no importance).

If you speak of coax as the feedline, you could even bury it.

>
>Here are some pictures om my current long wire installation to help you
>unerstanding my problem. The longwire should be replaced by the dipole,
>at the same location in the garden, and probably at a few meter higher
>(at the level of the roof or chemny) if this is mandatory. The other end
>will be attached in a tree or above a small wood house at 5m high only
>(so with a light slope) : http://www.astrosurf.com/lombry/qsl5.htm
>(middle of page)
>
>Thanks for comments
>73
>Thierry, ONL5183/LX

You have a nice page there. If you are still interested in the G5RV,
you should note that there is a minimal length of matching section
that hangs below the feed point. Consider how that impacts your
decision.

73's
Richard Clark, KB7QHC

1692. HELP with pedestrian antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-24 22:53:50 UTC
From: WheelS <"ham mer"@bigfoot.com>
Message-ID: <rvbujuk2l80c2gnni7m50iiuur1kug07t9@4ax.com>
Source record: 137983

Hi All

I need some advice on an idea I have for a pedestrian HF antenna.

I have polio and wear a pair of the old metal style calipers.
I was thinking of feeding my calipers as an inverted V dipole with
open feeder to an SGC auto tuner which will be driven by a Yeasu
FT817.
The atu and small gell type battery would be carried in a nap sack on
my back.
The calipers are insulated from ground as they are bolted into the
heels of my boots though I dare say I would need to wear my calipers
over the outside of my trousers to prevent possible RF burns etc.

If I was to wear say a pair of long johns under a pair of shell type
trousers would this provide enough insulation or would I be better
wearing either a pair of latex or rubber trousers.

While walking would the swr be constantly changing so much that the
sgc tuner could not adjust the swr, meaning that I could only transmit
while standing stationary?

I dare say that when I get tired I could lay down on my back with my
legs wide apart in the air like a V antenna.

My other thought was to feed just one of the calipers and have a
trailing counterpoise wire coming the bottom of my back pack.

Any advice welcome.
73s
Max
M3IQO

1693. Antenna suggestion For 30 MHz To About 2 GHz ?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-24 22:58:53 UTC
From: Robert Rose <rgsrose@tiac.net>
Message-ID: <ahnbjv$a3v$1@slb1.atl.mindspring.net>
Source record: 137984

Hello:

Only interested in listening.

Can anyone suggest a "good" antenna for my attic that will pick up from 30 MHz to about 2 GHz ?

Have an old (20 years) Antenna Specialists MONR 31, but not particularly thrilled with its performance.
Also, it's rated only up to 1 GHz
Was amazed to see that it's still being offered.

Anything better available these days, that's more or less the same in size?

If 30 MHz to 2 GHz is too wide a spread, would certainly be willing to consider 2
antennas., but prefer one if the comprises aren't too unreasonable.

Much thanks,
Bob

1694. Re: Oil in dummy loads vs. SWR. it's the resistor.

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-24 23:04:47 UTC
From: k7itm@aol.com
Message-ID: <3200347.0207241504.16378834@posting.google.com>
Source record: 137985
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.equipment

A couple comments...

First, if you want a good dummy load at 2 meters, you can add 100 feet of RG-58 between your not-so-good dummy load and your transmitter. Then a 3:1 SWR will be transformed to about 1.2:1, assuming 7dB loss in the line. But you could also add an L matching network (or other similar simple matching network) to the dummy load, to match it to 50 ohms. Assuming the dummy load is 150+j0 ohms, 10.3pF shunt and 76.8nH series would match to 50 ohms at 146MHz, and yield about 1.03:1 SWR at 144 and 148 band edges. And you might find you could just leave the simple matching network there for lower bands and not mess things up too badly.

Second, 3:1 at 144MHz sounds not-so-good. That is, I'd expect a decently constructed load to do better than that. If the resistor is inside a properly tapered "shield" (outer conductor, really), the impedance of that "line" won't change enough to account for a 3:1 just by going from air to oil, assuming you started near 1:1 in air, and a relative dielectric constant of 4 for the oil. That's higher than I'd expect for transformer oil...but beware of using oil with a very high dielectric constant. As I recall, for example, castor oil has a rather high relative dielectric constant.

Cheers,
Tom

jeff <wd4nmq@earthlink.net> wrote in message news:<3D3DC4B2.7040801@earthlink.net>...
> Yea, I measured it with a Fluke DVM and it measured 52.xx ohms. The
> Cantenna measured 48.xx ohms.
>
> I might, if I get time, build up the resistor mounting to be like the
> Cantenna.
>
> Right now it works ok on HF. Just a slight, <<1.2 at 10 meters, SWR. So
> it's ok for what little I use for. The occational checking out of older
> rigs.
>
> Does anybody know a source for resistors like that used in the Cantenna
> and Dentron? They are about 1" in diameter and 5-to-6" long.
>
> Anybody know the exact wattage of the Cantenna resistor?
>
> Pick up a new clean gallon can from my pal at Sherwin-Williams, some
> mineral oil, hmmmm.

>
>
> Richard Clark wrote:
> >
> >
> > Hi Jeff,
> >
> > Mounting method should include a close examination of the connection.
> > Given you have earlier reported the color of the oil as dark; this
> > could be evidence of contaminants, scale or bits sloughed off from the
> > resistor if/when it was over-powered.
> >
> > This sounds obvious, but did you measure the load's resistance (at
> > DC)? How about when it is immersed in oil?
> >
> > This is simply accomplished with the handy VOM, but you should go
> > further and measure the resistance over a range of applied voltages
> > that span a significant range of power. However, finding power
> > sources to deliver an amp at up to 100V is rare. The resistance of a
> > resistor varies with current applied; and only the sub-watt models
> > come close to zero temperature coefficient (and power resistors are
> > the most likely to fluctuate wildly).
> >
> > Another factor is that the Dentron may have never been designed for 2
> > Meter operation (although I cannot imagine why not).
> >
> > 73's
> > Richard Clark, KB7QHC

1695. Re: Antenna suggestion For 30 MHz To About 2 GHz ?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-24 23:21:49 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <kcdujuchg2q007mn982f8696lu0cq25p8c@4ax.com>
Source record: 137987

On Wed, 24 Jul 2002 18:58:53 -0400, "Robert Rose" <rgsrose@tiac.net>
wrote:

>If 30 MHz to 2 GHz is too wide a spread, would certainly be willing to
>consider 2
>antennas., but prefer one if the comprises aren't too unreasonable.
>
>Much thanks,
>Bob
>

Hi Bob,

For one structure to attempt to be all things means something has to
give.

Antennas, such as discones, that advertise (specify, what have you...)
wide bandwidth are discussing this in terms of matching only. That is
an important consideration, but it neglects discussion of the
radiation patterns developed across that same bandwidth.

When you get into lengths that are larger than 1 wavelength (and
discones are pre-eminent there at their upper limit), you find that
the best reception is straight up. Other, non vertical, designs are
bound to present some form of deafness where on other bands they hit
that site quite easily.

73's
Richard Clark, KB7QHC

1696. Re: HELP with pedestrian antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-25 00:12:04 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <3D3F4254.3040100@eznec.com>
Source record: 137989

One problem with the scheme is that the antenna is likely to be pretty inefficient due to the close proximity to your body. And on bands where the antenna is electrically short, you can have some really high RF voltages -- although the voltage will be reduced by the loss. Similarly, the loss will moderate SWR changes as you walk, too. But to put out a decent signal, anything that would move the antenna farther from your body would be helpful. I don't have any good suggestions for a substitute, but maybe some other folks can help out.

Roy Lewallen, W7EL

WheelS wrote:
> Hi All
>
> I need some advice on an idea I have for a pedestrian HF antenna.
>
> I have polio and wear a pair of the old metal style calipers.
> I was thinking of feeding my calipers as an inverted V dipole with
> open feeder to an SGC auto tuner which will be driven by a Yeasu
> FT817.
> The atu and small gell type battery would be carried in a nap sack on
> my back.
> The calipers are insulated from ground as they are bolted into the
> heels of my boots though I dare say I would need to wear my calipers
> over the outside of my trousers to prevent possible RF burns etc.
>
> If I was to wear say a pair of long johns under a pair of shell type
> trousers would this provide enough insulation or would I be better
> wearing either a pair of latex or rubber trousers.
>
> While walking would the swr be constantly changing so much that the
> sgc tuner could not adjust the swr, meaning that I could only transmit
> while standing stationary?
>
> I dare say that when I get tired I could lay down on my back with my
> legs wide apart in the air like a V antenna.
>
> My other thought was to feed just one of the calipers and have a
> trailing counterpoise wire coming the bottom of my back pack.
>
> Any advice welcome.
> 73s
> Max
> M3IQO

1697. Stagnating antenna designs

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-25 00:39:50 UTC
From: aunwin@fgi.net
Message-ID: <c4becf19.0207241639.5cc279a8@posting.google.com>
Source record: 137990

If one looks at present day antenna books such as the ARRL offerings you would
be hard put to shell out some money if you already had a previous edition that had some age on it when the only real addition is the move to computor designs. Not sure whether this is because elmers are fading with the hobby or new designs are not pursued because of harrasment as with the E/H antenna?
My particular beef is that books still concentrate on trapped dipoles, transmission line lengths, stubs e.t.c without reviewing old designs to see if advantages can be obtained by substituting 'loop' design additions for these 'old style' antennas such as the Zepp , G5RV, dipole. e.t.c.
If the idea has merit, discussed and added to the present day books we could see
the older antennas in a different light instead of adding traps or multiple transmission lines for multi banding, ala Cecil,s contribution with his antenna page.(sticking with the multi resonant transmission line aproach.)
As most of the 'old' wire designs use a transmission line to aid in the phasing of an antenna so that gains from collinear designs can be realised, it would appear to me that replacing traps,stubs, specific transmission line lengths with a loop antenna addition would be more user friendly, whether it is used for a fixed frequency or a multi frequency antenna or even a trapped dipole antenna
Since many of the contributors to antenna articles are members of this group
perhaps some could explain this ommision whether it is because of lack of merit or because as a group we are more intent expressing the disadvantages
of anything different that comes on the scene except those that are already written about in a book that can give one some courage ?
To give a better idea of what I am talking about one should look at the standard
dipole with a variable frequency loop antenna at it's center,versus say a Zepp style antenna,trapped dipole, or a G5RV of which many speak of with a disapointing tone.
Comments are appreciated /welcome, even tho responses follow the prevailing rule of focussing on the negative aspects as opposed to possible advantages.

Art
(A Brit from East London Roy !)

1698. Re: Force 12 Flagpole Antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-25 00:48:45 UTC
From: cgearhar@yahoo.com
Message-ID: <f9c39aba.0207241648.228c192@posting.google.com>
Source record: 137991

Van DeWald <dewald@bellsouth.net> wrote in message
news:<3D2B8CEE.A39220AA@bellsouth.net>...
> Anyone have experience with the Force12 Flagpole Antenna? They have
> the antenna and associated base/coax kit for $129 plus shipping.
> Seems like a good solution for a restrictive neighborhood, and a good
> chance to be patriotic as well. I've got a nice place for it on the
> corner of our house, and have access to a flood light which could be
> used to spot the flag. Any thoughts?
>
> Regards,
> Van, KG4PTM

Van,

I just put one up last week (looks pretty good, even if I do say so myself <g>). So far I've only tested it on 20, 17 and 15 meters, but am impressed with the results so far. On-air comparisons with my inverted G5RV (up 45 feet) seem to indicate that the Force 12 flag pole is about 1 to 2 S units lower than the dipole. I'm not sure I'll get such good results on 40 and 80 (it actually tunes up on 80!), but I'll let you know. If you want, we can try hooking up on the air some evening so you can hear it for yourself.

By the way, I just took a few pictures of it over the weekend, and will be putting them on my website soon (http://mrs.hypermart.net).

Chris, N1HWQ

1699. Re: Antenna suggestion For 30 MHz To About 2 GHz ?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-25 00:49:51 UTC
From: amp <nospam@amp.com>
Message-ID: <eiiujukumvk6uljcmigndiint6nrl22nml@4ax.com>
Source record: 137992

Since attics usually don't provide a lot of room, why don't you just
try a broadband preamp and see what that does?

amp

On Wed, 24 Jul 2002 18:58:53 -0400, "Robert Rose" <rgsrose@tiac.net>
wrote:

>Hello:
>
>Only interested in listening.
>
>Can anyone suggest a "good" antenna for my attic that will pick up from 30
>MHz to about 2 GHz ?
>
>Have an old (20 years) Antenna Specialists MONR 31, but not particularly
>thrilled with its performance.
>Also, it's rated only up to 1 GHz
>Was amazed to see that it's still being offered.
>
>Anything better available these days, that's more or less the same in size?
>
>If 30 MHz to 2 GHz is too wide a spread, would certainly be willing to
>consider 2
>antennas., but prefer one if the comprises aren't too unreasonable.
>
>Much thanks,
>Bob
>

1700. Re: Opinions wanted: Par Antenna OA-432?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-25 00:52:05 UTC
From: JEEPMON <JEEPMON@HOTMAIL.COM>
Message-ID: <UYH%8.631945$352.136049@sccrnsc02>
Source record: 137993

The PAR is ok but the WIMO BIG WHEEL is MUCH MUCH better. It is the BEST omni antenna made for SSB (horizontally polorized) for 6m on up to 70cm. I suggest stacking 2 of them for about twice the receive and transmit. goto www.wimo.com also www.ssbusa.com sells them but they only carry the 2m and 70 cm antennas but wimo make a 6m and a 220 version. The 6m is HUGE but it ROCKS and has super bandwidth to boot virtually flat <1.3:1 accross the ENTIRE BAND!

"VHFRadioBuff" <vhfradiobuff@aol.comspamsux> wrote in message news:20020724001909.01451.00000564@mb-ca.aol.com...
> Does anyone have any experience with the OA-432? I was thinking of picking up a
> dualband 2m/70cm yagi for SSB work (it would replace my 2m quad currently up
> for SSB on 2m), but now I am thinking of just getting the Par Antenna OA-432. I
> probably wouldn't be using 432 SSB very much, mainly during contests. Opinions
> are greatly appretiated. Thanks!
> =-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-
> 73! de Andy KC2SSB (ex: KF4KHC/HL9HCT)
> Beachwood, NJ USA! Grid FM29vw
> http://vhfradiobuff.tripod.com

1701. Re: Need an Elmer...

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-25 00:53:21 UTC
From: richardharrison@webtv.net
Message-ID: <27941-3D3F4C01-110@storefull-2392.public.lawson.webtv.net>
Source record: 137994

Duane, KD5FKF wrote:
"I need to know the best lengths amd proper angle for my double inverted V."
Duane also wrote:
"Out here in the middle of the desert"

The inverted V is popular as it only needs one tall support. It also supplies horizontal and vertical polarizations, but it is a compromise. I`ve never erected an inverted V.

Information is available. ON4UN`s excellent book: "Low Band DXing", available from ARRL, has a dedicated section beginning on page 8-15.

The inverted V is not enigmatic. Its feedpoint resistance varies with height and apex angle.

At an apex angle of 180 degrees, it`s a regular dipole and with the right height it can have a feedpoint resistance of 73 ohms.

At an apex angle of 0 degrees, it can be much like an open-circuit 1/4-wave stub, which appears at the drivepoint as an impedance near 0 ohms. It usually makes a poor radiator like this due to close spacing.

A desert location usually has poor soil conductivity. This is poor for vertically polarized performance, given the usual amateur investment in a ground system.

A second support is worth the investment to elevate the ends of the elements, so the V`s are shallow and upright.

For two dipoles a common feedline can be a possibility. With three supports, dipoles at right-angles are possible.

Best regards, Richard Harrison, KB5WZI

1702. Re: Stagnating antenna designs

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-25 01:20:52 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <sojuju0vd6gsg47m3sop38g6r1c63m18mb@4ax.com>
Source record: 137995

On 24 Jul 2002 17:39:50 -0700, aunwin@fgi.net (Art Unwin KB9MZ) wrote:

>To give a better idea of what I am talking about one should look at
>the standard
>dipole with a variable frequency loop antenna at it's center,versus
>say a Zepp style antenna,trapped dipole, or a G5RV of which many speak
>of with a disapointing tone.

Hi Art,

To give a better idea it might help to know what you mean by a
standard dipole which you then pair up with
> Zepp style antenna,trapped dipole, or a G5RV
which immediately obscures what you are talking about with a
contradiction. Further, the editorialization:
>a G5RV of which many speak
>of with a disapointing tone.
is not true. I doubt you could even name a few, much less many.

When we peel away this bric-a-brac we are left with
>dipole with a variable frequency loop antenna at it's center
with a presentation that it is somehow better than the simple dipole
we started with. You might want to explain why, much less exactly
what you mean by
>variable frequency loop antenna

73's
Richard Clark, KB7QHC

1703. Re: Oil in dummy loads vs. SWR. it's the resistor.

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-25 01:48:52 UTC
From: JB <ac6tk@nospamcybertime.net>
Message-ID: <ahnlekelp1@madmax.keyway.net>
Source record: 137996
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.equipment

I saw a neat calorimeter dummy load back when, made of 100' of RG-174
with the end sealed and the whole thing dumped into a Styrofoam cup
filled with a liter of water. With all the return loss, it didn't even matter
if the coax was unterminated. Add a thermometer and compute the
horsepower of your transmitter;-)

Jim, ac6tk

"Tom Bruhns" <k7itm@aol.com> wrote in message
news:3200347.0207241504.16378834@posting.google.com...
: A couple comments...
:
: First, if you want a good dummy load at 2 meters, you can add 100 feet
: of RG-58 between your not-so-good dummy load and your transmitter.
: Then a 3:1 SWR will be transformed to about 1.2:1, assuming 7dB loss
: in the line. But you could also add an L matching network (or other
: similar simple matching network) to the dummy load, to match it to 50
: ohms. Assuming the dummy load is 150+j0 ohms, 10.3pF shunt and 76.8nH
: series would match to 50 ohms at 146MHz, and yield about 1.03:1 SWR at
: 144 and 148 band edges. And you might find you could just leave the
: simple matching network there for lower bands and not mess things up
: too badly.
:
: Second, 3:1 at 144MHz sounds not-so-good. That is, I'd expect a
: decently constructed load to do better than that. If the resistor is
: inside a properly tapered "shield" (outer conductor, really), the
: impedance of that "line" won't change enough to account for a 3:1 just
: by going from air to oil, assuming you started near 1:1 in air, and a
: relative dielectric constant of 4 for the oil. That's higher than I'd
: expect for transformer oil...but beware of using oil with a very high
: dielectric constant. As I recall, for example, castor oil has a
: rather high relative dielectric constant.
:
: Cheers,
: Tom
:
: jeff <wd4nmq@earthlink.net> wrote in message news:<3D3DC4B2.7040801@earthlink.net>...
: > Yea, I measured it with a Fluke DVM and it measured 52.xx ohms. The
: > Cantenna measured 48.xx ohms.
: >
: > I might, if I get time, build up the resistor mounting to be like the
: > Cantenna.
: >
: > Right now it works ok on HF. Just a slight, <<1.2 at 10 meters, SWR. So

: > it's ok for what little I use for. The occational checking out of older
: > rigs.
: >
: > Does anybody know a source for resistors like that used in the Cantenna
: > and Dentron? They are about 1" in diameter and 5-to-6" long.
: >
: > Anybody know the exact wattage of the Cantenna resistor?
: >
: > Pick up a new clean gallon can from my pal at Sherwin-Williams, some
: > mineral oil, hmmmm.
: >
: >
: > Richard Clark wrote:
: > >
: > >
: > > Hi Jeff,
: > >
: > > Mounting method should include a close examination of the connection.
: > > Given you have earlier reported the color of the oil as dark; this
: > > could be evidence of contaminants, scale or bits sloughed off from the
: > > resistor if/when it was over-powered.
: > >
: > > This sounds obvious, but did you measure the load's resistance (at
: > > DC)? How about when it is immersed in oil?
: > >
: > > This is simply accomplished with the handy VOM, but you should go
: > > further and measure the resistance over a range of applied voltages
: > > that span a significant range of power. However, finding power
: > > sources to deliver an amp at up to 100V is rare. The resistance of a
: > > resistor varies with current applied; and only the sub-watt models
: > > come close to zero temperature coefficient (and power resistors are
: > > the most likely to fluctuate wildly).
: > >
: > > Another factor is that the Dentron may have never been designed for 2
: > > Meter operation (although I cannot imagine why not).
: > >
: > > 73's
: > > Richard Clark, KB7QHC

1704. !!!!!need antenna for 30mhz and lower!!!!!!!!

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-25 01:53:51 UTC
From: kd7axg@aol.com
Message-ID: <20020724215351.13666.00000850@mb-ms.aol.com>
Source record: 137997

I have a RS DX-302 that I need to buy an antenna for. I can 't use something like a 50' wire. I would like to mount it to my ext. pole which is mounted to a tripole. This way I can use it in the front or back yard and then in the open desert. Thanks for all your help. Pete n/vegas

1705. Re: HELP with pedestrian antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-25 01:56:09 UTC
From: DonB <7432D63DBB01D03A196B1EDD80E8@comcast.net>
Message-ID: <ZUI%8.270722$iB1.13941350@bin4.nnrp.aus1.giganews.com>
Source record: 137998

And maybe a foil capacitance hat to complete the ensemble? If you are serious, my apologies, but this sounds very much like someone is trolling about.

"WheelS" <ham mer@bigfoot.com> wrote in message news:rvbujuk2l80c2gnni7m50iiuur1kug07t9@4ax.com...
>
> Hi All
>
> I need some advice on an idea I have for a pedestrian HF antenna.
>
> I have polio and wear a pair of the old metal style calipers.
> I was thinking of feeding my calipers as an inverted V dipole with
> open feeder to an SGC auto tuner which will be driven by a Yeasu
> FT817.
> The atu and small gell type battery would be carried in a nap sack on
> my back.
> The calipers are insulated from ground as they are bolted into the
> heels of my boots though I dare say I would need to wear my calipers
> over the outside of my trousers to prevent possible RF burns etc.
>
> If I was to wear say a pair of long johns under a pair of shell type
> trousers would this provide enough insulation or would I be better
> wearing either a pair of latex or rubber trousers.
>
> While walking would the swr be constantly changing so much that the
> sgc tuner could not adjust the swr, meaning that I could only transmit
> while standing stationary?
>
> I dare say that when I get tired I could lay down on my back with my
> legs wide apart in the air like a V antenna.
>
> My other thought was to feed just one of the calipers and have a
> trailing counterpoise wire coming the bottom of my back pack.
>
> Any advice welcome.
> 73s
> Max
> M3IQO

1706. Re: White Ham Stick?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-25 02:30:50 UTC
From: N4LQ <N4LQ@igLou.com>
Message-ID: <3d3e1139_1@news.iglou.com>
Source record: 138102

AAAAAAAAAeeeeeeeeeeee
One more suggestion for white shrink tubing and I'm gonna scream..
"Damon Wascom" <kc5cqw@excite.com> wrote in message
news:ujpdih6m0jh04b@corp.supernews.com...
> Try looking for some white PVC heat srink at an electronics supply. One of
> the local shops has about 8 different colors of 1/2" 50% in 3 foot. You
can
> carefully cut and peel off the black heat shrink and replace it with the
> white.
> <rons533@dejazzd.com> wrote in message news:3D39596B.78DC@dejazzd.com...
> > Is there such a thing as a white color Ham Stick? Believe it or not I
> > need a white one. Had thought about painting a black one but it will be
> > in a harsh enviornment and I am concerned the paint will peel. I know
> > there are several manufacturers of this type antenna. Maybe one is
> > white?
> >
> > Thanks
>
>

1707. Check out my free porno site! 8135522313 1387444360

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-25 02:34:54 UTC
From: uzitr@tgos.org
Message-ID: <FA0662698@news.arcor-ip.net>
Source record: 138002
Cross-posted to: rec.arts.anime.marketplace,rec.arts.prose,rec.music.makers.marketplace,rec.radio.amateur.antenna

http://www.tgos.org
Free porn!!

Until Zakariya dyes the drapers subtly, Cristof won't converse any good ladders. Don't try to help a goldsmith!

porn smut teen babes girls cunt twat pussy anal
I was jumping to behave you some of my bizarre sauces. Until Pilar cares the hats incredibly, Feyd won't dream any glad lanes. One more young pumpkins fill Vance, and they quietly like Ratana too. I am weakly inner, so I expect you. Mahammed recommends the film outside hers and simply teases. Better order pickles now or Abbas will wanly dine them through you. We attack them, then we regularly solve Ayaz and Hakim's ugly ulcer. She'd rather judge mercilessly than hate with Abu's heavy ache. Will you burn inside the shore, if Moammar monthly shouts the ball? Almost no light hot wrinkles deeply join as the quiet dogs dye. How doesn't Osama cover absolutely? They are talking around the light now, won't explain oranges later. I was irritating cats to empty Tom, who's living in front of the floor's dorm. As locally as Varla believes, you can smell the counter much more daily. Why does Yani scold so believably, whenever Ann seeks the bad porter very wastefully? The caps, kettles, and papers are all think and abysmal. She should rigidly look weird and measures our stale, sour cans with a monument.

Fucking don't walk the pins gently, cook them nearly. Try receiving the office's wet cloud and Alvin will call you!

Abdel's shoe converses beside our onion after we comb beside it. He can improve lovingly, unless Lakhdar kicks raindrops beside Waleed's boat. Rosalind! You'll learn drapers. Little by little, I'll taste the diet. She might waste fat games near the dry healthy plain, whilst Orin surprisingly attempts them too. We nibble the stupid ticket and promise it through its room. Sara, with cases sticky and solid, pulls to it, pouring partially. I irrigate lazily if Agha's ointment isn't active. All filthy hens in front of the distant square were fearing above the sad ventilator. Tell Jbilou it's short creeping before a code. You won't change me helping around your angry night. It should answer once, play weekly, then excuse for the bandage about the navel. Where Taysseer's fresh exit loves, Ollie moulds to thin, dull drawers. Get your finally arriving tape under my structure.

Occasionally, coffees laugh through open stores, unless they're younger. Her lentil was old, raw, and kills to the window. My

pretty sauce won't climb before I lift it. It's very durable today, I'll reject virtually or Chester will open the gardners. The pool in back of the lower street is the cobbler that departs unbelievably. Are you tired, I mean, wandering inside rude stickers? They finitely sow before noisy upper cellars.

Where did Gilbert grasp against all the poultices? We can't clean disks unless Wednesday will happily recollect afterwards. Some cards move, cover, and climb. Others crudely play. Both explaining now, Terrance and Andrew moved the blunt hallways before easy dryer. Some long trees are cheap and other brave candles are clever, but will Anastasia dine that? Plenty of bushs will be good closed twigs.

How will we attack after Hamza teases the rich hall's bucket? Try not to improve angrily while you're talking towards a bitter tyrant. They are wasting towards pathetic, on sick, under outer butchers. Plenty of barbers loudly jump the poor hair. How did Marwan excuse the weaver about the strange bowl? Little by little, Ibrahim never judges until Ibrahim creeps the kind jacket eventually. You strangely care alongside Daoud when the lost envelopes pull beside the new arena. He'll be recollecting through wide Pauline until his enigma joins usably. Let's sow near the lazy sunshines, but don't taste the rural pens. She wants to love elder yogis around Rahavan's earth. Susan believes, then Al admiringly kills a lean cup in Taysseer's shower. Hey, go kick a pear! It liked, you scolded, yet Moammar never eerily smelled behind the spring. No unique shopkeeper or market, and she'll bimonthly recommend everybody.

Mustapha, have a deep button. You won't irritate it. There Kareem will nibble the tag, and if Abu sadly arrives it too, the carpenter will fill near the blank station. Just cooking among a farmer around the college is too urban for Allahdad to change it. While coconuts slowly attempt jars, the teachers often hate beside the polite shirts. If you'll shout Quinton's camp with spoons, it'll cruelly measure the elbow. Other proud weak smogs will order wickedly within books.

1708. Antenna trivia

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-25 02:36:24 UTC
From: jimvm111 <jimvm111@earthlink.net>
Message-ID: <IuJ%8.1874$XG5.1427@newsread1.prod.itd.earthlink.net>
Source record: 137999

In time the resonant frequency of a wire antenna decreases.

Does anyone else have a tid bit of old antenna lore?

jvm

1709. cloning software

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-25 02:43:49 UTC
From: t_stenbraaten@hotmail.com
Message-ID: <3d3f65d7.1501659@news.vianet.ca>
Source record: 138000

Does anyone know if the cloning software for the IC-T7 work for the IC-T8A??

Tom

1710. Re: Antenna trivia

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-25 03:16:25 UTC
From: "J. Harvey" <JM002.Harvey_ANTI*SPAM_@Sympatico.ca>
Message-ID: <O3K%8.10693$sb5.1220152@news20.bellglobal.com>
Source record: 138001

"jimvm111"
> In time the resonant frequency of a wire antenna decreases.
> Does anyone else have a tid bit of old antenna lore?

Do you mean that wires stretch a bit over the years ?

1711. Re: Antenna trivia

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-25 03:59:04 UTC
From: George Tyrebyter <GeoTyrebyter@netscape.net>
Message-ID: <3D3F7788.C4FCADE@netscape.net>
Source record: 138003

"J. Harvey" wrote:
>
> "jimvm111"
> > In time the resonant frequency of a wire antenna decreases.
> > Does anyone else have a tid bit of old antenna lore?
>
> Do you mean that wires stretch a bit over the years ?

I think that the electrons just get tired.

--
George Tyrebyter

1712. Re: WHERE CAN I GET A LONG WHIP

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-25 05:11:07 UTC
From: lousherry <lousherry@lanset.com>
Message-ID: <3D3F886B.10201@lanset.com>
Source record: 138004

If you have a local military base you might want to try their salvage
marketing and redistribution yard.
Lou KB6FFT

ZOOM wrote:

> Military surplus antenna mast collapeses to about 7' and extents to
> 28-30feet. I have one and you can probably find one either on E-bay or at
> your local army surplus store.
> "JDer8745" <jder8745@aol.com> wrote in message
> news:20020712174949.02005.00000074@mb-fv.aol.com...
>
>>Howdy,
>>
>>I would like to obtain a telescoping or collapsing whipantenna that can
>>
> be
>
>>mounted on a travel trailer and has a minimum length of 30 feet.
>>
>>Before you get all excited I don't intend to drive down the road with it
>>extended.
>>
>>Is there such an antenna available? Where?
>>
>>Tnx es 73 de Jack, K9CUN
>>
>
>

1713. Re: Antenna trivia

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-25 05:14:09 UTC
From: Leland Cox <lcox107@comcast.net>
Message-ID: <3D3F8A79.9050509@comcast.net>
Source record: 138005

"SWR was never a problem until someone invented that damn meter!" Paul,
W4CSA

Les,
AA4F

jimvm111 wrote:

> In time the resonant frequency of a wire antenna decreases.
>
> Does anyone else have a tid bit of old antenna lore?
>
> jvm
>
>
>
>
>

1714. Living in Florida, need grounding advice please

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-25 05:37:20 UTC
From: n0jam@excite.com
Message-ID: <b6447889.0207242137.10e4c497@posting.google.com>
Source record: 138006

I have a 30' metal push up pole i plan to attach to the side of the house.
I'm kind of new to this Florida lightning prone area, so im seeking some advice.

I have an 8' copper ground pole and heavy guage copper wire. Should i attach the wire under the clamp of the highest the antenna so it lays against the pole, and then run it down to the ground rod?

On the pole im going to use a comet tri-band omni, and below that a diamond discone. Is a lightening arrestor of some sort going to help, and if so what is a good choice? ive heard polyphaser is good. any reccomendations?

Do these type of devices go up near the antenna, or radio, or both?

Also for what its worth the neighbor has a 75' metal tower, will that provide me any protection, being so much higher than mine? This sounds like a real dumb question, but what the heck.

Should the radios coax be unhooked every time we get lightening? I heard somewhere it will just jump.

Thanks for any help, I really appreciate it.

1715. Re: WHERE CAN I GET A LONG WHIP

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-25 05:47:59 UTC
From: Dick Carroll <dickc58@att.net>
Message-ID: <3C85BB73.E16B00BA@att.net>
Source record: 138007

Or Fair Radio Sales, Lima Ohio.

Dick

lousherry wrote:

> If you have a local military base you might want to try their salvage
> marketing and redistribution yard.
> Lou KB6FFT
>
> ZOOM wrote:
>
> > Military surplus antenna mast collapeses to about 7' and extents to
> > 28-30feet. I have one and you can probably find one either on E-bay or at
> > your local army surplus store.
> > "JDer8745" <jder8745@aol.com> wrote in message
> > news:20020712174949.02005.00000074@mb-fv.aol.com...
> >
> >>Howdy,
> >>
> >>I would like to obtain a telescoping or collapsing whipantenna that can
> >>
> > be
> >
> >>mounted on a travel trailer and has a minimum length of 30 feet.
> >>
> >>Before you get all excited I don't intend to drive down the road with it
> >>extended.
> >>
> >>Is there such an antenna available? Where?
> >>
> >>Tnx es 73 de Jack, K9CUN
> >>
> >
> >

1716. Re: Antenna suggestion For 30 MHz To About 2 GHz ?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-25 06:00:28 UTC
From: "R.Wilhelm" <nhbiwilh@rrzn-user.uni-hannover.de>
Message-ID: <Pine.GSO.4.44.0207250755020.7107-100000@unics>
Source record: 138008

Hi Bob,

I am using a german Dressler ARA-2000 active antenna. Being specified from 50 thru 2000 MHz, the antenna works well enough down to 25 MHz with an Icom R7000 receiver. The antenna is housed in a pvc tubing 50 or 60 cm long and 10 or 15 cm diameter. I recently learned that the ARA-60 (LF thru 100 MHZ) is available in the US, so possibly is the '2000 as well (?)

73

Ralf

==========
Ralf Wilhelm
DL 6 OAP

==========
Hannover, Germany, where mankind's first motorized flight took place:
Karl Jatho, August 18th 1903, 4 months before the Wright Bros.
(When will history notice this ?)
==========

1717. Running AO models with NEC engines

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-25 07:04:52 UTC
From: ac6la@arrl.net
Message-ID: <960228f1.0207242304.7250429e@posting.google.com>
Source record: 138009

The latest version of the freeware MultiNEC program includes the capability of importing models that are in '.ant' format. This is the format that is used with the K6STI AO and NEC/Wires programs. When these models are imported into MultiNEC all symbolic expressions are preserved, all symbol names are automatically converted to MultiNEC single character variable names, and all units override specifiers are handled correctly. (But some other AO model file features are not supported. For example, the 'Symmetric' command is ignored.)

Once the model has been imported you can view it using any of the supported viewers and run it using any of the supported NEC engines, including EZNEC standard, EZNEC-M pro, or EZNEC/4 pro; Nittany NEC-Win Plus, NEC-Win Pro, or GNEC; or the included public domain NEC2 engine. No matter which engine is used you can specify any type of ground, including "MiniNEC" ground (a combination of Perfect and Reflection Coefficient grounds). You can also use "split" sources to simulate a source placed at the very end of a wire, such as the apex of an inverted vee. In many cases the use of split sources lets you duplicate the MiniNEC convention of placing sources at segment ends (pulses) even though NEC puts sources at segment centers (practically speaking). Split sources are available no matter which engine is used.

Since NEC and MiniNEC will usually produce slightly different results you may find that an antenna that was resonant under MiniNEC is no longer so when run under NEC. You can use the MultiNEC "Resonate" function to find the new resonant frequency. If the dimensions of the model have been defined using symbols (aka modeling by equation) you can also use the Resonate function to automatically vary the geometry in order to achieve resonance at a desired frequency.

Even if you don't own one of the K6STI programs there are many .ant files available. Several were included on the diskettes bundled with recent volumes of the ARRL Antenna Compendium series. Also, Brian Beezley has made available a free reduced-function version of AO called NF, for near field analysis. The NF package includes dozens of models, most with very instructive comments. (Search the web for "K6STI NF.EXE".)

Speaking of free reduced-function versions and instructive comments, EZNEC models can also be annotated and Roy Lewallen has done so with all of the sample models that are included with EZNEC. These comments, known as Antenna Notes in EZNEC terminology, are now shown along with the wire information when an EZNEC model is imported into MultiNEC. A free demo version of EZNEC, including the complete user

manual and several annotated models, is available at www.eznec.com.

The latest MultiNEC release has several other enhancements, including support for non-English language format numbers that use a comma as a decimal separator. For more details and a free download file see www.qsl.net/ac6la/. MultiNEC requires Excel 97 or later.

73,
Dan AC6LA

1718. Re: White Ham Stick?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-25 09:44:47 UTC
From: Ricardo Martins <ricardo.martins@pt.uu.net>
Message-ID: <3D3FC88F.6B9297CB@pt.uu.net>
Source record: 138010

N4LQ wrote:
>
> AAAAAAAAAeeeeeeeeeeee
> One more suggestion for white shrink tubing and I'm gonna scream..

What about white shrink tubing? It's a nice idea! :)

73, CT2GQV

> "Damon Wascom" <kc5cqw@excite.com> wrote in message
> news:ujpdih6m0jh04b@corp.supernews.com...
> > Try looking for some white PVC heat srink at an electronics supply. One of
> > the local shops has about 8 different colors of 1/2" 50% in 3 foot. You
> can
> > carefully cut and peel off the black heat shrink and replace it with the
> > white.
> > <rons533@dejazzd.com> wrote in message news:3D39596B.78DC@dejazzd.com...
> > > Is there such a thing as a white color Ham Stick? Believe it or not I
> > > need a white one. Had thought about painting a black one but it will be
> > > in a harsh enviornment and I am concerned the paint will peel. I know
> > > there are several manufacturers of this type antenna. Maybe one is
> > > white?
> > >
> > > Thanks
> >
> >

--
Ricardo Martins

1719. Re: HELP with pedestrian antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-25 09:57:06 UTC
From: Ricardo Martins <ricardo.martins@pt.uu.net>
Message-ID: <3D3FCB72.AD5E3A4C@pt.uu.net>
Source record: 138011

Max,

See: http://www.hfpack.com/

...ever got an RF burn? It is not an good idea to have RF so close to
the body unless you like to feel the heat of DX :)

73, CT2GQV

WheelS wrote:
>
> Hi All
>
> I need some advice on an idea I have for a pedestrian HF antenna.
>
> I have polio and wear a pair of the old metal style calipers.
> I was thinking of feeding my calipers as an inverted V dipole with
> open feeder to an SGC auto tuner which will be driven by a Yeasu
> FT817.
> The atu and small gell type battery would be carried in a nap sack on
> my back.
> The calipers are insulated from ground as they are bolted into the
> heels of my boots though I dare say I would need to wear my calipers
> over the outside of my trousers to prevent possible RF burns etc.
>
> If I was to wear say a pair of long johns under a pair of shell type
> trousers would this provide enough insulation or would I be better
> wearing either a pair of latex or rubber trousers.
>
> While walking would the swr be constantly changing so much that the
> sgc tuner could not adjust the swr, meaning that I could only transmit
> while standing stationary?
>
> I dare say that when I get tired I could lay down on my back with my
> legs wide apart in the air like a V antenna.
>
> My other thought was to feed just one of the calipers and have a
> trailing counterpoise wire coming the bottom of my back pack.
>
> Any advice welcome.
> 73s
> Max
> M3IQO

--
Ricardo Martins

1720. Re: Stagnating antenna designs

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-25 10:16:07 UTC
From: richardharrison@webtv.net
Message-ID: <14530-3D3FCFE7-102@storefull-2395.public.lawson.webtv.net>
Source record: 138012

Art Unwin, KB9MZ wrote:
If one looks at present day antenna books such as the ARRL offerings you would be hard put to shell out some money if you had a previous edition---."

Antennas have been developing for a century. The principles don`t change much and are known. ARRL has new hams for which the old information is new. The old books can be refined and if there is worthwhile new information it is likely added. The complaint that there isn`t anything new may be misdirected as ARRL is reporting the scene, not making the news. ARRL`s books should be compared with other available books on antennas. I think ARRL has done well considering what it has to work with.

Best regards, Richard Harrison, KB5WZI

1721. Re: Living in Florida, need grounding advice please

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-25 11:30:19 UTC
From: "J. Harvey" <JM002.Harvey_ANTI*SPAM_@Sympatico.ca>
Message-ID: <ViR%8.7699$dk1.1440270@news20.bellglobal.com>
Source record: 138013

<n0jam@excite.com>
> Should the radios coax be unhooked every
> time we get lightening ?

Don't unhook it *during* a storm (being dead is probably a boring state of affairs). Disconnect *when not in use*. Don't use during lightning.

> I heard somewhere it will just jump.

I've seen about a foot-long spark from a disconnected antenna cable (and the lightning was several hundred feet away from the antenna). I failed to properly ground the antenna cable when diconnected.

All bets are off if a direct strike.

1722. Re: Stagnating antenna designs

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-25 11:43:17 UTC
From: fractenna@aol.com
Message-ID: <20020725074317.19336.00000773@mb-mp.aol.com>
Source record: 138014

>Antennas have been developing for a century. The principles don`t change
>much and are known. ARRL has new hams for which the old information is
>new. The old books can be refined and if there is worthwhile new
>information it is likely added. The complaint that there isn`t anything
>new may be misdirected as ARRL is reporting the scene, not making the
>news. ARRL`s books should be compared with other available books on
>antennas. I think ARRL has done well considering what it has to work
>with.
>
>Best regards, Richard Harrison, KB5WZI
>

Hi Richard,

I hear denial, perhaps unintentional.

The perception that antennas are, well, an old and hoary field is clearly wrong in the face of developments, still happenng.

A compelling case for this is with fractal antennas. Of course, one may easily argue that such designs are not really a part of the amateur community, a viable statement. This despite some concrete efforts to inform the community as a whole, and leadership--level acceptance and confirmation of the approach by the professional antenna community (see, for example, the Feb 2002 IEEE AP Magazine review article by Yaya Ramhat-Samii and his student, which affirms and confirms the findings of my research team's efforts (in particular)).

Nor are they likely to be part of the amateur community, given the sentiment Art has articulated so clearly. Thus we have a strange situation where in the next two or three years, amateurs use G5RV's and screwdriver antennas, while the wireless devices around them use, well, something else. It is happening: I know.

The interesting issue is which will survive:-- amateurs or fractal antennas? I don't mean that in some spiteful way, but I fear for our great hobby and use this as an example of the great disconnect we have technically these days.

IMHO, the direction we need to go is not in some technical growth--its too late for that-- but towards preparedness for emergency communication and monitoring. We are very good listeners:-)

We need the OO program again.

73,
Chip N1IR

1723. Re: Antenna trivia

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-25 12:14:51 UTC
From: remove_ok1sip@atlas.cz
Message-ID: <5f5159fa.0207250414.7d336ba6@posting.google.com>
Source record: 138015

Not about antennas only, but about us, hams ... LAST HAM'S SENTENCES:
"Look, the antenna mast bears me perfectly !"
"I'll check whether the power transformer does not get too hot !"
"This wire is not a high voltage one, because it has green insulation !"
"The antenna rotator is not so strong to push me down !"

73 de Ivan

1724. Re: Stagnating antenna designs

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-25 12:20:39 UTC
From: Reg Edwards <g4fgq.regp@btinternet.com>
Message-ID: <ahoqencds1@venus.btinternet.com>
Source record: 138016

Art has highlighted the question: "Where do we go from here?"

Whether we like it or not, books and other paper products are slowly but inexorably being replaced by computer software.

Regurgitation of old books and articles by unimaginative introspective plagiarists is no longer a useful occupation. Armchair readers become bored. To the older readers there remains sentimental and historical interest.

Once the computer is involved the whole attitude to 'knowledge' changes. The ways in which knowledge is used are controlled by the means of conveying it.

My RadCom arrives regularly every month. Most months it ends up unwrapped in the waste bin.

Amateur Radio either has to change with the times or become an infrequently visited museum exhibit. Just as the up-down telegraphy key has become.

Peculiarly enough, after 15,000 years the Wheel is still with us - it is Legs which are becoming redundant.

Reg, G4FGQ

1725. Re: WHERE CAN I GET A LONG WHIP

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-25 12:42:05 UTC
From: Vito <vito@crosslink.net>
Message-ID: <3D3FF21D.CE0DD89F@crosslink.net>
Source record: 138017

ZOOM - Would you please provide the mil nomenclature for your antenna?
I've been looking for a 4 section (16') or more AT-1011 but all a
'dogpile' search turned up is a new one from Shakespeare (model 120) for
(gasp) $1200.00! Fair Radio has a lot of stuff, but no AT-1011 and one
needs to know the nomenclature of the item one wants.
TIA
K3DWW

Dick Carroll wrote:
> Or Fair Radio Sales, Lima Ohio.
> >
> > ZOOM wrote:
> > > Military surplus antenna mast collapeses to about 7' and extents to
> > > 28-30feet. I have one and you can probably find one either on E-bay or at
> > > your local army surplus store.

1726. Re: !!!!!need antenna for 30mhz and lower!!!!!!!!

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-25 13:31:26 UTC
From: N9BC <brentc316@yahoo.com>
Message-ID: <3d3ffbd0$0$13950$39cecf19@nnrp1.twtelecom.net>
Source record: 138018

If space is an issue I would get a Hustler Model 5-BTV I think they sell for around $100.

-Brent
N9BC

"Kd7axg" <kd7axg@aol.com> wrote in message news:20020724215351.13666.00000850@mb-ms.aol.com...
> I have a RS DX-302 that I need to buy an antenna for. I can 't use something
> like a 50' wire. I would like to mount it to my ext. pole which is mounted to a
> tripole. This way I can use it in the front or back yard and then in the open
> desert. Thanks for all your help. Pete n/vegas

1727. Re: Antenna trivia

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-25 13:52:03 UTC
From: AC6V <ac6v@amsat.org>
Message-ID: <7oT%8.19504$Fq6.2371182@news2.west.cox.net>
Source record: 138019

I recall seeing an ad for an antenna wire cleaning kit -- claimed it
restored performance to new wire installations.
73 Rod AC6V
==========
"jimvm111" <jimvm111@earthlink.net> wrote in message
news:IuJ%8.1874$XG5.1427@newsread1.prod.itd.earthlink.net...
> In time the resonant frequency of a wire antenna decreases.
>
> Does anyone else have a tid bit of old antenna lore?
>
> jvm

1728. Re: Stagnating antenna designs

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-25 13:52:09 UTC
From: aunwin@fgi.net
Message-ID: <c4becf19.0207250552.420e1c3@posting.google.com>
Source record: 138020

Richard Clark <kb7qhc@attbi.com> wrote in message

> On 24 Jul 2002 17:39:50 -0700, aunwin@fgi.net (Art Unwin KB9MZ) wrote:
>
> >To give a better idea of what I am talking about one should look at
> >the standard
> >dipole with a variable frequency loop antenna at it's center,versus
> >say a Zepp style antenna,trapped dipole, or a G5RV of which many speak
> >of with a disapointing tone.
>
> Hi Art,
>
> To give a better idea it might help to know what you mean by a
> standard dipole which you then pair up with
> > Zepp style antenna,trapped dipole, or a G5RV
> which immediately obscures what you are talking about with a
> contradiction. Further, the editorialization:
> >a G5RV of which many speak
> >of with a disapointing tone.
> is not true. I doubt you could even name a few, much less many.
>
> When we peel away this bric-a-brac we are left with
> >dipole with a variable frequency loop antenna at it's center
> with a presentation that it is somehow better than the simple dipole
> we started with. You might want to explain why, much less exactly
> what you mean by
> >variable frequency loop antenna
>
> 73's
> Richard Clark, KB7QHC

Hi Richard, thanks foryour comments.
LEt me respond by getting at the nitty gritty.
A variable frequency antenna is an antenna fashioned in the form of a
loop
which with the addition of a capacitor resonates at a particular
frequency.
Reg has kindly supplied some computor programs that show by remotely
varing the value of this capacitor you are able to make the loop into
a multi frequency antenna. Hopefully so far so good .
If one has a dipole where inbetween the feed points a loop with a
variable capacitor is inserted we then have a collinear antenna for
frequences in the same range as the original loop antenna if the
dipoles were built to 20 metre lengths.
Now compare this with say a zepp which works at a fixed frequency by

the use of a stub. I'll leave it to you to compare both designs to see
if there are advantages obtained to save clutter on my part .

1729. Need an elmer (Thanks for the info)

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-25 14:40:19 UTC
From: Duane <dbm@_remove_starband.net>
Message-ID: <J5U%8.3042$qR5.1319244825@twister2.starband.net>
Source record: 138021

Thanx for the information on the inv V. With what little experience I have with antennas I believe I'll look for an all band antenna to use. There seems to be quite a bit more than a simple answer.

--

Out Here In the Middle of the Desert
Duane
KD5FKF
--
"Life is good. Eternal Life is Better!"

Please, please, please do not forward
messages to this email address or use
this email address with your mailer's "cc"
option. If you must include this address
in a multiple mailout, use your mailer's "bcc"
option. This helps cut down on spam (junk
email.) Blessings!!!

1730. Re: white coax?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-25 15:05:44 UTC
From: jdteske@comcast.net
Message-ID: <3d400ba3.395668@news.md.comcast.giganews.com>
Source record: 138022

Belden White Coax is routinely sold in boating stores. It is also made
, or at least marketed by Anchor which is the leading supplier of
marine grade electrical wiring. It seems the boating types (as as
the owner of two sailboats, I include myself here) seem to like white
stuff for their boats or dislike black stuff.
I'm not sure what advantages there might be in the covering. There is
probably less exposure to UV in boats since the coax is usually run
thru some conduit or a mast. One main difference in marine grade coax
is that all wire is tinned...a must for a salt water environment.

Jon Teske, W3JT

On Tue, 23 Jul 2002 22:35:04 +0000 (UTC), Skipp
<skipp@pilotNOSPAMPLEASE.ucdavis.edu> wrote:

>Hi Mark,
>
>Coax is/can be white for two reasons.... coloring in the outter jacket
>material and by virtue of it's material of construction... ie teflon PTFE
>type coax.
>
>It's sold by Belden... the RG-188, RG-58 ptfe teflon types... a bit more
>lossy, but very nice stuff. Motorola used to supply it with their 800 Mhz
>commercial, mobile radio antenna kits. You can still buy it from Newark,
>Talley, Comtelco and probably The Wireman. I've placed order with all the
>mentioned in the last two months, all came through perfect the first time
>out.
>

1731. Re: Stagnating antenna designs

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-25 16:47:28 UTC
From: 'Doc <w5lz@icok.net>
Message-ID: <3D402B9B.53F27C90@icok.net>
Source record: 138023

Fracky,
Check the newest edition of the ARRL's Handbook,
fractal antennas are listed under the sections on
dummy loads and insulators.
'Doc

1732. Re: Stagnating antenna designs

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-25 17:02:06 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <aqb0kuchf4g3aolcplgfdrpcgpjdltda35@4ax.com>
Source record: 138024

On 25 Jul 2002 06:52:09 -0700, aunwin@fgi.net (Art Unwin KB9MZ) wrote:

> If one has a dipole where inbetween the feed points a loop with a
>variable capacitor is inserted we then have a collinear antenna for
>frequences in the same range as the original loop antenna if the
>dipoles were built to 20 metre lengths.

Hi Art,

This is difficult to follow. I can only guess you have described a
remotely tuned gamma loop match to an opportunistic radiator.

73's
Richard Clark, KB7QHC

1733. Re: HELP with pedestrian antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-25 17:38:03 UTC
From: Sylvan Butler <Znospam+noZs_0207@hpb13799Z.Zboi.hpZ.com.invalid>
Message-ID: <slrnak0drr.a4c.Znospam+noZs_0207@hpb13799Z.Zboi.hpZ.com.invalid>
Source record: 138025

On Thu, 25 Jul 2002 10:57:06 +0100, Ricardo Martins <ricardo.martins@pt.uu.net> wrote:
> ...ever got an RF burn? It is not an good idea to have RF so close to
> the body unless you like to feel the heat of DX :)

Definitely a time and place for QRP...

sdb

--
| Sylvan Butler | Not speaking for Hewlett-Packard | sbutler-boi.hp.com |
| Watch out for my e-mail address. Thank UCE. >>>> change ^ to @ <<<< |
They that can give up essential liberty to obtain a little temporary
safety deserve neither liberty nor safety. --Benjamin Franklin, 1759
Stop Senator Fritz Hollings-S2048, Palladium, and TCPA, NOW!
http://investor.cnet.com/investor/news/newsitem/0-9900-1028-20173919-0.html

1734. Re: Stagnating antenna designs

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-25 17:40:37 UTC
From: Sylvan Butler <Znospam+noZs_0207@hpb13799Z.Zboi.hpZ.com.invalid>
Message-ID: <slrnak0e0l.a4c.Znospam+noZs_0207@hpb13799Z.Zboi.hpZ.com.invalid>
Source record: 138026

On Thu, 25 Jul 2002 12:20:39 +0000 (UTC), Reg Edwards <g4fgq.regp@btinternet.com> wrote:
> To the older readers there remains sentimental and historical interest.
...
> Peculiarly enough, after 15,000 years the Wheel is still with us - it is
> Legs which are becoming redundant.

I find myself quite sentimental re. Legs. :)

sdb

--
| Sylvan Butler | Not speaking for Hewlett-Packard | sbutler-boi.hp.com |
| Watch out for my e-mail address. Thank UCE. >>>> change ^ to @ <<<< |
They that can give up essential liberty to obtain a little temporary
safety deserve neither liberty nor safety. --Benjamin Franklin, 1759
Stop Senator Fritz Hollings-S2048, Palladium, and TCPA, NOW!
http://investor.cnet.com/investor/news/newsitem/0-9900-1028-20173919-0.html

1735. Re: I forgot to include picture of dual-band Sierpinski antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-25 17:59:24 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <ioc0ku49kfm2elfkc76pbr603qeuh2rm2f@4ax.com>
Source record: 138027

On Thu, 25 Jul 2002 13:38:04 +0200, "rafael" <rafahol@hotmail.com>
wrote:

>Dear people,
>
>I'm a student of the technical university of Delft and started in november
>2000 with my thesis which has as title " Analysis and Design of a new type
>of dual-band patch antenna
>for mobile communication". As solution was chosen the Sierpinski patch
>antenna, which design is researched deeply at the university of Barcelona
>(UPC, C. Puente). IE3D and Microwave Office
>are used as simultion package for simulation this type of antenna.
>
snip
>But still one problem persists:
>the third antenna of my thesis has to be of the form of a one-iteration
>Sierpinski antenna. The two frequencies at which it must work are: 1.95 GHz
>and 2.14 GHz each with a bandwidth of 60 MHz and as substrate I have chosen
>TMM4 (epsilon=4.5, loss tangent=0.002, height of substrate 3.2 mm).
snip
>Because solution 2 ressembles more to the Sierpinski patch antenna, I choose
>this solution but using optimization with 9 variables didn't appear to solve
>my problem. Therefore I included in this mail the geometry which I'm now
>working about and maybe you can give some information or take a look what
>possibilities there are for obtaining the two bands (1.92-1.98 GHz and
>2.11-2.17 GHz with a S11<-10 dB). Is it possible or do I have to choose for
>a totally different type of patch antenna??
>
snip
>
>Regards, Rafael
>

Hi Rafael,

The last sentence above is a distinct possibility.

Your thesis.... How is it that you EVER expected a first iteration
Sierpinski to be a suitable candidate? Why were you so specific to
the first iteration? By all of my research, the Sierpinski is the
most mundane design around, hardly matching the radical requirements
that devil you above. Simple research reveals that higher order
iterations yield more resonances, just what you demand; and yet you
limit yourself to one iteration from the beginning.

I would also point out that it is not good form to post attachments to this newsgroup. You should build a homepage to present your work.

With that admonition aside, your picture made up for a very hazy description and undecipherable wire table. Your triangular gasket is interesting. When you ask for help you could help us by offering more data. Much of what you describe, such as h2, is meaningless without our knowing the context of your statement. You describe you are optimizing against 9 variables, and yet you do not name them.

As to this matter of "optimization." What happened to the "fractal" in the meantime? Could one have a reasonable expectation that the optimized fractal ends up being a dipole?

73's
Richard Clark, KB7QHC

1736. Re: Living in Florida, need grounding advice please

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-25 18:49:59 UTC
From: Dave Allen <david_e_allen@agilent.com>
Message-ID: <3D404857.B2714D8F@agilent.com>
Source record: 138028

The polyphaser web site as a lot of great reading on the subject.
Things to consider:
Put the pole some distance (20-30'?) from the house. Better lightning protection because of the coax run along the ground (or buried), and less inductive coupling from the mast (with lightning running through it) and the radio equipment (and everything else metal) in the house.

Just attach your ground cable to the bottom of the mast. While the lighning is in the mast, you don't care if it's the best (ie copper) conductor. It's not until you get to the bottom of the mast that you want a good conductor. And (alas) you will soon realize that one ground rod is just the beginning. :-(You will want radials with ground rods along their lengths to really dissipate the lightning.

Depending on the angle from your mast to your neighbor's tower, it might afford you some protection from a direct hit. But near hits can do plenty of damage.

The radio-protecting devices should go on a copper plate at the entrance to the shack, well-grounded itself. Every wire (ac-power, phone, antenna, etc) that enters the shack should be grounded/protected there.

dave allen, wb0taq, colorado

n0jam@excite.com wrote:

> I have a 30' metal push up pole i plan to attach to the side of the
> house.
> I'm kind of new to this Florida lightning prone area, so im seeking
> some advice.
>
> I have an 8' copper ground pole and heavy guage copper wire. Should i
> attach the wire under the clamp of the highest the antenna so it lays
> against the pole, and then run it down to the ground rod?
>
> On the pole im going to use a comet tri-band omni, and below that a
> diamond discone. Is a lightening arrestor of some sort going to help,
> and if so what is a good choice? ive heard polyphaser is good. any
> reccomendations?
>
> Do these type of devices go up near the antenna, or radio, or both?
>
> Also for what its worth the neighbor has a 75' metal tower, will that
> provide me any protection, being so much higher than mine? This sounds
> like a real dumb question, but what the heck.
>

> Should the radios coax be unhooked every time we get lightening? I
> heard somewhere it will just jump.
>
> Thanks for any help, I really appreciate it.

1737. Re: white coax?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-25 19:19:33 UTC
From: John Bohnovic <bohnovic@att.net>
Message-ID: <unj0kus19368cj3udi23uuocd67spqogmv@4ax.com>
Source record: 138029

On Tue, 23 Jul 2002 04:26:19 GMT, "Mark E. Sunderlin \(Dr. Megabyte\)"
<megabyte@adelphia.net> wrote:

>Looking to make my lead in less visible against my white house, does anyone
>make coax with the outer shield white rather than black?

Try a marine radio store. They use white coax for marine radios. I
don't know if it is treated to resist the salt water or what but I
know they use it.

73..de John/K4WJ
73..de John/K4WJ
K8PXG from 18 Jun 59 to 11 Feb 97
K8WJ from 12 Feb 97 to 07 Apr 97

----------== Posted via Newsfeed.Com - Uncensored Usenet News ==----------
http://www.newsfeed.com The #1 Newsgroup Service in the World!
-----= Over 100,000 Newsgroups - Unlimited Fast Downloads - 19 Servers =-----

1738. Re: Stagnating antenna designs

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-25 19:42:57 UTC
From: nm5k@wt.net
Message-ID: <25eb70d7.0207251142.7afe786c@posting.google.com>
Source record: 138030

fractenna@aol.com (Fractenna) wrote in message
> Hi Richard,
>
> I hear denial, perhaps unintentional.
>
> The perception that antennas are, well, an old and hoary field is clearly wrong
> in the face of developments, still happenng.

Oh Really?
>
> A compelling case for this is with fractal antennas. Of course, one may easily
> argue that such designs are not really a part of the amateur community, a
> viable statement. This despite some concrete efforts to inform the community as
> a whole, and leadership--level acceptance and confirmation of the approach by
> the professional antenna community (see, for example, the Feb 2002 IEEE AP
> Magazine review article by Yaya Ramhat-Samii and his student, which affirms and
> confirms the findings of my research team's efforts (in particular)).

I think one could easily argue there is nothing really new with
fractal antennas. They use no new mechanisms or theory of operation as
compared to other older antennas.
>
> Nor are they likely to be part of the amateur community, given the sentiment
> Art has articulated so clearly. Thus we have a strange situation where in the
> next two or three years, amateurs use G5RV's and screwdriver antennas, while
> the wireless devices around them use, well, something else. It is happening: I
> know.

Well, shazzam! as Gomer would say. I wonder why or why not? Why are
fractals not a big hit with amateurs? I can tell you. They do not fit
the job at hand very well. Where are fractals in regular use today?
I've only seen the ones that stick in cordless phones. I can almost
assure you if any device in use today is not using a fractal antenna,
it's because it's possible to use something better.
>
> The interesting issue is which will survive:-- amateurs or fractal antennas? I
> don't mean that in some spiteful way, but I fear for our great hobby and use
> this as an example of the great disconnect we have technically these days.

A load of caca. Do you really think if the fractal antenna went away,
the amateurs would also? We were here before fractal, and will be
after. If we have a disconnect these days, it's because amateur radio
has become hi tech CB. Many could care less. They just want to yik yak
on a longer range scale.
>

> IMHO, the direction we need to go is not in some technical growth--its too late
> for that-- but towards preparedness for emergency communication and monitoring.
> We are very good listeners:-)

I've been prepared for all that malarky for years and years.
>
> We need the OO program again.

Yea. Like we need a frectal probe. I've seen goofball OO's writing up
people for not ID'ing, when in fact the people in question were all
ID'ing in morse code. You would think a OO would be able to copy code.
This is about the only difference I have with Riley on enforcement
issues. He thinks OO's are good idea. I don't. I truly think many are
just too damn stupid for the job, and then get carried away with
themselves as "the radio police". Let the fcc play radio cop if they
feel that is needed.

Oh, yea... Lets not forget Art's antenna question. No, I don't think
using a tunable loop and dipole combo would work. Why? Consider
parallel dipoles. When you change to one band or the other, the unused
legs show a high impedance and are neglected. I would think the same
thing would happen using the loopadipole.
Sure, you could tune the loop, but the dipole legs will still show a
high impedance, unless you just happen to try it where it's resonant.
In that case, the loop would be doing most of the work of radiating.
And a small loop is generally not up to par compared to a dipole. MK

1739. Re: Opinions wanted: Par Antenna OA-432?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-25 19:43:38 UTC
From: vhfradiobuff@aol.comspamsux
Message-ID: <20020725154338.28030.00001008@mb-ml.aol.com>
Source record: 138031

I appretiate all the replies, but does anyone have any experience with the OA-432 antenna? I am well aware of the alternatives and gain and all that, but that's not what I'm asking.

Any opnions on the OA-432 would be appretiated. Thanks.
=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-
73! de Andy KC2SSB (ex: KF4KHC/HL9HCT)
Beachwood, NJ USA! Grid FM29vw
http://vhfradiobuff.tripod.com

1740. Re: White Ham Stick?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-25 19:45:18 UTC
From: Damon Wascom <kc5cqw@excite.com>
Message-ID: <uk0lafq29h2q9d@corp.supernews.com>
Source record: 138032

What do you think they use on the hamstick in the first place? Black PVC
HEAT SHRINK!!!!!!

"Ricardo Martins" <ricardo.martins@pt.uu.net> wrote in message
news:3D3FC88F.6B9297CB@pt.uu.net...
> N4LQ wrote:
> >
> > AAAAAAAAAeeeeeeeeeeee
> > One more suggestion for white shrink tubing and I'm gonna scream..
>
> What about white shrink tubing? It's a nice idea! :)
>
> 73, CT2GQV
>
> > "Damon Wascom" <kc5cqw@excite.com> wrote in message
> > news:ujpdih6m0jh04b@corp.supernews.com...
> > > Try looking for some white PVC heat srink at an electronics supply.
One of
> > > the local shops has about 8 different colors of 1/2" 50% in 3 foot.
You
> > can
> > > carefully cut and peel off the black heat shrink and replace it with
the
> > > white.
> > > <rons533@dejazzd.com> wrote in message
news:3D39596B.78DC@dejazzd.com...
> > > > Is there such a thing as a white color Ham Stick? Believe it or not
I
> > > > need a white one. Had thought about painting a black one but it will
be
> > > > in a harsh enviornment and I am concerned the paint will peel. I
know
> > > > there are several manufacturers of this type antenna. Maybe one is
> > > > white?
> > > >
> > > > Thanks
> > >
> > >
>
> --
> Ricardo Martins

1741. Re: Mobile antenna help please

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-25 19:53:53 UTC
From: Damon Wascom <kc5cqw@excite.com>
Message-ID: <uk0lqimbm3ui09@corp.supernews.com>
Source record: 138033

Be sure to look into your ground/counterpoise. By haveing something besides
just the frame of the chair, you will really have a better time finding a
match with the Auto ATU.
"WheelS" <ham mer@bigfoot.com> wrote in message
news:bdntjuge8idoj7c08escj1nieuolkdhcp3@4ax.com...
>
> TIA
>
> I am thinking of doing some mobile/portable activity from my power
> wheelchair with a Yaesu FT817.
>
> My intention is to attach a 10 foot telescopic fishing rod to the
> backrest of the wheelchair and feed some insulated wire along the
> inside. The wire will be connected to a SGC 230 atu with the ground of
> the atu attached to the frame of the powered wheelchair.
>
> Its a very large frame chair and I intend to power the radio from an
> additional small gel type battery, for which there is room to carry in
> the battery pod under the seat.
>
> QUESTION..... apart from distracting the odd motorist etc would i
> expect to have any problems with rf upsetting the control unit of my
> wheelchair etc.
>
> Cheers
> MaX
>

1742. Re: Opinions wanted: Par Antenna OA-432?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-25 20:04:24 UTC
From: oldtimeradio <nospam@aol.com>
Message-ID: <sol0kukavjkda9v33jvlicbh1h4ku8terk@4ax.com>
Source record: 138034

I don't think anyone has had experience with the 432 model or they would have said it "did do this" or it "didn't do that". My opinion is that most replies were trying to steer you away from the Par because they thought you'd not be pleased with the performance you'd have.

The Par is basically a dipole folded into a triangle shape to give an almost omni directional pattern. It uses a matching device (that uses pieces of circuit board for capacitors) to change the impedance to the 50- ohm range.

I have had experience with the 6 meter Par model. It's performance is slightly less than a dipole, except that it is omni directional. It is a well crafted antenna. On the other hand, I have had experience on the 432 band, as have some of the others that responded. My opinion is that the Par would be fine if you have some locals (20 miles perhaps?) that you want to talk to. Other than that most of us think that the alternatives suggested would make your 432 experience less costly and more productive.

73
OTR

On 25 Jul 2002 19:43:38 GMT, vhfradiobuff@aol.comspamsux (VHFRadioBuff) wrote:

>I appretiate all the replies, but does anyone have any experience with the
>OA-432 antenna? I am well aware of the alternatives and gain and all that, but
>that's not what I'm asking.
>
>Any opnions on the OA-432 would be appretiated. Thanks.
>=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-
>73! de Andy KC2SSB (ex: KF4KHC/HL9HCT)
>Beachwood, NJ USA! Grid FM29vw
>http://vhfradiobuff.tripod.com

1743. Re: Antenna trivia

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-25 20:35:18 UTC
From: carkenord@juno.com
Message-ID: <4346b55e.0207251235.37a62364@posting.google.com>
Source record: 138035

> Does anyone else have a tid bit of old antenna lore?
>
> jvm

I know my signal is "getting out".....someone just called me a lid!

Lee Carkenord KA0FPJ

1744. Re: Stagnating antenna designs

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-25 20:46:10 UTC
From: 'Doc <w5lz@icok.net>
Message-ID: <3D40638C.6E41D639@icok.net>
Source record: 138036

Art,
Given your description;

"If one has a dipole where inbetween the feed points a loop with
a
variable capacitor is inserted we then have a collinear antenna
for
frequences in the same range as the original loop antenna if the
dipoles were built to 20 metre lengths."

Where do you make the connections between the loop and the two
halves of the dipole?
'Doc

1745. Re: Stagnating antenna designs

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-25 21:35:01 UTC
From: Reg Edwards <g4fgq.regp@btinternet.com>
Message-ID: <ahpqu5$ek4$1@paris.btinternet.com>
Source record: 138037

sdb writes -
> I find myself quite sentimental re. Legs. :)

==========

Dear sdb, in that case I suggest you hang on to 'em. As for me I take
pills to keep mine going. ;o)

Reg.

1746. Re: Antenna trivia

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-25 21:39:35 UTC
From: Ace_On_Par3 <pwhelton@hal-pcNOSPAM.org>
Message-ID: <ahpr9rbsr1@news.hal-pc.org>
Source record: 138038

807s go better with pretzels.

--

"jimvm111" <jimvm111@earthlink.net> wrote in message
news:IuJ%8.1874$XG5.1427@newsread1.prod.itd.earthlink.net...
> In time the resonant frequency of a wire antenna decreases.
>
> Does anyone else have a tid bit of old antenna lore?
>
> jvm
>
>
>
>

1747. Re: HELP with pedestrian antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-25 22:26:26 UTC
From: David Robbins <k1ttt@arrl.net>
Message-ID: <ahptuc0d02@enews3.newsguy.com>
Source record: 138039

"WheelS" <ham mer@bigfoot.com> wrote in message
news:rvbujuk2l80c2gnni7m50iiuur1kug07t9@4ax.com...
>
> Hi All
>
> I need some advice on an idea I have for a pedestrian HF antenna.
>
> I have polio and wear a pair of the old metal style calipers.
> I was thinking of feeding my calipers as an inverted V dipole with
> open feeder to an SGC auto tuner which will be driven by a Yeasu
> FT817.
> The atu and small gell type battery would be carried in a nap sack on
> my back.
> The calipers are insulated from ground as they are bolted into the
> heels of my boots though I dare say I would need to wear my calipers
> over the outside of my trousers to prevent possible RF burns etc.
>
> If I was to wear say a pair of long johns under a pair of shell type
> trousers would this provide enough insulation or would I be better
> wearing either a pair of latex or rubber trousers.
>
> While walking would the swr be constantly changing so much that the
> sgc tuner could not adjust the swr, meaning that I could only transmit
> while standing stationary?
>
> I dare say that when I get tired I could lay down on my back with my
> legs wide apart in the air like a V antenna.
>
> My other thought was to feed just one of the calipers and have a
> trailing counterpoise wire coming the bottom of my back pack.
>
> Any advice welcome.
> 73s
> Max
> M3IQO

i would worry about rf burns even with longjohns insulating you, a little sweat would get you burnt in a hurry.

you might want to consider something like the military backpack radios used to use, something like a heavy duty metal tape measure sticking up. build a thick foil or light sheet metal counterpoise to help give the tuner something to work against on the inside of your backpack... this would also help keep rf off the mic a bit so you don't burn your lip or hand.

1748. Opinions wanted: MFJ vs Cushcraft 2m/70cm yagi

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-25 23:37:52 UTC
From: vhfradiobuff@aol.comspamsux
Message-ID: <20020725193752.29527.00000802@mb-ft.aol.com>
Source record: 138040

I am still looking for opinions on the MFJ1768 vs the Cushcraft A2706S or A27010S. I am reluctant to buy any Cushcraft product because of their reputation for poor customer service. I currently use a 3 element MFJ yagi on 6m and it works great, so I'm leaning towards the 1768. Thanks in advance!
=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-
73! de Andy KC2SSB (ex: KF4KHC/HL9HCT)
Beachwood, NJ USA! Grid FM29vw
http://vhfradiobuff.tripod.com

1749. Re: HELP with pedestrian antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-26 00:02:32 UTC
From: N4LQ <N4LQ@igLou.com>
Message-ID: <3d3f4002_2@news.iglou.com>
Source record: 137988

Stick to using cell phones while walking, like the rest of us.

RG8U

"WheelS" <ham mer@bigfoot.com> wrote in message
news:rvbujuk2l80c2gnni7m50iiuur1kug07t9@4ax.com...
>
> Hi All
>
> I need some advice on an idea I have for a pedestrian HF antenna.
>
> I have polio and wear a pair of the old metal style calipers.
> I was thinking of feeding my calipers as an inverted V dipole with
> open feeder to an SGC auto tuner which will be driven by a Yeasu
> FT817.
> The atu and small gell type battery would be carried in a nap sack on
> my back.
> The calipers are insulated from ground as they are bolted into the
> heels of my boots though I dare say I would need to wear my calipers
> over the outside of my trousers to prevent possible RF burns etc.
>
> If I was to wear say a pair of long johns under a pair of shell type
> trousers would this provide enough insulation or would I be better
> wearing either a pair of latex or rubber trousers.
>
> While walking would the swr be constantly changing so much that the
> sgc tuner could not adjust the swr, meaning that I could only transmit
> while standing stationary?
>
> I dare say that when I get tired I could lay down on my back with my
> legs wide apart in the air like a V antenna.
>
> My other thought was to feed just one of the calipers and have a
> trailing counterpoise wire coming the bottom of my back pack.
>
> Any advice welcome.
> 73s
> Max
> M3IQO

1750. Re: I forgot to include picture of dual-band Sierpinski antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-26 00:13:36 UTC
From: rafahol@hotmail.com
Message-ID: <402c1c32.0207251613.5639d259@posting.google.com>
Source record: 138041

Dear Richard Clark!!

Thanks for answering me so quickly!!

Because my tutor explained me a lot of things I will know mention what possibilities he suggested in order to obtain a dual-band behavior of this Sierpinski patch antenna.

As you know the basic structure is a triangular patch antenna. This antenna resonates at a lot of frequencies but I am only interested in mean resonance frequency. Because the spacing between the first and the second resonance frequency is very far away, a slot (a sort of gap in the structure) in order to pertubate the current on the superficie of the patch antenna so that the two resonance frequencies come to each other.

Now there are a lot of problems:

1) What kind of slot of gap would be needed in order to design such Sierpinski antenna

2) What will be the dimensions of the gap

3) How to matching the antenna to the 50 OHm cable.

For matching an inset matching network is presented with 3 sections for bandwidth enhancement for the two UMTS bands. But another design could also be used but this matching is relatively simple..

Because there are a lot of variables in this design (type of slot, dimensions slot, dimensions antenna, dimensions microstrip sections) one has to optimize.

Therefore in IE3D the following variables are given:

-3 variables for the width, heigth and position of the upper gap
-3 variables for the three microstrip sections (widths and lengths of each section)
-1 variable for the heigth of the lowest gap (where the matching network is situated)
-1 variable for the width of the lowest gap
-1 variable for the heigth of the antenna

The problem is now that I couldn't achieve with optimizations a good matching for the two bands because the couldn't get close why is that?? Do you have an idea what type of gap/slot is the best in such case?

From literature is known that a dual-band Sierpinski monopole antenna exist but it seems that the behavior of a Sierpinski on a patch structure is different..

I hope answering your troubles, and that you have some advice how to continue further.

Rafael (email:rafahol@hotmail.com)

> Hi Rafael,
>
> The last sentence above is a distinct possibility.
>
> Your thesis.... How is it that you EVER expected a first iteration
> Sierpinski to be a suitable candidate? Why were you so specific to
> the first iteration? By all of my research, the Sierpinski is the
> most mundane design around, hardly matching the radical requirements
> that devil you above. Simple research reveals that higher order
> iterations yield more resonances, just what you demand; and yet you
> limit yourself to one iteration from the beginning.

> I would also point out that it is not good form to post attachments to
> this newsgroup. You should build a homepage to present your work.
>
> With that admonition aside, your picture made up for a very hazy
> description and undecipherable wire table. Your triangular gasket is
> interesting. When you ask for help you could help us by offering more
> data. Much of what you describe, such as h2, is meaningless without
> our knowing the context of your statement. You describe you are
> optimizing against 9 variables, and yet you do not name them.
>
> As to this matter of "optimization." What happened to the "fractal"
> in the meantime? Could one have a reasonable expectation that the
> optimized fractal ends up being a dipole?
>
> 73's
> Richard Clark, KB7QHC

1751. pvc antenna for 2-meters

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-26 01:13:12 UTC
From: Sean Ingram <singram@direcway.com>
Message-ID: <an109.7960$u7.612994@news.direcpc.com>
Source record: 138042

This is Kd4Adv
QTH is Amelia, Virginia 23002

I saw a project in a QST issue sometime ago and unable to remember the month/year.

It refers to an antenna enclosed inside PVC tubing to resemble that of a Dipole.

I have been on the internet trying to find that particular antenna project so that I can build it to use with my 2meter mobile (15/35W) when I go on vacation to the beach or set up the antenna outside my window.

Please direct me to the URL or any similar pages that may have this featured.
I really would appreciate it.

73s
Kd4Adv

1752. Re: pvc antenna for 2-meters

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-26 01:21:14 UTC
From: ":-) Bill" <therealexray@netscape.net>
Message-ID: <3D40A40A.633792A7@netscape.net>
Source record: 138043

Sean Ingram wrote:
>
> This is Kd4Adv
> QTH is Amelia, Virginia 23002
>
> I saw a project in a QST issue sometime ago and unable to remember the
> month/year.
>
> It refers to an antenna enclosed inside PVC tubing to resemble that of a
> Dipole.
>
> 73s
> Kd4Adv

I use something like that as my TV antenna. Its just as you describe
it, a dipole inside PVC pipe.
Wire up the dipole with wire elements using a PVC Tee in the middle then
glue it all together.
-Bill WX4A

1753. Re: pvc antenna for 2-meters

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-26 01:45:53 UTC
From: "R. Scott" <washingtonham@yahoo.com>
Message-ID: <3D40AA41.C5818928@yahoo.com>
Source record: 138044

":-) Bill" wrote:
>
> Sean Ingram wrote:
> >
> > This is Kd4Adv
> > QTH is Amelia, Virginia 23002
> >
> > I saw a project in a QST issue sometime ago and unable to remember the
> > month/year.
> >
> > It refers to an antenna enclosed inside PVC tubing to resemble that of a
> > Dipole.
> >
> > 73s
> > Kd4Adv
>
> I use something like that as my TV antenna. Its just as you describe
> it, a dipole inside PVC pipe.
> Wire up the dipole with wire elements using a PVC Tee in the middle then
> glue it all together.
> -Bill WX4A

Better yet do what I did, I made the 300 ohm Radio shack twin lead Jpole
and put it inside 60" of PVC with a cap. Coax comes out the bottom and
is taped to the PVC there. Works both 2 and 440 just Peachy.

You can find the plans for 300ohm twin lead jpoles all over the net.

Scotty N7HJ

1754. Re: pvc antenna for 2-meters

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-26 02:19:15 UTC
From: David Cook <nospam.davepc2@oz.net>
Message-ID: <Dk209.168485$uw.94796@rwcrnsc51.ops.asp.att.net>
Source record: 138045

"R. Scott" <washingtonham@yahoo.com> wrote in message
news:3D40AA41.C5818928@yahoo.com...
> Better yet do what I did, I made the 300 ohm Radio shack twin lead Jpole
> and put it inside 60" of PVC with a cap. Coax comes out the bottom and
> is taped to the PVC there. Works both 2 and 440 just Peachy.
>
> You can find the plans for 300ohm twin lead jpoles all over the net.
>
> Scotty N7HJ

I just one of those over the weekend. I used a cap at the bottom too and used a single-hole chassis mount connector (the kind with a large nut, rather than the bulkhead mount with the 4 screws). It's all hermetically sealed now, with the exception of the usual connector weather treatment. I put a small eyebolt in the top cap so I can haul it up with a rope, or I can mount it to a mast at the bottom with hose clamps. It's great for portable use, just throw a rope over a tree and hoist it up. Virtually indestructable!

-- Dave, WA0TTN

1755. Re: What antenna do you use as SWLer?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-26 02:57:38 UTC
From: Fredrik Olofsson <meteon@telia.com>
Message-ID: <CU209.17579$p56.5688027@newsb.telia.net>
Source record: 138046

http://www.antennex.com/preview/New/c8titanx.htm

Go log periodic :)

1756. Re: Opinions wanted: Par Antenna OA-432?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-26 03:08:52 UTC
From: Dale Parfitt <parinc@gte.net>
Message-ID: <3D40BB72.455940C@gte.net>
Source record: 138047

oldtimeradio wrote:

> I don't think anyone has had experience with the 432 model or they
> would have said it "did do this" or it "didn't do that". My opinion
> is that most replies were trying to steer you away from the Par
> because they thought you'd not be pleased with the performance you'd
> have.
>
> The Par is basically a dipole folded into a triangle shape to give an
> almost omni directional pattern. It uses a matching device (that uses
> pieces of circuit board for capacitors) to change the impedance to the
> 50- ohm range.
>

It is actually considerably longer than a dipole- it is this length and the isosceles triangle shape that yield a near perfect omni- considerably better than traditional loops.

>
> I have had experience with the 6 meter Par model. It's performance is
> slightly less than a dipole, except that it is omni directional. It
> is a well crafted antenna. On the other hand, I have had experience
> on the 432 band, as have some of the others that responded. My
> opinion is that the Par would be fine if you have some locals (20
> miles perhaps?) that you want to talk to. Other than that most of us
> think that the alternatives suggested would make your 432 experience
> less costly and more productive.
>
> 73
> OTR
>
> On 25 Jul 2002 19:43:38 GMT, vhfradiobuff@aol.comspamsux
> (VHFRadioBuff) wrote:
>
> >I appretiate all the replies, but does anyone have any experience with the
> >OA-432 antenna? I am well aware of the alternatives and gain and all that, but
> >that's not what I'm asking.
> >
> >Any opnions on the OA-432 would be appretiated. Thanks.
> >=-
> >73! de Andy KC2SSB (ex: KF4KHC/HL9HCT)
> >Beachwood, NJ USA! Grid FM29vw
> >http://vhfradiobuff.tripod.com

1757. Re: pvc antenna for 2-meters

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-26 03:56:43 UTC
From: Juerg Tschirren <juerg-tschirren@uiowa.edu>
Message-ID: <%L309.118962$_51.88602@rwcrnsc52.ops.asp.att.net>
Source record: 138048

The Buddipole might be what you are looking for:
http://www.qsl.net/w3ff/ (if you want to build it yourself), or
http://www.buddipole.com/ (if you want to buy it)

Sean Ingram wrote:

> This is Kd4Adv
> QTH is Amelia, Virginia 23002
>
> I saw a project in a QST issue sometime ago and unable to remember the
> month/year.
>
> It refers to an antenna enclosed inside PVC tubing to resemble that of a
> Dipole.
>
> I have been on the internet trying to find that particular antenna project
> so that I can build it to use with my 2meter mobile (15/35W) when I go on
> vacation to the beach or set up the antenna outside my window.
>
> Please direct me to the URL or any similar pages that may have this
> featured.
> I really would appreciate it.
>
> 73s
> Kd4Adv

1758. Re: Stagnating antenna designs

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-26 03:57:51 UTC
From: aunwin@fgi.net
Message-ID: <c4becf19.0207251957.7bcb0a99@posting.google.com>
Source record: 138049

Richard Clark <kb7qhc@attbi.com> wrote in message
news:<aqb0kuchf4g3aolcplgfdrpcgpjdltda35@4ax.com>...
> On 25 Jul 2002 06:52:09 -0700, aunwin@fgi.net (Art Unwin KB9MZ) wrote:
>
> > If one has a dipole where between the feed points a loop with a
> >variable capacitor is inserted we then have a collinear antenna for
> >frequences in the same range as the original loop antenna if the
> >dipoles were built to 20 metre lengths.
>
> Hi Art,
>
> This is difficult to follow. I can only guess you have described a
> remotely tuned gamma loop match to an opportunistic radiator.
>
> 73's
> Richard Clark, KB7QHC

Well I suppose we are all getting a bit older, a picture
is what you are asking for unless you are looking for a 'Hoos on
first'
type scenario, so here goes.
xxxxxxICxxxxx
x x
A xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxB
x x
x x
x x
xx
xx
xx

Now Richard, the straight line is a half wave dipole.(A-B)
For simplicity sake the 'loop' is in the form of a rectangle
but it can easily be made in a circular form. At the top of the loop
we have a capacitor 'IC' which can be fixed or a variable form.
So the above is basically a combination loop/dipole antenna.
So what does the above give you? To save you figuring it out
the above gives you a variable frequency antenna with a higher
efficiency
than a loop antenna alone. A less complicated capacitor and a more
user friendly antenna with respect to tuning. It also provides a small
collinear gain that neither the loop or the dipole alone can provide.
Now the Zepp provides the collinear gain by adding part of the
transmission line to the antenna but it only provides for a single
frequency. Ofcourse we can add a tuner to vary the frequency response

by using the whole antenna SYSTEM, but it does not supply a superior antenna to the loop/dipole.
When comparing a trapped dipole for say three frequency bands I would suggest the combination antenna is far superior but if you disagree I would be happy to hear why. Ofcourse, if you still don't understand the antenna i.e. the picture.....! With respect to feeding I show a delta match and I would imagine the type and point of feed could be almost anywhere.(the feed that you described probably could be used also.
Now one could compare radiation patterns or compare what the 'loop' portion does
compared to a 'stub' and then add up the advantages ,many of the 'old' wire designs could well be updated to be more user friendy.
It is my personal opinion that the combination antenna is far more versatile,
user friendly and supplies better gain over a range of frequency than the majority of single wire antennas now shown and if it could only make one antenna book it could be as Reg says, plagarised,copied, or pointed to by the experts so it will be more widely utilized and antenna designs would not stagnate, which is precisely the point I am making.

1759. Vs: Antenna trivia

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-26 05:38:15 UTC
From: Matti Ponkamo <mattipo@luukku.com>
Message-ID: <ahqn87$bd0$1@news1.song.fi>
Source record: 138050

OK1SIP <remove_ok1sip@atlas.cz> kirjoitti
viestiss&#65533;:5f5159fa.0207250414.7d336ba6@posting.google.com...
> Not about antennas only, but about us, hams ... LAST HAM'S SENTENCES:
> "Look, the antenna mast bears me perfectly !"
> "I'll check whether the power transformer does not get too hot !"
> "This wire is not a high voltage one, because it has green insulation !"
> "The antenna rotator is not so strong to push me down !"
>
> 73 de Ivan

The best one I*ve heard is still missing:

"Don't worry, I know what I'm doing, I am a ham, you know..."

73 de Matti Ponkamo, Naantali, Finland

1760. Re: HELP with pedestrian antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-26 08:15:25 UTC
From: HH <mcleanaj@bigpond.com>
Message-ID: <Ur709.44260$Hj3.134670@newsfeeds.bigpond.com>
Source record: 138051

I think this dude is having us all on

HH

"N4LQ" <N4LQ@igLou.com> wrote in message news:3d3f4002_2@news.iglou.com...
> Stick to using cell phones while walking, like the rest of us.
>
> RG8U
>
> "WheelS" <ham mer@bigfoot.com> wrote in message
> news:rvbujuk2l80c2gnni7m50iiuur1kug07t9@4ax.com...
> >
> > Hi All
> >
> > I need some advice on an idea I have for a pedestrian HF antenna.
> >
> > I have polio and wear a pair of the old metal style calipers.

1761. Re: Opinions wanted: Par Antenna OA-432?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-26 10:31:38 UTC
From: k4sqr@juno.com
Message-ID: <d43e4174.0207260231.7657183@posting.google.com>
Source record: 138052

Andy;

See W4VHF's photo of the OA-50 & OA-432 at the Par Web Page; Ted was
Number One in the Rover Catagory last year!

GL

vhfradiobuff@aol.comspamsux (VHFRadioBuff) wrote in message
news:<20020724001909.01451.00000564@mb-ca.aol.com>...
> Does anyone have any experience with the OA-432? I was thinking of picking up a
> dualband 2m/70cm yagi for SSB work (it would replace my 2m quad currently up
> for SSB on 2m), but now I am thinking of just getting the Par Antenna OA-432. I
> probably wouldn't be using 432 SSB very much, mainly during contests. Opinions
> are greatly appretiated. Thanks!
> =-
> 73! de Andy KC2SSB (ex: KF4KHC/HL9HCT)
> Beachwood, NJ USA! Grid FM29vw
> http://vhfradiobuff.tripod.com

1762. Steel flues resonating with V dipole

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-26 10:49:47 UTC
From: cprstn54zz@att.net
Message-ID: <3d41246a.105638218@news-server.optonline.net>
Source record: 138053

I put the center (40 ft up) of my inverted V, multi-band dipole on a boom 2 ft. off my chase (wood chimney) in which there are three grounded, galvanized, double-wall flues. The manufacturer said it would be OK.

I now find that these flues are very RF hot and suspect that at least one is resonating on almost every band. They are respectively approximately 19, 28 and 38 ft. long. I suspect that the vertical component of the downward sloping legs (35 degree angle from vertical) of the dipole is the problem. Unfortunately, I can't get the ends much higher without some major tree surgery.

Other than this is pumping RF into my house ground in a major way, is it hurting my signal? I believe it is changing the radiation pattern, but is it making my signal weaker? Is it making it stronger? Some contacts report a wavery signal on 40M.

I can access the interior of the chase approximately 12 ft. below the top. I could strap the three flues together with copper braid there. Would this reduce/prevent resonance?

Ken KC2JDY

Ken
(to reply via email
remove "zz" from address)

1763. Re: Steel flues resonating with V dipole

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-26 10:57:58 UTC
From: cprstn54zz@att.net
Message-ID: <3d412ab3.107247078@news-server.optonline.net>
Source record: 138054

On Fri, 26 Jul 2002 10:49:47 GMT, cprstn54zz@att.net (Ken) wrote:
>I suspect that the vertical
>component of the downward sloping legs (35 degree angle from vertical)
>of the dipole is the problem.

I mis-spoke myself. The legs are 60 degrees from vertical -- meaning
they are more horizontal that vertical, but still have a 50% vertical
component if I remember my sines and cosines.

Ken KC2JDY

Ken
(to reply via email
remove "zz" from address)

1764. 220 MHz swr/watt meter

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-26 11:12:38 UTC
From: JEEPMON <JEEPMON@HOTMAIL.COM>
Message-ID: <G8a09.123116$_51.88663@rwcrnsc52.ops.asp.att.net>
Source record: 138055
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.equipment,uk.radio.amateur

Does anyone know of a meter (cheaper than a bird) that will accurately read the forward and reflected power of a 220 MHz radio <50 watts? I really like the Diamond meters but when reading the literature on the SX-40C it says that 220MHz frequencies use a 'correction factor' what is that? I was told by another ham that even the meters that cover 220MHz frequencies are not accurate that I must purchase a Bird meter. Is this true? Does anyone have any experience with swr/watt meters for these frequencies? How about the yaesu meters? I did find the MFJ makes a 220MHz meter but I have heard nothing but terrible things about MFJ and their quality!

Please help
KC9BNY
73's

1765. Re: 220 MHz swr/watt meter

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-26 11:23:26 UTC
From: "H. Adam Stevens" <solo@totalaccess.net>
Message-ID: <uk2cbiqe7fa9be@corp.supernews.com>
Source record: 138056
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.equipment,uk.radio.amateur

I've had the 144/220 MFJ unit for years. It also has a field strength meter.
Works fine.
H.
NQ5H

"JEEPMON" <JEEPMON@HOTMAIL.COM> wrote in message
news:G8a09.123116$_51.88663@rwcrnsc52.ops.asp.att.net...
> Does anyone know of a meter (cheaper than a bird) that will accurately
read
> the forward and reflected power of a 220 MHz radio <50 watts? I really
like
> the Diamond meters but when reading the literature on the SX-40C it says
> that 220MHz frequencies use a 'correction factor' what is that? I was told
> by another ham that even the meters that cover 220MHz frequencies are not
> accurate that I must purchase a Bird meter. Is this true? Does anyone have
> any experience with swr/watt meters for these frequencies? How about the
> yaesu meters? I did find the MFJ makes a 220MHz meter but I have heard
> nothing but terrible things about MFJ and their quality!
>
> Please help
> KC9BNY
> 73's
>
>

1766. Lightning Arrester Ground Wire Question ?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-26 12:40:35 UTC
From: Robert Rose <rgsrose@tiac.net>
Message-ID: <ahrg4j$4pa$1@slb1.atl.mindspring.net>
Source record: 138057

Hi,

Am trying to figure out the best, and most practical, way for me to safely ground a new receiver
and a lightning arrestor (Alpha Delta) that I'll be adding near the receiver's input.
I do listening only, so transmit. grounding is not an issue.

For a variety of reasons, it's not practical for me to run a very heavy bus wire as a separate ground
to a ground bar in the earth by my house.

I may end up doing this, but for the moment I would appreciate any thoughts on the
following approaches.

If any lightning hits the house directly, I imagine I'll have much bigger problems
than a burnt out receiver front end.

So, I am only trying to offer reasonable protection for any induced voltages that my
attic aerials might pick up, and offer a decent ground path for the lightning arrester's
gas tube ionization path if it hopefully does break down at a reasonably low voltage.

The Alpha Delta arrestors have a third, separate, grounding lug.

a. What do you think of feeding the lightning arrester gnd. to the AC wall plug; the center pin (green wire) ground?
(not the neutral). It's No. 14 AWG wire , so should be able to handle quite a few hundred pulse for the very short time, i would think?

The receiver chassis is, of course, already grounded thru this.

b. Or, picking up the forced hot water heating pipe in the room. This does communicate
with earth ground via the cold water pipes at the furnace. I'm a bit reluctant to this,
as the furnace is gas-fired. However, the hot water circulator, and its associated piping, is
fairly well removed from the natural gas input line. Still, ...

As always, any thoughts would be most appreciated.

Thanks,
Bob

1767. Re: Steel flues resonating with V dipole

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-26 12:56:44 UTC
From: richardharrison@webtv.net
Message-ID: <10620-3D41470C-7@storefull-2396.public.lawson.webtv.net>
Source record: 138059

Ken, KC2JDY wrote:
"Is it making my signal stronger?"

In some direction, maybe. Anything disturbing a radiation pattern usually makes it stronger in some direction and weaker in another.

Conductors accept and re-radiate according to current flowing in them. If a conductor is far from resonance it usually accepts little current to cause re-radiation. Of course, the quantity depends on the strength of the field it`s in.

If the flue pipes are grounded verticals 40 ft high, their first resonance is around 48m. This can be made to appear as a near open-circuit folded monopole by hanging a wire attached to the top of a pipe and left open-circuit at the bottom. Such a structupe now appears as an open-circuit to induced current at this resonance point and accepts little current to re-radiate, if before it accepted a large current.
Another view may be that it is now an open-circuit stub of the 1/4-wave shorted variety and its induced fields cancel leaving no external field.. But, whatever, the pipe is detuned.

Best regards, Richard Harrison, KB5WZI

1768. Re: cloning software

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-26 13:13:17 UTC
From: w9gb <gregory.beat@attbi.com>
Message-ID: <NVb09.174010$uw.94860@rwcrnsc51.ops.asp.att.net>
Source record: 138058

Double check the RT Systems web site, but I believe it does.

GB
"Tom S" <t_stenbraaten@hotmail.com> wrote in message
news:3d3f65d7.1501659@news.vianet.ca...
> Does anyone know if the cloning software for the IC-T7 work for the
> IC-T8A??
>
> Tom

1769. Re: pvc antenna for 2-meters

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-26 13:58:24 UTC
From: David Cook <nospam.davepc2@oz.net>
Message-ID: <4Ac09.124071$_51.88673@rwcrnsc52.ops.asp.att.net>
Source record: 138060

No, he's looking for something for 2 meters, per the subject line. The
Buddipole is HF, but it is a neat idea in it's own right.

-- Dave, WA0TTN

"Juerg Tschirren" <juerg-tschirren@uiowa.edu> wrote in message
news:%L309.118962$_51.88602@rwcrnsc52.ops.asp.att.net...
>
> The Buddipole might be what you are looking for:
> http://www.qsl.net/w3ff/ (if you want to build it yourself), or
> http://www.buddipole.com/ (if you want to buy it)
>
>
> Sean Ingram wrote:
>
> > This is Kd4Adv
> > QTH is Amelia, Virginia 23002
> >
> > I saw a project in a QST issue sometime ago and unable to remember the
> > month/year.
> >
> > It refers to an antenna enclosed inside PVC tubing to resemble that of a
> > Dipole.
> >
> > I have been on the internet trying to find that particular antenna
project
> > so that I can build it to use with my 2meter mobile (15/35W) when I go
on
> > vacation to the beach or set up the antenna outside my window.
> >
> > Please direct me to the URL or any similar pages that may have this
> > featured.
> > I really would appreciate it.
> >
> > 73s
> > Kd4Adv
>

1770. Re: Lightning Arrester Ground Wire Question ?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-26 14:00:57 UTC
From: richardharrison@webtv.net
Message-ID: <7203-3D415619-14@storefull-2391.public.lawson.webtv.net>
Source record: 138063

Robert Rose wrote:
"Am trying to figure out the best and most practical way for me to safely ground a new receiver and a lightning arrester (Alpha Delta) that I`ll be adding near the receiver`s input."

Get a surge protector with MOV`s that plugs into the 3-wire electrical outlet. Plug the receiver into that. Don`t use that electrical circuit from the breaker box for modems, phone answering machines, or any other device that requires any wires other than the power wires.

If the Alpha Delta is a gas tube, it likely won`t protect a solid-state receiver front-end. It takes too much time and voltage to fire.

Best front-end protection is a common-mode choke. A length of coax feedline is a good common-mode choke. Lightning is rejected by the coax interior and forced to travel on the outside of the coax shield.

The coax connector screws onto the radio. So, lightning skips the radio interior. Voltage is the same on all sides of the box so there`s nothing to drive current through its interior. As the antenna connector is connected to the radio box, that`s where the radio`s power wires should be bypassed so that surge currents between the power ground and antenna skip the box`s interior. Antenna and power wires must be at the same potential at the radio during a lightning strike to protect the radio.

It is helpful to rid the coax of as much lightning as possible outside so that the power safety ground wire isn`t overloaded. External coax grounds are helpful.

Best regards, Richard Harrison, KB5WZI

1771. Re: LMR400 around rotator

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-26 14:08:32 UTC
From: hasan schiers <schiers@netins.net>
Message-ID: <ahrl52$u6bv9$1@ID-52642.news.dfncis.de>
Source record: 138061

Hi Jim,

The UltraFlex is both more expensive and somewhat higher loss. I'm using two runs of standard LMR-400 around my 450 deg rotation Yaesu rotor with no difficulties after a year. I make the loops pretty good sized to reduce the bending and have had no trouble. I have done the same thing with other similarly sized coax cables at a prior qth and the coax was up over 10 years with no problems. I've never found the need to use the UltraFlex approach.

73

--
hasan schiers, N0AN

schiers@netins.net
or use amsat.org or arrl.net remailer
"J Tabor" <denews@taborsoft.com> wrote in message
news:ujqu9qamegr06f@corp.supernews.com...
> Greetings,
>
> Thanks for the info. Any reason to not just use the ultra-flex for entire
> run? Other than extra expense of course. I should have specified that in
> original post.
>
> Regards,
> Jim - KU5S
>
>

1772. Re: Radioshack DiscOne Base Antenna vs 6 meter dipole

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-26 14:10:00 UTC
From: hasan schiers <schiers@netins.net>
Message-ID: <ahrl7p$urh4u$1@ID-52642.news.dfncis.de>
Source record: 138062

The mechanical quality of the Radio Shack discone is quite poor. The
"spokes" fall off in windy Iowa after a relatively short time period. The
antenna worked ok, but mechanically it is "cheap".

--
hasan schiers, N0AN

schiers@netins.net
or use amsat.org or arrl.net remailer
"Ed Laughery" <laughery@bellsouth.net> wrote in message
news:jIp%8.3866$Og3.583499@e3500-atl1.usenetserver.com...
> Hi
>
> I would appreciate any info regarding the Radioshack Discone base antenna
> for 6 meters. How does it compare in performance to a simple 6 meter
> dipole? Same questions but for Discone antennas in general for 6 meter
> ops.
>
> 73s
> Ed AD5JV
>
>
>

1773. Re: 220 MHz swr/watt meter

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-26 15:02:24 UTC
From: radiofun <radiofun@charter.net>
Message-ID: <uk2p60l63uamf0@corp.supernews.com>
Source record: 138065
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.equipment,uk.radio.amateur

The Yaesu meter does quite well. I think its the YS-60 or something like
that.

Bill
KC4KMG

--
Web Site: www.polkcounty.org/radiofun

"JEEPMON" <JEEPMON@HOTMAIL.COM> wrote in message
news:G8a09.123116$_51.88663@rwcrnsc52.ops.asp.att.net...
> Does anyone know of a meter (cheaper than a bird) that will accurately
read
> the forward and reflected power of a 220 MHz radio <50 watts? I really
like
> the Diamond meters but when reading the literature on the SX-40C it says
> that 220MHz frequencies use a 'correction factor' what is that? I was told
> by another ham that even the meters that cover 220MHz frequencies are not
> accurate that I must purchase a Bird meter. Is this true? Does anyone have
> any experience with swr/watt meters for these frequencies? How about the
> yaesu meters? I did find the MFJ makes a 220MHz meter but I have heard
> nothing but terrible things about MFJ and their quality!
>
> Please help
> KC9BNY
> 73's
>
>

1774. looking for cubex skymaster instruction manual

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-26 15:03:23 UTC
From: Paolo Emanuelli IK1QHB <ik1qhb@libero.it>
Message-ID: <%wd09.5175$n04.117152@twister2.libero.it>
Source record: 138064

I'm looking for cubex skymaster instruction manual.
Is there someone have this manual in file mode (pdf, jpg etc)?

Thank you

Paul IK1QHB

1775. Re: Lightning Arrester Ground Wire Question ?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-26 15:07:18 UTC
From: Robert Rose <rgsrose@tiac.net>
Message-ID: <ahroun$15a$1@slb5.atl.mindspring.net>
Source record: 138066

Hi Richard:

Much thanks for your reply:

Am confused, a bit, over the following:

"Lightning is rejected by the coax
interior and forced to travel on the outside of the coax shield."

I can see where a puls of several thousand volts undoubtedly flows, mainly,
thru the coax shield.
But what about possibly antenna induced volts due to a nearby strike, of say
a hundred or so?

Still enough to harm a front end, but not enough, probably, to prefer the
shield path?

Best rergards, and thanks again,
Bob

"Richard Harrison" <richardharrison@webtv.net> wrote in message
news:7203-3D415619-14@storefull-2391.public.lawson.webtv.net...
> Robert Rose wrote:
> "Am trying to figure out the best and most practical way for me to
> safely ground a new receiver and a lightning arrester (Alpha Delta) that
> I`ll be adding near the receiver`s input."
>
> Get a surge protector with MOV`s that plugs into the 3-wire electrical
> outlet. Plug the receiver into that. Don`t use that electrical circuit
> from the breaker box for modems, phone answering machines, or any other
> device that requires any wires other than the power wires.
>
> If the Alpha Delta is a gas tube, it likely won`t protect a solid-state
> receiver front-end. It takes too much time and voltage to fire.
>
> Best front-end protection is a common-mode choke. A length of coax
> feedline is a good common-mode choke. Lightning is rejected by the coax
> interior and forced to travel on the outside of the coax shield.
>
> The coax connector screws onto the radio. So, lightning skips the radio
> interior. Voltage is the same on all sides of the box so there`s nothing
> to drive current through its interior. As the antenna connector is
> connected to the radio box, that`s where the radio`s power wires should
> be bypassed so that surge currents between the power ground and antenna
> skip the box`s interior. Antenna and power wires must be at the same

> potential at the radio during a lightning strike to protect the radio.
>
> It is helpful to rid the coax of as much lightning as possible outside
> so that the power safety ground wire isn`t overloaded. External coax
> grounds are helpful.
>
> Best regards, Richard Harrison, KB5WZI
>

1776. Re: 220 MHz swr/watt meter

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-26 15:11:57 UTC
From: radiofun <radiofun@charter.net>
Message-ID: <uk2po163o5hp8f@corp.supernews.com>
Source record: 138067
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.equipment,uk.radio.amateur

Sorry..its the YS-500 See:
http://www.universal-radio.com/catalog/meters/0672.html

"JEEPMON" <JEEPMON@HOTMAIL.COM> wrote in message
news:G8a09.123116$_51.88663@rwcrnsc52.ops.asp.att.net...
> Does anyone know of a meter (cheaper than a bird) that will accurately
read
> the forward and reflected power of a 220 MHz radio <50 watts? I really
like
> the Diamond meters but when reading the literature on the SX-40C it says
> that 220MHz frequencies use a 'correction factor' what is that? I was told
> by another ham that even the meters that cover 220MHz frequencies are not
> accurate that I must purchase a Bird meter. Is this true? Does anyone have
> any experience with swr/watt meters for these frequencies? How about the
> yaesu meters? I did find the MFJ makes a 220MHz meter but I have heard
> nothing but terrible things about MFJ and their quality!
>
> Please help
> KC9BNY
> 73's
>
>

1777. Re: looking for cubex skymaster instruction manual

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-26 15:24:28 UTC
From: Dennis Kaylor <k4oxg@tampabay.rr.com>
Message-ID: <MQd09.6687$s8.149571@twister.tampabay.rr.com>
Source record: 138068

have you tried emailing them or checking out there website?
http:\\www.cubex.com

"Paolo Emanuelli IK1QHB" <ik1qhb@libero.it> wrote in message
news:%wd09.5175$n04.117152@twister2.libero.it...
> I'm looking for cubex skymaster instruction manual.
> Is there someone have this manual in file mode (pdf, jpg etc)?
>
> Thank you
>
> Paul IK1QHB
>
>
>

1778. Re: Antenna suggestion For 30 MHz To About 2 GHz ?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-26 16:15:10 UTC
From: Robert Rose <rgsrose@tiac.net>
Message-ID: <ahrstv$p8a$1@slb5.atl.mindspring.net>
Source record: 137919

Hi Dick:

Thanks for help.

I have a twenty year old Antenna Specialists MONR 31.
I see that they are still being offered !

Regards,
Bob

"Richard Clark" <kb7qhc@attbi.com> wrote in message
news:kcdujuchg2q007mn982f8696lu0cq25p8c@4ax.com...
> On Wed, 24 Jul 2002 18:58:53 -0400, "Robert Rose" <rgsrose@tiac.net>
> wrote:
>
> >If 30 MHz to 2 GHz is too wide a spread, would certainly be willing to
> >consider 2
> >antennas., but prefer one if the comprises aren't too unreasonable.
> >
> >Much thanks,
> >Bob
> >
>
> Hi Bob,
>
> For one structure to attempt to be all things means something has to
> give.
>
> Antennas, such as discones, that advertise (specify, what have you...)
> wide bandwidth are discussing this in terms of matching only. That is
> an important consideration, but it neglects discussion of the
> radiation patterns developed across that same bandwidth.
>
> When you get into lengths that are larger than 1 wavelength (and
> discones are pre-eminent there at their upper limit), you find that
> the best reception is straight up. Other, non vertical, designs are
> bound to present some form of deafness where on other bands they hit
> that site quite easily.
>
> 73's
> Richard Clark, KB7QHC

1779. FS 50' tower on wheels !!!!!

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-26 16:28:58 UTC
From: wb4una@aol.com
Message-ID: <20020726122858.27981.00001003@mb-cr.aol.com>
Source record: 137920

ok..here some info on the towers..
they are on a 20' tralior..they are tilt towers and all work is done on traliors..hand wench on both tilt and crankup cables..they are 50' towers built by Aluma Towers.
the price for these new are 9100.00....I am selling these for 1200.00 each.I am located in Columbia,SC..I have pics and specs for those that are really looking for something like this..drop me a line and we can go from there....

Randy Chavis
WB4UNA

ARS: WB4UNA
Randy Chavis
247 Goff Court
West Columbia
S.C. 29172

1780. Re: Lightning Arrester Ground Wire Question ?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-26 16:57:39 UTC
From: richardharrison@webtv.net
Message-ID: <3353-3D417F83-18@storefull-2392.public.lawson.webtv.net>
Source record: 137921

Robert Rose wrote:
"I can see where a pulse of several thousand volts undoubtedly flows through the coax shield."

A common-mode choke functions as a 1:1 ratio transformer. Take a look at the equivalent circuit of coax cable. Both interior conductors have reactance coupling them inductively. Any volts across one conductor segment induces voltage across the opposing inductance of the other conductor. The coax is a 1:1 ratio transformer, inside.

Same-polarity currents imposed from one end of the coax produce aiding currents (like paralleled transformer coils) and these produce counter-ems in both conductors which equal the imposed voltage and oppose current flow in either conductor. In an ideal situation the net current through the inside of the coax is zero. In a practical situation the common-mode surge current is so low that it is nothing to be concerned about even with solid-state receivers. But I`ve no experience with only 2 or 3-foot feedlines. I`ve had experience with hundreds of solid-state receivers connected 24/7 to long coax feeders and the receicvers were never damaged by lightning strikes.

Best regards, Richard Harrison, KB5WZI

1781. Re: Lightning Arrester Ground Wire Question ?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-26 17:02:02 UTC
From: richardharrison@webtv.net
Message-ID: <3353-3D41808A-19@storefull-2392.public.lawson.webtv.net>
Source record: 137922

A common-mode choke`s rejection is at least as good at 100 volts as it is at 10,000 volts.

Best regards, Richard Harrison, KB5WZI

1782. Re: Steel flues resonating with V dipole

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-26 17:46:31 UTC
From: 'Doc <w5lz@icok.net>
Message-ID: <3D418AEE.ACCEDA99@icok.net>
Source record: 137923

Ken,
I'd have to say that there could be two things
there, that are not 'helping' your signal. The
first being the narrow angle between your dipoles
legs. If you can't change that, then you should at
least be aware that it isn't doing your signal much
'good'.
As to the flues in your chimney, you might try
grounding them, as you suggested. If possible, both
at the top and bottom. (I would take care in how I
did the grounding, you certainly don't want to attach
anything that will compromise the air insulation
between the various layers of the flue pipes.)
Are the flues being 'RF' hot hurting your signal in
some way, or changing the antennas radiation pattern?
It sure can't be helping your signal, and it is changing
the radiation pattern to some extent. As for the 'wavering'
signal on 40 meters, who knows? I would be more apt to
'chalking' that one up to band conditions, though.
Good luck...
'Doc

1783. Re: Steel flues resonating with V dipole

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-26 17:48:35 UTC
From: richardharrison@webtv.net
Message-ID: <28589-3D418B73-14@storefull-2394.public.lawson.webtv.net>
Source record: 137924

I wrote:
"If a conductor is far from resonance it usually accepts little current
to cause re-radiation."

No one has asked, but some reader may doubt the necessity of resonance.
The inhibition to current is the same as for any standing-wave antenna.
Reactance impedes current off-resonance.

Best regards, Richard Harrison, KB5WZI

1784. Re: LMR400 around rotator

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-26 19:40:35 UTC
From: Sylvan Butler <Znospam+noZs_0207@hpb13799Z.Zboi.hpZ.com.invalid>
Message-ID: <slrnak39dj.fot.Znospam+noZs_0207@hpb13799Z.Zboi.hpZ.com.invalid>
Source record: 137925

On Fri, 26 Jul 2002 09:08:32 -0500, hasan schiers <schiers@netins.net> wrote:
> The UltraFlex is both more expensive and somewhat higher loss. I'm using two
> runs of standard LMR-400 around my 450 deg rotation Yaesu rotor with no
> difficulties after a year. I make the loops pretty good sized to reduce the
> bending and have had no trouble. I have done the same thing with other
> similarly sized coax cables at a prior qth and the coax was up over 10 years
> with no problems. I've never found the need to use the UltraFlex approach.

And if the loop of coax were to fail, cutting it out and replacing
with a section of ultraflex at that time would probably be better
than adding the connectors and/or extra cost during the initial
install. Unless you are trying to create a maintenance free tower.
:)

sdb
--
| Sylvan Butler | Not speaking for Hewlett-Packard | sbutler-boi.hp.com |
| Watch out for my e-mail address. Thank UCE. >>>> change ^ to @ <<<< |
They that can give up essential liberty to obtain a little temporary
safety deserve neither liberty nor safety. --Benjamin Franklin, 1759
Stop Senator Fritz Hollings-S2048, Palladium, and TCPA, NOW!
http://investor.cnet.com/investor/news/newsitem/0-9900-1028-20173919-0.html
http://zdnet.com.com/2100-1106-945976.html

1785. Re: Stagnating antenna designs

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-26 20:17:12 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <bta3ku0bs0pj175bt7tkdcmo074qafamae@4ax.com>
Source record: 137926

On 25 Jul 2002 20:57:51 -0700, aunwin@fgi.net (Art Unwin KB9MZ) wrote:

>we have a capacitor 'IC' which can be fixed or a variable form.

This begs the observation, if IC is fixed, that antenna is no longer a multiband design - clearly this is not your intention so why mention it?

>So what does the above give you?

A large, variable gamma match; so large that it contributes to the radiation if I follow your description.

>When comparing a trapped dipole for say three frequency bands I would
>suggest the combination antenna is far superior but if you disagree I
>would be happy to hear why.

Hi Art,

That is simply responded to that few here would consider "far superior" to qualify at a less than 1 dB variation. Plus you have the added complexity of turning that variable capacitor to achieve multiband performance. The trapped dipole already works multiband, you have to come up with a real gain differential to qualify for even "modestly superior."

73's
Richard Clark, KB7QHC

1786. Re: I forgot to include picture of dual-band Sierpinski antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-26 20:37:00 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <msb3kusvs923e2av57smohiaqgh5mv1fl9@4ax.com>
Source record: 137927

On 25 Jul 2002 17:13:36 -0700, rafahol@hotmail.com (Rafael) wrote:

>Dear Richard Clark!!
>
>Thanks for answering me so quickly!!
>
>Because my tutor explained me a lot of things I will know mention what
>possibilities he suggested in order to obtain a dual-band behavior of
>this Sierpinski patch antenna.
>
>As you know the basic structure is a triangular patch antenna. This
>antenna resonates at a lot of frequencies but I am only interested in
>mean resonance frequency. Because the spacing between the first and
>the second resonance frequency is very far away, a slot (a sort of gap
>in the structure) in order to pertubate the current on the superficie
>of the patch antenna so that the two resonance frequencies come to
>each other.
>
>Now there are a lot of problems:
>
>1) What kind of slot of gap would be needed in order to design such
>Sierpinski antenna
>
>2) What will be the dimensions of the gap
>
>3) How to matching the antenna to the 50 OHm cable.
>
>For matching an inset matching network is presented with 3 sections
>for bandwidth enhancement for the two UMTS bands. But another design
>could also be used but this matching is relatively simple..
>
>Because there are a lot of variables in this design (type of slot,
>dimensions slot, dimensions antenna, dimensions microstrip sections)
>one has to optimize.
>
>Therefore in IE3D the following variables are given:
>
>-3 variables for the width, heigth and position of the upper gap
>-3 variables for the three microstrip sections (widths and lengths of
>each section)
>-1 variable for the heigth of the lowest gap (where the matching
>network is situated)
>-1 variable for the width of the lowest gap
>-1 variable for the heigth of the antenna

>
>The problem is now that I couldn't achieve with optimizations a good
>matching for the two bands because the couldn't get close why is
>that?? Do you have an idea what type of gap/slot is the best in such
>case?
>
>From literature is known that a dual-band Sierpinski monopole antenna
>exist but it seems that the behavior of a Sierpinski on a patch
>structure is different..
>
>I hope answering your troubles, and that you have some advice how to
>continue further.
>
>Rafael (email:rafahol@hotmail.com)
\

Hi Rafael,

It is good that you are putting more detail into your problems like
naming those optimization criteria.

However, I would point out once again that you may have the
anticipated outcome painting you into a corner. That is, you approach
this with a solution in mind, and the software keeps telling you it
won't work. One of the two must be wrong. There is every chance that
BOTH may be wrong.

I will also ask again:
>> Your thesis.... How is it that you EVER expected a first iteration
>> Sierpinski to be a suitable candidate? Why were you so specific to
>> the first iteration? By all of my research, the Sierpinski is the
>> most mundane design around, hardly matching the radical requirements
>> that devil you above. Simple research reveals that higher order
>> iterations yield more resonances, just what you demand; and yet you
>> limit yourself to one iteration from the beginning.
>
You have to come to terms with the obvious force-fit of a solution to
a problem. Your observation:
>From literature is known that a dual-band Sierpinski monopole antenna
>exist but it seems that the behavior of a Sierpinski on a patch
>structure is different..
reveals no data to support your thesis. It is gossip at this point
without knowing just what those two bands were. I would suggest that
you stand back and look at your frequency requirements and appreciate
they are very close to one another. Yes at that band it may be many
MHz apart, but as a function of proportion, it is a razor's edge
between them. No first iteration Sierpinski on god's green earth is
ever going to do it.

Try for a higher iteration Koch Quadratic if you want more resonances
in a smaller package. I suggest this only if you wish to maintain the
fractal purity of your thesis - but mind you, optimization (if you

need it, and you probably will) is bound to destroy that fractal myth. If you followed this group a little more, you may have noted one of the "major" proponents of commercial fractal development is abandoning fractal purity with a vengeance (optimization a la genetic algorithms). The joke of these optimizations is that an hour's worth of doodling has eclipsed their best product every time.

If you are forced to maintain a triangular outside dimension, simply distort the cartesian co-orinate system of the Koch Quadratic to fit.

73's
Richard Clark, KB7QHC

1787. Re: What Multi-Band Dipole to Buy for 1.5kW use??

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-26 22:35:03 UTC
From: Mark Krubsack <mkrubsack@yahoo.com>
Message-ID: <jfj3ku8m79n4omnnr93io5mfvofgj1dv9e@4ax.com>
Source record: 137928

Yes, I did finally find one, and bought it. I got an email from a local Fresno ham who had the 80/40 meter version (MPD-2, 85') for sale brand new still in the shipping box. I bought it for $50, and it's great.

It's entirely flat across the 40M phone band, and with a tuner it works great on 80M. Without a tuner, SWR rises to about 2.5:1. I have an Alpha 99, and as a test pumped the legal limit+ into, and no sweat. W9INN's are good antennas.

On Mon, 22 Jul 2002 23:33:50 GMT, Bob Miller <bamiller@texas.net> wrote:

>Mark Krubsack <mkrubsack@yahoo.com> wrote:
>
>>On Sun, 21 Jul 2002 18:15:26 GMT, "Steve Floyd" <w4yhd@earthlink.net>
>>wrote:
>>
>>>I am looking for a multiband dipole antenna that is 90 ft. long (Max) and
>>>works on 80-10 meter bands including 17 and 30 meter bands without a tuner.
>>>I am looking at building my own parallel dipole design with only a trap in
>>>the 40/80 meter leg for length reduction to 90 ft. Has any company out
>>>there built a good quality multiband dipole that actually has 30 and 17
>>>meters included. Or, has anyone built a good parallel (fan) dipole for
>>>80,40,30.17,15,10 meter bands? I would really like to hear some ideas and
>>>advice.
>>>
>>>I have a Ameritron AL-1500 so it must take legal limit power.
>>>
>>
>>The W9INN antennas will fit your bill. I use a 80/40 meter version
>>with full power (Alpha 99) and narry a problem. They have a variety of
>>multi-band dipoles, some as short as 60+ feet.
>>
>>Check out the add in each month's QST, or see
>>http://www.cableone.net/ctj92/index.html?row1col2=w9inn.html
>>
>>Mark Krubsack,
>>ke6oi@arrl.net
>
>Mark, a few days ago you posted the message, :
>
>***
>
>I'm looking for a W9INN 80/40 meter dipole. Anyone have one for sale?

> Email me if you do. Thanks.
>
>Mark, KE6OI.
>
>Mark Krubsack,
>ke6oi@arrl.net
>
>***
>
>Did you already buy one, and get it up and running? Why are so many of your
>posts paired with those of "CJ"?
>
>Bob
>k5qwg

1788. Re: pvc antenna for 2-meters

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-26 23:24:27 UTC
From: Juerg Tschirren <juerg-tschirren@uiowa.edu>
Message-ID: <LSk09.676955$cQ3.106209@sccrnsc01>
Source record: 137929

David Cook wrote:

> No, he's looking for something for 2 meters, per the subject line. The
> Buddipole is HF, but it is a neat idea in it's own right.
>
> -- Dave, WA0TTN

from http://www.buddipole.com/ : "Superior efficiency 40 through 2 meters."

Plus if he want to buid his own then he could certainly trim it down to 2m.

1789. Re: white coax?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-26 23:35:01 UTC
From: AstroMan <dont@spam.me>
Message-ID: <uk3n56ii7q973c@corp.supernews.com>
Source record: 137930

White coax is also called "gain" coax. They sell it by the Linear foot. ;)

--

"CAM" <w5dxp@hotmail.com> wrote in message
news:3D3DE74C.A2494308@hotmail.com...
> CJ wrote:
> > Due to reflection of the sun's rays the white coax exhibits from .3 -
> > .77 db per 100ft less loss than normal black coax due to internal
> > heating and molecular friction dynamics. I only use white coax and it
> > has been a real performance advantage..... those that still use black
> > coax don't know what they are missing.....
>
> Looks like they are missing 5%-13% of one S-unit.
> --
> cheers, CAM http://www.qsl.net/w5dxp
>
>
> -----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
> http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
> -----== Over 80,000 Newsgroups - 16 Different Servers! =-----

1790. How to suppress indoor RFI ?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-26 23:58:37 UTC
From: lombryt@hotmail.com
Message-ID: <db35a0c.0207261558.1c667bca@posting.google.com>
Source record: 137931

Hi,

As many hams/swl I quickly discovered that portable PC or desktop computers located near the RX/TX produced a lot of QRN : from the screen - few -, the power supply - much -, or even from the move of the mouse or from the color displayed of the screen - sometimes-. A battery charger (for a digital cam) located 2m away from the RTX, on the ground near the power line, is even the strongest emitter and I must switch it off without condition when I listen to HF bands.

But from time to time even when the PC is on, I heard stations without switching on the N.R.1 and Beat cancel filters on my TS-570D. This is amazing but true as usually I can only heard the strongest stations without these filters. Suddenly like by miracle it seems the bands and all RFI are silents, without generating QRM/QRN.

On the contrary sometimes, my PC seems to generate much more QRN than usually and I have to switch it off to hear HF bands or weak remote stations. Sometimes RFI are even generated in the middle of HF bands, for example at 21220 Khz or 18160 Khz, but that changes regularly, without structure at first sight.

FYI, my PCs are located very near my RTX (see pics on http://wwww.astrosurf.com/lombry/qsl.hm and http://wwww.astrosurf.com/lombry/qsl4.hm).

On the pictures of shacks I have seen, - like to yours probably - the PC stands often very near the RTX due to the fact most of us use the PC to record our QSO or to access simultaneously to Internet. So I cannot place my PC far from the RTX. It must be on the same table, even if the main unit is located about 1 or 2m away from the RTX. My coax is not more far away.

Question : What is in theory the solution to suppress these RFI ?
Is there a solution to remove (or filter) this QRN generated by PCs or electronic homes devices in order to heard HF bands without these RFI (and keeping the PC near the RTX of course) ?
Can an external DSP be the ultime solution in such a case ?

Thanks for comments

73
Thierry
ONL5183
http://www.astrosurf.com/lombry/menu-qsl.htm

1791. Re: How to suppress indoor RFI ?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-27 00:59:22 UTC
From: Crazy George <munschNO@attglobal.net.SPAM>
Message-ID: <3d41f518_2@news1.prserv.net>
Source record: 137932

Thierry:

First, let me help a little on terminology. QRN implies natural sources, like lightning and other atmospherics. QRM doesn't fit well, but is the closest Q signal. What you are describing is indeed RFI or EMI. No Q signal for that.

Now, try a little test. Put a shielded 50 ohm termination on the RX/TX antenna connector. If the noise is still present, then you are going to have to work on shielding of the RX. If it is clean, next try with the termination at the far end of the feedline. If that picks up the interference, relocate the coax, or use double shielded coax. If that is clean, then it is getting into the antenna, which is the correct route for signals and interference. Filters on the computer cable connections, all cables shielded, and perhaps some additional shielding around the PC power supply and monitor power supply will be required. Antenna tuner? Be sure it is properly shielded, as many are not. Too many slots in the case. My PC and computers are adjacent, and I have no interference, but the antennas are a minimum of 30 meters away, and I use only double shielded coax or hard line.

--
Crazy George
Remove NO and SPAM from return address
Thierry <lombryt@hotmail.com> wrote in message
news:db35a0c.0207261558.1c667bca@posting.google.com...
> Hi,
>
> As many hams/swl I quickly discovered that portable PC or desktop
> computers located near the RX/TX produced a lot of QRN : from the
> screen - few -, the power supply - much -, or even from the move of
> the mouse or from the color displayed of the screen - sometimes-. A
> battery charger (for a digital cam) located 2m away from the RTX, on
> the ground near the power line, is even the strongest emitter and I
> must switch it off without condition when I listen to HF bands.
>
> But from time to time even when the PC is on, I heard stations without
> switching on the N.R.1 and Beat cancel filters on my TS-570D. This is
> amazing but true as usually I can only heard the strongest stations
> without these filters. Suddenly like by miracle it seems the bands and
> all RFI are silents, without generating QRM/QRN.
>
> On the contrary sometimes, my PC seems to generate much more QRN than
> usually and I have to switch it off to hear HF bands or weak remote
> stations. Sometimes RFI are even generated in the middle of HF bands,

> for example at 21220 Khz or 18160 Khz, but that changes regularly,
> without structure at first sight.
>
> FYI, my PCs are located very near my RTX (see pics on
> http://wwww.astrosurf.com/lombry/qsl.hm and
> http://wwww.astrosurf.com/lombry/qsl4.hm).
>
> On the pictures of shacks I have seen, - like to yours probably - the
> PC stands often very near the RTX due to the fact most of us use the
> PC to record our QSO or to access simultaneously to Internet. So I
> cannot place my PC far from the RTX. It must be on the same table,
> even if the main unit is located about 1 or 2m away from the RTX. My
> coax is not more far away.
>
> Question : What is in theory the solution to suppress these RFI ?
> Is there a solution to remove (or filter) this QRN generated by PCs or
> electronic homes devices in order to heard HF bands without these RFI
> (and keeping the PC near the RTX of course) ?
> Can an external DSP be the ultime solution in such a case ?
>
> Thanks for comments
>
> 73
> Thierry
> ONL5183
> http://www.astrosurf.com/lombry/menu-qsl.htm

1792. Re: Antenna suggestion For 30 MHz To About 2 GHz ?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-27 01:45:37 UTC
From: richardharrison@webtv.net
Message-ID: <15020-3D41FB41-8@storefull-2397.public.lawson.webtv.net>
Source record: 137935

Robert Rose wrote:
"If 30 MHz to 2 GHz is too wide a spread, would certainly be willing to consider 2 antennas,---."

Depends on how critical the application is. A shortwave broadcaster changes frequency by 50% and he usually changes antennas for something more suited to the new frequency. Generally, this means the broadcaster changes antennas every time he changes bands. The cost of listeners makes this a good trade-off.

A single TV antenna may serve a user from 54 MHz to nearly 800 MHz. The antenna is likely to be more a conglomeration of antennas connected to a single feedline or two. As Richard Clark noted, uniform performance shouldn`t be expected over such a range.

Then , there is a telescoping vertical over a large conducting sheet which is length adjusted for each frequency used. Regardless of elevation, performance of this antenna is a function of wavelength and how the atmosphere treats the signal over this wide frequency range.

Best regards, Richard Harrison, KB5WZI

1793. Re: Stagnating antenna designs

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-27 01:52:35 UTC
From: aunwin@fgi.net
Message-ID: <c4becf19.0207261752.7ce4a1ac@posting.google.com>
Source record: 137934

nm5k@wt.net (Mark Keith) wrote in message
news:<25eb70d7.0207251142.7afe786c@posting.google.com>...
> fractenna@aol.com (Fractenna) wrote in message
> > Hi Richard,
> >
> > I hear denial, perhaps unintentional.
> >
> > The perception that antennas are, well, an old and hoary field is clearly wrong
> > in the face of developments, still happenng.
>
> Oh Really?
> >

> Oh, yea... Lets not forget Art's antenna question. No, I don't think
> using a tunable loop and dipole combo would work. Why? Consider
> parallel dipoles. When you change to one band or the other, the unused
> legs show a high impedance and are neglected. I would think the same
> thing would happen using the loopadipole.
> Sure, you could tune the loop, but the dipole legs will still show a
> high impedance, unless you just happen to try it where it's resonant.
> In that case, the loop would be doing most of the work of radiating.
> And a small loop is generally not up to par compared to a dipole. MK

You make my point so clearly. You have dismissed the antenna outright
without looking for possible advantages and do a diservice to ham
radio without giving it a shot PROBABLY because it is not in an arrl
ANTENNA BOOK , AND YOU ARE SO...SO WRONG. I have used this antenna for
years and I know it works and want to share it with all. I also want
to share with new amateurs that experimenting with fishing poles with
a conductive surface is so much cheaper than buying telescopic tubing
unfortunately these things are passed by unless utterred by a 'known'
person or it is a book. I would love to hear from a novice ham who has
spread his wings by making a log periodic using poles with an aluminum
surface
instead of that shown in the antenna book made of wire and string to
achieve lightness.
So do yourself a favour, try it a use a computor program to check
it out or maybe Reg will modify his 'loop' programs to prove my point
so we can review the overall subject of 'stagnating antenna designs'
rather than presenting a 'off the cuff' notion without thinking it
out. If it does not have merit you have the option of saying 'I told
you so' or conversely you can rate the merit of the antenna
advantages/disadvantages to the enjoyment of all.
Nothing personal intended, but please note that no one has stated so
far that it is without merit , because it is not yet 'written in the

book'.
Have a great week end
Art

1794. Re: pvc antenna for 2-meters

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-27 02:05:08 UTC
From: KC8SSG <kc8ssg@qsl.net>
Message-ID: <odn09.329$934.3885@news>
Source record: 137933

Hi Sean
I took a 1.5 " pvc and put a 19"vert up and then hooked a coiled 20" to the panel mount 239 for the ground and it worked great! You have to stretch the coil around to adjust the swr but the it works pretty good as a portable and as a ventenna type hidden antenna.Email me direct if you'd like more info
Rob
KC8SSG
"Sean Ingram" <singram@direcway.com> wrote in message news:an109.7960$u7.612994@news.direcpc.com...
> This is Kd4Adv
> QTH is Amelia, Virginia 23002
>
> I saw a project in a QST issue sometime ago and unable to remember the
> month/year.
>
> It refers to an antenna enclosed inside PVC tubing to resemble that of a
> Dipole.
>
> I have been on the internet trying to find that particular antenna project
> so that I can build it to use with my 2meter mobile (15/35W) when I go on
> vacation to the beach or set up the antenna outside my window.
>
> Please direct me to the URL or any similar pages that may have this
> featured.
> I really would appreciate it.
>
> 73s
> Kd4Adv
>
>
>

1795. Re: Stagnating antenna designs

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-27 02:31:58 UTC
From: richardharrison@webtv.net
Message-ID: <22887-3D42061E-125@storefull-2393.public.lawson.webtv.net>
Source record: 137936

Art Unwin wrote:
"With respect to feeding I show a delta match----."

Art seema to have a definite antenna in mind, but he raised a question of why innovation seems automatically rejected on arrival.

People are invested in the status quo. That`s why they reject innovation.

Why isn`t more written about connecting to antennas of opportunity? Too hard to predict results and who would profit from this activity? Maybe the practitioner and a tuner maker or two.

Best regards, Richard Harrison, KB5WZI

1796. Re: Radioshack DiscOne Base Antenna vs 6 meter dipole

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-27 02:48:02 UTC
From: Ed Laughery <laughery@bellsouth.net>
Message-ID: <NEn09.23347$Og3.7826473@e3500-atl1.usenetserver.com>
Source record: 137937

Thanks for the info.

73s
Ed
AD5JV
"hasan schiers" <schiers@netins.net> wrote in message
news:ahrl7p$urh4u$1@ID-52642.news.dfncis.de...
> The mechanical quality of the Radio Shack discone is quite poor. The
> "spokes" fall off in windy Iowa after a relatively short time period. The
> antenna worked ok, but mechanically it is "cheap".
>
> --
> hasan schiers, N0AN
>
> schiers@netins.net
> or use amsat.org or arrl.net remailer
> "Ed Laughery" <laughery@bellsouth.net> wrote in message
> news:jIp%8.3866$Og3.583499@e3500-atl1.usenetserver.com...
> > Hi
> >
> > I would appreciate any info regarding the Radioshack Discone base
antenna
> > for 6 meters. How does it compare in performance to a simple 6 meter
> > dipole? Same questions but for Discone antennas in general for 6 meter
> > ops.
> >
> > 73s
> > Ed AD5JV
> >
> >
> >
>
>

1797. Re: Stagnating antenna designs

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-27 03:28:57 UTC
From: aunwin@fgi.net
Message-ID: <c4becf19.0207261928.c84f662@posting.google.com>
Source record: 137938

Richard Clark <kb7qhc@attbi.com> wrote in message
news:<bta3ku0bs0pj175bt7tkdcmo074qafamae@4ax.com>...
> On 25 Jul 2002 20:57:51 -0700, aunwin@fgi.net (Art Unwin KB9MZ) wrote:
Hand in there Richard and keep an open mind. The design si about as
simple asit gets both to make or check out with the computor.

> >we have a capacitor 'IC' which can be fixed or a variable form.
>
> This begs the observation, if IC is fixed, that antenna is no longer a
> multiband design - clearly this is not your intention so why mention
> it?
Going back to my initial post where I compare to a zepp which is
usually made for a fixed frequency, it would hardly be fair to compare
with a design that has a VARIABLE capacitor. There is no snake oil
involved here.
>
> >So what does the above give you?
Actualy it doesnt, iyt takes the place of the transmition line stub
and the center portion of a dipole which contributes to those side
lobes on the zepp patten where the radiation created to form a
collinear does not fully cancel.
To make this capacitor variable suggests to me that multiple feed
lines to
obtain multi frequency use for a zep could be replaced. Merit, that is
for the experts to decide.
>
> A large, variable gamma match; so large that it contributes to the
> radiation if I follow your description.
Well I do not see where the large gamma match which is variable comes
about
but yes a gamma match radiates but also supplies an impedance that can
easily be
matched. Again merit is in the eye of the beholder.
>
> >When comparing a trapped dipole for say three frequency bands I would
> >suggest the combination antenna is far superior but if you disagree I
> >would be happy to hear why.
>
> Hi Art,
>
> That is simply responded to that few here would consider "far
> superior" to qualify at a less than 1 dB variation. Plus you have the
> added complexity of turning that variable capacitor to achieve
> multiband performance. The trapped dipole already works multiband,

> you have to come up with a real gain differential to qualify for even
> "modestly superior."

All dipoles made for a particular band has quite a variation with
respect to gain with a high gain only met at a particular frequency,
nobody high lights the low gain at the end of the bands but to the
amateur this is very interested.
Again it is the eye of the beholder. The trapped antenna does not
radiate along the whole length of the antenna so the gain loss is
heavy where the combination
antenna radiates from each end of the antenna and provides the added
gains for a collinear. Superior ? Try it out and compare the numbers
and see if anything of interest show up.
You also mentioned the complexity of turning the capacitor and I
suppose that is a huge demerit in some eyes but it is really as simple
as it gets and accepted for the loop, so it is not so complex to stop
people using a loop antenna despite the difficulties encountered with
that particular antenna
So Richard, knowing you have considerable expertise with the computor
and antennas please do me the honour of checking the figures so the
response will be factual and informative to all.
Hang in there buddy, sometimes I ask at the dinner table where the
salt is
and all hasten to point out that it is right in front of my eyes, but
yet I did not see it.
Regards
Art
>
> 73's
> Richard Clark, KB7QHC

1798. Re: Stagnating antenna designs

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-27 03:30:55 UTC
From: aunwin@fgi.net
Message-ID: <c4becf19.0207261930.2e47ce69@posting.google.com>
Source record: 137939

Richard Clark <kb7qhc@attbi.com> wrote in message
news:<bta3ku0bs0pj175bt7tkdcmo074qafamae@4ax.com>...
> On 25 Jul 2002 20:57:51 -0700, aunwin@fgi.net (Art Unwin KB9MZ) wrote:
Hand in there Richard and keep an open mind. The design si about as
simple asit gets both to make or check out with the computor.

> >we have a capacitor 'IC' which can be fixed or a variable form.
>
> This begs the observation, if IC is fixed, that antenna is no longer a
> multiband design - clearly this is not your intention so why mention
> it?
Going back to my initial post where I compare to a zepp which is
usually made for a fixed frequency, it would hardly be fair to compare
with a design that has a VARIABLE capacitor. There is no snake oil
involved here.
>
> >So what does the above give you?
Actualy it doesnt, iyt takes the place of the transmition line stub
and the center portion of a dipole which contributes to those side
lobes on the zepp patten where the radiation created to form a
collinear does not fully cancel.
To make this capacitor variable suggests to me that multiple feed
lines to
obtain multi frequency use for a zep could be replaced. Merit, that is
for the experts to decide.
>
> A large, variable gamma match; so large that it contributes to the
> radiation if I follow your description.
Well I do not see where the large gamma match which is variable comes
about
but yes a gamma match radiates but also supplies an impedance that can
easily be
matched. Again merit is in the eye of the beholder.
>
> >When comparing a trapped dipole for say three frequency bands I would
> >suggest the combination antenna is far superior but if you disagree I
> >would be happy to hear why.
>
> Hi Art,
>
> That is simply responded to that few here would consider "far
> superior" to qualify at a less than 1 dB variation. Plus you have the
> added complexity of turning that variable capacitor to achieve
> multiband performance. The trapped dipole already works multiband,

> you have to come up with a real gain differential to qualify for even
> "modestly superior."

All dipoles made for a particular band has quite a variation with
respect to gain with a high gain only met at a particular frequency,
nobody high lights the low gain at the end of the bands but to the
amateur this is very interested.
Again it is the eye of the beholder. The trapped antenna does not
radiate along the whole length of the antenna so the gain loss is
heavy where the combination
antenna radiates from each end of the antenna and provides the added
gains for a collinear. Superior ? Try it out and compare the numbers
and see if anything of interest show up.
You also mentioned the complexity of turning the capacitor and I
suppose that is a huge demerit in some eyes but it is really as simple
as it gets and accepted for the loop, so it is not so complex to stop
people using a loop antenna despite the difficulties encountered with
that particular antenna
So Richard, knowing you have considerable expertise with the computor
and antennas please do me the honour of checking the figures so the
response will be factual and informative to all.
Hang in there buddy, sometimes I ask at the dinner table where the
salt is
and all hasten to point out that it is right in front of my eyes, but
yet I did not see it.
Regards
Art
>
> 73's
> Richard Clark, KB7QHC

1799. Re: Oil in dummy loads vs. SWR.

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-27 03:44:17 UTC
From: tmgroatatpeakpeakdotcom
Message-ID: <3d421464.664658@news.peakpeak.com>
Source record: 137940

Geometry of the return conductor is significant at VHF. The length of the resistor is about 20cm, iirc. That's 1/10 wavelength at 2M, which is enough to create considerable reactance.

Some loads have a tapered cylinder for the return conductor, with the spacing set for 50 ohm characteristic impedance at the coax connector, tapering down to no spacing (0 ohms) at the ground end of the resistor. The ideal case is that at every point along the coaxial structure of resistor and return conductor, the characteristic impedance is equal to the remaining resistance from that point to the ground end of the resistor. This absorbs the return lead into a lossy coaxial line, for good SWR at VHF and even UHF (if the construction is good enough).

--KR0U
-- Tim Groat

To reply by e-mail, change the quoted words to
the corresponding punctuation marks.

1800. Re: Stagnating antenna designs

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-27 04:17:18 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <3D421ECE.4040200@eznec.com>
Source record: 137941

Art, I understand your fondness for the antenna you've created -- you've mentioned it quite a few times before on this newsgroup. I encourage you and others to take a look at the ARRL Antenna Compendium. Last I checked, six volumes of this have been published. They're chock full of innovative antenna designs. Some are particularly good at solving some problem or another, but nearly all do so at the expense of something else -- efficiency, mechanical complexity, gain or directivity (too much or too little), and so forth. I hate to tell you, but your antenna, much as you may like it for your particular situation, is no exception. I can build a trap dipole to operate on several bands, feed it with 50 ohm line, and forget it. I can hang it from two supports, or put it up as an inverted vee from one support. I can build the traps from a few pieces of PVC pipe and some coax. No tuning, manual or automatic, is required. That doesn't make it better than your antenna. But it certainly has some advantages for a lot of users. I personally prefer it for my uses, over finding a high voltage variable capacitor of adequate range, weatherproofing it, and providing a means of remote tuning. Each to his own. You can take any two antennas and write a list of advantages and disadvantages, and seldom will one come out on top in all regards for all users.

The place for new and innovative antennas is publications like the Antenna Compendium, or books like Moxon's _HF Antennas For All Locations_. The ARRL Handbook and Antenna Book are the appropriate places for antennas that many people have found to be useful and advantageous and are using as a result. Out of all the antennas in all the textbooks, in all the Antenna Compendium volumes, QST, RadCom, CQ, ComQ, Ham Radio articles over the years, in books like Moxon's, is your antenna really so wonderful that it should merit inclusion in the ARRL Hanbook among the very few that can be included? Is it really so much better than the thousands of other innovative designs?

Here's how to find out. Write it up and submit it to the ARRL for publication in the Antenna Compendium. If you have a problem with that, choose any other magazine of your choice. Or post it on your web page and tell your friends about it. Then wait and let the test of time determine whether yours is really so great as to attract a following large enough to put it in a class with tried and popular antennas. Or whether it'll join the thousands of other designs that are great for some and not so great for others.

You seem to feel that your antenna isn't being recognized by the world because the ARRL doesn't include it in their Handbook. But I think you have it backward -- the ARRL doesn't include it in the Handbook because not enough people have adopted it to separate it from the vast hordes of

innovative antennas vying for attention. It's up to you, not the ARRL, to convince people that it's the greatest thing since canned beer. Only then will they grab their openers and join your party.

Roy Lewallen, W7EL

1801. Re: Stagnating antenna designs

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-27 04:22:20 UTC
From: aunwin@fgi.net
Message-ID: <c4becf19.0207262022.78ce4964@posting.google.com>
Source record: 137942

fractenna@aol.com (Fractenna) wrote in message
news:<20020725074317.19336.00000773@mb-mp.aol.com>...
>
snip
> confirms the findings of my research team's efforts (in particular)).
>
> Nor are they likely to be part of the amateur community, given the sentiment
> Art has articulated so clearly. Thus we have a strange situation where in the
> next two or three years, amateurs use G5RV's and screwdriver antennas, while
> the wireless devices around them use, well, something else. It is happening: I
> know.
>
snip
>
> 73,
> Chip N1IR
Chip,
I believe that I have made my point already. Comments so far have
been 'off the cuff' responses that would discourage any new ham. The
task at hand now is to persuade the knoweledgable to go beyond that
and take a few minuites with AO
or some of Roy's programs or even place dipole extensions on a loop
antenna which they may have at hand. When one of the more knowlegable
finally succumbs and does a modicom of leg work for himself rather
than leaning on hunches or looking up 'the book' will the true meaning
of my original post become apparent regarding 'stagnation.' All I am
pointing out is that we all tend to dismiss the new or different as we
get older, focussing on hunches or the absence of articles to take the
time to verify for oneself. In this particular case I have made some
sweeping statements and asked for verication based on merit BOTH the
good and the bad which on this forum is like pulling teeth but ONLY
when completed will I have met with success regarding the original
post on
'antenna stagnation' be fully understood.
Regards
Art

1802. Burial of 10BaseT and 10Base2 cables

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-27 04:30:16 UTC
From: ryeburn@sfu.caz
Message-ID: <ryeburn-2607022130170001@207.6.87.119>
Source record: 137943
Cross-posted to: rec.radio.amateur.antenna,comp.sys.mac.system

Over in the newsgroup comp.sys.mac.system, giarcman <giarcman@attbi.com>
in article <X0%%8.116182$_51.87455@rwcrnsc52.ops.asp.att.net> wrote:

> Here's sitch. I'm moving to a new home in September. I work at home,
> and my new place actually has a little guest cottage in the back of the
> property where I'm going to set up my office. Luckily, the prior owners
> had cable running out there, and I'm hoping it won't be too much of a
> hassle to use that line for broadband (ISP is Charter Communications).
>
> However, my wife, who will be in the "main" house, also needs access.
> Presently we use an Airport Base Station to solve the 2 computer issue.

(The Airport Base Station is a 2.4 GHz system that can be quickly attached
to any recent Mac computer; it's very popular for use in conjunction with
current Mac portables, which have relatively inefficient internal antennas
already present whether ordered from the factory with an Airport card or
not. Airport is compatible with most of the other currently available
"WiFi" systems.)

> I doubt an ABS would work in this situation, since the guest cottage is
> quite far from the main house and my TiBook doesn't get the best
> reception anyway. So...sounds like a router is called for.
>
> However, a router would involve me running an ethernet line a looooooong
> way from one house to the other. That's doable in theory, but does
> anyone know if length of line affects ethernet transmission? Also, any
> other suggestions other than running the really looooooooong line? I'm
> guessing it would be hundreds of feet, since I'd probably go around the
> perimeter of the property to avoid the "what a nice yard, why is there a
> cable running past my face?" syndrome.

There were a number of replies, some of them suggesting improved antennas
for use with 2.4 GHz wireless connections, and other suggesting buried
coax. Here's what I wrote in article
<ryeburn-2507022229540001@207.6.87.119>:

> The "cable running past my face" problem wouldn't arise if the cable went
> directly, but was buried a few inches below the ground surface. I suspect
> that 10BaseT will work OK if the cable is buried, provided that the cable
> is loosely inserted in a length of PVC pipe (so that it isn't right up
> against the earth, but separated from it by at least the pipe thickness).
> You don't want the field around the cable penetrating the poorly
> conducting ground. For this purpose, thicker walled pipe is better than
> thinner walled pipe. Of course you'd have to keep moisture out of the
> pipe; that could be done by bringing it up out of the ground at each end

> and making a U, so that it goes up, then down, before the open end.
>
> If that doesn't work you can always use coaxial cable (10Base2). Coax
> works equally well buried or not, since the fields are entirely inside the
> shield. But some coaxial cables deteriorate when buried; you'd be well
> advised either to use one intended to be buried, or else put the coax
> inside a PVC pipe, to protect against moisture this time rather than to
> keep the field from penetrating the ground. In this case, PVC pipe wall
> thickness would be of no concern provided it was sufficiently thick to
> prevent water leakage.

What thoughts do you have on this? Has anyone tried burying CAT5 cable, using PVC pipe as I suggested? What types of coax are available which will tolerate burial without protection, are of relatively small diameter, and aren't too expensive? I've read enough in this group (rraa) about the ease of burying radials by just making a slit in the ground that I don't think building a big trench is needed, as long as the coax, or the PVC pipe, is of fairly small diameter.

David, ex W8EZE

--
David or Jo Anne Ryeburn
ryeburn@sfu.caz
To send e-mail, remove the letter "z" from this address.

1803. Re: Burial of 10BaseT and 10Base2 cables

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-27 05:05:53 UTC
From: AES <siegman@stanford.edu>
Message-ID: <siegman-28AE42.22055326072002@usenet.stanford.edu>
Source record: 137945
Cross-posted to: rec.radio.amateur.antenna,comp.sys.mac.system

In article <ryeburn-26070221301700001@207.6.87.119>,
ryeburn@sfu.caz (David or Jo Anne Ryeburn) wrote:

> What thoughts do you have on this? Has anyone tried burying CAT5 cable,
> using PVC pipe as I suggested? What types of coax are available which will
> tolerate burial without protection, are of relatively small diameter, and
> aren't too expensive? I've read enough in this group (rraa) about the ease
> of burying radials by just making a slit in the ground that I don't think
> building a big trench is needed, as long as the coax, or the PVC pipe, is
> of fairly small diameter.

Just as a distantly related data point, we've had a Cat 5 cable slung
for maybe 100 feet across the flat tar & gravel roof of a house in SF
Bay Area for a couple of years --bakes in direct sun all summer, rained
on all winter -- and had no problems.

I'd suspect that if you buried an unbroken run of good quality Cat 5
cable with a good quality jacket in a slit trench, inside a half inch
plastic conduit for mechanical protection, not necessarily watertight
but with the ends of the cable brought up above ground level and into a
structure at each end, you'd have no problems -- but that's only a guess.

1804. Re: Burial of 10BaseT and 10Base2 cables

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-27 05:09:04 UTC
From: Ralph Wade Phillips <ralphp@techie.com>
Message-ID: <3d422a4d$1_3@spamkiller.newsgroups.com>
Source record: 137944
Cross-posted to: rec.radio.amateur.antenna,comp.sys.mac.system

Howdy!

"David or Jo Anne Ryeburn" <ryeburn@sfu.caz> wrote in message
news:ryeburn-2607022130170001@207.6.87.119...

> There were a number of replies, some of them suggesting improved antennas
> for use with 2.4 GHz wireless connections, and other suggesting buried
> coax. Here's what I wrote in article
> <ryeburn-2507022229540001@207.6.87.119>:
>
> > The "cable running past my face" problem wouldn't arise if the cable
went
> > directly, but was buried a few inches below the ground surface. I
suspect
> > that 10BaseT will work OK if the cable is buried, provided that the
cable
> > is loosely inserted in a length of PVC pipe (so that it isn't right up
> > against the earth, but separated from it by at least the pipe
thickness).
> > You don't want the field around the cable penetrating the poorly
> > conducting ground. For this purpose, thicker walled pipe is better than
> > thinner walled pipe. Of course you'd have to keep moisture out of the
> > pipe; that could be done by bringing it up out of the ground at each end
> > and making a U, so that it goes up, then down, before the open end.
> >
> > If that doesn't work you can always use coaxial cable (10Base2). Coax
> > works equally well buried or not, since the fields are entirely inside
the
> > shield. But some coaxial cables deteriorate when buried; you'd be well
> > advised either to use one intended to be buried, or else put the coax
> > inside a PVC pipe, to protect against moisture this time rather than to
> > keep the field from penetrating the ground. In this case, PVC pipe wall
> > thickness would be of no concern provided it was sufficiently thick to
> > prevent water leakage.
>
> What thoughts do you have on this? Has anyone tried burying CAT5 cable,
> using PVC pipe as I suggested? What types of coax are available which will
> tolerate burial without protection, are of relatively small diameter, and
> aren't too expensive? I've read enough in this group (rraa) about the ease
> of burying radials by just making a slit in the ground that I don't think
> building a big trench is needed, as long as the coax, or the PVC pipe, is
> of fairly small diameter.

You CAN buy direct-burial CAT5 cable. Also, a sealed conduit will help keep the cable safe. I'd do both myself ... for just in case the conduit leaked.

Also, you can buy direct burial RG-58A/U (well, RG-58, anyway!) but that will force you to 10Mbit data. Might not be a problem if you're comparing to the 11MBit max of Airport, but still ...)

>
> David, ex W8EZE

You probably know more sources than I do - but a quick Google does turn in a lot of sources for CAT5 direct burial cable.

RwP

1805. Re: Burial of 10BaseT and 10Base2 cables

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-27 05:28:29 UTC
From: Kevin Stevens <Kevin_Stevens@Hotmail.com>
Message-ID: <Kevin_Stevens-A4445F.22282926072002@babelfish>
Source record: 137946
Cross-posted to: rec.radio.amateur.antenna,comp.sys.mac.system

In article <ryeburn-26070221301700001@207.6.87.119>,
ryeburn@sfu.caz (David or Jo Anne Ryeburn) wrote:

> > The "cable running past my face" problem wouldn't arise if the cable went
> > directly, but was buried a few inches below the ground surface. I suspect
> > that 10BaseT will work OK if the cable is buried, provided that the cable
> > is loosely inserted in a length of PVC pipe (so that it isn't right up
> > against the earth, but separated from it by at least the pipe thickness).
> > You don't want the field around the cable penetrating the poorly
> > conducting ground. For this purpose, thicker walled pipe is better than
> > thinner walled pipe. Of course you'd have to keep moisture out of the
> > pipe; that could be done by bringing it up out of the ground at each end
> > and making a U, so that it goes up, then down, before the open end.
> >
> > If that doesn't work you can always use coaxial cable (10Base2). Coax
> > works equally well buried or not, since the fields are entirely inside the
> > shield. But some coaxial cables deteriorate when buried; you'd be well
> > advised either to use one intended to be buried, or else put the coax
> > inside a PVC pipe, to protect against moisture this time rather than to
> > keep the field from penetrating the ground. In this case, PVC pipe wall
> > thickness would be of no concern provided it was sufficiently thick to
> > prevent water leakage.
>
> What thoughts do you have on this? Has anyone tried burying CAT5 cable,
> using PVC pipe as I suggested? What types of coax are available which will
> tolerate burial without protection, are of relatively small diameter, and
> aren't too expensive? I've read enough in this group (rraa) about the ease
> of burying radials by just making a slit in the ground that I don't think
> building a big trench is needed, as long as the coax, or the PVC pipe, is
> of fairly small diameter.
>
> David, ex W8EZE

You have to use RG-58 for coax - it is typically about the same diameter
as RG-59? 62? CATV cable. I'm sure it is available in weather-resistant
jacketing, and if you keep the termination points indoors it would
probably be quite durable even in a wet conduit. If I were actually
doing this - which I probably wouldn't, see my recommendation on
wireless - I'd see if multimode fiber fit the bill. It is resistant to
all but physical damage, can support a number of popular network types
from FX100 Ethernet (very cheap) to GigE and faster/future technologies,
and avoids the grounding headaches of copper. Downside is media cost.
(Obviously coax can support massive broadband transports, too, but
practically none of them are packaged for the consumer.)

If you use copper, grounding is a problem. Two separate buildings very often have different ground potientials. 10Base2 needs to be grounded at exactly one end of the bus. 10BaseT doesn't really have provision for grounding other than at the hub/switch. In either case, you also have electrical/safety/code issues to deal with as well as just the signaling.

KeS

1806. Re: Antenna trivia

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-27 07:16:05 UTC
From: amfowler@melbpc.org.au
Message-ID: <3d4247c7.17352040@news.melbpc.org.au>
Source record: 137947

"AC6V" <ac6v@amsat.org> wrote:

>I recall seeing an ad for an antenna wire cleaning kit -- claimed it
>restored performance to new wire installations.

How much loss does the oxide layer that forms on the
wire cause?

If you use galvanised wire for the antenna, the
losses rise substantially as the zinc is eaten away.

Alan.

>73 Rod AC6V
>==========================
>"jimvm111" <jimvm111@earthlink.net> wrote in message
>news:IuJ%8.1874$XG5.1427@newsread1.prod.itd.earthlink.net...
>> In time the resonant frequency of a wire antenna decreases.
>>
>> Does anyone else have a tid bit of old antenna lore?
>>
>> jvm
>
>

1807. Re: Vs: Antenna trivia

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-27 07:18:14 UTC
From: amfowler@melbpc.org.au
Message-ID: <3d434910.17680865@news.melbpc.org.au>
Source record: 137948

"Matti Ponkamo" <mattipo@luukku.com> wrote:

>OK1SIP <remove_ok1sip@atlas.cz> kirjoitti
>viestissï¿½:5f5159fa.0207250414.7d336ba6@posting.google.com...
>> Not about antennas only, but about us, hams ... LAST HAM'S SENTENCES:
>> "Look, the antenna mast bears me perfectly !"
>> "I'll check whether the power transformer does not get too hot !"
>> "This wire is not a high voltage one, because it has green insulation !"
>> "The antenna rotator is not so strong to push me down !"
>>
>> 73 de Ivan
>
>The best one I*ve heard is still missing:
>
>"Don't worry, I know what I'm doing, I am a ham, you know..."

So that's how they make smoked hams?

Alan
>
>73 de Matti Ponkamo, Naantali, Finland
>

1808. Re: Stagnating antenna designs

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-27 11:37:22 UTC
From: Bob Miller <bamiller@texas.net>
Message-ID: <doVCPVut25C4a22UXi7UxuTqPu+c@4ax.com>
Source record: 137949

aunwin@fgi.net (Art Unwin KB9MZ) wrote:

>
>You make my point so clearly. You have dismissed the antenna outright
>without looking for possible advantages and do a diservice to ham
>radio without giving it a shot PROBABLY because it is not in an arrl
>ANTENNA BOOK , AND YOU ARE SO...SO WRONG. I have used this antenna for
>years and I know it works and want to share it with all.

Curious, how many supports does it take to hold up your combined dipole-loop?
That's a consideration for me.

Tnx,

Bob
k5qwg

>Have a great week end
>Art

1809. Re: Radioshack DiscOne Base Antenna vs 6 meter dipole

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-27 12:23:05 UTC
From: Steve Robbins <srobbinsNoSpAmDUdes@netacc.net>
Message-ID: <lp35kugnlclogv19045m1o7vvsmp92ma7m@4ax.com>
Source record: 137950

On Fri, 26 Jul 2002 21:48:02 -0500, "Ed Laughery"
<laughery@bellsouth.net> wrote:

>Thanks for the info.
>
>73s
>Ed
>AD5JV
>"hasan schiers" <schiers@netins.net> wrote in message
>news:ahrl7p$urh4u$1@ID-52642.news.dfncis.de...
>> The mechanical quality of the Radio Shack discone is quite poor. The
>> "spokes" fall off in windy Iowa after a relatively short time period. The
>> antenna worked ok, but mechanically it is "cheap".
>>
>> --

The discone has always been a beast mechanically due to it's number of
elements and the angles involved in the hub.

The Radio Snack antenna is a great electrical implementation but like
Hasan says, it vibrates apart in a steady breeze. I fixed the problem
by using LockTite on the outer quarter of the threads on each element.
You would not want to LockTite the entire thread since this could
possible electrically isolate (insulate) the element from the hub. I
tossed the little lock nuts that are on the elements and only rely on
the LockTite. I have two at our camp up in Canada and they have
survived three Northern winters so far without problem.

Steve

1810. Re: Stagnating antenna designs

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-27 13:25:02 UTC
From: k1bqt@aol.com
Message-ID: <20020727092502.04696.00001331@mb-mk.aol.com>
Source record: 137951

>All I am pointing out is that we all tend to dismiss the new or different as
we
get older, focussing on hunches or the absence of articles to take the
time to verify for oneself.<

Is that a southern mouse in your pocket, Art? ("we all"). Personally, I think "seasoned judgement" and "callous disregard" aren't the same thing. If your idea is hot, someone will discover it and spread the word. That's why there are more G5RVs than EHs hanging in the trees.

Rick K1BQT

1811. Yaesu G-1000SDX rotor question

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-27 13:46:35 UTC
From: Charlie Hicks <hicksc@starband.net>
Message-ID: <lvx09.186$7W.124097572@twister1.starband.net>
Source record: 137952

I bought a Yaesu G-1000SDX rotor a few years ago and am now just putting it up. The control cable connects to the rotor with a 7-pin round connector but only uses 6 pins. The instruction manual say ""pin 6, the center pin, is not used". However, the center pin is pin 4, not 6.

Does anyone know for sure which pin is not used? Is it the center pin (4) or pin 6?

Thanks + 73, Charlie K0CKH

1812. Re: Radioshack DiscOne Base Antenna vs 6 meter dipole

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-27 13:50:42 UTC
From: Darrin <darrin99@nj.rr.com>
Message-ID: <h795kuk150h0msljo5td8p8svrmvta1n86@4ax.com>
Source record: 137953

On Sat, 27 Jul 2002 08:23:05 -0400, Steve Robbins
<srobbinsNoSpAmDUdes@netacc.net> wrote:

>On Fri, 26 Jul 2002 21:48:02 -0500, "Ed Laughery"
><laughery@bellsouth.net> wrote:
>
>>Thanks for the info.
>>
>>73s
>>Ed
>>AD5JV
>>"hasan schiers" <schiers@netins.net> wrote in message
>>news:ahrl7p$urh4u$1@ID-52642.news.dfncis.de...
>>> The mechanical quality of the Radio Shack discone is quite poor. The
>>> "spokes" fall off in windy Iowa after a relatively short time period. The
>>> antenna worked ok, but mechanically it is "cheap".
>>>
>>> --
>
>The discone has always been a beast mechanically due to it's number of
>elements and the angles involved in the hub.
>
>The Radio Snack antenna is a great electrical implementation but like
>Hasan says, it vibrates apart in a steady breeze. I fixed the problem
>by using LockTite on the outer quarter of the threads on each element.
>You would not want to LockTite the entire thread since this could
>possible electrically isolate (insulate) the element from the hub. I
>tossed the little lock nuts that are on the elements and only rely on
>the LockTite. I have two at our camp up in Canada and they have
>survived three Northern winters so far without problem.
>
>Steve

FWIW, mine has survived 3 years in the N/E, and is still holding
together.

1813. Re: Radioshack DiscOne Base Antenna vs 6 meter dipole

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-27 14:47:02 UTC
From: hasan schiers <schiers@netins.net>
Message-ID: <ahubp8$10cnni$1@ID-52642.news.dfncis.de>
Source record: 137954

In Iowa, mine didn't last a year, and it wasn't just the elements "falling"
off from the screws getting loose...they broke off completely due to metal
fatigue. When I had it on the ground, simply brushing one of the discone
elements against my leg, snapped it right off. Mechanically, it is very
weak. (at least the one I had was).

--
hasan schiers, N0AN

schiers@netins.net
or use amsat.org or arrl.net remailer
"Darrin" <darrin99@nj.rr.com> wrote in message
news:h795kuk150h0msljo5td8p8svrmvta1n86@4ax.com...
> On Sat, 27 Jul 2002 08:23:05 -0400, Steve Robbins
> <srobbinsNoSpAmDUdes@netacc.net> wrote:
>
> >On Fri, 26 Jul 2002 21:48:02 -0500, "Ed Laughery"
> ><laughery@bellsouth.net> wrote:
> >
> >>Thanks for the info.
> >>
> >>73s
> >>Ed
> >>AD5JV
> >>"hasan schiers" <schiers@netins.net> wrote in message
> >>news:ahrl7p$urh4u$1@ID-52642.news.dfncis.de...
> >>> The mechanical quality of the Radio Shack discone is quite poor. The
> >>> "spokes" fall off in windy Iowa after a relatively short time period.
The
> >>> antenna worked ok, but mechanically it is "cheap".
> >>>
> >>> --
> >
> >The discone has always been a beast mechanically due to it's number of
> >elements and the angles involved in the hub.
> >
> >The Radio Snack antenna is a great electrical implementation but like
> >Hasan says, it vibrates apart in a steady breeze. I fixed the problem
> >by using LockTite on the outer quarter of the threads on each element.
> >You would not want to LockTite the entire thread since this could
> >possible electrically isolate (insulate) the element from the hub. I
> >tossed the little lock nuts that are on the elements and only rely on
> >the LockTite. I have two at our camp up in Canada and they have
> >survived three Northern winters so far without problem.
> >

> >Steve
>
> FWIW, mine has survived 3 years in the N/E, and is still holding
> together.

1814. Re: Radioshack DiscOne Base Antenna vs 6 meter dipole

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-27 14:58:15 UTC
From: KB9TMP <kb9tmp@juno.com>
Message-ID: <uk5d799b64sed@corp.supernews.com>
Source record: 137955

"hasan schiers" <schiers@netins.net> wrote in message
news:ahubp8$10cnni$1@ID-52642.news.dfncis.de...
> In Iowa, mine didn't last a year, and it wasn't just the elements
"falling"
> off from the screws getting loose...they broke off completely due to metal
> fatigue. When I had it on the ground, simply brushing one of the discone
> elements against my leg, snapped it right off. Mechanically, it is very
> weak. (at least the one I had was).
>
> --
> hasan schiers, N0AN

If the RS discone was made with solid elements instead of the hollow
ones that are crimped onto the threaded part, it would be a much
better antenna. I just got through soldering up all my elements because
they were loose to the point of falling off. I sure hope this "fixes" it!

--

'73' From KB9TMP
"The secret of life is honesty and fair dealing,
if you can fake that, you've got it made."
-Groucho Marx

1815. Re: Stagnating antenna designs

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-27 15:39:30 UTC
From: n7ws_at_yahoo.com
Message-ID: <3d42be35.5188345@news.triconet.org>
Source record: 137956

On 24 Jul 2002 17:39:50 -0700, aunwin@fgi.net (Art Unwin KB9MZ) wrote:

|If one looks at present day antenna books such as the ARRL offerings
|you would be hard put to shell out some money if you already had a previous
|edition that had some age on it

[snip]

Art, Art, Art, calm down and steady yourself.

It may be that your design has merit, but in reading all of the prior posts I'll be damned if I can figure out exactly what you're talking about. You are going to have to publish something understandable on a web site or on paper with some readable illustrations and analysis before you can legitimately claim that you are being ignored.

I'm as eager as anyone to challenge the conventional wisdom of some "prior art" as you might conclude by reading my thoughts on the "advantages" of ladderline and "G5RV" antennas. I might be all wet with my conclusions, but I put 'em out there for discussion, in what I hope is understandable form.

I know that Dean Straw, editor of the Antenna Compendiums and the Antenna Handbook, is begging for something fresh to publish. So if you are unhappy about the "tired old, worn out designs" that are regurgitated annually, do something about it. Write it up and send it in.

73,

Wes

1816. Re: Confusing Conundrum/Pse email me--my replies keep bouncing!

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-27 16:20:21 UTC
From: SideBand <abNO8SPAMlr@csotbs.org>
Message-ID: <3D42C845.1020700@csotbs.org>
Source record: 137957

Jerry:

Done, but I also got the mail server fixed.. Sorry, I forgot to unfsck the DNS when I hopped ISP's, and it wasn't resolving properly... Got it fixed, so the csotbs.org address should be back up and running just fine...

Thanks for plugging away and keeping with it.. Shows your customer service is second to none...

73 de AB8LR, Chris

Jerry Oxendine wrote:

> Email me with a good email--the one you are giving me won't work!
>
> Jerry
> SideBand <abNO8SPAMlr@csotbs.org> wrote in message
> news:3D33088B.2000903@csotbs.org...
>
>>Here's the deal.. I'm planning on running HF mobile in the truck. The
>>problem is twofold here:
>>
>>1. The truck body is mostly fiberglass, which makes it difficult to find a
>>ground.
>>2. When a ground is found, it is invariably plagued with noise from the
>>fridge and the inverter.. (I know... don't run the fridge and the
>>
> inverter,
>
>>right? Well, then my milk goes bad and I can't charge my cellphone.)
>>
>>So, I'm looking for a solution that will eliminate these problems.
>>Isolating the RF ground from the body by setting up a separate
>>
> counterpoise
>
>>of some sort seems to be the way to go.. It worked on the 2M set, anyway..
>>The problem with that is size...
>>
>>I'd also thought about dipoling two screwdriver antennas, or a pair of
>>hamsticks for each band I'm interested in, but again, the size issue...
>>
>>Any ideas?
>>--
>>73 de AB8LR, Chris
>>

>>http://csotbs.shopiwon.com/ for great deals on computer products.
>>
>>
>
>
>

--
73 de AB8LR, Chris

http://csotbs.shopiwon.com/ for great deals on computer products.

1817. WTB: hotstick

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-27 16:34:24 UTC
From: k9sqg@aol.com
Message-ID: <20020727123424.17397.00001317@mb-mt.aol.com>
Source record: 137958

Looking for a reasonably priced hot stick about 30-35 ft long. Must be in good to excellent condition.

Thanks.

Evan

1818. Re: Antenna trivia

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-27 16:56:02 UTC
From: k0bg@aol.com
Message-ID: <20020727125602.29007.00001179@mb-fm.aol.com>
Source record: 137959

Have you heard of Robert's Law?

It says:

Any antenna you wish to use is always 10 feet longer than your lot. The correlation is, if it fits your lot, the SWR is too high.

Alan, Kï¿½BG

1819. Re: Mobile antenna help please

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-27 17:04:25 UTC
From: k0bg@aol.com
Message-ID: <20020727130425.29007.00001180@mb-fm.aol.com>
Source record: 137960

The frame isn't much in the way of a groundplane, and based on the stuff I once did with a 1959 Cushman Eagle Scooter, I'd say the ground losses will be about 20 ohms on 40 meters. The tuner should handle that ok, but your efficiency will be very low, say 2 or 3% on 40.

Alan, Kï¿½BG

1820. Re: WTK: wiring for philips/alliance U-110 rotor control

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-27 17:05:14 UTC
From: k0bg@aol.com
Message-ID: <20020727130514.29007.00001181@mb-fm.aol.com>
Source record: 137961

How many wires: 3, 4, or 6?

Alan, Kï¿½BG

1821. Re: How to suppress indoor RFI ?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-27 17:09:10 UTC
From: Dan/W4NTI <w4nti@mindspringnospam.com>
Message-ID: <ahuk31$v2h$2@slb2.atl.mindspring.net>
Source record: 137962

QRN = Natural noise, i.e. power line QRN, automobile ignition QRN.

QRM= Man Made interference....ie. noise from another transmitter nearby.

PC = QRM...certainly man made and most certainly noise from another transmitter.

How does one cure that crap? Physically seperate the units.

Seperate the RX antenna from the PC as much as possible.

Use shielded cable on EVERYTHING.

Dan/W4NTI

"Thierry" <lombryt@hotmail.com> wrote in message news:db35a0c.0207261558.1c667bca@posting.google.com...
> Hi,
>
> As many hams/swl I quickly discovered that portable PC or desktop
> computers located near the RX/TX produced a lot of QRN : from the
> screen - few -, the power supply - much -, or even from the move of
> the mouse or from the color displayed of the screen - sometimes-. A
> battery charger (for a digital cam) located 2m away from the RTX, on
> the ground near the power line, is even the strongest emitter and I
> must switch it off without condition when I listen to HF bands.
>
> But from time to time even when the PC is on, I heard stations without
> switching on the N.R.1 and Beat cancel filters on my TS-570D. This is
> amazing but true as usually I can only heard the strongest stations
> without these filters. Suddenly like by miracle it seems the bands and
> all RFI are silents, without generating QRM/QRN.
>
> On the contrary sometimes, my PC seems to generate much more QRN than
> usually and I have to switch it off to hear HF bands or weak remote
> stations. Sometimes RFI are even generated in the middle of HF bands,
> for example at 21220 Khz or 18160 Khz, but that changes regularly,
> without structure at first sight.
>
> FYI, my PCs are located very near my RTX (see pics on
> http://wwww.astrosurf.com/lombry/qsl.hm and
> http://wwww.astrosurf.com/lombry/qsl4.hm).
>
> On the pictures of shacks I have seen, - like to yours probably - the
> PC stands often very near the RTX due to the fact most of us use the
> PC to record our QSO or to access simultaneously to Internet. So I

> cannot place my PC far from the RTX. It must be on the same table,
> even if the main unit is located about 1 or 2m away from the RTX. My
> coax is not more far away.
>
> Question : What is in theory the solution to suppress these RFI ?
> Is there a solution to remove (or filter) this QRN generated by PCs or
> electronic homes devices in order to heard HF bands without these RFI
> (and keeping the PC near the RTX of course) ?
> Can an external DSP be the ultime solution in such a case ?
>
> Thanks for comments
>
> 73
> Thierry
> ONL5183
> http://www.astrosurf.com/lombry/menu-qsl.htm

1822. Re: Yaesu G-1000SDX rotor question

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-27 17:25:29 UTC
From: John Siegel <JohnASiegel@worldnet.att.net>
Message-ID: <3D42D782.EA27DE21@worldnet.att.net>
Source record: 137963

According to my manual, the round connector has 6 pins and the center
pin is marked 6 and not used. The rectangular connector at the control
end also has 6 pins and again only 5 are used. I suggest going by the
picture in the manual and not any markings on the connector itself.
Different manufacturers of connectors do not always number the pins the
same way.
73, John

Charlie Hicks wrote:
>
> I bought a Yaesu G-1000SDX rotor a few years ago and am now just putting it
> up. The control cable connects to the rotor with a 7-pin round connector
> but only uses 6 pins. The instruction manual say ""pin 6, the center pin,
> is not used". However, the center pin is pin 4, not 6.
>
> Does anyone know for sure which pin is not used? Is it the center pin (4)
> or pin 6?
>
> Thanks + 73, Charlie K0CKH

1823. Re: Stagnating antenna designs

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-27 17:58:34 UTC
From: ":-) Bill" <therealexray@netscape.net>
Message-ID: <3D42DF4A.BE8D5F93@netscape.net>
Source record: 137964

Rick Littlefield wrote:

> idea is hot, someone will discover it and spread the word. That's why there are
> more G5RVs than EHs hanging in the trees.
>
> Rick K1BQT

One website says the EH works equally well in a basement. Probably
true.
-BM WX4A

1824. Re: Burial of 10BaseT and 10Base2 cables

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-27 18:41:54 UTC
From: AES <siegman@stanford.edu>
Message-ID: <siegman-390914.11415427072002@usenet.stanford.edu>
Source record: 137965
Cross-posted to: rec.radio.amateur.antenna,comp.sys.mac.system

In article <willie-91364E.09395027072002@enews.newsguy.com>,
willie raye <willie@macknowledge.net> wrote:

> It bakes in the Bay Area? I take my coat when I go there in the
> summertime :)

Not if you head down the Peninsula or into Silicon Valley any distance.

But Mark Twain did write something along the lines of "Summer in San
Francisco was the coldest winter I've ever spent."

1825. CAM?? 160m & 10 m Dipole?? Anyone

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-27 19:23:14 UTC
From: StarGazer <pti@capnet.com>
Message-ID: <3D42F322.9803C07D@capnet.com>
Source record: 137966

Which should work better for 160 m? A 80 m dipole cut for
3750 or a 40 m dipole cut for 7150?

Which would work better for 10 m?

Both are fed with RG-213.

I heard one can disconnect the shield on the 80 m dipole and
have it work better on 160 m??

1826. Re: Stagnating antenna designs

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-27 19:52:33 UTC
From: aunwin@fgi.net
Message-ID: <c4becf19.0207271152.6d9f4d7b@posting.google.com>
Source record: 137967

richardharrison@webtv.net (Richard Harrison) wrote in message
news:<22887-3D42061E-125@storefull-2393.public.lawson.webtv.net>...
> Art Unwin wrote:
> "With respect to feeding I show a delta match----."
>
> Art seema to have a definite antenna in mind, but he raised a question
> of why innovation seems automatically rejected on arrival.
>
> People are invested in the status quo. That`s why they reject
> innovation.
>
> Why isn`t more written about connecting to antennas of opportunity? Too
> hard to predict results and who would profit from this activity? Maybe
> the practitioner and a tuner maker or two.
>
> Best regards, Richard Harrison, KB5WZI

Richard,
I may have misread your post
but I do not have any monetary interest in this style of antenna or
any others
I withdrew from the patent scene some years ago and withdrew from
amateur radio for a while. If somebody picks up the torch and gives a
'how to' post on how to utelise a 'stamp' to automate it I could not
be happier. If they make some money while pursuing the idea then good
luck to them. My post is to strictly make a point about 'stagnation'
and what creates it. The basic idea IS in old antenna books where a
ham shows a instrument or antenna formed in a figure '8' to show how
one can desensitise structures or poles that may be affecting other
wire antennas . It is not a new basic idea nor is the use of 14 foot
fishing blanks
or driving existing verticle structures to make a variable frequency
antennas
or its use as a dipole with a full frequency sweep or infact any
antenna that presently uses a stub where replacement uprates the
frequency sweep. Yours is the last post that appeares on my computor
but at the end of the day I am hoping that one expert will not dismiss
it with hunches and give it some validity
if my posts have merit.
P.S. Were you the person I sent a picture to where I showed a 80 foot
plus long antenna with 13 elements made of fibre glass poles ? I have
not been well for a while and I have slightly lost track of things
Regards
Art KB9MZ

coated with uluminum wrap ?

1827. Re: hotstick

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-27 19:56:42 UTC
From: Crazy George <munschNO@attglobal.net.SPAM>
Message-ID: <3d43344c_3@news1.prserv.net>
Source record: 137875

As I told the last guy looking for one, if you are going to use it for its intended purpose:

Get a copy of ANSI C2 National Electric Safety Code (note this is not the NEC),
Always have it hi-potted before use,
Use it only with certified high voltage gloves,
Make sure your insurance and will are all in order.
Also be sure your high voltage certification is up to date, I think OSHA only recognizes it for 5 years now.

If you are going to cut it up for antenna poles, there are a lot less expensive alternatives.
--
Crazy George
Remove NO and SPAM from return address

K9SQG <k9sqg@aol.com> wrote in message news:20020727123424.17397.00001317@mb-mt.aol.com...
> Looking for a reasonably priced hot stick about 30-35 ft long. Must be in good
> to excellent condition.
>
> Thanks.
>
> Evan

1828. Re: Antenna suggestion For 30 MHz To About 2 GHz ?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-27 20:28:10 UTC
From: aunwin@fgi.net
Message-ID: <c4becf19.0207271228.35654501@posting.google.com>
Source record: 137968

"R.Wilhelm" <nhbiwilh@rrzn-user.uni-hannover.de> wrote in message
news:<Pine.GSO.4.44.0207250755020.7107-100000@unics>...
> Hi Bob,
>
>snip
>
> 73
>
> Ralf
> ===
> Ralf Wilhelm
> DL 6 OAP
>
> ===
> Hannover, Germany, where mankind's first motorized flight took place:
> Karl Jatho, August 18th 1903, 4 months before the Wright Bros.
> (When will history notice this ?)
> ===
When the World takes notice of who was the first to fly cross the Atlantic
Ocean. I share your angst
Art

1829. Re: Stagnating antenna designs

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-27 20:46:23 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <5206kukv2d11r6v7q8ahh2v7vkl19sor9v@4ax.com>
Source record: 137869

On 26 Jul 2002 20:30:55 -0700, aunwin@fgi.net (Art Unwin KB9MZ) wrote:

>Richard Clark <kb7qhc@attbi.com> wrote in message
news:<bta3ku0bs0pj175bt7tkdcmo074qafamae@4ax.com>...
>> On 25 Jul 2002 20:57:51 -0700, aunwin@fgi.net (Art Unwin KB9MZ) wrote:
>> >we have a capacitor 'IC' which can be fixed or a variable form.
>>
>> This begs the observation, if IC is fixed, that antenna is no longer a
>> multiband design - clearly this is not your intention so why mention
>> it?
>Going back to my initial post where I compare to a zepp which is
>usually made for a fixed frequency, it would hardly be fair to compare
>with a design that has a VARIABLE capacitor. There is no snake oil
>involved here.

Hi Art,

Going back to your initial post has nothing to do with multiband
requirements driving the necessity of a variable capacitor for the
design you offer and the specifications you claim.

Further, if you want to champion an antenna, it is very poor form to
choose poor examples to compare it in contest. Skip the discussion of
the Zepp altogether, unless you are more interested in its exclusion
from the canon of antennas than you are in your own's inclusion.

>>
>> >So what does the above give you?
>Actualy it doesnt,

Art, do you realize how hard it is to follow your logic when you
directly contradict yourself? The two lines above were both authored
by you.

>> A large, variable gamma match; so large that it contributes to the
>> radiation if I follow your description.
>Well I do not see where the large gamma match which is variable comes
>about
>but yes a gamma match radiates but also supplies an impedance that can
>easily be
>matched. Again merit is in the eye of the beholder.

Who is talking about merit here? Show me more than a dB before we get
into the emotional specification.

>The trapped antenna does not
>radiate along the whole length of the antenna so the gain loss is

>heavy where the combination
>antenna radiates from each end of the antenna and provides the added
>gains for a collinear. Superior ? Try it out and compare the numbers
>and see if anything of interest show up.

Art, I have been doing that for quite a few years now. I have seen many interesting things - and to the surprise, perhaps, of some, they were fractals.

Surprise, Interest. Each of these emotions absolutely did not translate into the pinnacle of performance. For myself, surprise and interest led me to literally thousands of failures (most of them available for viewing at my pages). But amongst those thousand abominations I found that I had gained in insight through the investigation of them.

>So Richard, knowing you have considerable expertise with the computor
>and antennas please do me the honour of checking the figures so the
>response will be factual and informative to all.
>Hang in there buddy, sometimes I ask at the dinner table where the
>salt is
>and all hasten to point out that it is right in front of my eyes, but
>yet I did not see it.
>Regards
>Art

Art, it is your responsibility to provide an exact model to us, not for me to rummage around with equivalents. This is a minimum requirement to enter the canon of antenna.

73's
Richard Clark, KB7QHC

1830. Re: Stagnating antenna designs

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-27 20:49:32 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <hu16kuctlf5jms0sn2ik77ejl5h9nptv9h@4ax.com>
Source record: 137870

On 27 Jul 2002 13:25:02 GMT, k1bqt@aol.com (Rick Littlefield) wrote:

>That's why there are
>more G5RVs than EHs hanging in the trees.
>
>Rick K1BQT

mots juste

73's
Richard Clark, KB7QHC

1831. Re: Stagnating antenna designs

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-27 20:55:30 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <t326kusmucsru49t1q6q0pg74cetc4mark@4ax.com>
Source record: 137871

On Fri, 26 Jul 2002 21:31:58 -0500 (CDT), richardharrison@webtv.net
(Richard Harrison) wrote:

>
>People are invested in the status quo. That`s why they reject
>innovation.
>

Hi Richard,

No one rejects innovation on the basis of status quo, they reject the
failed challengers of the status quo.

We would all still be in caves otherwise.

73's
Richard Clark, KB7QHC

1832. Re: How to suppress indoor RFI ?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-27 21:13:20 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <7s26ku4mrbrmu27d8egkjbv6l9adcg3gfh@4ax.com>
Source record: 137872

On 26 Jul 2002 16:58:37 -0700, lombryt@hotmail.com (Thierry) wrote:

>Hi,
>
>As many hams/swl I quickly discovered that portable PC or desktop
>computers located near the RX/TX produced a lot of QRN : from the
>screen - few -, the power supply - much -, or even from the move of
>the mouse or from the color displayed of the screen - sometimes-. A
>battery charger (for a digital cam) located 2m away from the RTX, on
>the ground near the power line, is even the strongest emitter and I
>must switch it off without condition when I listen to HF bands.
>
snip
>FYI, my PCs are located very near my RTX (see pics on
>http://wwww.astrosurf.com/lombry/qsl.hm and
>http://wwww.astrosurf.com/lombry/qsl4.hm).

These are useless links (wwww?).

Always cut and paste from the browser address bar, rather than relying
on memory.
>
>On the pictures of shacks I have seen, - like to yours probably - the
>PC stands often very near the RTX due to the fact most of us use the
>PC to record our QSO or to access simultaneously to Internet. So I
>cannot place my PC far from the RTX. It must be on the same table,
>even if the main unit is located about 1 or 2m away from the RTX. My
>coax is not more far away.
>
>Question : What is in theory the solution to suppress these RFI ?
>Is there a solution to remove (or filter) this QRN generated by PCs or
>electronic homes devices in order to heard HF bands without these RFI
>(and keeping the PC near the RTX of course) ?
>Can an external DSP be the ultime solution in such a case ?
>
>Thanks for comments
>
>73
>Thierry
>ONL5183
>http://www.astrosurf.com/lombry/menu-qsl.htm

Hi Thierry,

The other's discussion is to the point and fairly simple to achieve.
There is something even easier to try and will be the probable

solution.

Connect the laptop power supply to an outlet on a separate circuit breaker. Use an extension cord as necessary (do not move the laptop). Whatever noise reduction you gain, that noise arrived by conduction (common wiring).

Second, investigate your equipment grounding (common wiring again).

73's
Richard Clark, KB7QHC

1833. Re: How to suppress indoor RFI ?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-27 21:28:41 UTC
From: ":-) Bill" <therealexray@netscape.net>
Message-ID: <3D431089.4A2B0302@netscape.net>
Source record: 137873

Richard Clark wrote:

> >FYI, my PCs are located very near my RTX (see pics on
> >http://wwww.astrosurf.com/lombry/qsl.hm and
> >http://wwww.astrosurf.com/lombry/qsl4.hm).
>
> These are useless links (wwww?).

Actually, using wwww did bring up a page...albeit a bad one. Tried with wwwwwww also and same thing. Weird that they respond to that.

-Bill

1834. Re: Burial of 10BaseT and 10Base2 cables

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-27 22:31:58 UTC
From: Angus McIntyre <angus@pobox.com>
Message-ID: <angus-530F17.00315828072002@news2-2.free.fr>
Source record: 137874
Cross-posted to: rec.radio.amateur.antenna,comp.sys.mac.system

In article <siegman-390914.11415427072002@usenet.stanford.edu>,
AES <siegman@stanford.edu> wrote:

> ... Mark Twain did write something along the lines of "Summer in San
> Francisco was the coldest winter I've ever spent."

And that was before they invented air-conditioning.

Angus

--
"I am here by the will of the people ... and I *will* ["Metrophage",
not leave until I get my raincoat back." Richard Kadrey]

1835. Re: How to suppress indoor RFI ?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-27 23:48:59 UTC
From: Crazy George <munschNO@attglobal.net.SPAM>
Message-ID: <3d433624_4@news1.prserv.net>
Source record: 137876

Interestingly, there are legitimate www2 and www3 prefixes out there also.

--
Crazy George
Remove NO and SPAM from return address
:-) Bill <therealexray@netscape.net> wrote in message
news:3D431089.4A2B0302@netscape.net...
> Richard Clark wrote:
>
> > >FYI, my PCs are located very near my RTX (see pics on
> > >http://wwww.astrosurf.com/lombry/qsl.hm and
> > >http://wwww.astrosurf.com/lombry/qsl4.hm).
> >
> > These are useless links (wwww?).
>
> Actually, using wwww did bring up a page...albeit a bad one. Tried with
> wwwwwww also and same thing. Weird that they respond to that.
>
> -Bill

1836. Re: CAM?? 160m & 10 m Dipole?? Anyone

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-28 00:14:39 UTC
From: yardleyite@aol.com
Message-ID: <20020727201439.06842.00001671@mb-fc.aol.com>
Source record: 137877

The longer the antenna (closest to a half wave or more) the better signal you'll put out. Height is a plus. As an option you may want to tie the shield and center conductor together and run it as an end fed zep. Any configuration you use will require the use of a tuner since it won't be resonant anywhere on 160M.
Best Regards de Joe N3IBX

1837. Re: Burial of 10BaseT and 10Base2 cables

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-28 00:35:44 UTC
From: Kerry Kingsbury <kkingsbury.spam.me.not@greenmountainaccess.net>
Message-ID: <uk6f317nvl0463@corp.supernews.com>
Source record: 137878
Cross-posted to: rec.radio.amateur.antenna,comp.sys.mac.system

If I were to do it I would use a router hub and use 3/4" plastic pvc schedule 40 pvc conduit and the best CAT5 plenum or direct burial cable I could afford. Distance, by the way, between a machine and a hub is on the order of 100 meters or so it says in my D-Link DFE-530TX+ manual. I love these nics. Others will hate them. Since the CAT5 is twisted pair some might argue that 1 inch conduit would allow for the cable (likely RG6/u) and the CAT5 to be in the same tube.

Also there is another thought for the conduit. How about 1" semi rigid plastic pipe that is used for well to house connections. Unless you are in a heavy ground frost area with gravel for soil it should last for years even though it isn't buried feet below the surface. It saves on the time gluing each joint etc though feeding the wire through may be tougher.

"David or Jo Anne Ryeburn" <ryeburn@sfu.caz> wrote in message news:ryeburn-2607022130170001@207.6.87.119...
> Over in the newsgroup comp.sys.mac.system, giarcman <giarcman@attbi.com>
> in article <X0%%8.116182$_51.87455@rwcrnsc52.ops.asp.att.net> wrote:
>
> > Here's sitch. I'm moving to a new home in September. I work at home,
> > and my new place actually has a little guest cottage in the back of the
> > property where I'm going to set up my office. Luckily, the prior owners
> > had cable running out there, and I'm hoping it won't be too much of a
> > hassle to use that line for broadband (ISP is Charter Communications).
> >
> > However, my wife, who will be in the "main" house, also needs access.
> > Presently we use an Airport Base Station to solve the 2 computer issue.
>
>
> (The Airport Base Station is a 2.4 GHz system that can be quickly attached
> to any recent Mac computer; it's very popular for use in conjunction with
> current Mac portables, which have relatively inefficient internal antennas
> already present whether ordered from the factory with an Airport card or
> not. Airport is compatible with most of the other currently available
> "WiFi" systems.)
>
>
> > I doubt an ABS would work in this situation, since the guest cottage is
> > quite far from the main house and my TiBook doesn't get the best
> > reception anyway. So...sounds like a router is called for.
> >
> > However, a router would involve me running an ethernet line a looooooong
> > way from one house to the other. That's doable in theory, but does
> > anyone know if length of line affects ethernet transmission? Also, any

> > other suggestions other than running the really looooooooong line? I'm
> > guessing it would be hundreds of feet, since I'd probably go around the
> > perimeter of the property to avoid the "what a nice yard, why is there a
> > cable running past my face?" syndrome.

1838. Re: Burial of 10BaseT and 10Base2 cables

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-28 01:19:59 UTC
From: Martin Ewing <ewing@alum.mit.edu>
Message-ID: <3D4346BE.4080406@alum.mit.edu>
Source record: 137879
Cross-posted to: rec.radio.amateur.antenna,comp.sys.mac.system

I vote for optical fiber, too. From the Linksys line, you could get two 16-port switches with fiber uplink modules for about $600, and ST type (multimode) duplex fiber seems to run about $0.50 a foot in bulk. Good for 2,000 meters, they say. Burial & lightning protection should be easy.

Has anyone tried this in ham applications?

73 Martin AA6E

Kevin Stevens wrote:
> In article <ryeburn-2607022130170001@207.6.87.119>,
> ryeburn@sfu.caz (David or Jo Anne Ryeburn) wrote:
>
>
>>>The "cable running past my face" problem wouldn't arise if the cable went
>>>directly, but was buried a few inches below the ground surface. I suspect
>>>that 10BaseT will work OK if the cable is buried, provided that the cable
>>>is loosely inserted in a length of PVC pipe (so that it isn't right up
>>>against the earth, but separated from it by at least the pipe thickness).
>>>You don't want the field around the cable penetrating the poorly
>>>conducting ground. For this purpose, thicker walled pipe is better than
>>>thinner walled pipe. Of course you'd have to keep moisture out of the
>>>pipe; that could be done by bringing it up out of the ground at each end
>>>and making a U, so that it goes up, then down, before the open end.
>>>
>>>If that doesn't work you can always use coaxial cable (10Base2). Coax
>>>works equally well buried or not, since the fields are entirely inside the
>>>shield. But some coaxial cables deteriorate when buried; you'd be well
>>>advised either to use one intended to be buried, or else put the coax
>>>inside a PVC pipe, to protect against moisture this time rather than to
>>>keep the field from penetrating the ground. In this case, PVC pipe wall
>>>thickness would be of no concern provided it was sufficiently thick to
>>>prevent water leakage.
>>
>>What thoughts do you have on this? Has anyone tried burying CAT5 cable,
>>using PVC pipe as I suggested? What types of coax are available which will
>>tolerate burial without protection, are of relatively small diameter, and
>>aren't too expensive? I've read enough in this group (rraa) about the ease
>>of burying radials by just making a slit in the ground that I don't think
>>building a big trench is needed, as long as the coax, or the PVC pipe, is
>>of fairly small diameter.
>>
>>David, ex W8EZE
>

>
> You have to use RG-58 for coax - it is typically about the same diameter
> as RG-59? 62? CATV cable. I'm sure it is available in weather-resistant
> jacketing, and if you keep the termination points indoors it would
> probably be quite durable even in a wet conduit. If I were actually
> doing this - which I probably wouldn't, see my recommendation on
> wireless - I'd see if multimode fiber fit the bill. It is resistant to
> all but physical damage, can support a number of popular network types
> from FX100 Ethernet (very cheap) to GigE and faster/future technologies,
> and avoids the grounding headaches of copper. Downside is media cost.
> (Obviously coax can support massive broadband transports, too, but
> practically none of them are packaged for the consumer.)
>
> If you use copper, grounding is a problem. Two separate buildings very
> often have different ground potientials. 10Base2 needs to be grounded
> at exactly one end of the bus. 10BaseT doesn't really have provision
> for grounding other than at the hub/switch. In either case, you also
> have electrical/safety/code issues to deal with as well as just the
> signaling.
>
> KeS

--
Martin Ewing AA6E ewing@alum.mit.edu
Branford, Connecticut

1839. How much signal is going out?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-28 01:21:42 UTC
From: cprstn54zz@att.net
Message-ID: <3d4346fc.245562000@news-server.optonline.net>
Source record: 137880

If my SWR/wattmeter shows 100 watts forward and nothing reflected (SWR=1.0), does this mean I am pumping out a 100 watt signal?

I am finding that my MFJ-986 can tune my multi-band (160-80-40-20-10) shortened dipole to any HF frequency at SWR=1.0 -- even some improbable frequencies not mentioned by the antenna manufacturer, like 30M, 17M and 12M. Does this necessarily mean I am getting out a good signal?

Ken KC2JDY

Ken
(to reply via email
remove "zz" from address)

1840. Re: How much signal is going out?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-28 01:27:41 UTC
From: 'Doc <w5lz@icok.net>
Message-ID: <3D434887.556F11E3@icok.net>
Source record: 137881

Ken,
It means that the antenna is probably radiating
everything that's being sent to it. That doesn't
necessarily mean you have a good signal. That 1:1
SWR is between the radio and the tuner, the SWR of
the antenna system (feed line and antenna) hasn't
been changed.
'Doc

1841. Re: Burial of 10BaseT and 10Base2 cables

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-28 01:31:34 UTC
From: Tom Stiller <tomstiller@comcast.net>
Message-ID: <tomstiller-DF1728.21313427072002@news.comcast.giganews.com>
Source record: 137882
Cross-posted to: rec.radio.amateur.antenna,comp.sys.mac.system

In article <3D4346BE.4080406@alum.mit.edu>,
Martin Ewing <ewing@alum.mit.edu> wrote:

> I vote for optical fiber, too. From the Linksys line, you could get
> two 16-port switches with fiber uplink modules for about $600, and ST
> type (multimode) duplex fiber seems to run about $0.50 a foot in
> bulk. Good for 2,000 meters, they say. Burial & lightning
> protection should be easy.
>
> Has anyone tried this in ham applications?
>

How much for termination on the cable?

--
Tom Stiller

PGP fingerprint = 5108 DDB2 9761 EDE5 E7E3 7BDA 71ED 6496 99C0 C7CF

1842. Re: CAM?? 160m & 10 m Dipole?? Anyone

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-28 01:33:00 UTC
From: 'Doc <w5lz@icok.net>
Message-ID: <3D4349C6.CD9C75D5@icok.net>
Source record: 137883

Stargazer,
Not enough information. Depends on how high each
is off the ground. Also, if you disconnect the shield
from the SO-239, then short it to the center conductor,
you might be able to use either antenna on 160 meters
if you use a tuner. Still depends on how high the two
antennas are...
'Doc

1843. Re: Burial of 10BaseT and 10Base2 cables

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-28 01:36:43 UTC
From: "David C." <shamino@techie.com>
Message-ID: <ahvhrc$b6j$2@slb4.atl.mindspring.net>
Source record: 137884
Cross-posted to: rec.radio.amateur.antenna,comp.sys.mac.system

Kevin Stevens wrote:
>
> If you use copper, grounding is a problem. Two separate buildings very
> often have different ground potientials. 10Base2 needs to be grounded
> at exactly one end of the bus. 10BaseT doesn't really have provision
> for grounding other than at the hub/switch. In either case, you also
> have electrical/safety/code issues to deal with as well as just the
> signaling.

If this is a problem, it might be easier to use fiber.

Multimode fiber isn't terribly expensive, and you can get tranceivers to convert between 100BaseT and 100BaseF. The tranceivers can be a bit pricey to buy new, but I've seen them sold really cheap at computer flea markets (collected from dumpster diving at defunct dot-coms, probably).

-- David

1844. Re: Stagnating antenna designs

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-28 01:57:11 UTC
From: "W.G Ewald" <wgewald@att.net>
Message-ID: <m1k6kus9m6qhf7qhjn30behonjm3u7bpfn@4ax.com>
Source record: 137885

On 25 Jul 2002 12:42:57 -0700, nm5k@wt.net (Mark Keith) wrote:

> Where are fractals in regular use today?
>I've only seen the ones that stick in cordless phones.

Mark --

What fractal antennas are in cordless phones? I have not seen any
cordless phones advertised with "fractal antenna" as a feature.

WGE

1845. Re: How much signal is going out?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-28 02:33:13 UTC
From: Ralph Mowery <rmowery@dialpoint.net>
Message-ID: <ahvlb7$q11$1@newsreader.cetlink.net>
Source record: 137886

The ammount of swr has no real meaning on how much signal is getting out. By using a tuner all you do is allow the transmitter to put its maximum power into the antenna system. You will loose some power in the tuner. Mine looses about 5% depending on the band . Even with no tuner (provided the transmitter will put out the same power) you can have a dipole with a very high swr using open wire line and radiate a beter signal than one fed with coax and a low swr.

"Ken" <cprstn54zz@att.net> wrote in message
news:3d4346fc.245562000@news-server.optonline.net...
> If my SWR/wattmeter shows 100 watts forward and nothing reflected
> (SWR=1.0), does this mean I am pumping out a 100 watt signal?
>
> I am finding that my MFJ-986 can tune my multi-band (160-80-40-20-10)
> shortened dipole to any HF frequency at SWR=1.0 -- even some
> improbable frequencies not mentioned by the antenna manufacturer, like
> 30M, 17M and 12M. Does this necessarily mean I am getting out a good
> signal?
>
> Ken KC2JDY
>
>
> ----
> Ken
> (to reply via email
> remove "zz" from address)

1846. Re: How to suppress indoor RFI ?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-28 04:19:44 UTC
From: Bill Nelson <billn@spock.peak.org>
Message-ID: <ahvrcvjhv1@quark.scn.rain.com>
Source record: 137887

Dan/W4NTI <w4nti@mindspringnospam.com> wrote:
> QRN = Natural noise, i.e. power line QRN, automobile ignition QRN.

> QRM= Man Made interference....ie. noise from another transmitter nearby.

> PC = QRM...certainly man made and most certainly noise from another
> transmitter.

Your definitions are at odds with what I think are the original meanings.

QRN - I am being troubled by static
QRM - I am being interfered with

Further, neither power line noise or automobile ignition noise are any
more "natural" than computer generated noise.

--
Bill Nelson (billn@peak.org)

1847. Re: How much signal is going out?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-28 04:38:20 UTC
From: Bill Nelson <billn@spock.peak.org>
Message-ID: <ahvsfsjhv2@quark.scn.rain.com>
Source record: 137888

Ken <cprstn54zz@att.net> wrote:
> If my SWR/wattmeter shows 100 watts forward and nothing reflected
> (SWR=1.0), does this mean I am pumping out a 100 watt signal?

It means that your are putting 100 watts into the feedline - nothing more.

For example, assume you have an infinite length of coax with no termination (or shorted, it doesn't matter). Because of the attenuation of the coax, no power would be radiated and none would be reflected. So the VSWR reading would be 1:1.

As a more practical example, assume that your coax has an attenuation of 3.33 dB per 100 feet - and that the coax is 300 feet long. If you feed 100 watts into the coax, only 10 watts is getting as far as the antenna. Even if the coax were shorted, so all the signal were reflected, only one watt of that 10 watts would get back to the VSWR meter at the rig. That 1 watt would only slightly deflect the needle on your meter.

--
Bill Nelson (billn@peak.org)

1848. Re: Stagnating antenna designs

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-28 04:39:04 UTC
From: nm5k@wt.net
Message-ID: <25eb70d7.0207272039.66065601@posting.google.com>
Source record: 137889

aunwin@fgi.net (Art Unwin KB9MZ) wrote in message
>
> You make my point so clearly. You have dismissed the antenna outright
> without looking for possible advantages and do a diservice to ham
> radio without giving it a shot PROBABLY because it is not in an arrl
> ANTENNA BOOK , AND YOU ARE SO...SO WRONG. I have used this antenna for
> years and I know it works and want to share it with all.

Have you measured the gain when used at frequencies far off from the
1/2 wave dipole length?

I also want
> to share with new amateurs that experimenting with fishing poles with
> a conductive surface is so much cheaper than buying telescopic tubing
> unfortunately these things are passed by unless utterred by a 'known'
> person or it is a book. I would love to hear from a novice ham who has
> spread his wings by making a log periodic using poles with an aluminum
> surface
> instead of that shown in the antenna book made of wire and string to
> achieve lightness.

Oh, I have no problems with such foil methods. Whatever works...The
only thing with foil is trying to get good connections. And then keep
them with the effects of wx. Can't solder to it too well. I have done
things like make vhf yagis from coathanger wire...

> So do yourself a favour, try it a use a computor program to check
> it out or maybe Reg will modify his 'loop' programs to prove my point
> so we can review the overall subject of 'stagnating antenna designs'
> rather than presenting a 'off the cuff' notion without thinking it
> out. If it does not have merit you have the option of saying 'I told
> you so' or conversely you can rate the merit of the antenna
> advantages/disadvantages to the enjoyment of all.

That would be no problem to model. Or at least I don't think it would
be...
I'm willing to give it a shot. But my comments were not without
thought.
I still am not sure how you are going to couple power to a radiator
that shows a high impedance to the feedline when you have the loop
tuned and showing a fairly low impedance. IE: 50 ohm coax feeding a
small tunable loop parallel with a 1/2 wave dipole at a certain freq.
Lets say the dipole is cut for 40m. Now go to 20m, and tune the loop
for 20m use. Seems to me if it shows a low impedance to the line, and
the dipole show a high impedance, such as a full wavelength would, the
loop would accept the majority of the power. And being the loop would

not be too efficient, I don't really see how the performance on 20m, would equal or exceed the performance on 40m, where it would naturally be good being the dipole is resonant. If I'm missing something here, maybe someone will jump in... Am I describing the antenna correctly?
MK

1849. Re: CAM?? 160m & 10 m Dipole?? Anyone

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-28 04:54:36 UTC
From: nm5k@wt.net
Message-ID: <25eb70d7.0207272054.5f97aa2c@posting.google.com>
Source record: 137890

StarGazer <pti@capnet.com> wrote in message news:<3D42F322.9803C07D@capnet.com>...
> Which should work better for 160 m? A 80 m dipole cut for
> 3750 or a 40 m dipole cut for 7150?
>
> Which would work better for 10 m?
>
> Both are fed with RG-213.
>
> I heard one can disconnect the shield on the 80 m dipole and
> have it work better on 160 m??

Yep, thats the best plan. Feed the 80m antenna as a T vertical. If you are lucky and have the right distance to the antenna, you can tune it for 160m by varying the length of the coax to make a 1/4 wave total length. The 80m antenna is better because it has more top loading . Lets say you have a 120 ft dipole cut for about 3.850 or so. Each leg is 60 ft. If you tie the shield to the center pin, or, just feed the shield alone, you can add about 66 ft or so of coax to make a T vertical for 160m. Naturally, the coax would need to be supported above the ground for best results. The only problem with this plan is you are feeding directly from the shack, and should have grounding and radials for best use. But it will work even with less than best ground systems. Amounts to a shack fed inverted L, if you feed only one conductor. Would probably have a bit more high angle use than the T vertical, which is what you have if you tie the coax together. The T might be a bit better for longer haul stuff. I don't know which would work better for 10m. Probably the 40m antenna. MK

1850. Re: Stagnating antenna designs

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-28 07:08:03 UTC
From: aunwin@fgi.net
Message-ID: <c4becf19.0207272308.fffce1e@posting.google.com>
Source record: 137891

n7ws_at_yahoo.com (Wes) wrote in message news:<3d42be35.5188345@news.triconet.org>...
> On 24 Jul 2002 17:39:50 -0700, aunwin@fgi.net (Art Unwin KB9MZ) wrote:
>
> |If one looks at present day antenna books such as the ARRL offerings
> |you would be hard put to shell out some money if you already had a previous
> |edition that had some age on it
>
> [snip]
>
> Art, Art, Art, calm down and steady yourself.
>
> It may be that your design has merit, but in reading all of the prior
> posts I'll be damned if I can figure out exactly what you're talking
> about. You are going to have to publish something understandable on a
> web site or on paper with some readable illustrations and analysis
> before you can legitimately claim that you are being ignored.
>
> I'm as eager as anyone to challenge the conventional wisdom of some
> "prior art" as you might conclude by reading my thoughts on the
> "advantages" of ladderline and "G5RV" antennas. I might be all wet
> with my conclusions, but I put 'em out there for discussion, in what I
> hope is understandable form.
>
> I know that Dean Straw, editor of the Antenna Compendiums and the
> Antenna Handbook, is begging for something fresh to publish. So if
> you are unhappy about the "tired old, worn out designs" that are
> regurgitated annually, do something about it. Write it up and send it
> in.
>
>
> 73,
>
> Wes

O.K. Wes if my computor works o.k this morning listen to my story.
My training is that of a engineer with G.E but after 25 years I had to
retire because of heart attack, many depression periods, sleep apnia
e.t.c so I can understand that my writing is not all it should be.
Many years ago Moxon showed this antenna in the British Radcom,
unfortunatly he did not go far enough with it plus he called it the
case of the disapearing induntance. Progress that stopped him was an
everyday thing for me and I made these antennas plus a lot more. Later
it was published in his book, I forget the name now but still it
didnot attract attention. After talking with him at his home about the

variable cylinder type of capacitors within booms e.t.c. I asked a friend of mine to show my stuff to the British ham assoc where they viewed it with some suspision.
I took out a patent in fact a series of patents some of which I abandoned with discust before the examination period because I recieved similar comments from this group as I am getting now and at that time I had also placed on the net a page showing construction methods.
Since it got no follow up interest I got the AO program and worked with it. Unfortunately in those early days I made many mistaks using the program that I began to doubt myself. Eventually I amnaged to get the University of Illinois to do a study on the sly (they were working on fractals at that time, and they confirmed my work. I then gave a couple of lectures at the Peoria ham fest which that year was the premier hamfest of the ARRL for that year. Prior to giving those lectures I sent the material to Dean Straw you was nice enough to give me some tips on presenting it.This post is getting too long so I will finish.
But for those who are willing to join the rest of the lemmings in following the crowd start thinking back to first principles and consider what you get when you add two frequencies as a tip for how this antenna works. It only takes ten lines of info for a AO style conformation of what I am claiming and I am willing to work with anybody who is willing to give me a modicom of repect and bear with my obvious difficulty of explaining things with my present problems.
Best regards to all
Art UNwin
KB9MZ

1851. Stacking anntenas

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-28 08:08:17 UTC
From: Ivan Har&#65533;anji <ivan.harsanji@os.hinet.hr>
Message-ID: <ai08r5$dk8e$1@as201.hinet.hr>
Source record: 137892

I should like to stack 4 antennas for 20m in fixed direction on diferent masts.What should be distance between masts? Thanks
Ivan 9A3HX

1852. Re: Yaesu G-1000SDX rotor question

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-28 11:21:52 UTC
From: David Robbins <k1ttt@arrl.net>
Message-ID: <ai0k3u0uep@enews3.newsguy.com>
Source record: 137893

the center pin is pin 6 and is not used in the g-1000sdx. if you have enough conductors you may want to hook it up anyway, it is used in other yaesu rotor models and if you ever want to upgrade you would not have to rewire.

"Charlie Hicks" <hicksc@starband.net> wrote in message news:lvx09.186$7W.124097572@twister1.starband.net...
> I bought a Yaesu G-1000SDX rotor a few years ago and am now just putting it
> up. The control cable connects to the rotor with a 7-pin round connector
> but only uses 6 pins. The instruction manual say ""pin 6, the center pin,
> is not used". However, the center pin is pin 4, not 6.
>
> Does anyone know for sure which pin is not used? Is it the center pin (4)
> or pin 6?
>
> Thanks + 73, Charlie K0CKH
>
>

1853. Re: Stacking anntenas

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-28 13:08:53 UTC
From: richardharrison@webtv.net
Message-ID: <4816-3D43ECE5-275@storefull-2398.public.lawson.webtv.net>
Source record: 137894

Ivan, 9A3HX wrote:
I should like to stack 4 antennas for 20m in a fixed direction on
different masts. What should be the distance between masts?"

This in-line, end-fed, unidirectional, array works well with
1/4-wavelength spacing between masts. Such an array is shown by Terman
in his 1955 edition of "Electronic and Radio Engineering" on page 878.

All elements are fed equal currents, progressively delayed by 90-degrees
so that energy arriving from coax and space are in-phase in the desired
direction.

My father-in-law Phil Rand, W1DBM, built an 8-element, 20m array on his
New Hampshire farm, which he demonstrated for me, Like "Hello
Australia", and the responses boomed in, and he did this almost every
day. That array shook the aether with its power. It was written up in
some ARRL publication, as I remember. This was about 20 years ago or so.
The coax power division and phasing arrangements were simple and clever
as I recall.

Best regards, Richard Harrison, KB5WZI

1854. Wanted: Datasheet Antron99

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-28 15:13:21 UTC
From: Tom <truckdrivingman@hotmail.com>
Message-ID: <ai11mi$b1n$07$1@news.t-online.com>
Source record: 137895
Cross-posted to: alt.ham-radio.hf,rec.radio.amateur.antenna

Hi OMs
I need the datasheet of the A99 10m-antenna,especially the shortening information for making it resonant at 29.5 MHz.I'd be happy if someone could send it by e-mail

TIA
Tom

1855. Re: How to suppress indoor RFI ?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-28 15:17:11 UTC
From: Dan/W4NTI <w4nti@mindspringnospam.com>
Message-ID: <ai11t0$6og$1@slb2.atl.mindspring.net>
Source record: 137896

OK...for the purists out there...lets KISS.

QRN= STATIC

QRM= MANMADE INTERFERENCE

Dan/W4NTI

"Bill Nelson" <billn@spock.peak.org> wrote in message
news:ahvrcvjhv1@quark.scn.rain.com...
> Dan/W4NTI <w4nti@mindspringnospam.com> wrote:
> > QRN = Natural noise, i.e. power line QRN, automobile ignition QRN.
>
> > QRM= Man Made interference....ie. noise from another transmitter
nearby.
>
> > PC = QRM...certainly man made and most certainly noise from another
> > transmitter.
>
> Your definitions are at odds with what I think are the original meanings.
>
> QRN - I am being troubled by static
> QRM - I am being interfered with
>
> Further, neither power line noise or automobile ignition noise are any
> more "natural" than computer generated noise.
>
> --
> Bill Nelson (billn@peak.org)
>

1856. Re: How to suppress indoor RFI ?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-28 15:30:38 UTC
From: lombryt@hotmail.com
Message-ID: <db35a0c.0207280730.fa7711c@posting.google.com>
Source record: 137897

Richard Clark <kb7qhc@attbi.com> wrote in message
news:<7s26ku4mrbrmu27d8egkjbv6l9adcg3gfh@4ax.com>...
> On 26 Jul 2002 16:58:37 -0700, lombryt@hotmail.com (Thierry) wrote:
>
> >Hi,
> >
> >As many hams/swl I quickly discovered that portable PC or desktop
> >computers located near the RX/TX produced a lot of QRN : from the
> >screen - few -, the power supply - much -, or even from the move of
> >the mouse or from the color displayed of the screen - sometimes-. A
> >battery charger (for a digital cam) located 2m away from the RTX, on
> >the ground near the power line, is even the strongest emitter and I
> >must switch it off without condition when I listen to HF bands.
> >
> snip
> >FYI, my PCs are located very near my RTX (see pics on
> >http://wwww.astrosurf.com/lombry/qsl.hm and
> >http://wwww.astrosurf.com/lombry/qsl4.hm).

First, the bug,
http://www.astrosurf.com/lombry/qsl.hm and
http://www.astrosurf.com/lombry/qsl4.hm). ;-)

>
> These are useless links (wwww?).
>
> snip
>
> Hi Thierry,
>
> The other's discussion is to the point and fairly simple to achieve.
> There is something even easier to try and will be the probable
> solution.
>
> Connect the laptop power supply to an outlet on a separate circuit
> breaker. Use an extension cord as necessary (do not move the laptop).
> Whatever noise reduction you gain, that noise arrived by conduction
> (common wiring).

Correct. I discovered that also but it is not enough.
I think shielded power lines will be the best solution. I will try to
find that (I even didn't know that such cable existed for private
usage...).

But the problem stays for my DELL portable that - like all portable and many small devices - uses a specific cable between the PC and the AC adapter (with a proprietary 3 inputs jack). I could probably not shield that one. For the wall outlet this is OK i hope i could find shielded power lines.

Thanks.
Thierry

>
> Second, investigate your equipment grounding (common wiring again).
>
> 73's
> Richard Clark, KB7QHC

1857. Re: How to suppress indoor RFI ?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-28 15:42:52 UTC
From: "J. Harvey" <JM002.Harvey_ANTI*SPAM_@Sympatico.ca>
Message-ID: <GhU09.293$tY5.67487@news20.bellglobal.com>
Source record: 137898

"Dan/W4NTI"
> OK...for the purists out there...lets KISS.
> QRN= STATIC
> QRM= MANMADE INTERFERENCE

What if it is manmade static that is causing the interference ?

:-)

1858. How Many Beads Makes a Choke?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-28 16:43:32 UTC
From: kelly@dvol.com
Message-ID: <d22b54c3.0207280843.766680f4@posting.google.com>
Source record: 137899

There has been a lot of discussion in this NG about choke baluns over time. It seems to me that the simplest, cleanest & easiest way to attenuate common mode currents on coax cable shields is a stack of ferrite beads along the cable at the feedpoint of the antenna or tuner. The question in my mind is "how many beads are enough?" particularly at HF frequencies which are the focus for some experimental antennas I plan to get into. Is there any sort of engineered standard and/or common practice in terms of dB worth of attenuation required to construct a proper choke? Or is it all just more ham black art and mythology?
>
>
Tnx.
>
>
w3rv

1859. Re: Burial of 10BaseT and 10Base2 cables

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-28 16:45:52 UTC
From: "David C." <shamino@techie.com>
Message-ID: <ai1741$ab9$1@slb0.atl.mindspring.net>
Source record: 137900
Cross-posted to: rec.radio.amateur.antenna,comp.sys.mac.system

Tom Stiller wrote:
> Martin Ewing wrote:
>
>>I vote for optical fiber, too. From the Linksys line, you could get
>>two 16-port switches with fiber uplink modules for about $600, and ST
>>type (multimode) duplex fiber seems to run about $0.50 a foot in
>>bulk. Good for 2,000 meters, they say. Burial & lightning
>>protection should be easy.
>>
>>Has anyone tried this in ham applications?
>
> How much for termination on the cable?

I don't know what Martin was referring to, but I visited Black Box's web page to look up their prices. Black Box isn't the cheapest, but they're a well-established company with a good reputation. They will sell termiated cables at custom lengths:

http://catalog.blackbox.com/BlackBox/templates/blackbox/itemgroup478guest.asp?param=90&ig_id=478&title=Ceramic+Terminated+Multimode+Fiber+Optic+Cables&related=

Their lowest price for a terminated multimode cable (duplex, riser, with ceramic SC connectors) is $58 plis $0.70 per foot.

Of course, other products and other vendors will have other prices.
This definitely isn't the best. It's just the first that came to mind.

-- David

1860. Discones ?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-28 17:47:26 UTC
From: Robert Rose <rgsrose@tiac.net>
Message-ID: <ai1aru$3eb$1@slb1.atl.mindspring.net>
Source record: 137901

Hello:

Am looking for a not too expensive VHF/UHF for installation in my attic.

Receiving only.
Have an old Antenna Specialis MONR 31 which I've never thought too much of.

A lot of people have mentioned Discones.

Would this be a good choice for an omni directional 30 MHz to say 1.5 GHz ?

Caveats ?
Negatives on ?

Thanks,
Bob

1861. Re: Steel flues resonating with V dipole

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-28 18:11:29 UTC
From: k7itm@aol.com
Message-ID: <3200347.0207281011.507d3ba7@posting.google.com>
Source record: 137902

richardharrison@webtv.net (Richard Harrison) wrote in message news:<10620-3D41470C-7@storefull-2396.public.lawson.webtv.net>...
...

> If the flue pipes are grounded verticals 40 ft high, their first
> resonance is around 48m.

Actually, the flue pipe is pretty large diameter, and that lowers the resonance considerably. The model Ken provided me shows resonance at 4.6MHz.

Your decoupling wire idea works fine for a bottom-excited antenna, but unfortunately it appears the way this is being excited (by the antenna above and around it) it doesn't do much good (per EZNEC model). I'm kinda surprised how much current the model shows in the flue pipe, but it seems to match Ken's experience.

Cheers,
Tom

> This can be made to appear as a near
> open-circuit folded monopole by hanging a wire attached to the top of a
> pipe and left open-circuit at the bottom. Such a structupe now appears
> as an open-circuit to induced current at this resonance point and
> accepts little current to re-radiate, if before it accepted a large
> current.
> Another view may be that it is now an open-circuit stub of the 1/4-wave
> shorted variety and its induced fields cancel leaving no external
> field.. But, whatever, the pipe is detuned.
>
> Best regards, Richard Harrison, KB5WZI

1862. Re: How Many Beads Makes a Choke?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-28 18:22:25 UTC
From: 'Doc <w5lz@icok.net>
Message-ID: <3D443658.9C46BBD@icok.net>
Source record: 137903

Brian,
Personally, I think it's more a matter of
'black art', or 'dumb luck', than meaningful
predictions, too many variables. So the
'right' answer is, "just enough plus one more".
And 'enough' is a whole number between zero
and infinity.
'Doc

1863. Re: How to suppress indoor RFI ?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-28 18:33:59 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <k3c8ku41lkddu77pppl0h54jo57thc2k65@4ax.com>
Source record: 137904

On Sat, 27 Jul 2002 18:48:59 -0500, "Crazy George"
<munschNO@attglobal.net.SPAM> wrote:

>Interestingly, there are legitimate www2 and www3 prefixes out there also.

Hi Crazy,

You've touched the edge of internet2. This is principally a
university based network researching high speed high capacity
connections. Typical customer/client connection runs at T100 (my
cable modem runs about T1 or better) moving one teraByte of data.

Here in Rain City there is a "branch" that runs from the University of
Washington to the Microsoft Campus with a T1000 capacity.

I would also point out that the United States currently has a 50 fold
over capacity resource in fiber-optics. What we called the
information superhighway is a rambling rutted dirt path.

73's
Richard Clark, KB7QHC

1864. Re: How to suppress indoor RFI ?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-28 18:48:43 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <vfe8kusqlvfpk5qie0672qad5l532ddd3k@4ax.com>
Source record: 137905

On 28 Jul 2002 08:30:38 -0700, lombryt@hotmail.com (Thierry) wrote:

>
>First, the bug,
>http://www.astrosurf.com/lombry/qsl.hm and

http://www.astrosurf.com/404.php3?Erreur=404

>http://www.astrosurf.com/lombry/qsl4.hm). ;-)

La page que vous avez demandï¿½e n'existe pas ... ;-)

What can I say? Always visit your own page and copy the url from the
browser's address bar.

>>
>> Connect the laptop power supply to an outlet on a separate circuit
>> breaker. Use an extension cord as necessary (do not move the laptop).
>> Whatever noise reduction you gain, that noise arrived by conduction
>> (common wiring).
>
>Correct. I discovered that also but it is not enough.
>I think shielded power lines will be the best solution. I will try to
>find that (I even didn't know that such cable existed for private
>usage...).

Hi Thierry,

Shielded power lines seems rather severe and does not answer the
source of the noise. It is unlikely that ALL of your computer devices
are noisy beyond EU standards, so it must be a common problem (that
is, your radio equipment and computer equipment SHARE something).

By the way, how well does your computer do running off battery?

73's
Richard Clark, KB7QHC

1865. Re: How Many Beads Makes a Choke?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-28 19:37:17 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <rcg8ku4kcet9rbl92j1h936q6utpdu0bd7@4ax.com>
Source record: 137907

On 28 Jul 2002 09:43:32 -0700, kelly@dvol.com (Brian Kelly) wrote:

>There has been a lot of discussion in this NG about choke baluns over
>time. It seems to me that the simplest, cleanest & easiest way to
>attenuate common mode currents on coax cable shields is a stack of
>ferrite beads along the cable at the feedpoint of the antenna or
>tuner. The question in my mind is "how many beads are enough?"
>particularly at HF frequencies which are the focus for some
>experimental antennas I plan to get into. Is there any sort of
>engineered standard and/or common practice in terms of dB worth of
>attenuation required to construct a proper choke? Or is it all just
>more ham black art and mythology?
>>
>>
>Tnx.
>>
>>
>w3rv

Hi Brian,

The question of how many is relative to need or intended use.

However, as you have identified experimentation; this means one answer will not work. I have several engineering samples kits for ferrite products and they span quite a few formulations and form factors. I have measured and confirmed their manufacturer's specifications and calibrated the individual pieces.

If I were to take a sample at random with the standard bead dimension, I would treat it like a 20 Ohm 1 W resistor. If your transmission line had the prospects of acting like a quarterwave antenna and you wanted to choke that 32 Ohm load- One bead probably wouldn't do very well, and certainly not in the face of 100W transmission levels.

A Technician's rule of thumb would be to present at least three times the load's impedance to that load - about 5 beads. The Engineer's rule of thumb would be five times the load - about 8 beads. The Metrologist's rule of thumb would be ten times the load - about 16 beads.

Now, as to the mystical elements. As only you will be aware of the conditions that are to be choked, you will have to shop for the ferrite formulation that is optimized for your frequencie(s) of operation. Amidon sales material is quite informative to this.

73's
Richard Clark, KB7QHC

1866. Shielded parallel feedlines

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-28 19:41:13 UTC
From: Chris Codella <codella@frontiernet.net>
Message-ID: <uk8i8276aphhbf@corp.supernews.com>
Source record: 137908

I would like to replace the coax that feeds my 80m dipole with a balanced feedline so I can use it with a tuner on other bands efficiently. But open-wire and other balanced lines need special consideration going through walls, near objects, etc. Also, my other antennas are fed with buried coax, mostly for appearance sake. You can't bury open wire.

I was reading the 2000 ARRL Antenna Book and came across a part in the chapter on transmission lines (24) which talks about using two parallel lengths of coax as a balanced feeline that is shielded and thus can be used near metal, go through walls, can even be buried (see page 24-20). You connect the shields together at both ends and feed the two center conductors as a balanced line. Granted, it's an expensive way to feed a dipole but it seems to make perfect sense if you want to simplify and hide the routing of the feedline.

By the way, I imagine that a parallel coax feedline is distinctly different from shielded twinlead (or similar) where both feedline conductors are within a the same shield.

Has anyone here tried this? How well did it work?

73,
Chris, W2PA

1867. Re: How Many Beads Makes a Choke?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-28 21:04:33 UTC
From: k1bqt@aol.com
Message-ID: <20020728170433.11223.00001313@mb-mr.aol.com>
Source record: 137909

>The question of how many is relative to need or intended use.<

Not really. Generally, I try to raise the blocking impedance of the line as high as practicable in order to cover the widest possible range of circumstances. It isn't that "black magic" is afoot, it's just that the load presented by the outer cable shield is notorious for being difficult to predict.

Although I stack beads for convenience, stacking isn't the most efficient way to make a feed-line choke. Winding coax onto a large core of the appropriate mix (or even air-winding your choke) takes a lot less ferrite material in weight. Many of the better cables in the RG-58 family (RG-303 etc) can handle plenty of power in the HF region without breaking down, so you really don't need to stack cores on RG-213 to make a 1-kW balun.

Here are some other things to think about. As you stack on more cores, the choke's Q at Z-max increases (reducing effective bandwidth). Also, the frequency of Z-max tends to migrate downward. As a result, if your choke uses a lot of beads to ensure optimum performance on 75 and 160 meters, it may not be very effective at all on the higher bands.

Finally, these ferro-ceramic materials introduce both a resistive and reactive blocking component to the line they are choking---and the ratio of the two rarely remain constant for changes in mix permeability or operating frequency. To avoid heating problems at high power, it might be better to use a larger cross-section of a lower-permeability mix to prevent resistive (destructive) heating in the material.

Having said all that, I generally use 43 mix beads above 10 MHz and 77 (or 73) below. Haven't burned up my coax so far by doing that.

Rick K1BQT

1868. Re: How Many Beads Makes a Choke?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-28 21:38:47 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <3D446467.7020100@eznec.com>
Source record: 137910

A rule of thumb that seems to work in practice for nominally 50 ohm systems is to create a balun impedance of 500 - 1000 ohms. To determine how much impedance an individual bead has, you either have to measure it with an impednce meter, or look at information provided by the vendor. A lot of the more popular and suitable beads are Fair-rite type 43, and you can get information about their impedances at the frequencies of interest at the Fair-rite web site. The total impedance is simply the impedance of a single bead multiplied by the number of beads. (This is why I prefer to use multiple turns on a single core -- the impedance is proportional to the square of the number of turns.)

Roy Lewallen, W7EL

Brian Kelly wrote:
> There has been a lot of discussion in this NG about choke baluns over
> time. It seems to me that the simplest, cleanest & easiest way to
> attenuate common mode currents on coax cable shields is a stack of
> ferrite beads along the cable at the feedpoint of the antenna or
> tuner. The question in my mind is "how many beads are enough?"
> particularly at HF frequencies which are the focus for some
> experimental antennas I plan to get into. Is there any sort of
> engineered standard and/or common practice in terms of dB worth of
> attenuation required to construct a proper choke? Or is it all just
> more ham black art and mythology?
>
>>
> Tnx.
>
>>
> w3rv

1869. Re: How Many Beads Makes a Choke?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-28 21:59:02 UTC
From: Reg Edwards <g4fgq.regp@btinternet.com>
Message-ID: <ai1pf5$7qh$1@knossos.btinternet.com>
Source record: 137911

20 ohms seems a little low and is by no means purely resistive. It much depends on bead dimensions, especially length. Actual values can be measured on an antenna analyser using the Z or R+jX range.

It should be made quite clear the impedance of N beads is N times the impedance of one bead.

The impedance of 1 bead can be increased by passing the conductor through the hole-in-the-middle twice if mechanically possible. Z then quadruples.

If you feel like passing the conductor through a lot of times then use a big bead with a big hole in the middle. This is known as a torroidal winding. It is much lighter in weight for the same impedance and a much less expensive way of using ferrites.

And beads and torroids need not be touching each other. Indeed there may be advantages in spreading them out along a length of coax to break up resonances.

Reg, G4FGQ

1870. Re: Shielded parallel feedlines

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-28 22:06:05 UTC
From: CW <clinton.magers@attbi.com>
Message-ID: <hVZ09.199985$uw.105019@rwcrnsc51.ops.asp.att.net>
Source record: 137912

Efficiency won't increase much. The lower loss in balanced line is due to
the higher impedance; something you really won't gain with parallel coax.
"Chris Codella" <codella@frontiernet.net> wrote in message
news:uk8i8276aphhbf@corp.supernews.com...
> I would like to replace the coax that feeds my 80m dipole with a balanced
> feedline so I can use it with a tuner on other bands efficiently. But
> open-wire and other balanced lines need special consideration going
through
> walls, near objects, etc. Also, my other antennas are fed with buried
coax,
> mostly for appearance sake. You can't bury open wire.
>
> I was reading the 2000 ARRL Antenna Book and came across a part in the
> chapter on transmission lines (24) which talks about using two parallel
> lengths of coax as a balanced feeline that is shielded and thus can be
used
> near metal, go through walls, can even be buried (see page 24-20). You
> connect the shields together at both ends and feed the two center
conductors
> as a balanced line. Granted, it's an expensive way to feed a dipole but
it
> seems to make perfect sense if you want to simplify and hide the routing
of
> the feedline.
>
> By the way, I imagine that a parallel coax feedline is distinctly
different
> from shielded twinlead (or similar) where both feedline conductors are
> within a the same shield.
>
> Has anyone here tried this? How well did it work?
>
> 73,
> Chris, W2PA
>
>

1871. Re: Shielded parallel feedlines

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-28 22:17:03 UTC
From: Reg Edwards <g4fgq.regp@btinternet.com>
Message-ID: <ai1qgu$8e7$1@helle.btinternet.com>
Source record: 137913

There's no problem bringing open-wire lines through window frames and walls.
Just bring the two wires close together through a relatively small hole with
some extra insulation round each wire and around the pair. 3/4" or 1"
diameter holes are ample. In brick, timber or metalwork.

The transmitter thinks there's an extra 2 or 3 pF across the line or the
line has increased in length by 2 or 3 inches. There's no extra loss.

NEVER bring openwire lines through TWO holes unless the material is a good
insulator such as a glass window pane or a really dry wood panel.
--
Reg, G4FGQ

======================

"Chris Codella" <codella@frontiernet.net> wrote in message
news:uk8i8276aphhbf@corp.supernews.com...
> I would like to replace the coax that feeds my 80m dipole with a balanced
> feedline so I can use it with a tuner on other bands efficiently. But
> open-wire and other balanced lines need special consideration going
through
> walls, near objects, etc. Also, my other antennas are fed with buried
coax,
> mostly for appearance sake. You can't bury open wire.
>
> I was reading the 2000 ARRL Antenna Book and came across a part in the
> chapter on transmission lines (24) which talks about using two parallel
> lengths of coax as a balanced feeline that is shielded and thus can be
used
> near metal, go through walls, can even be buried (see page 24-20). You
> connect the shields together at both ends and feed the two center
conductors
> as a balanced line. Granted, it's an expensive way to feed a dipole but
it
> seems to make perfect sense if you want to simplify and hide the routing
of
> the feedline.
>
> By the way, I imagine that a parallel coax feedline is distinctly
different
> from shielded twinlead (or similar) where both feedline conductors are
> within a the same shield.
>
> Has anyone here tried this? How well did it work?
>

> 73,
> Chris, W2PA
>
>

1872. Re: Shielded parallel feedlines

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-28 22:27:27 UTC
From: Dan Richardson <k6mhe@mendolink.com>
Message-ID: <s5r8ku0slmm941mp9tn01kpn4i1lgthqt6@4ax.com>
Source record: 137915

On Sun, 28 Jul 2002 15:41:13 -0400, "Chris Codella"
<codella@frontiernet.net> wrote:
[snip]
>
>I was reading the 2000 ARRL Antenna Book and came across a part in the
>chapter on transmission lines (24) which talks about using two parallel
>lengths of coax as a balanced feeline that is shielded and thus can be used
>near metal, go through walls, can even be buried (see page 24-20). You
>connect the shields together at both ends and feed the two center conductors
>as a balanced line. Granted, it's an expensive way to feed a dipole but it
>seems to make perfect sense if you want to simplify and hide the routing of
>the feedline.
[snip]
>
>Has anyone here tried this? How well did it work?
>
Chris,

I use this method for bringing my parallel transmission line through
the wall and into the shack. However, I am only using about four feet
run of the parallel coax. It works fine.

For what you describe I would use only the coax for those portions
which that are buried and/or going through the walls and use the open
line for the rest of the run because the coax losses will be
considerably higher than the open line. There is no requirement that
in a tuned feeder application that the transmission line's impedance
be constant - the only requirement is to keep it balanced - so mixing
say 100-Ohm and 400-Ohm lines will be okay.

73
Danny, K6MHE

1873. Need Info MFJ-249 antenna analyzer

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-28 22:38:51 UTC
From: k3vr@hotmail.com
Message-ID: <4bfc7bb.0207281438.3b39d1d0@posting.google.com>
Source record: 137914

Can someone with an MFJ schematic or 2 minutes to look at their MFJ-249 or 259 give me the value of R-31, the potentiometer that is part of the calibration procedure for the MFJ-249 antenna analyzer? It is the middle of three pots located below IC1.

Opening your MFJ-249 and looking at the circuit board with the tune capacitor at BOTTOM RIGHT, IC1 is about 20% down from the top on the right side of the board. The pot to the left of IC1 is R-17, the SWR adjustment. The pot in the
middle of the 3 below IC1 is R-31, the resistance pot. I need the value of R-31. Curiously mine came from MFJ ~without~ that pot installed and it is necessary to calibrate the SWR to 50 ohms.

Thanks, Brian K3VR

1874. Novel Type of Antenna Trap.

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-28 23:08:19 UTC
From: Reg Edwards <g4fgq.regp@btinternet.com>
Message-ID: <ai1th3dmo1@knossos.btinternet.com>
Source record: 137916

NEW PROGRAM AVAILABLE

TWINTRAP.exe 33 kilobytes.

Two identical plastic insulated wires are close-wound alongside each for N turns on a cylindrical former. The two wires are then connected series-aiding.

Distributed capacitance between wires resonates with the trap inductance at the trap frequency.

Advantages - no high voltage, high current capacitor is needed. And trimming wire ends for exact frequency is much easier and neater than with coax traps.

Download TRAPDIP from website below.

========================
Regards from Reg G4FGQ
Free Radio Design Software
Go to http://www.g4fgq.com
========================

1875. Re: Steel flues resonating with V dipole

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-28 23:22:55 UTC
From: richardharrison@webtv.net
Message-ID: <7203-3D447CCF-139@storefull-2391.public.lawson.webtv.net>
Source record: 137819

Tom Bruhns, K7ITM wrote:
"Actually, the flue pipe is pretty large diameter, and that lowers its resonance considerably."

Yes it would.

My numbers using a flue pipe length was a speculation because I really didn`t know what the length of the grounded pipe is , much less its diameter, or the effective diameter of a bundle of pipes. It really doesn`t matter much if the pipe(s) are resonating, I described a method of detuning the resonance.

The method of hanging a wire or wires from the upper levels of grounded structures to detune them is well known and used by broadfcast stations finding things like water towers distorting their radiation patterns. They hang a wire or wires from them as I described and the problem is usually fixed. It`s gone. The pattern is as designed or can be if the antenna array is adjusted as designed.

Best regards, Richard Harrison, KB5WZI

1876. Re: How Many Beads Makes a Choke?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-28 23:27:34 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <8kv8ku0hre2ajbjvplf7n854e1uss0uh9q@4ax.com>
Source record: 137917

On 28 Jul 2002 21:04:33 GMT, k1bqt@aol.com (Rick Littlefield) wrote:

>>The question of how many is relative to need or intended use.<
>
>Not really.

How odd.

73's
Richard Clark, KB7QHC

1877. Re: Shielded parallel feedlines

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-28 23:29:23 UTC
From: Chris Codella <codella@frontiernet.net>
Message-ID: <uk8vjnrpqvtie9@corp.supernews.com>
Source record: 137918

"Dan Richardson" <k6mhe@mendolink.com> wrote in message
news:s5r8ku0slmm941mp9tn01kpn4i1lgthqt6@4ax.com...
> [snip]
>
> For what you describe I would use only the coax for those portions
> which that are buried and/or going through the walls and use the open
> line for the rest of the run because the coax losses will be
> considerably higher than the open line. There is no requirement that
> in a tuned feeder application that the transmission line's impedance
> be constant - the only requirement is to keep it balanced - so mixing
> say 100-Ohm and 400-Ohm lines will be okay.
>
> 73
> Danny, K6MHE
>

Danny,

Thanks - that's exactly what I had in mind, a mixture. But in my case the coax run would be long enough to get away from the house and over to the trees where the antenna is - about 100 feet.

But my reason for going to a balanced feedline in the first place was to avoid high losses in coax under high SWR conditions when operating on bands other than what the antenna is designed for (in this case 80m). If the same loss condition will exist with the double-coax balanced feedline, then that would really nullify my whole reason for doing it. So it sounds like my best bet is to just use open wire (coax just through the wall) and hope my xyl doesn't notice the dangling feedline. ;-)

Chris, W2PA

1878. Re: Shielded parallel feedlines

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-29 00:27:45 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <3D448C01.1080003@eznec.com>
Source record: 137821

Danny and the others are right.

Ladder line's low loss under very high SWR conditions (when dry) isn't because it's symmetrical or balanced. The reason for the low loss is that it has high impedance with relatively large conductors -- impedance that's higher than you can get with coax because of the coax's confined fields. Because making a "balanced" (symmetrical) line from coax doesn't give you the high impedance of ladder line, you also won't get its low loss.

Roy Lewallen, W7EL

Chris Codella wrote:
> . . .
> But my reason for going to a balanced feedline in the first place was to
> avoid high losses in coax under high SWR conditions when operating on bands
> other than what the antenna is designed for (in this case 80m). If the same
> loss condition will exist with the double-coax balanced feedline, then that
> would really nullify my whole reason for doing it. So it sounds like my
> best bet is to just use open wire (coax just through the wall) and hope my
> xyl doesn't notice the dangling feedline. ;-)
>
> Chris, W2PA
>
>

1879. Re: Stagnating antenna designs

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-29 00:55:52 UTC
From: "J. McLaughlin" <JCM@Power-Net.Net>
Message-ID: <uk94ka4v4h3t82@corp.supernews.com>
Source record: 137822

Dear Art (KB9MZ):
Please supply the patent numbers and we will all be able to "see"
the antenna that you invented. We all understand that you are having
difficulty in expressing and describing the antenna using words.
Thanks, Mac N8TT
--
J. Mc Laughlin - Michigan USA
Home: JCM@Power-Net.Net
"Art Unwin KB9MZ" <aunwin@fgi.net> wrote in message
>
> O.K. Wes if my computor works o.k this morning listen to my story.
> My training is that of a engineer with G.E but after 25 years I had to
> retire because of heart attack, many depression periods, sleep apnia
> e.t.c so I can understand that my writing is not all it should be.
> Many years ago Moxon showed this antenna in the British Radcom,
> unfortunatly he did not go far enough with it plus he called it the
> case of the disapearing induntance. Progress that stopped him was an
> everyday thing for me and I made these antennas plus a lot more. Later
> it was published in his book, I forget the name now but still it
> didnot attract attention. After talking with him at his home about the
> variable cylinder type of capacitors within booms e.t.c. I asked a
> friend of mine to show my stuff to the British ham assoc where they
> viewed it with some suspision.
> I took out a patent in fact a series of patents some of which I
> abandoned with discust before the examination period because I
> recieved similar comments from this group as I am getting now and at
> that time I had also placed on the net a page showing construction
> methods.
> Since it got no follow up interest I got the AO program and worked
> with it. Unfortunately in those early days I made many mistaks using
> the program that I began to doubt myself. Eventually I amnaged to get
> the University of Illinois to do a study on the sly (they were
> working on fractals at that time, and they confirmed my work. I then
> gave a couple of lectures at the Peoria ham fest which that year was
> the premier hamfest of the ARRL for that year. Prior to giving those
> lectures I sent the material to Dean Straw you was nice enough to give
> me some tips on presenting it.This post is getting too long so I will
> finish.
> But for those who are willing to join the rest of the lemmings in
> following the crowd start thinking back to first principles and
> consider what you get when you add two frequencies as a tip for how
> this antenna works. It only takes ten lines of info for a AO style
> conformation of what I am claiming and I am willing to work with
> anybody who is willing to give me a modicom of repect and bear with

> my obvious difficulty of explaining things with my present problems.
> Best regards to all
> Art UNwin
> KB9MZ

1880. Re: How Many Beads Makes a Choke?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-29 01:14:25 UTC
From: k1bqt@aol.com
Message-ID: <20020728211425.06568.00001314@mb-fy.aol.com>
Source record: 137823

>The question of how many is relative to need or intended use.<

I don't think there's any doubt about intended use.

>How odd.<

Tell me more.

Rick K1BQT

1881. Re: CAM?? 160m & 10 m Dipole?? Anyone

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-29 01:27:23 UTC
From: StarGazer <pti@capnet.com>
Message-ID: <3D4499FB.1C4C71CE@capnet.com>
Source record: 137824

Antenna are only about 22 feet high.

'Doc wrote:

> Stargazer,
> Not enough information. Depends on how high each
> is off the ground. Also, if you disconnect the shield
> from the SO-239, then short it to the center conductor,
> you might be able to use either antenna on 160 meters
> if you use a tuner. Still depends on how high the two
> antennas are...
> 'Doc

1882. Re: CAM?? 160m & 10 m Dipole?? Anyone

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-29 01:28:14 UTC
From: StarGazer <pti@capnet.com>
Message-ID: <3D449A2E.A537F538@capnet.com>
Source record: 137825

wouldn't that short out the TXer?

'Doc wrote:

> Stargazer,
> Not enough information. Depends on how high each
> is off the ground. Also, if you disconnect the shield
> from the SO-239, then short it to the center conductor,
> you might be able to use either antenna on 160 meters
> if you use a tuner. Still depends on how high the two
> antennas are...
> 'Doc

1883. I need a simple antenna for 160 m??

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-29 01:30:24 UTC
From: StarGazer <pti@capnet.com>
Message-ID: <3D449AB0.558E88E0@capnet.com>
Source record: 137826

Don't have a lot of room.

1884. SWR ?? What to cut for?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-29 01:54:33 UTC
From: StarGazer <pti@capnet.com>
Message-ID: <3D44A059.918FFC77@capnet.com>
Source record: 137829

I have a 80 and 40 dipole.

No tuner.

If I use CW and SSB equally would it be better to cut if favoring the CW portion because of the higher duty cycle and higher average power of CW?

Currently it is almost 3:1 at 7 MHz and 2:1 at 7.3 MHz.
Talking seems to take much less power.

I have a similiar situation, but more pronounced, with my 80 m dipole.

How come I have a deeper null with my 80 m dipole than with the 40 m dipole. The 80 m dipole nulls to almost 1:1 and the 40 m one only nulls to about 1.4:1?

1885. Re: Wanted: Datasheet Antron99

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-29 01:56:20 UTC
From: lousherry <lousherry@lanset.com>
Message-ID: <3D44A0C4.4040404@lanset.com>
Source record: 137827

Tom
Sorry my scanner is out butAccording to the fact sheet at 29.456 cut 21
inches off the top section to leave 51 inches remaining. At 29.528 cut
22 inches off the top section leaving 50 inches remaining.
Lou KB6FFT

Tom wrote:

> Hi OMs
> I need the datasheet of the A99 10m-antenna,especially the shortening
> information for making it resonant at 29.5 MHz.I'd be happy if someone could
> send it by e-mail
>
> TIA
> Tom
>
>
>
>

1886. Re: Shielded parallel feedlines

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-29 02:18:00 UTC
From: Chris Codella <codella@frontiernet.net>
Message-ID: <uk99g17orkus68@corp.supernews.com>
Source record: 137830

"Roy Lewallen" <w7el@eznec.com> wrote in message
news:3D448C01.1080003@eznec.com...
> Danny and the others are right.
>
> Ladder line's low loss under very high SWR conditions (when dry) isn't
> because it's symmetrical or balanced. The reason for the low loss is
> that it has high impedance with relatively large conductors -- impedance
> that's higher than you can get with coax because of the coax's confined
> fields. Because making a "balanced" (symmetrical) line from coax doesn't
> give you the high impedance of ladder line, you also won't get its low
loss.
>
> Roy Lewallen, W7EL

Got it - thanks Roy. I should have realized all this before I started entertaining the idea. Even using parallel 75 ohm lines only results in a 150 ohm feedline - higher than a single coax run but certainly lower than open wire. Plus there's the extra dielectric between center and braid. All in all, not much better than a coax run.

73,
Chris, W2PA

1887. Re: I need a simple antenna for 160 m??

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-29 02:18:50 UTC
From: ardujenski@aol.com
Message-ID: <20020728221850.20762.00000545@mb-da.aol.com>
Source record: 137828

Any time you go to a small antenna wave lenght wise you do become less efficient. However I have good success with an Inverted-L only 33ft by 33ft and 12 ---16 ft radials. I have 28 states, half ofwhich are east of the Mississippi (I live near Seattle) and 2 Japan contacts and run less than 50 watts. Efficiency wise it probably runs less than 15 percent but it does get me on the 160m band. Oh yes I feed it with 300 ohm line and use a Ten Tec 229 tuner.

One fact I found at this QTH and on the trails is for some reason the Inverted-L likes equal legs tuner wise.

The two legs give you some high angle (for local contacts) and some lower angle for a little DX.

Alan KB7MBI
Woodinville, WA

1888. Re: SWR ?? What to cut for?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-29 02:36:44 UTC
From: Ralph Mowery <rmowery@dialpoint.net>
Message-ID: <ai29u7$2mg7$1@newsreader.cetlink.net>
Source record: 137831

Get a tuner if you want to operate over the whole band.

A dipole in free space is arouund 70 ohms. As you get close to the earth (electrically) the impedance will go up and down. At certain heights the 80 meter dipole will approach 50 ohms. It may be that your antenna is at that critical height. Mine is only about 20 feet up and that is one of the places it is close to 50 ohms at resonance. It sends most of the signal up which is fine with me as I use it mostly to talk to a friend about 200 miles away. Your 40 meter antenna is aparently up high enough where it is around 70 ohms which would be normal and would give you about a 1.4 swr.

"StarGazer" <pti@capnet.com> wrote in message
news:3D44A059.918FFC77@capnet.com...
> I have a 80 and 40 dipole.
>
> No tuner.
>
> If I use CW and SSB equally would it be better to cut if favoring
> the CW portion because of the higher duty cycle and higher average
> power of CW?
>
> Currently it is almost 3:1 at 7 MHz and 2:1 at 7.3 MHz.
> Talking seems to take much less power.
>
> I have a similiar situation, but more pronounced, with my 80 m
> dipole.
>
> How come I have a deeper null with my 80 m dipole than with
> the 40 m dipole. The 80 m dipole nulls to almost 1:1 and the 40 m
> one only nulls to about 1.4:1?
>

1889. Re: Shielded parallel feedlines

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-29 02:44:42 UTC
From: ":-) Bill" <therealexray@netscape.net>
Message-ID: <3D44AC1A.9C7D88B9@netscape.net>
Source record: 137832

Chris Codella wrote:
>
> "Roy Lewallen" <w7el@eznec.com> wrote in message
> news:3D448C01.1080003@eznec.com...
> > Danny and the others are right.
> >
> > Ladder line's low loss under very high SWR conditions (when dry) isn't
> > because it's symmetrical or balanced. The reason for the low loss is
> > that it has high impedance with relatively large conductors -- impedance
> > that's higher than you can get with coax because of the coax's confined
> > fields. Because making a "balanced" (symmetrical) line from coax doesn't
> > give you the high impedance of ladder line, you also won't get its low
> loss.
> >
> > Roy Lewallen, W7EL
>
> Got it - thanks Roy. I should have realized all this before I started
> entertaining the idea. Even using parallel 75 ohm lines only results in a
> 150 ohm feedline - higher than a single coax run but certainly lower than
> open wire. Plus there's the extra dielectric between center and braid. All
> in all, not much better than a coax run.
>
> 73,
> Chris, W2PA

I hope I'm asking this question correctly...
What if you had a situation to where you just had to tack up the
feedline say, on the side of a house?. Lets use brick as an example.
And used parallel, properly spaced conductors of RG8X with the shield
floating. The centre conductor size on the 8x is respectable.
Would the outer shield provide any 'isolation' (in respect to
unbalancing the feeder) from the wall, metal window frames, etc?
-Bill WX4A

1890. Re: Novel Type of Antenna Trap.

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-29 02:53:46 UTC
From: Charles <great@sex.edu>
Message-ID: <uk9bhsf48fvp3c@corp.supernews.com>
Source record: 137833

Hello Reg,
Is what you posted similar to what W9INN has done for many years now?
1. http://www.ab7sl.com/index.html?row1col2=resonactor.html
- see also -
2. http://www.ab7sl.com/index.html?row1col2=w9inn.html
--

73 / DX de AB7SL - Charles
AB7SL - Ham Radio Pages
www.ab7sl.com

"Reg Edwards" <g4fgq.regp@btinternet.com> wrote in message
news:ai1th3dmo1@knossos.btinternet.com...
> NEW PROGRAM AVAILABLE
>
> TWINTRAP.exe 33 kilobytes.
>
> Two identical plastic insulated wires are close-wound alongside each
for N
> turns on a cylindrical former. The two wires are then connected
> series-aiding.
>
> Distributed capacitance between wires resonates with the trap
inductance at
> the trap frequency.
>
> Advantages - no high voltage, high current capacitor is needed. And
> trimming wire ends for exact frequency is much easier and neater than
with
> coax traps.
>
> Download TRAPDIP from website below.
> ---
> ========================
> Regards from Reg G4FGQ
> Free Radio Design Software
> Go to http://www.g4fgq.com
> ========================
>
>

1891. Re: Need Info MFJ-249 antenna analyzer

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-29 03:09:26 UTC
From: Eskay <Nospamve3jua@rac.ca>
Message-ID: <3D44B1E6.58AB837B@rac.ca>
Source record: 137820

Can't help you but MFJ will send a circuit diagram if you phone them on
their 800 number,It took me about 6 month of bugging them to get one for
my 207...
Sieb...

Brian wrote:

> Can someone with an MFJ schematic or 2 minutes to look at their
> MFJ-249 or 259 give me the value of R-31, the potentiometer that is
> part of the calibration procedure for the MFJ-249 antenna analyzer? It
> is the middle of three pots located below IC1.
>
> Opening your MFJ-249 and looking at the circuit board with the tune
> capacitor at BOTTOM RIGHT, IC1 is about 20% down from the top on the
> right side of the board. The pot to the left of IC1 is R-17, the SWR
> adjustment. The pot in the
> middle of the 3 below IC1 is R-31, the resistance pot. I need the
> value of R-31. Curiously mine came from MFJ ~without~ that pot
> installed and it is necessary to calibrate the SWR to 50 ohms.
>
> Thanks, Brian K3VR

1892. Re: Stagnating antenna designs

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-29 03:31:14 UTC
From: "J. McLaughlin" <JCM@Power-Net.Net>
Message-ID: <uk9dnitde7tc4f@corp.supernews.com>
Source record: 137834

Art H. Unwin, of Bloomington, IL, has two US patents in the PTO's data base.

5,625,367 Variable capacitance antenna for multiband reception and transmission was issued April 29, 1997 on an application filed on March 20, 1995.

5,790,081 Constant impedance matching system was issued on August 4, 1998 based on an application filed on January 30, 1996.

The PTO's data base only provides the means to search for specific inventors within patents issued since about 1976.

Mac N8TT

--
J. Mc Laughlin - Michigan USA
Home: JCM@Power-Net.Net

1893. Re: Stagnating antenna designs

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-29 03:59:04 UTC
From: richardharrison@webtv.net
Message-ID: <4818-3D44BD88-45@storefull-2398.public.lawson.webtv.net>
Source record: 137835

Art, KB9MZ wrote:
"---I do not have any menetary interest in this style of antenna or any others."

I`m sorry. I didn`t intend to insinuate Art was motivated by greed or even monetary interest. I said people reject innovation because they are invested in the status quo People invest effort in turning ideas into reality That`s good, but they often want to believe that their time was well spent, and this may be devoid of profit motive.

Profit is necessary to a commercial venture. Profit is good. People are stubborn. We can`t readily change that.

Best regards, Richard Harrison, KB5WZI

1894. Re: Novel Type of Antenna Trap.

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-29 04:29:50 UTC
From: CW <clinton.magers@attbi.com>
Message-ID: <2x319.155220$_51.101870@rwcrnsc52.ops.asp.att.net>
Source record: 137836

No. By Reg's dicription, his operate like coax traps.
"Charles" <great@sex.edu> wrote in message
news:uk9bhsf48fvp3c@corp.supernews.com...
> Hello Reg,
> Is what you posted similar to what W9INN has done for many years now?
> 1. http://www.ab7sl.com/index.html?row1col2=resonactor.html
> - see also -
> 2. http://www.ab7sl.com/index.html?row1col2=w9inn.html
> --
>
> 73 / DX de AB7SL - Charles
> AB7SL - Ham Radio Pages
> www.ab7sl.com
>
>
>
>
> "Reg Edwards" <g4fgq.regp@btinternet.com> wrote in message
> news:ai1th3dmo1@knossos.btinternet.com...
> > NEW PROGRAM AVAILABLE
> >
> > TWINTRAP.exe 33 kilobytes.
> >
> > Two identical plastic insulated wires are close-wound alongside each
> for N
> > turns on a cylindrical former. The two wires are then connected
> > series-aiding.
> >
> > Distributed capacitance between wires resonates with the trap
> inductance at
> > the trap frequency.
> >
> > Advantages - no high voltage, high current capacitor is needed. And
> > trimming wire ends for exact frequency is much easier and neater than
> with
> > coax traps.
> >
> > Download TRAPDIP from website below.
> > ---
> > ========================
> > Regards from Reg G4FGQ
> > Free Radio Design Software
> > Go to http://www.g4fgq.com
> > ========================

> >
> >
>
>

1895. Re: Novel Type of Antenna Trap.

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-29 04:54:23 UTC
From: Charles <great@sex.edu>
Message-ID: <uk9ik1r57sl539@corp.supernews.com>
Source record: 137837

Hello CW,
Can you explain what you mean? Thank you....

--

73 / DX de AB7SL - Charles
AB7SL - Ham Radio Pages
www.ab7sl.com

"CW" <clinton.magers@attbi.com> wrote in message
news:2x319.155220$_51.101870@rwcrnsc52.ops.asp.att.net...
> No. By Reg's dicription, his operate like coax traps.
> "Charles" <great@sex.edu> wrote in message
> news:uk9bhsf48fvp3c@corp.supernews.com...
> > Hello Reg,
> > Is what you posted similar to what W9INN has done for many years
now?
> > 1. http://www.ab7sl.com/index.html?row1col2=resonactor.html
> > - see also -
> > 2. http://www.ab7sl.com/index.html?row1col2=w9inn.html
> > --
> >
> > 73 / DX de AB7SL - Charles
> > AB7SL - Ham Radio Pages
> > www.ab7sl.com
> >
> >
> >
> >
> > "Reg Edwards" <g4fgq.regp@btinternet.com> wrote in message
> > news:ai1th3dmo1@knossos.btinternet.com...
> > > NEW PROGRAM AVAILABLE
> > >
> > > TWINTRAP.exe 33 kilobytes.
> > >
> > > Two identical plastic insulated wires are close-wound alongside
each
> > for N
> > > turns on a cylindrical former. The two wires are then connected
> > > series-aiding.
> > >
> > > Distributed capacitance between wires resonates with the trap
> > inductance at
> > > the trap frequency.
> > >

> > > Advantages - no high voltage, high current capacitor is needed.
And
> > > trimming wire ends for exact frequency is much easier and neater
than
> > with
> > > coax traps.
> > >
> > > Download TRAPDIP from website below.
> > > ---
> > > ========================
> > > Regards from Reg G4FGQ
> > > Free Radio Design Software
> > > Go to http://www.g4fgq.com
> > > ========================
> > >
> > >
> >
> >
>
>

1896. Re: Stacking anntenas

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-29 04:58:43 UTC
From: Rick Karlquist <richard@karlquist.removethis.com>
Message-ID: <3Y319.683339$352.146718@sccrnsc02>
Source record: 137838

You can get several more db gain by decreasing the spacing
to about 3/16 wl. At least if you can keep losses low enough.

Rick N6RK
"Richard Harrison" <richardharrison@webtv.net> wrote in message
news:4816-3D43ECE5-275@storefull-2398.public.lawson.webtv.net...
> Ivan, 9A3HX wrote:
> I should like to stack 4 antennas for 20m in a fixed direction on
> different masts. What should be the distance between masts?"
>
> This in-line, end-fed, unidirectional, array works well with
> 1/4-wavelength spacing between masts. Such an array is shown by Terman
> in his 1955 edition of "Electronic and Radio Engineering" on page 878.
>
> All elements are fed equal currents, progressively delayed by 90-degrees
> so that energy arriving from coax and space are in-phase in the desired
> direction.
>
> My father-in-law Phil Rand, W1DBM, built an 8-element, 20m array on his
> New Hampshire farm, which he demonstrated for me, Like "Hello
> Australia", and the responses boomed in, and he did this almost every
> day. That array shook the aether with its power. It was written up in
> some ARRL publication, as I remember. This was about 20 years ago or so.
> The coax power division and phasing arrangements were simple and clever
> as I recall.
>
> Best regards, Richard Harrison, KB5WZI
>

1897. Using AV-620 Hy*Gain

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-29 05:31:49 UTC
From: Francis Pinson <F6BLP@wanadoo.fr>
Message-ID: <ai2k00rt1@wanadoo.fr>
Source record: 137839

Who is using AV*620 Hy-Gain vertical antenna ??

What do you think about...

Thanks for giving some feelings

Best 73

Frank

1898. Re: Shielded parallel feedlines

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-29 06:04:58 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <3D44DB0A.8040801@eznec.com>
Source record: 137840

:-) Bill wrote:
>
> I hope I'm asking this question correctly...
> What if you had a situation to where you just had to tack up the
> feedline say, on the side of a house?. Lets use brick as an example.
> And used parallel, properly spaced conductors of RG8X with the shield
> floating. The centre conductor size on the 8x is respectable.
> Would the outer shield provide any 'isolation' (in respect to
> unbalancing the feeder) from the wall, metal window frames, etc?
> -Bill WX4A

If, and only if, the currents on the two coax center conductors are equal and opposite (as they would be if you had a truly balanced tuner on one end, a symmetrical antenna on the other, and the feedline was positioned symmetrically relative to the antenna), then there would be no current on the outside of the shield, and you could place the twin-coax feedline against any object without interaction.

Roy Lewallen, W7EL

1899. Re: Dual band antenna???

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-29 07:20:37 UTC
From: Wayne <w>
Message-ID: <uk9r673coegh50@corp.supernews.com>
Source record: 137841

Some 'techs' think that there is only 2 meters and 440.
yes, we must be tolerable, and try to teach them a few things.

Wayne W6YNE

"Reg Edwards" <g4fgq.regp@btinternet.com> wrote in message
news:ah7fd0$r92$2@venus.btinternet.com...
> > Which two bands?
> ==========
>
> Alan, indeed, a good question.
>
> On receipt of an original careless query of that sort it makes one wonder
> whether it's a waste of time composing a sensible reply on the grounds
that
> the originator would be incapable of understanding it.
>
> But I suppose we must be charitable and press on regardless.
> ----
> Reg, G4FGQ
>
>
>

1900. Re: Placement of egg insulators?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-29 07:30:26 UTC
From: Wayne <w>
Message-ID: <uk9roisjjs8p69@corp.supernews.com>
Source record: 137842

Dacron Polyester?

My, the things they sell nowadays.
Used to sell a fiberglass, covered, guy wire/rope back in the 70's.
And for some purposes, I'd hesitate to uses even that.
Rope may be okay for temporary.
Heck, I'm using some old black cloth type fishing line for two legs of my
dual dipole.
But that I consider to be temporary around here.
And no squirrels (unless you consider Gophers to be in that class, and they
don't climb to rooftops).
For a more permanent, I'd tend to say use something like aircraft cable,
done properly with good clamps and maybe thimbles.
I'd not suggest the rope for use in desert type heat like we get here in
the San Joaquin Valley, or hotter places.

"Crazy George" <munschNO@attglobal.net.SPAM> wrote in message
news:3d36e83f_4@news1.prserv.net...
>
>
> CAM <w5dxp@hotmail.com> wrote in message
> news:3D36A177.6291D56F@hotmail.com...
> > Toni wrote:
> > > We will be installing a GAP Eagle at the local radioclub and some of
> > > us wonder on what is the best placement of the egg insulators on the
> > > supporting wires.
> >
> > Avoid the problem entirely by using UV resistant Dacron Polyester
> > antenna rope available from AES.
>
> Providing you don't have any squirrels around. I had one shred a length
of
> that rope for lining for its nest. Ruined a 100 foot piece of it right in
> the middle which I was using for a halyard. They don't seem to bother
> Phyllistran (or is it Phillystran?).
> --
> Crazy George
> Remove NO and SPAM from return address
>
>
> > --
> > cheers, CAM http://www.qsl.net/w5dxp
> >
> >
>

>
>

1901. Re: Mobile Antennas

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-29 07:35:49 UTC
From: Wayne <w>
Message-ID: <uk9s2m925rv7fe@corp.supernews.com>
Source record: 137843

I'm using a Rat Shack 2 meter magnet mount.
5/8 wave, and it went through a desert sandstorm East of Barstow CA this year with no problems.
Does quite well.
Can't say about 440, as I have not tried it that way yet, though I could test it with my HT.
Price not bad, and easy to find at most rat shacks.

"DPH" <rally2xs@compuserve.com> wrote in message news:ofoejukmj1ubejgmpm8cutpfu8rraapuie@4ax.com...
> On Thu, 18 Jul 2002 06:18:31 -0400, "KC8PMX"
> <kc8pmx@NOSPAMdiamondcs.net> wrote:
>
> >I am looking to replace my mobile antenna and am looking for
> >advice/opinions/suggestions on what you believe is the best mobile antenna.
> >
> >It must meet the basic requirements:
> >
> >*best gain/performance/reception
> >*must be magnet mount of some kind due to having to move it from vehicle to
> >vehicle and
> > cannot drill in either vehicles.
> >*must be at least a 2 meter antenna, but a dual band would be cool.... 6m/2m
> >or
> > 70cm/2m. Even a triband would be cool if the gain was decent at least on
> >6 and 2
> > meters.
> >*Under $125 bucks.
> >
> >Lemme know what your suggestions are. My current J*p Shack antenna has
> >definitely seen better days and needs replacement.
>
> Can't say about the price, because its been some time since I bought
> mine (maybe 5 years?) but the Larsen dual band 2m / 440 antenna on a
> Larsen mag mount, right in the center of the roof, is a really good
> working antenna. Built like a tank, it has a magnet that is good for
> really high speeds, too, so if you are on I-10 in Arizona, where the
> limit is 75 and everyone goes faster-than-that, it still won't blow
> off even in a stiff headwind. Well, usually, anyway! <G>
>

> I've been using Larsen since I was a 2-way radio tech some 22 years
> ago, and converted to Larsen from Antenna Specialists because they
> _did_ blow off the top of my car, and have found them to always work
> very well.
>
> Dave Head
> K8DH
>

1902. Re: Shielded parallel feedlines

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-29 09:31:22 UTC
From: 'Doc <w5lz@icok.net>
Message-ID: <3D450B59.3D2D2301@icok.net>
Source record: 137844

Chris,
The only way you stand a chance of her not noticing
the ladder line is to paint your yard paisely. If you
live over that, the ladder line won't be any problem.
'Doc

1903. Re: Shielded parallel feedlines

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-29 09:54:19 UTC
From: Reg Edwards <g4fgq.regp@btinternet.com>
Message-ID: <ai33ca$7l$1@venus.btinternet.com>
Source record: 137845

When you have converted to two parallel lengths of coax for a few inches why bother drilling two holes when one relatively small hole will convey both coax lines.

It matters not a jot how far apart the coax lines are.

So we are now back to square one. Just bring the two feedline wires close together and bring them indoors through one modest hole.

Reg G4FGQ

1904. Re: Steel flues resonating with V dipole

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-29 10:20:46 UTC
From: cprstn54zz@att.net
Message-ID: <3d45164b.364169234@news-server.optonline.net>
Source record: 137846

On Sun, 28 Jul 2002 18:22:55 -0500 (CDT), richardharrison@webtv.net
(Richard Harrison) wrote:
>The method of hanging a wire or wires from the upper levels of grounded
>structures to detune them is well known and used by broadfcast stations
>finding things like water towers distorting their radiation patterns.
>They hang a wire or wires from them as I described and the problem is
>usually fixed. It`s gone. The pattern is as designed or can be if the
>antenna array is adjusted as designed.

Inasmuch as I do not grock why this works I need to ask a question.
Does the added wire have hang vertically near the grounded structure?
Or can it be connected to it at the top and run perpendicularly?

Ken KC2JDY

Ken
(to reply via email
remove "zz" from address)

1905. Re: Steel flues resonating with V dipole

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-29 13:13:55 UTC
From: richardharrison@webtv.net
Message-ID: <16628-3D453F93-46@storefull-2393.public.lawson.webtv.net>
Source record: 137847

Ken, KC2JDY wrote:
"Does the wire hang vertically near the grounded structure?"

Yes.

The grounded structure`s resonance comes from balanced capacitive and inductive reactances at the operating frequency. Having no net reactance to oppose current, a conducting structure may have a large induced current in the field of a transmitter. More so when the polarizations are aligned, that is to say when the structure is parallel with the transmitting antenna..

Adding a parallel wire or wires connected with the structure at its top produces induced currents in both conductors flowing up or down simultaneously. These currents butt heads as they continue their flow from one conductor to the other. But they can`t make a complete loop. The suspended wire is left insulated from the earth at its bottom.

Currents flowing in opposite directions in the two conducting paths tend to cancel each other`s external fields.

Try it for youself. You might use a 1/4-wave short-circuited stub (300-ohm twinlead?) with only one of its open-end wires grounded. Put it in a parallel sense with an r-f field producing antenna.. Its effect is the same as that of an insulator in the field.

Best regards, Richard Harrison, KB5WZI

1906. Re: Wanted: Datasheet Antron99

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-29 13:56:48 UTC
From: Tom <truckdrivingman@hotmail.com>
Message-ID: <ai3hj2$u1g$02$1@news.t-online.com>
Source record: 137848
Cross-posted to: alt.ham-radio.hf,rec.radio.amateur.antenna

"lousherry" <lousherry@lanset.com> schrieb im Newsbeitrag
news:3D44A0C4.4040404@lanset.com...
> Tom
> Sorry my scanner is out butAccording to the fact sheet at 29.456 cut 21
> inches off the top section to leave 51 inches remaining. At 29.528 cut
> 22 inches off the top section leaving 50 inches remaining.
> Lou KB6FFT
>

tnx Lou,but I got it already,the whole sheet.

And also mni tnx to all who made efforts to help me

73
Tom

1907. Re: Stacking anntenas

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-29 15:02:09 UTC
From: richardharrison@webtv.net
Message-ID: <10518-3D4558F1-25@storefull-2397.public.lawson.webtv.net>
Source record: 137850

Rick, N6RK wrote:
"You can get several more db gain by decreasing the spacing to about
3/16 wl."

I don`t reject that assertion without trial. But, I wonder why Terman used 1/16 wl more in his example? The smaller the array, the more the directivity?

The same total power is radiated in the usual case. Only the directivity changes with configuration and current distribution. The picker gets to chose the pattern shape if he knows what he is doing.

Best regards, Richard Harrison, KB5WZI

1908. Re: How to suppress indoor RFI ?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-29 15:14:33 UTC
From: Dan/W4NTI <w4nti@mindspringnospam.com>
Message-ID: <ai3m41$1tl$1@slb3.atl.mindspring.net>
Source record: 137849

Then it would be

QRMn

Dan/W4NTI

"J. Harvey" <JM002.Harvey_ANTI*SPAM_@Sympatico.ca> wrote in message
news:GhU09.293$tY5.67487@news20.bellglobal.com...
> "Dan/W4NTI"
> > OK...for the purists out there...lets KISS.
> > QRN= STATIC
> > QRM= MANMADE INTERFERENCE
>
> What if it is manmade static that is causing the interference ?
>
> :-)
>
>
>
>

1909. Re: white coax?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-29 15:18:05 UTC
From: BillS <BillS@austin.rr.com>
Message-ID: <3D455CAD.4738076D@austin.rr.com>
Source record: 137852

Most any Marine Supply store will have 52ohm coax in white. West Marine sells
it mail order.
BillS

"Mark E. Sunderlin (Dr. Megabyte)" wrote:

> Looking to make my lead in less visible against my white house, does anyone
> make coax with the outer shield white rather than black?
>
> --
> Mark Sunderlin, a.k.a. Dr. Megabyte KD4HRI Tuba Playing Technocrat in
> Winchester, VA
> "The number of job openings for Philosopher-Kings is limited in the early
> 21st century" - Dr. Megabyte

1910. FS: Bristol Wrench Sets

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-29 15:24:56 UTC
From: jonweiner@aol.com
Message-ID: <20020729112456.02999.00000041@mb-fo.aol.com>
Source record: 137851

10 PIECE BRISTOL SPLINE WRENCH SETS FOR COLLINS & HALLICRAFTERS. I have for sale the original hard to find 10 piece Bristol spline wrench sets. These are "L" shaped, made in the USA, and come in a fitted vinyl pouch. Includes all necessary sizes for Collins (even the tiny size for the 75A-4 main tuning knob), Hallicrafters, Johnson and others. Price is $20. per set postpaid USA, $22. postpaid
World-Wide.

1911. Re: Steel flues resonating with V dipole

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-29 15:40:17 UTC
From: cprstn54zz@att.net
Message-ID: <3d4561db.18938125@news-server.optonline.net>
Source record: 137853

On Sun, 28 Jul 2002 18:22:55 -0500 (CDT), richardharrison@webtv.net
(Richard Harrison) wrote:
>The method of hanging a wire or wires from the upper levels of grounded
>structures to detune them is well known and used by broadfcast stations
>finding things like water towers distorting their radiation patterns.
>They hang a wire or wires from them as I described and the problem is
>usually fixed. It`s gone. The pattern is as designed or can be if the
>antenna array is adjusted as designed.

Inasmuch as I do not grock why this works I need to ask a question.
Does the added wire have hang vertically near the grounded structure?
Or can it be connected to it at the top and run perpendicularly?

Ken KC2JDY

Ken
(to reply via email
remove "zz" from address)

1912. Re: Shielded parallel feedlines

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-29 15:43:22 UTC
From: richardharrison@webtv.net
Message-ID: <24619-3D45629A-29@storefull-2394.public.lawson.webtv.net>
Source record: 137854

Bill wrote:
"Let`s use brick as an example. And used parallel, properly spaced conductors of RG8X with the shield floating."

You have a "balanced" transmission line of some impedance depending on the space between the lengths of RG8X and their outside conductor diameter.

"Floating" indicates that onlty he inner coax conductors are used to make transmitter and load connections. Coax capacitance and inductance couples inside surfaces. These are isolated from the outside surface of the coax by skin-effect except at the ends of the floating coax where the current induced on the inside of the shield can make a U-turn to the outside of the shield, and vice versa. This will allow the outside of the shield to act as the transmission line.

There may be instances of short-length coax where the breakdown voltage of the coax is helpful.

Best regards, Richard Harrison, KB5WZI

1913. Re: I need a simple antenna for 160 m??

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-29 16:24:34 UTC
From: raiar@bbs.galilei.com.nospam
Message-ID: <3d456a05.763430484@news.galilei.com>
Source record: 137855

Hi StarGazer

Check out my Linear Loaded Inverted Vee for 160 on my web page. It works better than anything else I have tried at my location. Other's have used it, some with results equivalent to mine, others with results not very favorable at all. So I guess it's very location dependent, referring to the ground conductivity it's over. My backyard over years of burying radials is now almost solid metal, hi hi.....

http://archimedes.galilei.com/raiar

Look for the Amateur pages and then the antenna. It has dimensions, pictures and a hand drawing.

TTUL
Gary

1914. Re: Steel flues resonating with V dipole

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-29 16:48:42 UTC
From: richardharrison@webtv.net
Message-ID: <6699-3D4571EA-8@storefull-2396.public.lawson.webtv.net>
Source record: 137856

Ken, KC2JDY wrote:
"Or can it be connected to it at the top and run perpendicularly?"

The perpendicular wire won`t have a current nearly identical to that it must cancel to effectively eliminate the re-rediated field.
(NO)

Best regards, Richard Harrison, KB5WZI

1915. Re: SWR ?? What to cut for?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-29 18:09:21 UTC
From: nm5k@wt.net
Message-ID: <25eb70d7.0207291009.4f1742f1@posting.google.com>
Source record: 137857

StarGazer <pti@capnet.com> wrote in message news:<3D44A059.918FFC77@capnet.com>...
> I have a 80 and 40 dipole.
>
> No tuner.
>
> If I use CW and SSB equally would it be better to cut if favoring
> the CW portion because of the higher duty cycle and higher average
> power of CW?

Hard to say really. I don't like to run a solid state rig over 2:1
SWR. So I pretty much have to use a tuner if I want the whole band.
"80 or 40". For me, I prefer to tune so the SWR is below 2:1 in the
fone band. Mainly because I have a larger chance of using an amp
there. I prefer not to use a tuner when running high power. I'll stick
the tuner inline on the cw band. I almost never use the amp on cw, so
I don't really mind the tuner. The loss is fairly unnoticable.
If I had no tuner, I would adjust the antenna for the portion of the
band used at the time. IE: cut the dipoles for the fone band, but have
short wires with gator clips to add on the ends when I want to run cw.
The short wires at the end can just hang, or whatever. Not critical.
There is little current at that point. Of course if you do this, you
must have the ends tied off low enough to reach. You might want to
find a tuner somewhere. Even a small L-net tuner would do the job for
100w use. The small mfj random wire tuner will work fine in most
cases. You don't have to use a high $$$ tuner, although the losses
usually are a bit less with the better coils, etc. As far as a tube
rig, if it will load within the normal loading range, I consider it
good enough. No extra tuner needed. That can extend to 3:1 limits or
better in many cases. If the loading is outside the range, you need a
tuner. MK

1916. Re: Shielded parallel feedlines

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-29 18:17:06 UTC
From: nm5k@wt.net
Message-ID: <25eb70d7.0207291017.74998e88@posting.google.com>
Source record: 137858

"Reg Edwards" <g4fgq.regp@btinternet.com> wrote in message
news:<ai33ca$7l$1@venus.btinternet.com>...
> When you have converted to two parallel lengths of coax for a few inches why
> bother drilling two holes when one relatively small hole will convey both
> coax lines.
>
> It matters not a jot how far apart the coax lines are.
>
> So we are now back to square one. Just bring the two feedline wires close
> together and bring them indoors through one modest hole.
> ---
> Reg G4FGQ

I've run twin lead pinched between a nearly closed all metal window
sill and had no problems.
I agree, it's really not that critical usually. Or didn't seem to be
to me. I think the main thing is to be at right angles so the amount
of metal next to each conductor is equal and perpendicular. That helps
keep the balance. MK

1917. Re: How Many Beads Makes a Choke?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-29 19:04:10 UTC
From: N4LQ <N4LQ@igLou.com>
Message-ID: <3d44400b$1_1@news.iglou.com>
Source record: 137906

What happens to all that "choked" RF?

One time I slid some beads over the wires of a dipole while experimenting with an idea, an adjustable multiband dipole. I applied 100 watts and the beads go hot enough to melt the insulation of the antenna wire.

--
Steve Ellington N4LQ.
"'Doc" <w5lz@icok.net> wrote in message news:3D443658.9C46BBD@icok.net...
> Brian,
> Personally, I think it's more a matter of
> 'black art', or 'dumb luck', than meaningful
> predictions, too many variables. So the
> 'right' answer is, "just enough plus one more".
> And 'enough' is a whole number between zero
> and infinity.
> 'Doc

1918. Re: Stagnating antenna designs

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-29 19:36:32 UTC
From: aunwin@fgi.net
Message-ID: <c4becf19.0207291136.52cbcf55@posting.google.com>
Source record: 137859

"J. McLaughlin" <JCM@Power-Net.Net> wrote in message
news:<uk9dnitde7tc4f@corp.supernews.com>...
> Art H. Unwin, of Bloomington, IL, has two US patents in the PTO's data
> base.
>
> 5,625,367 Variable capacitance antenna for multiband reception and
> transmission was issued April 29, 1997 on an application filed on March
> 20, 1995.
>
> 5,790,081 Constant impedance matching system was issued on August 4,
> 1998 based on an application filed on January 30, 1996.
>
> The PTO's data base only provides the means to search for specific
> inventors within patents issued since about 1976.
>
> Mac N8TT

Mac, I was unaware your e mails were also being posted here.
The reason I was not forthcomming with patent details e.t.c.
is they are a source of embarasement to me.
What I originally submitted bore little resemblace to what came out
as many on this group can attest to.
Patents of mine prior to these have no relevance to the subject at hand.

1919. Re: Stagnating antenna designs

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-29 20:49:04 UTC
From: aunwin@fgi.net
Message-ID: <c4becf19.0207291249.67578bf0@posting.google.com>
Source record: 137860

nm5k@wt.net (Mark Keith) wrote in message
news:<25eb70d7.0207272039.66065601@posting.google.com>...
> aunwin@fgi.net (Art Unwin KB9MZ) wrote in message
> >
> > You make my point so clearly. You have dismissed the antenna outright
> > without looking for possible advantages and do a diservice to ham
> > radio without giving it a shot PROBABLY because it is not in an arrl
> > ANTENNA BOOK , AND YOU ARE SO...SO WRONG. I have used this antenna for
> > years and I know it works and want to share it with all.
>
> Have you measured the gain when used at frequencies far off from the
> 1/2 wave dipole length?
>
> I also want
> > to share with new amateurs that experimenting with fishing poles with
> > a conductive surface is so much cheaper than buying telescopic tubing
> > unfortunately these things are passed by unless utterred by a 'known'
> > person or it is a book. I would love to hear from a novice ham who has
> > spread his wings by making a log periodic using poles with an aluminum
> > surface
> > instead of that shown in the antenna book made of wire and string to
> > achieve lightness.
>
> Oh, I have no problems with such foil methods. Whatever works...The
> only thing with foil is trying to get good connections. And then keep
> them with the effects of wx. Can't solder to it too well. I have done
> things like make vhf yagis from coathanger wire...
>
> > So do yourself a favour, try it a use a computor program to check
> > it out or maybe Reg will modify his 'loop' programs to prove my point
> > so we can review the overall subject of 'stagnating antenna designs'
> > rather than presenting a 'off the cuff' notion without thinking it
> > out. If it does not have merit you have the option of saying 'I told
> > you so' or conversely you can rate the merit of the antenna
> > advantages/disadvantages to the enjoyment of all.
>
> That would be no problem to model. Or at least I don't think it would
> be...
> I'm willing to give it a shot. But my comments were not without
> thought.
> I still am not sure how you are going to couple power to a radiator
> that shows a high impedance to the feedline when you have the loop
> tuned and showing a fairly low impedance. IE: 50 ohm coax feeding a
> small tunable loop parallel with a 1/2 wave dipole at a certain freq.

> Lets say the dipole is cut for 40m. Now go to 20m, and tune the loop
> for 20m use. Seems to me if it shows a low impedance to the line, and
> the dipole show a high impedance, such as a full wavelength would, the
> loop would accept the majority of the power. And being the loop would
> not be too efficient, I don't really see how the performance on 20m,
> would equal or exceed the performance on 40m, where it would naturally
> be good being the dipole is resonant. If I'm missing something here,
> maybe someone will jump in... Am I describing the antenna correctly?
> MK

Mark,
The antenna described was talked about to emphasize what the title
stated.
Instead of auguing the point on this antenna which is presenting a
problem to many. since you say you have made many anttenas have you
ever thought about two reflectors? If you go by what is said in
theArrl books it would say that this would lower the impedance which
gives cause who go solely by the book not to attempt it.were as the
reverse istrue and by now we should have many commercial antennas with
two reflectors. No problem withe good job that the book does
but it is still written that way because of what Reg would call
regurgitation.
If it is written every place it then becomes iron clad fact.
Please dont feel that you have to defend yourself this is not
personal.
Take comfort in one post where it was stated that we reject innovation
that does not come up to the mark, you are in good company.
No offense intended
Regards
Art kB9MZ

1920. Re: 220 MHz swr/watt meter

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-29 21:17:54 UTC
From: Bob Miller <bamiller@texas.net>
Message-ID: <Fa9FPUmeID823UJjQr57ulRB81Y0@4ax.com>
Source record: 137861

"JEEPMON" <JEEPMON@HOTMAIL.COM> wrote:

>Does anyone know of a meter (cheaper than a bird) that will accurately read
>the forward and reflected power of a 220 MHz radio <50 watts? I really like
>the Diamond meters but when reading the literature on the SX-40C it says
>that 220MHz frequencies use a 'correction factor' what is that? I was told
>by another ham that even the meters that cover 220MHz frequencies are not
>accurate that I must purchase a Bird meter. Is this true? Does anyone have
>any experience with swr/watt meters for these frequencies? How about the
>yaesu meters? I did find the MFJ makes a 220MHz meter but I have heard
>nothing but terrible things about MFJ and their quality!
>
>Please help
>KC9BNY
>73's
>

The cross-needle watt meter in my MFJ antenna tuner has virtually the same
accuracy as a Bird 43 meter that is in-line at the same time. The MFJ meter also
"reads" faster and quicker than the Bird -- I don't have to pull out my paper
Bird chart and line up the forward & reverse to get the damned SWR. The MFJ
shows it at a glance. I'd recommend the stand-alone MFJ meters to anybody.

Don't believe everything you hear :-)

Bob
k5qwg

1921. Re: Stagnating antenna designs

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-29 21:25:03 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <qubbkuocff3j8a81sio5godra9pkil5ei7@4ax.com>
Source record: 137862

On 29 Jul 2002 13:49:04 -0700, aunwin@fgi.net (Art Unwin KB9MZ) wrote:

>Take comfort in one post where it was stated that we reject innovation
>that does not come up to the mark,

Hi Art,

Actually I put it as we (society, not necessarily this group) rejects
what does not work which by definition is poor innovation.

73's
Richard Clark, KB7QHC

1922. Anyone use the SteppIR adjustable Yagi

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-29 21:30:34 UTC
From: "R. Scott" <washingtonham@yahoo.com>
Message-ID: <3D45B3FA.34E9C2D7@yahoo.com>
Source record: 137863

Looks interesting except price. Wonder if anyone has one and what if anything you think. Worked a guy this weekend and he fawned over it. But his home page is a big ad for the company so I figured he was bias'd

http://www.steppir.com/

Comments (besides price of 1075.00)
Wondered when someone would do an antenna like this.

Rick N7HJ

1923. Re: Anyone use the SteppIR adjustable Yagi

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-29 22:23:44 UTC
From: me@nowwhere.com
Message-ID: <3D45C06F.D3B7A7AD@swbell.net>
Source record: 137864

"R. Scott" wrote:

> Looks interesting except price. Wonder if anyone has one and what if
> anything you think. Worked a guy this weekend and he fawned over it. But
> his home page is a big ad for the company so I figured he was bias'd
>
> http://www.steppir.com/
>
> Comments (besides price of 1075.00)
> Wondered when someone would do an antenna like this.
>
> Rick N7HJ

have had one for 3 months. works like a fire hose on
17m and up. works pretty good on 20m.

try:

http://groups.yahoo.com/group/SteppIR/

larry
kd5foy

1924. Re: Anyone use the SteppIR adjustable Yagi

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-29 23:47:46 UTC
From: "R. Scott" <washingtonham@yahoo.com>
Message-ID: <3D45D49D.9327AB7F@yahoo.com>
Source record: 137865

me@nowwhere.com wrote:
>
> "R. Scott" wrote:
>
> > Looks interesting except price. Wonder if anyone has one and what if
> > anything you think. Worked a guy this weekend and he fawned over it. But
> > his home page is a big ad for the company so I figured he was bias'd
> >
> > http://www.steppir.com/
> >
> > Comments (besides price of 1075.00)
> > Wondered when someone would do an antenna like this.
> >
> > Rick N7HJ
>
> have had one for 3 months. works like a fire hose on
> 17m and up. works pretty good on 20m.
>
> try:
>
> http://groups.yahoo.com/group/SteppIR/
>
> larry
> kd5foy

Thanks, Just signed up, will lurk and see.

Scotty N7HJ

1925. Re: Stagnating antenna designs

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-30 00:08:43 UTC
From: "J. McLaughlin" <JCM@Power-Net.Net>
Message-ID: <ukbm7s41ij9121@corp.supernews.com>
Source record: 137866

Dear Art and Group:
I was only trying to provide more detail about the type of antenna
being discussed. Patents tend to be more lucid than what is convenient
to describe here. Patents also usually have drawings that help
communicate.
It is a remarkable achievement that you were able to prosecute the
two patents by yourself. I can not understand, but then there is no
need for me to understand, your expressed feelings about the patents.
Very few patents issue containing just what was in the initial
application.
Perhaps now that the patents have been identified, some investor
will arrive to help move forward the inventions.
Warm regards and keep inventing,
Mac N8TT

--
J. Mc Laughlin - Michigan USA
Home: JCM@Power-Net.Net
"Art Unwin KB9MZ" <aunwin@fgi.net> wrote in message
news:c4becf19.0207291136.52cbcf55@posting.google.com...
> "J. McLaughlin" <JCM@Power-Net.Net> wrote in message
news:<uk9dnitde7tc4f@corp.supernews.com>...
> > Art H. Unwin, of Bloomington, IL, has two US patents in the PTO's
data
> > base.
> >
> > 5,625,367 Variable capacitance antenna for multiband reception and
> > transmission was issued April 29, 1997 on an application filed on
March
> > 20, 1995.
> >
> > 5,790,081 Constant impedance matching system was issued on August 4,
> > 1998 based on an application filed on January 30, 1996.
> >
> > The PTO's data base only provides the means to search for specific
> > inventors within patents issued since about 1976.
> >
> > Mac N8TT
>
> Mac, I was unaware your e mails were also being posted here.
> The reason I was not forthcomming with patent details e.t.c.
> is they are a source of embarasement to me.
> What I originally submitted bore little resemblace to what came out
> as many on this group can attest to.

> Patents of mine prior to these have no relevance to the subject at hand.

1926. Re: Shielded parallel feedlines

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-30 00:18:43 UTC
From: Reg Edwards <g4fgq.regp@btinternet.com>
Message-ID: <ai4m12bvg1@venus.btinternet.com>
Source record: 137867

Hi Mark, the amount of unbalance introduced by bringing open-wire indoors through a metal window frame at an angle would be negligible in comparison with what occurs due to natural causes in an ordinary well-constructed antenna system.

But it might make a good subject for a 2-page magazine article by PhD. ;o)

Reg G4FGQ

1927. Re: Stagnating antenna designs

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-30 00:23:18 UTC
From: richardharrison@webtv.net
Message-ID: <6699-3D45DC76-40@storefull-2396.public.lawson.webtv.net>
Source record: 137868

Art Unwin, KB9MZ wrote:
"---by now we should have many commercial antennas with two reflectors."

Is that the best use we can make of materials?

Consider the yagi. With only one reflector we can get a good front-to-back ratio. Another reflector in the plane of the radiator and of the first reflector, but to its rear, doesn`t have much energy to work with. The energy is already turned around by the first reflector. A director using about the same material as an additional reflector has a lot more energy to act upon. The logic of a single reflector and multiple directors seems obvious and sound to me.

I have no interest in the status quo.

Best regards, Richard Harrison, KB5WZI

1928. Re: Stagnating antenna designs

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-30 01:01:13 UTC
From: k3bu@aol.com
Message-ID: <20020729210113.19365.00000241@mb-ch.aol.com>
Source record: 137769

>
>Is that the best use we can make of materials?
>
>Consider the yagi. With only one reflector we can get a good
>front-to-back ratio. Another reflector in the plane of the radiator and
>of the first reflector, but to its rear, doesn`t have much energy to
>work with. The energy is already turned around by the first reflector. A
>director using about the same material as an additional reflector has a
>lot more energy to act upon. The logic of a single reflector and
>multiple directors seems obvious and sound to me.
>
>I have no interest in the status quo.
>
>Best regards, Richard Harrison, KB5WZI
>
>
>

Theoretically?
Practically, I have also found second reflector to be beneficial (back in late 70ies). At the shorter spacing it gave me better F/B and more gain than I could have achieved with additional director needing spacing about 3 times wider. (Saved boom aluminum.) This was "discovered" by experimentation with real hardware models on 2m antenna test range and with Quad-Yagi combination of elements in my Razors. (Not patented, not commercially manufactured, few built and creamed contest records.)
Pictures can be seen at
http://members.aol.com/ve3bmv/Razors.htm
New software modeling could prove me "wrong" but I can take it :-)

Yuri, K3BU, VE3BMV, VE1BY

1929. Re: Stagnating antenna designs

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-30 01:26:42 UTC
From: richardharrison@webtv.net
Message-ID: <16306-3D45EB52-2@storefull-2395.public.lawson.webtv.net>
Source record: 137770

I suggested a director might be a better use for more material than using it for a second reflector.

That was based on upping the gain. The dipole with a reflector might give 5 dbd gain. Adding a director might give you 2 db more gain (no guarantees). An additional reflector is likely to give less gain improvement to a dipole with a reflector, as it has little energy to work with.

There are other factors. Front-to-back ratio might be improved using two reflectors, and bandwidth might be better. The dipole with one parasitic reflector has a bandwidth of about 30%. A 3-element yagi (reflector, radiator, director) typically has a bandwidth of only about 6%. Additionl reflectors are unlikely to do much and that includes narrowing the bandwidth.

Evidence of the bandwidth-friendly status of multiple reflectors is probably seen in the TV antennas on British roofs. Many of these seem to have 3 horizontal reflecting rods in a vertical plane if my memory is correct.

A lot has to do with the use that is to be made of the antenna.

Best regards, Richard Harrison, KB5WZI

1930. Re: Stagnating antenna designs

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-30 02:29:46 UTC
From: richardharrison@webtv.net
Message-ID: <16303-3D45FA1A-112@storefull-2395.public.lawson.webtv.net>
Source record: 137771

Yuri, K3BU wrote:
"Practically, I have also found second reflector to be beneficial (back in late 70ies), at the shorter spacing it gave me better F/B and more gain than I could have achieved with additional director needing about 3 times wider."

Can`t argue with valid test data and competitive success. I would second Art Unwin`s motion that multiple reflector antennas should be commercially available.

Yuri`s pictures at>
http://members.aol.com/ve3bmb/Razors.htm

These are very nice and worth a look.

Best regards, Richard Harrison, KB5WZI

1931. Re: Stagnating antenna designs

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-30 02:46:02 UTC
From: aunwin@fgi.net
Message-ID: <c4becf19.0207291846.653a6f41@posting.google.com>
Source record: 137772

Richard Clark <kb7qhc@attbi.com> wrote in message
news:<5206kukv2d11r6v7q8ahh2v7vkl19sor9v@4ax.com>...
> On 26 Jul 2002 20:30:55 -0700, aunwin@fgi.net (Art Unwin KB9MZ) wrote:
>
> >Richard Clark <kb7qhc@attbi.com> wrote in message
news:<bta3ku0bs0pj175bt7tkdcmo074qafamae@4ax.com>...
> >> On 25 Jul 2002 20:57:51 -0700, aunwin@fgi.net (Art Unwin KB9MZ) wrote:
> >> >we have a capacitor 'IC' which can be fixed or a variable form.
> >>
> >> This begs the observation, if IC is fixed, that antenna is no longer a
> >> multiband design - clearly this is not your intention so why mention
> >> it?
> >Going back to my initial post where I compare to a zepp which is
> >usually made for a fixed frequency, it would hardly be fair to compare
> >with a design that has a VARIABLE capacitor. There is no snake oil
> >involved here.
>
> Hi Art,
>
> Going back to your initial post has nothing to do with multiband
> requirements driving the necessity of a variable capacitor for the
> design you offer and the specifications you claim.
>
Art, do you realize how hard it is to follow your logic when you
> directly contradict yourself? The two lines above were both authored
> by you.
>
>
> 73's
> Richard Clark, KB7QHC

O. K. Richard it is time for me to eat crow.
! I apologise to all that I have not respoded to, I have only just
realised
that responses are not listed at the end but instead are broken up
into more thread so I apologise to those I may have offended.
2 My focus was on the continuing reprinting of the older wire antennas
for cheapness and then allowing my antenna to dominate the thread
rather than discussion of the title.
3 I accept the admonitions of Roy W7EL as the normal correct ways of
doing things,and I continue to respect his wisdom
4 Believe it or not I have difficulty in accepting why this group has
a problem with my posts. If I knew how to correct it I would but for
some reason I have lost any good communications skills that I may have

had. I certainly recognise that I am not able to follow form and write a paper,posters have certainly made that clear to me but I am unable to correct the problem at the moment.
5 Yes I did speak of this antenna years ago on this thread and I not surprisingly feel it has merit. I also am stubborn continually place myself in a position of scorn. Maybe after today I can reconcile myself that I did the best I could with a product that failed to meet standards.
I apologise for any inconvenience or emotionalism that I have inposed on the readers and will try harder if and when I enter later threads.
With apologise to all
Art Unwin KB9MZ.
I will now read other comments that I may not have read.

1932. Re: Stagnating antenna designs

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-30 02:47:54 UTC
From: richardharrison@webtv.net
Message-ID: <16305-3D45FE5A-18@storefull-2395.public.lawson.webtv.net>
Source record: 137773

I`ll try again on Yuri`s URL>
http://members.aol.com/ve3bmv/Razors.htm

I am still a lousy typist and data machines don`t tolerate my mistakes.

Best regards, Richard Harrison, KB5WZI

1933. Re: How to suppress indoor RFI ?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-30 03:33:54 UTC
From: tmgroatatpeakpeakdotcom
Message-ID: <3d4606ec.46630351@news.peakpeak.com>
Source record: 137774

On 28 Jul 2002 08:30:38 -0700, lombryt@hotmail.com (Thierry) wrote:

>Correct. I discovered that also but it is not enough.
>I think shielded power lines will be the best solution. I will try to
>find that (I even didn't know that such cable existed for private
>usage...).
>

Shielded cords may not be worth the trouble and expense. If the wiring of your house is typical it's "non-metallic sheathed cable", commonly known by the Romex brand name. This means the shielding ends where the plug meets the wall outlet, in close proximity to your receiver and all its wiring.

OTOH, if your wiring is in metallic conduit then the shielding extends back to the circuit breaker panel and will provide better isolation. But conduit is more expensive, so it usually isn't used unless required by code (for residences more than three stories high, in most jurisdictions).

--KR0U

-- Tim Groat

To reply by e-mail, change the quoted words to
the corresponding punctuation marks.

1934. Re: Anyone use the SteppIR adjustable Yagi

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-30 04:36:37 UTC
From: "H. Adam Stevens" <solo@totalaccess.net>
Message-ID: <ukc61a6hep0a8b@corp.supernews.com>
Source record: 137775

I sure like my SteppIR. I have the 3 element with the 6 meter bit. It's
still on a short pole as the tower isn't up yet.
As for the price, I think it's comparable to log periodic dipole arrays and
anything else that can approach the performance.
It's a simpler (at most 4 elements on 6 meters), lighter (lower tower, rotor
costs), stronger (100 MPH),
antenna than anything comparably priced that comes close in performance. The
VSWR is always 1:1.
I think it's correctly engineered and well executed. It does tricks nothing
else can.
I sure hope lightning doesn't find it attractive.
H.
NQ5H

<me@nowwhere.com> wrote in message news:3D45C06F.D3B7A7AD@swbell.net...
>
>
> "R. Scott" wrote:
>
> > Looks interesting except price. Wonder if anyone has one and what if
> > anything you think. Worked a guy this weekend and he fawned over it. But
> > his home page is a big ad for the company so I figured he was bias'd
> >
> > http://www.steppir.com/
> >
> > Comments (besides price of 1075.00)
> > Wondered when someone would do an antenna like this.
> >
> > Rick N7HJ
>
> have had one for 3 months. works like a fire hose on
> 17m and up. works pretty good on 20m.
>
> try:
>
> http://groups.yahoo.com/group/SteppIR/
>
> larry
> kd5foy
>

1935. Re: j-pole

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-30 07:18:24 UTC
From: Wayne <w>
Message-ID: <ukcfe0ggnnse7b@corp.supernews.com>
Source record: 137776

The only disadvantages I can think of are these.

A: a bit on the heavy side.
B: will discolor eventually to most likely green over dark brown.
C: requires good soldering skill, and must be made to exact specifications.

Advantages.

A: has good gain and is fairly easy to construct.
B: can use salvaged copper.
C: parts readily available, most areas.
D: lower cost than aluminum, unless you can salvage the materials from
something else.

Aluminum.
Lighter weight
also easy to construct, but difficult to solder

Either should last long and work well.

Can be built in dual or tri band types as well.
I have seen many web sites with designs for this one.
Seems to be some variance in feed method from one site to another, though
the majority feed center conductor of coax cable to taller element.
This one may be worth a couple of tests to see what if any difference will
come up.
Needs SWR meter or antenna analyzer, and a field strength meter.
to be properly valid, all tests must be in the same locations with the same
power used.

Nobody seems to come up with true gain factor for this type.
Is it that nobody actually knows?

"JEEPMON" <JEEPMON@HOTMAIL.COM> wrote in message
news:TsJZ8.582213$cQ3.54786@sccrnsc01...
> What are the disadvantages of a j-pole antenna made of copper tubing? Is
any
> ground plane needed. If not why not? What are the best books to read or
> websites about j-pole antennas, more specifically cooper tubing j-poles.
How
> would an vertical antenna (commercially made from Diamond, Comet, Hustler,
> Hy-Gain, ect.)with ground radials compare to a j-pole antenna for 6m, 2m,
> 220MHz, 440MHz, and 1.2 GHz? What would most of you use?
>
>

1936. Re: j-pole

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-30 07:19:16 UTC
From: Wayne <w>
Message-ID: <ukcffmi2o8ng8c@corp.supernews.com>
Source record: 137777

Brilliant deduction, Watson... <G>

"ZOOM" <robert931@sympatico.ca> wrote in message
news:8OJZ8.15105$Db.955652@news20.bellglobal.com...
> Put this in a search engine and come up with all sorts of sites: "JPOLE"
> They work but they are not a beam!
>
> "JEEPMON" <JEEPMON@HOTMAIL.COM> wrote in message
> news:TsJZ8.582213$cQ3.54786@sccrnsc01...
> > What are the disadvantages of a j-pole antenna made of copper tubing? Is
> any
> > ground plane needed. If not why not? What are the best books to read or
> > websites about j-pole antennas, more specifically cooper tubing j-poles.
> How
> > would an vertical antenna (commercially made from Diamond, Comet,
Hustler,
> > Hy-Gain, ect.)with ground radials compare to a j-pole antenna for 6m,
2m,
> > 220MHz, 440MHz, and 1.2 GHz? What would most of you use?
> >
> >
>
>

1937. Re: j-pole

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-30 08:49:26 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <3D465316.7070903@eznec.com>
Source record: 137778

Wayne wrote:
>. . .

> Nobody seems to come up with true gain factor for this type.
> Is it that nobody actually knows?

>. . .

A J-pole has just about exactly the same gain and pattern as a ground plane or a vertical dipole. In absolute terms for an antenna in free space, this is about 2.15 dBi.

For any of these antenna types, current can be induced on the feedline by coupling to the antenna, which can skew the pattern somewhat. The amount of induced current depends on feedline length and placement, but it can be minimized if necessary with a couple of current baluns, one at the feedpoint and one about a quarter wavelength below.

Now you can count yourself among the many people who know. Tell your friends.

Roy Lewallen, W7EL

1938. Hamstick With Radial

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-30 11:20:29 UTC
From: marvin rosen <raghead@worldnet.att.net>
Message-ID: <1Eu19.10657$pg2.873331@bgtnsc05-news.ops.worldnet.att.net>
Source record: 137779

Possible idea for an 80-10 mtr vertical/horizontal ant. One 75 mtr hamstick
(7' or longer).
One lead of ladderline connected to the vertical hamstick. The other lead of
the
ladderline connected to 65' of horizontal wire. The other two leads of the
ladderline
line would go to a balun and/or tuner. Does this idea have any merit?

Outgoing mail is certified Virus Free.
Checked by AVG anti-virus system (http://www.grisoft.com).
Version: 6.0.375 / Virus Database: 210 - Release Date: 7/10/02

1939. Solarcon A99

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-30 11:20:36 UTC
From: "Thorvald." <thorvald@arendal.online.no>
Message-ID: <8Eu19.4177$sR2.74145@news4.ulv.nextra.no>
Source record: 137780

Anyone with experiences with this antenna ?

T.

1940. Re: white coax?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-30 11:52:54 UTC
From: 'Doc <w5lz@icok.net>
Message-ID: <3D467E08.4A3BE2FD@icok.net>
Source record: 137781

Mark,
Run down to the hardware store, but a pint of
white latex paint. Then paint any coax you want to
be white.
'Doc

1941. Re: Solarcon A99

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-30 11:53:35 UTC
From: 'Doc <w5lz@icok.net>
Message-ID: <3D467E30.361CC503@icok.net>
Source record: 137782

Thorvald,
Yes.
'Doc

1942. Re: Hamstick With Radial

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-30 11:54:15 UTC
From: 'Doc <w5lz@icok.net>
Message-ID: <3D467E59.5E2809F8@icok.net>
Source record: 137783

marvin,
Not much.
'Doc

1943. Re: Solarcon A99

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-30 12:05:29 UTC
From: Tom <truckdrivingman@hotmail.com>
Message-ID: <ai5veb$1mn$03$1@news.t-online.com>
Source record: 137784

"Thorvald." <thorvald@arendal.online.no> schrieb im Newsbeitrag
news:8Eu19.4177$sR2.74145@news4.ulv.nextra.no...
> Anyone with experiences with this antenna ?

Yes,good ones.Some years ago I used the A99 on CB,and later(=now) on 29 MHz.

73
Tom

1944. Re: Novel Type of Antenna Trap.

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-30 12:06:47 UTC
From: n2ey@aol.com
Message-ID: <20020730080647.10086.00000025@mb-mr.aol.com>
Source record: 137785

In article <uk9bhsf48fvp3c@corp.supernews.com>, "Charles" writes:

>Hello Reg,
> Is what you posted similar to what W9INN has done for many years now?
> 1. http://www.ab7sl.com/index.html?row1col2=resonactor.html
> - see also -
> 2. http://www.ab7sl.com/index.html?row1col2=w9inn.html

Charles,

The structure of the "resonactors" is not clear from the above URLs. However, the W9INN antenna is simply one realization of a trap dipole.

Trap dipoles are no more "high performance" than plain dipoles of the same size. The only reasons to use trap dipoles are the size reduction brought about by the traps and the ease of matching to direct coax feed on several bands.

Reg's software includes concise explanations of the trap constructions. The twin-wire bifilar trap design described appears to result in traps with slightly higher L/lower C/higher Q than their coax equivalents. Much easier to adjust, though.

The twin-wire bifilar trap idea is so obvious - once you understand it - that I'm still kicking myself for not thinking of it! Been using coax traps for 17 years now. (See QST, December 1984, article by N4UU). W8NX did a bunch of coax-trap stuff, including a multilayer thing, but I believe the twin-wire idea is new. Never seen it before, anyway.

Next time the antenna needs work, I'm going to try some twin-wire traps. PVC pipe and the center conductor from RG-58 scraps...gotta luv it.

Reg, you should write the thing up for the ham mags.

73 de Jim, N2EY

1945. Re: Solarcon A99

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-30 12:13:19 UTC
From: Dennis Kaylor <k4oxg@tampabay.rr.com>
Message-ID: <zpv19.35378$s8.844322@twister.tampabay.rr.com>
Source record: 137786

i have one and it works great with a tuner i work 10-12-15-17
and its only mounted about 7 feet off the ground
"Thorvald." <thorvald@arendal.online.no> wrote in message
news:8Eu19.4177$sR2.74145@news4.ulv.nextra.no...
> Anyone with experiences with this antenna ?
>
> T.
>
>
>

1946. Building a hidden 2 meter antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-30 12:24:08 UTC
From: pendrgn2002@aol.com
Message-ID: <20020730082408.10144.00000251@mb-mr.aol.com>
Source record: 137787

Hello,
The apartment I live in does not allow antennas to be put up unless the are hidden. I would like to know if anyone could tell me if there is a website or book I could get that discribes how to make one. What I was thinking was, if possible, making a coax lead that would go to basically just a copper(or some kind) of wire that I could streatch to look like a wash line in the back yard. Can anyon e give me help on this.

Thanks,
Mike Waters

1947. FS 33' Alum Tower

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-30 13:06:59 UTC
From: wrhood@exis.net
Message-ID: <3d468f1b.1675437@news.exis.net>
Source record: 137789

33' ALUMINUM TOWER FOR SALE - This is a old heavy duty aluminum Navy "Loran Transmitter" type. The tower is assembled with total length of 33 ft., with hinged base ready to mount on concrete base. Tower is 12" on each side, ladder steps on one side. Approximately 55 lb.'s weight. This is not a self-supporting tower, guying or dwelling bracketed recommended. Has flat plate on the top, ready to cut for the thrust bearing (pilot hole centered). Has rotator support plate mounted 5 ft. below the top, will need mounting holes drilled so match rotor base. Pickup in Chesapeake, Va. 23323, or deliver Tidewater area within 35 mile radius.
Call (757)487-0357 or e-mail <wrhood@exis.net>
$100.00

1948. Re: Burial of 10BaseT and 10Base2 cables

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-30 13:07:16 UTC
From: hasan schiers <schiers@netins.net>
Message-ID: <ai6326$11qar5$1@ID-52642.news.dfncis.de>
Source record: 137790
Cross-posted to: rec.radio.amateur.antenna,comp.sys.mac.system

Bad geography. "The coldest winter I ever spent was a summer in Duluth." (as
in Minnesota)

--
hasan schiers, N0AN

schiers@netins.net
or use amsat.org or arrl.net remailer
"Angus McIntyre" <angus@pobox.com> wrote in message
news:angus-530F17.00315828072002@news2-2.free.fr...
> In article <siegman-390914.11415427072002@usenet.stanford.edu>,
> AES <siegman@stanford.edu> wrote:
>
> > ... Mark Twain did write something along the lines of "Summer in San
> > Francisco was the coldest winter I've ever spent."
>
> And that was before they invented air-conditioning.
>
> Angus
>
> --
> "I am here by the will of the people ... and I *will*
["Metrophage",
> not leave until I get my raincoat back." Richard
Kadrey]

1949. coax choices?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-30 13:49:57 UTC
From: JTB <shutup@nowhere.Lsu>
Message-ID: <9Qw19.701040$352.151305@sccrnsc02>
Source record: 137791

I am looking for info on what everyone's past experiences are w/ types of
coax, and recommendations for the following antenna types.
I am installing a 100 ft tower, w/ 6 antennas.
The antennas are:
VHF base station 6db gain (commercial use, for a repeater)
UHF base station 9db gain (commercial use, for a repeater)
Dual Band base station ham antenna (possible repeater at some point)
VHF Yagi on rotor
UHF Yagi also on the rotor
Low band base station antenna

Discone scanner antenna on the roof peak.

I'm not looking for extreme quality here, but of course as the saying goes,
you get what you pay for..
Cables will be buried in PVC pipe.

Thanks

Jeremy
KB1EJW

1950. Re: coax choices?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-30 14:09:15 UTC
From: n7ws_at_yahoo.com
Message-ID: <3d469d97.4311912@news.triconet.org>
Source record: 137792

7/8" Heliax and you can forget the PVC pipe.

On Tue, 30 Jul 2002 13:49:57 GMT, "JTB" <shutup@nowhere.Lsu> wrote:

|I am looking for info on what everyone's past experiences are w/ types of
|coax, and recommendations for the following antenna types.
|I am installing a 100 ft tower, w/ 6 antennas.
|The antennas are:
|VHF base station 6db gain (commercial use, for a repeater)
|UHF base station 9db gain (commercial use, for a repeater)
|Dual Band base station ham antenna (possible repeater at some point)
|VHF Yagi on rotor
|UHF Yagi also on the rotor
|Low band base station antenna
|
|Discone scanner antenna on the roof peak.
|
|I'm not looking for extreme quality here, but of course as the saying goes,
|you get what you pay for..
|Cables will be buried in PVC pipe.
|
|Thanks
|
|Jeremy
|KB1EJW
|
|

1951. Split vs Solid-core Ferrite

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-30 14:16:46 UTC
From: Al <aburzynski@swri.nojunk.edu>
Message-ID: <ukd7ued334bdc4@corp.supernews.com>
Source record: 137793

If all other characteristics are the same, is there a difference between a split (snap-on) ferrite core and a solid ferrite core? In other words, does the fact that there is an electrical open between the two halves on a split ferrite affect any electrical characteristics?

On the same line of thought, if I glue together two, three-inch ferrite bars end to end, would this be electrically the same as having one six-inch bar?

Thank you.
Al
KA5JGV

1952. Re: Building a hidden 2 meter antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-30 14:22:57 UTC
From: AC6V <ac6v@amsat.org>
Message-ID: <5jx19.44152$Fq6.3965606@news2.west.cox.net>
Source record: 137794

Mike -- some 2M simple indoor antennas at URL:
http://ac6v.com/antprojects.htm

Also see Stealth Antennas there.
73 Rod AC6V
Mega Ham Page - http://ac6v.com/
==========
"Pendrgn2002" <pendrgn2002@aol.com> wrote in message
news:20020730082408.10144.00000251@mb-mr.aol.com...
> Hello,
> The apartment I live in does not allow antennas to be put up unless
the are
> hidden. I would like to know if anyone could tell me if there is a
website or
> book I could get that discribes how to make one. What I was thinking was,
if
> possible, making a coax lead that would go to basically just a copper(or
some
> kind) of wire that I could streatch to look like a wash line in the back
yard.
> Can anyon e give me help on this.
>
> Thanks,
> Mike Waters
>

1953. Re: Building a hidden 2 meter antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-30 14:28:48 UTC
From: Juerg Tschirren <juerg-tschirren@uiowa.edu>
Message-ID: <Aox19.723013$cQ3.111686@sccrnsc01>
Source record: 137795

"Stealth Amateur Radio"
by Kirk A. Kleinschmidt
published by ARRL (http://www.arrl.org/catalog/)
ISBN: 0-87259-757-1

Pendrgn2002 wrote:

> Hello,
> The apartment I live in does not allow antennas to be put up unless
> the are
> hidden. I would like to know if anyone could tell me if there is a
> website or
> book I could get that discribes how to make one. What I was thinking was,
> if possible, making a coax lead that would go to basically just a copper(
> or some kind) of wire that I could streatch to look like a wash line in
> the back yard. Can anyon e give me help on this.
>
> Thanks,
> Mike Waters

1954. Re: FS 33' Alum Tower

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-30 14:45:32 UTC
From: dan <danlx@execpc.com>
Message-ID: <3d46a800$0$1433$272ea4a1@news.execpc.com>
Source record: 137797

On Tue, 30 Jul 2002 13:06:59 GMT, wrhood@exis.net wrote:

>33' ALUMINUM TOWER FOR SALE - This is a old heavy duty aluminum Navy
>"Loran Transmitter" type. The tower is assembled with total length of
>33 ft., with hinged base ready to mount on concrete base. Tower is 12"
>on each side, ladder steps on one side. Approximately 55 lb.'s

55#s??? Really? What is it made out of aluminum foil? :<}
>weight. This is not a self-supporting tower, guying or dwelling
>bracketed recommended. Has flat plate on the top, ready to cut for
>the thrust bearing (pilot hole centered). Has rotator support plate
>mounted 5 ft. below the top, will need mounting holes drilled so match
>rotor base. Pickup in Chesapeake, Va. 23323, or deliver Tidewater
>area within 35 mile radius.
>Call (757)487-0357 or e-mail <wrhood@exis.net>
>$100.00

Dan

I've rambled enough, back to the rocking chair. ZZZZZZZZZ
Remove left x for a direct reply.

1955. Re: Stagnating antenna designs

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-30 14:49:42 UTC
From: aunwin@fgi.net
Message-ID: <c4becf19.0207300649.32198718@posting.google.com>
Source record: 137796

richardharrison@webtv.net (Richard Harrison) wrote in message
news:<6699-3D45DC76-40@storefull-2396.public.lawson.webtv.net>...
> Art Unwin, KB9MZ wrote:
> "---by now we should have many commercial antennas with two reflectors."
>
> Is that the best use we can make of materials?
>
> Consider the yagi. With only one reflector we can get a good
> front-to-back ratio. Another reflector in the plane of the radiator and
> of the first reflector, but to its rear, doesn`t have much energy to
> work with. The energy is already turned around by the first reflector. A
> director using about the same material as an additional reflector has a
> lot more energy to act upon. The logic of a single reflector and
> multiple directors seems obvious and sound to me.
>
> I have no interest in the status quo.
>
> Best regards, Richard Harrison, KB5WZI

The Group
Before we get too deep with this offshoot regarding two reflectors, where I have probably overeached to support my other statements, consider the following.
There is no doubt in my mind that for present HF antennas and the like, two reflectors has yet to be proved beneficial. For moon bounce and the like of which I have no experience modification of radiation pattern and impedance are paramount. In an experiment which I performed and on which Roy W7EL graciously placed on his page a simulating program of the antenna which consisted of 13 elements including reflectors, where it was shown densely populated element antennas provided no extra gain over those presently in use (tho in my mind they had no less gain)and the only thing for that particular HF antenna, was that the second reflector element produced a HIGHER impedance!
Since antenna manufactures make great note of improving for gain on the status quo creats unuseable LOW impedances at least for HF antennas. I extrapolated perhaps incorrectly,that the two reflectors may well have value where gain is everything as well as the radiation pattern, ala moon bounce antennas.
But if a statement is made where the use of a second reflector IMPROVES the pattern then the question of adding to the statement LOW impedance is up for question.
As I stated earlier, I may be over reaching in using this as an example and I also do not have experience in areas above HF .

On another side note with respect to aluminum clad fishing poles, there is in present day use pre adhesive coated aluminum which is used in the building arena for long term use which allows for elements with zero number of joints for those cases where the joint resistances is bothersome. In addition for those who have to have a joint, most hams have seen at hamfests demonstrations of the use of a blow torch and a suitable 'stick' for want of a definable word connect aluminum rods to .002" thick alumanum wrap with little difficulty, but to each his own. It is undeniable that for those with little cash on hand that telescopic aluminum for ham use is extremely expensive and where a search for more reasonable methods and costs are in order.
I have taken extra care with this post but it probably wiil still confuse most readers if past experiences are taken into account.
If it does, please let that part of the subject to drop and allow the use of two reflectors to pass away from this thread.
Thank you for your indulgence.
Art Unwin KB9MZ

1956. Re: Stagnating antenna designs

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-30 15:38:51 UTC
From: k3bu@aol.com
Message-ID: <20020730113851.15335.00000322@mb-dh.aol.com>
Source record: 137798

>
>I suggested a director might be a better use for more material than
>using it for a second reflector.
>
>That was based on upping the gain. The dipole with a reflector might
>give 5 dbd gain. Adding a director might give you 2 db more gain (no
>guarantees). An additional reflector is likely to give less gain
>improvement to a dipole with a reflector, as it has little energy to
>work with.
> Richard Harrison, KB5WZI
>
>
>
>

One note of caution, the above might valid in simple, few element antennas. Antennas with more than 5-6 elements start losing F/B and this is when second reflector comes to the rescue and offers some benefits. The 15m Razors shown at

http://members.aol.com/ve3bmv/Razors.htm
have configuration: Yagi reflector, Quad reflector, dual Quad driven log cell, Quad director and 2 Yagi directors on a 62 ft boom.
I played with that stuff on the 2m antenna test range for three months during long Canadian winter nights and that was the best I could come up with. More emphasis was on the clean pattern (best F/B and F/S) rather than max gain. They are practically flat 1.1:1 across the band.
I am trying to find some free time to plug the Razors into the EZNEC, but QRL with resort is in the way. So far I tried to compare my 3 el. Quad design and simulate it in the software and there was some discrepancy. I ran it also through AO. I need to do some correlating with 2m models (much easier than with real HF antennas) and see what I get.
So far when some friends tried to do multielement Razors in software, they tell me that they have no gain and lousy F/B and pattern with high angle back lobes. Well, I have seen real antennas performing on 2m (compared to KLM "standards") and then scaled to HF and I know how they work. I am looking forward to explore this, just need to shake off the QRL.

Yuri, K3BU

1957. Re: Building a hidden 2 meter antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-30 15:44:31 UTC
From: Eskay <Nospamve3jua@rac.ca>
Message-ID: <3D46B45F.35061F52@rac.ca>
Source record: 137788

HI..
I saw an article once that described a combination vertical (isopole) and birdfeeder..
Interested? Sieb VE3JUA...

Pendrgn2002 wrote:

> Hello,
> The apartment I live in does not allow antennas to be put up unless the are
> hidden. I would like to know if anyone could tell me if there is a website or
> book I could get that discribes how to make one. What I was thinking was, if
> possible, making a coax lead that would go to basically just a copper(or some
> kind) of wire that I could streatch to look like a wash line in the back yard.
> Can anyon e give me help on this.
>
> Thanks,
> Mike Waters

1958. Re: How Many Beads Makes a Choke?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-30 17:17:55 UTC
From: kelly@dvol.com
Message-ID: <d22b54c3.0207300917.7b93125e@posting.google.com>
Source record: 137799

kelly@dvol.com (Brian Kelly) wrote in message
news:<d22b54c3.0207280843.766680f4@posting.google.com>...
>
>
. . .
>
>
> ferrite beads along the cable at the feedpoint of the antenna or
> tuner. The question in my mind is "how many beads are enough?"
>
>
. . . . .
>
>
>
I thank all you gentlemen for the responses to my query and the
education. I get the drift and then some. Whatta difference between
now and just ten years ago. Ten years ago we didn't have anything like
this NG available for the masses, I for one had no reasonable access
to you senior gurus let alone overnight access. For a lousy
US$15/month for this dialup connection to your brains.
>
>
w3rv

1959. G5RV, coax/ladderline and remote tuner

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-30 17:37:04 UTC
From: a_g_lyph@hotmail.com
Message-ID: <f8479612.0207300937.7321c204@posting.google.com>
Source record: 137800

Hello-

I managed to get a G5RV about 22-24' up in the air a month or so ago and it has been working wonderfully. It is currently (no pun intended) fed by approximately 80' of Belden 213-type coax, which is connected to an Emtech ZM-2 tuner which is connect to the rig by a short jumper. So far, so good. Even had some success at QRP during the WTRC weekend, using my FT-817.

In planning for the coming cold weather, however, I would like to extend the feed into the house. I'm not terribly excited about having the tuner at the rig, as I'm concerned about RF on the coax feeder running out to the antenna. What I'm considering, and what I would like comments on, is the possibility of using a remote antenna tuner, say an SGC-239 or LDG RT-11, mounted to the side of the (wooden) shed which the ladderline from the G5RV hangs next to. From looking at the SGC literature, I can use an 4:1 balun to go between the tuner output and the ladder line. So, I would have:

rig -> ~80' RG-213 -> [SGC-239 | RT-11] -> 4:1 balun -> ladderline/G5RV

Is this a logical approach or is the remote tuner directly to ladderline not advisable? Is the balun necessary? Am I missing anything important here?[1]

Assuming this is a logical solution[2], any comments on the SGC vs. the RT-11?

Many thanks in advance,

AG

[1] I'm sure I have, be gentle... :)
[2] Well, even if it's not, I'd still like to hear input on the two ATUs

1960. Re: G5RV, coax/ladderline and remote tuner

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-30 18:10:59 UTC
From: Bibby <bibby@attbi.com>
Message-ID: <TEA19.724408$cQ3.112370@sccrnsc01>
Source record: 137801

Gordon, two questions:

1. How do you connect the coax and the open line feeder - balan or no balun?
2. What is the VSWR on the coax on the various bands? Where did you measure it?

Malcolm

"A. Gordon Lyph" <a_g_lyph@hotmail.com> wrote in message news:f8479612.0207300937.7321c204@posting.google.com...
> Hello-
>
> I managed to get a G5RV about 22-24' up in the air a month or so ago
> and it has been working wonderfully. It is currently (no pun
> intended) fed by approximately 80' of Belden 213-type coax, which is
> connected to an Emtech ZM-2 tuner which is connect to the rig by a
> short jumper. So far, so good. Even had some success at QRP during
> the WTRC weekend, using my FT-817.
>
> In planning for the coming cold weather, however, I would like to
> extend the feed into the house. I'm not terribly excited about having
> the tuner at the rig, as I'm concerned about RF on the coax feeder
> running out to the antenna. What I'm considering, and what I would
> like comments on, is the possibility of using a remote antenna tuner,
> say an SGC-239 or LDG RT-11, mounted to the side of the (wooden) shed
> which the ladderline from the G5RV hangs next to. From looking at the
> SGC literature, I can use an 4:1 balun to go between the tuner output
> and the ladder line. So, I would have:
>
> rig -> ~80' RG-213 -> [SGC-239 | RT-11] -> 4:1 balun ->
> ladderline/G5RV
>
> Is this a logical approach or is the remote tuner directly to
> ladderline not advisable? Is the balun necessary? Am I missing
> anything important here?[1]
>
> Assuming this is a logical solution[2], any comments on the SGC vs.
> the RT-11?
>
> Many thanks in advance,
>
> AG
>
> [1] I'm sure I have, be gentle... :)

> [2] Well, even if it's not, I'd still like to hear input on the two
> ATUs

1961. Re: G5RV, coax/ladderline and remote tuner

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-30 18:55:48 UTC
From: 'Doc <w5lz@icok.net>
Message-ID: <3D46E123.534D8A0A@icok.net>
Source record: 137802

AG,
Forget the 80 feet of coax. Mount the tuner
to the outer wall of your operating position.
Run ladder line from tuner to the antenna. Run
coax from the tuner to the radio. If the ZM-2
will handle ladder line with/without a balun,
forget the SGC.
'Doc

1962. Re: Split vs Solid-core Ferrite

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-30 18:57:30 UTC
From: 'Doc <w5lz@icok.net>
Message-ID: <3D46E183.B942E74E@icok.net>
Source record: 137803

Al,
1. If the gap is kept to a minimum, there
is no practical difference.
2. Yes.
'Doc

1963. Kite and Balloon Antennas

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-30 19:18:56 UTC
From: Bob G4VGO <ky0c@hotmail.com>
Message-ID: <3d46e9ba_2@news2.prserv.net>
Source record: 137804

New Site with info for the CC&R disadvantaged.

www.qsl.net/g4vgo

Questions, just ask.

Bob G4VGO

1964. How many Hops on 40 m from coast to coast??

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-30 19:33:32 UTC
From: StarGazer <pti@capnet.com>
Message-ID: <3D46EA0C.2C8E6ED2@capnet.com>
Source record: 137805

. .

1965. Re: Kite and Balloon Antennas

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-30 19:51:57 UTC
From: MD <daveincanada2000@yahoo.com>
Message-ID: <p7C19.3467$tY5.817031@news20.bellglobal.com>
Source record: 137806

"Bob G4VGO" <ky0c@hotmail.com> wrote in message
news:3d46e9ba_2@news2.prserv.net...
> New Site with info for the CC&R disadvantaged.
>
> www.qsl.net/g4vgo
>
> Questions, just ask.
>
> Bob G4VGO
>
> Nice site Bob, but how do you think us CC&R diadvantaged will get away will sticking a huge support pole in our yards? I would think a multiband vertical would be a little easier to hide. It would also look a little obvious flying as kite from the yard.

But good idea.

1966. Re: Kite and Balloon Antennas

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-30 21:06:53 UTC
From: AC6V <ac6v@amsat.org>
Message-ID: <NdD19.45332$Fq6.3965229@news2.west.cox.net>
Source record: 137807

Ms Clipboard of the HOA can't see black antennas at night and that works
well on the "night bands"
Just my 2 milliwatts worth!

AC6V Rod in oceanside, CA
Ham Mega Page http://ac6v.com/

"MD" <daveincanada2000@yahoo.com> wrote in message
news:p7C19.3467$tY5.817031@news20.bellglobal.com...
>
> "Bob G4VGO" <ky0c@hotmail.com> wrote in message
> news:3d46e9ba_2@news2.prserv.net...
> > New Site with info for the CC&R disadvantaged.
> >
> > www.qsl.net/g4vgo
> >
> > Questions, just ask.
> >
> > Bob G4VGO
> >
> > Nice site Bob, but how do you think us CC&R diadvantaged will get away
> will sticking a huge support pole in our yards? I would think a multiband
> vertical would be a little easier to hide. It would also look a little
> obvious flying as kite from the yard.
>
> But good idea.
>
>

1967. Re: How many Hops on 40 m from coast to coast??

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-30 21:23:45 UTC
From: fazamy@aol.com
Message-ID: <20020730172345.20215.00000399@mb-fr.aol.com>
Source record: 137808

>How many Hops on 40 m from coast to coast??

I theorize that the answer might depend on the height of the ionosphere.
Perhaps the higher the altitude of the ionsphere, the lesser the amount of
skips you need for a coast to coast qso on 40m.

I figure you'll get a lot of responses.

KB2AMY
Evan

1968. Re: How many Hops on 40 m from coast to coast??

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-30 21:46:44 UTC
From: 'Doc <w5lz@icok.net>
Message-ID: <3D470932.B22A13AF@icok.net>
Source record: 137809

StarGazer,
Depending on propagation, it varies between
any whole number between 1 and 20. Take your
pick...
'Doc

1969. Re: How many Hops on 40 m from coast to coast??

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-30 22:12:17 UTC
From: Dan/W4NTI <w4nti@mindspringnospam.com>
Message-ID: <ai72v4mbo1@slb2.atl.mindspring.net>
Source record: 137810

This is a trick question folks...like the one...."How many people are dead in that cemetary?"

all of them.

To answer the question of how many hops it takes from coast to coast on 40 m....the answer is:

As many as it takes.

Dan/W4NTI

"'Doc" <w5lz@icok.net> wrote in message news:3D470932.B22A13AF@icok.net...
>
>
> StarGazer,
> Depending on propagation, it varies between
> any whole number between 1 and 20. Take your
> pick...
> 'Doc

1970. Re: G5RV, coax/ladderline and remote tuner

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-30 22:15:32 UTC
From: Dan/W4NTI <w4nti@mindspringnospam.com>
Message-ID: <ai7356$e59$1@slb7.atl.mindspring.net>
Source record: 137811

Better yet....remove the G5RV and use it for rabbit fencing.

Put up a 130' flat top. Feed with ladder line. Put balun on outside of
house. Run coax into house to tuner/rig. Enjoy.

Dan/W4NTI

"'Doc" <w5lz@icok.net> wrote in message news:3D46E123.534D8A0A@icok.net...
> AG,
> Forget the 80 feet of coax. Mount the tuner
> to the outer wall of your operating position.
> Run ladder line from tuner to the antenna. Run
> coax from the tuner to the radio. If the ZM-2
> will handle ladder line with/without a balun,
> forget the SGC.
> 'Doc

1971. Re: Need Info MFJ-249 antenna analyzer

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-30 22:38:56 UTC
From: Max <ve3tmt@rac.ca>
Message-ID: <LzE19.3536$tY5.876856@news20.bellglobal.com>
Source record: 137812

"Brian" <k3vr@hotmail.com> wrote in message
news:4bfc7bb.0207281438.3b39d1d0@posting.google.com...
> Can someone with an MFJ schematic or 2 minutes to look at their
> MFJ-249 or 259 give me the value of R-31, the potentiometer that is
> part of the calibration procedure for the MFJ-249 antenna analyzer? It
> is the middle of three pots located below IC1.
>
> Opening your MFJ-249 and looking at the circuit board with the tune
> capacitor at BOTTOM RIGHT, IC1 is about 20% down from the top on the
> right side of the board. The pot to the left of IC1 is R-17, the SWR
> adjustment. The pot in the
> middle of the 3 below IC1 is R-31, the resistance pot. I need the
> value of R-31. Curiously mine came from MFJ ~without~ that pot
> installed and it is necessary to calibrate the SWR to 50 ohms.
>
> Thanks, Brian K3VR

Brian,

I have the 249B, and I'm not sure if they made some circuits changes but it looks like nothing short of dissambling the entire unit to see the component values. I wish I could help but mine is less than 2 weeks old, and I would hate to do irreversible damage. Might be better to call MFJ.

Good luck,

Max

1972. Best Allround Antenna ?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-30 23:15:58 UTC
From: N1RZB <n1rzb@110.net>
Message-ID: <uke7c6tllniee5@corp.supernews.com>
Source record: 137813

BlankI'm well aware that this question has been asked a thousand time but I must ask.

What is the best all-round antenna for HF work, 80 to 10 meters?

Dave/N1RZB

1973. Re: How many Hops on 40 m from coast to coast??

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-30 23:20:56 UTC
From: dennis@wawa.juniper.net
Message-ID: <ai770o$21p3$1@heap.juniper.net>
Source record: 137815

Using the computation from an old NBS Time and Frequency Users'
Manual, the minimum distance path from San Diego, CA to Augusta, ME
is 2 hops. You can get from San Diego to Detroit in 1 hop in the
winter, and perhaps as far as Connecticut in the summer.

This is based on the assumption that the average F2 layer (virtual)
height varies from about 250 km in the winter to 350 km in the summer.
There are day-to-night variations as well which aren't mentioned in my
reference. The higher the F2 layer is, the further you can get in
a single hop.

Dennis Ferguson

1974. Re: How many Hops on 40 m from coast to coast??

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-30 23:24:56 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <3D472048.1010900@eznec.com>
Source record: 137814

It depends on the effective height of the ionosphere, which varies with frequency, solar flux, and time of day.

The easiest way to determine the number of hops for a given time and frequency is to download the excellent, and free, propagation program W6ELProp by Shel Shallon, W6EL. You can get it at http://www.qsl.net/w6elprop/. It's easy to use, and will give you the information you're after.

Roy Lewallen, W7EL

1975. Re: Best Allround Antenna ?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-30 23:32:11 UTC
From: jgboyles@aol.com
Message-ID: <20020730193211.22163.00000478@mb-mo.aol.com>
Source record: 137816

>What is the best all-round antenna for HF work, 80 to 10 meters?

Well Dave, In my opinion, a 125' dipole fed with open wire or ladder line as high as you can get it. An antenna tuner or transmatch to match the line to the rig. 80-10, good efficiency. The pattern of this antenna gets strange above 15m, but as with all antennas, can't have everything.
73 Gary N4AST

1976. Re: Best Allround Antenna ?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-30 23:45:39 UTC
From: "WB3FUP (Mike Hall)" <wb3fup@msn.com>
Message-ID: <aiaes5$134cke$1@ID-134747.news.dfncis.de>
Source record: 137733

"N1RZB" <n1rzb@110.net> wrote in message
news:uke7c6tllniee5@corp.supernews.com...
> BlankI'm well aware that this question has been asked a thousand time but
I
> must ask.
>
> What is the best all-round antenna for HF work, 80 to 10 meters?
>
>
> Dave/N1RZB
>
>

My vote is for two. A dipole fed with ladder line and an inexpensive
vertical tuned with a base loaded coil. There am times when it is sure nice
to switch!

wb3fup

1977. Re: How many Hops on 40 m from coast to coast??

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-30 23:47:38 UTC
From: "WB3FUP (Mike Hall)" <wb3fup@msn.com>
Message-ID: <aiaes9$134cke$2@ID-134747.news.dfncis.de>
Source record: 137734

Who cares, if it is open talk, if not try another band

"StarGazer" <pti@capnet.com> wrote in message
news:3D46EA0C.2C8E6ED2@capnet.com...
> ..
>

1978. Re: CAM?? 160m & 10 m Dipole?? Anyone

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-30 23:54:11 UTC
From: "WB3FUP (Mike Hall)" <wb3fup@msn.com>
Message-ID: <aiaesg$134cke$3@ID-134747.news.dfncis.de>
Source record: 137735

Change the 80m feedline to ladderline. On 160 some of the feedlne will radiate. It will alos be vertically polarized and help tame the "cloud warmer" you are using now.

wb3fup

"StarGazer" <pti@capnet.com> wrote in message news:3D4499FB.1C4C71CE@capnet.com...
> Antenna are only about 22 feet high.
>
>
>
> 'Doc wrote:
>
> > Stargazer,
> > Not enough information. Depends on how high each
> > is off the ground. Also, if you disconnect the shield
> > from the SO-239, then short it to the center conductor,
> > you might be able to use either antenna on 160 meters
> > if you use a tuner. Still depends on how high the two
> > antennas are...
> > 'Doc
>

1979. Re: Building a hidden 2 meter antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-31 00:00:11 UTC
From: Bob Miller <bamiller@texas.net>
Message-ID: <cidHPS4abWifTJCexVudeP+bSown@4ax.com>
Source record: 137817

pendrgn2002@aol.com (Pendrgn2002) wrote:

>Hello,
> The apartment I live in does not allow antennas to be put up unless the are
>hidden. I would like to know if anyone could tell me if there is a website or
>book I could get that discribes how to make one. What I was thinking was, if
>possible, making a coax lead that would go to basically just a copper(or some
>kind) of wire that I could streatch to look like a wash line in the back yard.
>Can anyon e give me help on this.
>
>Thanks,
>Mike Waters

Go to google.com and do a search for the J-pole antenna. If you look around, you should be able to find one you can make from inexpensive TV twin-lead. Hang it in your window, and it should hit most, if not all, of your local repeaters. You could also get a copy of the ARRL Antenna Book, available at http://www.arrl.com This book has all kinds of vhf antennas, and will teach you the principles of antenna-building.

Bob
k5qwg

1980. Re: pvc antenna for 2-meters

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-31 00:03:35 UTC
From: "WB3FUP (Mike Hall)" <wb3fup@msn.com>
Message-ID: <aiaesn$134cke$4@ID-134747.news.dfncis.de>
Source record: 137736

Build a J-Pole, I used 450 ohm ladder line, but you can use 300 ohm twin lead. I enclosed the antenna in 1 1/4 inch PVC. My walking stick antenna was the hit of the K2BSA staff at th 1993 National Jamboree. A VK worked a ZL with it.

wb3fup

"Sean Ingram" <singram@direcway.com> wrote in message news:an109.7960$u7.612994@news.direcpc.com...
> This is Kd4Adv
> QTH is Amelia, Virginia 23002
>
> I saw a project in a QST issue sometime ago and unable to remember the
> month/year.
>
> It refers to an antenna enclosed inside PVC tubing to resemble that of a
> Dipole.
>
> I have been on the internet trying to find that particular antenna project
> so that I can build it to use with my 2meter mobile (15/35W) when I go on
> vacation to the beach or set up the antenna outside my window.
>
> Please direct me to the URL or any similar pages that may have this
> featured.
> I really would appreciate it.
>
> 73s
> Kd4Adv
>
>
>

1981. Re: Best Allround Antenna ?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-31 00:33:11 UTC
From: Crazy George <munschNO@attglobal.net.SPAM>
Message-ID: <3d473576_2@news1.prserv.net>
Source record: 137818

AS-3195/GRC is the best choice;
AS-3640/GRC only goes down to 4 MHz.
W5VPQ
--
Crazy George
Remove NO and SPAM from return address

N1RZB <n1rzb@110.net> wrote in message
news:uke7c6tllniee5@corp.supernews.com...
> BlankI'm well aware that this question has been asked a thousand time but
I
> must ask.
>
> What is the best all-round antenna for HF work, 80 to 10 meters?
>
>
> Dave/N1RZB
>
>

1982. Re: G5RV, coax/ladderline and remote tuner

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-31 00:40:53 UTC
From: a_g_lyph@hotmail.com
Message-ID: <f8479612.0207301640.5bad42f2@posting.google.com>
Source record: 137669

"Bibby" <bibby@attbi.com> wrote in message news:<TEA19.724408$cQ3.112370@sccrnsc01>...

> 1. How do you connect the coax and the open line feeder - balan or no
> balun?

Presently, the setup is as follows:

rig -> short coax jumper -> ZM-2 tuner -> ~80' coax -> ladderline

The G5RV ladderline piece is connected via a PL-239 (or is it SO-239,
I always get the two backwards) connector mounted on an insulating
board (phenolic) which has the ladderline connected to it.

> 2. What is the VSWR on the coax on the various bands? Where did you
> measure it?

Hard to tell as I don't currently posses an VSWR meter. The LED on
the ZM-2 and the built in SWR meter on the FT-817 are the sole means
of monitoring such. As the rig is connected to the ZM-2 tuner, the
built-in meter is measuring the VSWR between the rig and the tuner on
the short jumper of coax.[1] The LED on the tuner is measuring the
VSWR on the coax/ladderline section[2] and on 10m, 20m and 40m I can
get the LED to black by adjusting the varicaps (sometimes kicking in
the 250/500pF adjustment, sometimes not). I haven't really tried it
down on 80m and I don't believe the G5RV will handle 160m without
being fed differently.[3]

Hope that helps, but I suspect it doesn't.

AG

[1] Or so I believe
[2] Or so I believe[4]
[3] There are instructions on the Internet for making this happen;
I hope to have replaced the G5RV with something else for the
lower band by the time I want to play down there
[4] I am well aware that I could remain silent and (only) be thought
a fool. However, I am hopeful that by expressing my beliefs
regarding what is happening, the resident gurus might share a
little light with me...always searching for more light.

1983. Re: G5RV, coax/ladderline and remote tuner

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-31 00:50:12 UTC
From: a_g_lyph@hotmail.com
Message-ID: <f8479612.0207301650.3e27ac7@posting.google.com>
Source record: 137670

'Doc <w5lz@icok.net> wrote in message news:<3D46E123.534D8A0A@icok.net>...

> Forget the 80 feet of coax. Mount the tuner
> to the outer wall of your operating position.
> Run ladder line from tuner to the antenna. Run
> coax from the tuner to the radio. If the ZM-2
> will handle ladder line with/without a balun,
> forget the SGC.

'Doc-

Thank you for replying. I understand your suggestion, and the ZM-2 will handle balanced feeder by using the binding posts and switching the unit from 'ground' to 'link.' So, mechanically, that would be attractive. Unfortunately, due to the placement of my 'shack' inside the house, and the necessity of mounting the antenna on the far side of the rear yard I don't think it will be logistically possible. My XYL would frown heavily on my bisecting the yard with ladderline. =(

I was originally thinking of sinking PVC pipe into the ground between the exit point of the 'shack' and the feed point of the antenna. Now, I'm wondering, though, if I couldn't just run the ladderline through the PVC? I know that the ladderline portion of the G5RV is a part of the antenna system and I believe that it resonates (at least on 20m). Would using a long run of ladderline, underground, encased in a suitable diameter PVC pipe present any problems?

Now that I'm thinking aobut it, though, I would wind up with a balanced fed, 102' dipole at 22-24' in the air. I could actually lengthen that to around 125' if that would make a difference. I wonder how that would work. This hobby sure is a hoot!

Thank you again for taking the time to reply.
Regards,

AG

1984. Re: Best Allround Antenna ?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-31 00:56:36 UTC
From: richardharrison@webtv.net
Message-ID: <16629-3D4735C4-76@storefull-2393.public.lawson.webtv.net>
Source record: 137671

Seashore, desert, or in-between?

Best regards, Richard Harrison, KB5WZI

1985. Re: coax choices?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-31 01:12:06 UTC
From: richardharrison@webtv.net
Message-ID: <16631-3D473966-9@storefull-2393.public.lawson.webtv.net>
Source record: 137673

I agree with Wes, and don`t accept substitutes. Stick with Andrew.

Best regards, Richard Harrison, KB5WZI

1986. Re: Best Allround Antenna ?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-31 01:29:07 UTC
From: ":-) Bill" <therealexray@netscape.net>
Message-ID: <3D473D63.E421AB23@netscape.net>
Source record: 137672

Richard Harrison wrote:
>
> Seashore, desert, or in-between?
>
> Best regards, Richard Harrison, KB5WZI

Best "allround" might be one of those ISOTROPIC antennas. Have searched
all over but can't seem to find a distributor.
-WX4A

1987. Re: G5RV, coax/ladderline and remote tuner

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-31 02:04:17 UTC
From: 'Doc <w5lz@icok.net>
Message-ID: <3D47458F.34A8BEE9@icok.net>
Source record: 137674

AG,
Off hand, I'd guess that running ladder line through
a buried PVC pipe wouldn't work. But I'm certainly not
sure about that! That would be interesting to try. If
you could keep the ladder line 'centered' in something
like a 4" pipe, I wonder if it really wouldn't work?
Hey, try that and let us know! (waiting with baited(?)
breath)
'Doc

1988. Re: Need Info MFJ-249 antenna analyzer

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-31 02:38:39 UTC
From: aunwin@fgi.net
Message-ID: <c4becf19.0207301838.25a6df3@posting.google.com>
Source record: 137675

"Max" <ve3tmt@rac.ca> wrote in message
news:<LzE19.3536$tY5.876856@news20.bellglobal.com>...
> "Brian" <k3vr@hotmail.com> wrote in message
> news:4bfc7bb.0207281438.3b39d1d0@posting.google.com...
> > Can someone with an MFJ schematic or 2 minutes to look at their
> > MFJ-249 or 259 give me the value of R-31, the potentiometer that is
> > part of the calibration procedure for the MFJ-249 antenna analyzer? It
> > is the middle of three pots located below IC1.
> >
> > Opening your MFJ-249 and looking at the circuit board with the tune
> > capacitor at BOTTOM RIGHT, IC1 is about 20% down from the top on the
> > right side of the board. The pot to the left of IC1 is R-17, the SWR
> > adjustment. The pot in the
> > middle of the 3 below IC1 is R-31, the resistance pot. I need the
> > value of R-31. Curiously mine came from MFJ ~without~ that pot
> > installed and it is necessary to calibrate the SWR to 50 ohms.
> >
> > Thanks, Brian K3VR
>
> Brian,
If it is used for calibrating the meter i.e. it is before the meter
and in series with the output of the meter going to ground my guess
that 100k
would be satisfactory.Frankly I have a problem with the idea that the
pot is missing as the meter would be useless as in such a case the
meter would be out of the circuit. Why not trace the circuit around
the calibration meter,it may well be that there is another circuit
between the meter amplifier and the meter which would suggest that the
particular circuit board has multiple device useage
which in your case is not a feature that your device is produced for.
Sorry I cannot be of further use.
Art
> I have the 249B, and I'm not sure if they made some circuits changes but it
> looks like nothing short of dissambling the entire unit to see the component
> values. I wish I could help but mine is less than 2 weeks old, and I would
> hate to do irreversible damage. Might be better to call MFJ.
>
> Good luck,
>
> Max

1989. Re: Split vs Solid-core Ferrite

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-31 02:46:14 UTC
From: tmgroatatpeakpeakdotcom
Message-ID: <3d474c6e.6002408@news.peakpeak.com>
Source record: 137676

On Tue, 30 Jul 2002 09:16:46 -0500, "Al" <aburzynski@swri.nojunk.edu>
wrote:

>If all other characteristics are the same, is there a difference between a
>split (snap-on) ferrite core and a solid ferrite core? In other words, does
>the fact that there is an electrical open between the two halves on a split
>ferrite affect any electrical characteristics?

Unless you're dealing with a really high permeability ferrite the
small gap where the cores meet isn't a big concern. It's a concern
with high permeability Manganese-Zinc ferrites (mu of 5000 and up),
but not the lower mu RF materials.

Some very high mu split E cores have finely polished mating ends, to
cut the air gaps down to the bare minimum possible. To obtain their
high AL values these cores need to be clamped together, not glued.

But if you're using the typical type 43 Nickel-Zinc ferrite for RFI
suppression, the gap doesn't upset the permability very much (probably
less than the tolerance of AL). You won't notice it.

Any rod configuration has mu determined mainly by the rod geometry.
The disturbancve of the magnetic path caused by gluing the rods
together is nothing compared to the air path between the ends of the
rod. This is why the rod's AL so stable, much better than the
tolerance and temperature coefficient of the ferrite itself.

--KR0U

-- Tim Groat

To reply by e-mail, change the quoted words to
the corresponding punctuation marks.

1990. Re: How many Hops on 40 m from coast to coast??

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-31 02:58:35 UTC
From: tmgroatatpeakpeakdotcom
Message-ID: <3d474fbf.6851698@news.peakpeak.com>
Source record: 137677

On Tue, 30 Jul 2002 16:24:56 -0700, Roy Lewallen <w7el@eznec.com>
wrote:

>It depends on the effective height of the ionosphere, which varies with
>frequency, solar flux, and time of day.
>
It also depends on the radiation angles of the antennas at both ends.
You may not be using the minimum possible number of hops if your
antenna works poorly at the angle you need for those hops. The signal
may be stronger with more hops, arriving at an angle better suited for
your antenna system.

Likewise, there is a maximum number of hops. This can be limited
either by the MUF for the path to the closer ground reflection or by
the cumulative losses of all the hops.

--KR0U

-- Tim Groat

To reply by e-mail, change the quoted words to
the corresponding punctuation marks.

1991. Re: G5RV, coax/ladderline and remote tuner

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-31 03:05:51 UTC
From: Bibby <bibby@attbi.com>
Message-ID: <jul19.96866$uh7.14213@sccrnsc03>
Source record: 137678

Gordon, it appears to me that moving the tuner to where the insulating board
is will certainly not make anything worse. However, the tuner, even though
it would be floating is still 'one-sided'. So, I would either use a balun
or build/buy a tuner with a truly balanced output. If it were my
installation, I would check the VSWR at the coax/line junction. If it is
not too (?) high, I would install a balun, a real one not a choke. If it
is high, then you will have to acquire a tuner with a truly balanced output.

Good luck,

Malcolm

"A. Gordon Lyph" <a_g_lyph@hotmail.com> wrote in message
news:f8479612.0207301640.5bad42f2@posting.google.com...
> "Bibby" <bibby@attbi.com> wrote in message
news:<TEA19.724408$cQ3.112370@sccrnsc01>...
>
> > 1. How do you connect the coax and the open line feeder - balan or no
> > balun?
>
> Presently, the setup is as follows:
>
> rig -> short coax jumper -> ZM-2 tuner -> ~80' coax -> ladderline
>
> The G5RV ladderline piece is connected via a PL-239 (or is it SO-239,
> I always get the two backwards) connector mounted on an insulating
> board (phenolic) which has the ladderline connected to it.
>
> > 2. What is the VSWR on the coax on the various bands? Where did you
> > measure it?
>
> Hard to tell as I don't currently posses an VSWR meter. The LED on
> the ZM-2 and the built in SWR meter on the FT-817 are the sole means
> of monitoring such. As the rig is connected to the ZM-2 tuner, the
> built-in meter is measuring the VSWR between the rig and the tuner on
> the short jumper of coax.[1] The LED on the tuner is measuring the
> VSWR on the coax/ladderline section[2] and on 10m, 20m and 40m I can
> get the LED to black by adjusting the varicaps (sometimes kicking in
> the 250/500pF adjustment, sometimes not). I haven't really tried it
> down on 80m and I don't believe the G5RV will handle 160m without
> being fed differently.[3]
>
> Hope that helps, but I suspect it doesn't.
>
> AG

>
> [1] Or so I believe
> [2] Or so I believe[4]
> [3] There are instructions on the Internet for making this happen;
> I hope to have replaced the G5RV with something else for the
> lower band by the time I want to play down there
> [4] I am well aware that I could remain silent and (only) be thought
> a fool. However, I am hopeful that by expressing my beliefs
> regarding what is happening, the resident gurus might share a
> little light with me...always searching for more light.

1992. Re: Best Allround Antenna ?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-31 03:13:21 UTC
From: jder8745@aol.com
Message-ID: <20020730231321.06756.00000291@mb-ft.aol.com>
Source record: 137679

Howdy,

No doubt about it. A half wave doublet 130 feet long fed with low loss balanced transmission line, open wire or transmitting twin lead. You will need a"tuner" with a balanced output.

On 40 it will be a full wave and have gain.

On higher bands it will have lots of lobes. Make sure it is at least 40 or more feet off the ground.

I have lots of antennas for HF and this one is excellent.

73 de Jack, K9CUN

1993. Re: Shielded parallel feedlines

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-31 08:32:01 UTC
From: Arend Harteveld <a.harteveld@noio.tudelft.nl>
Message-ID: <ai87a4$lo9$1@news.tudelft.nl>
Source record: 137681

Chris,

Life is difficult as it is... pay attention to what Reg says, he is
absolutely right ! (as always ;-))
That is the way I did it, no sweat...

GL, Arend PA1ARE

1994. Re: Best Allround Antenna ?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-31 09:44:31 UTC
From: Eamon Skelton <Xnospam@oceanfree.net>
Message-ID: <vhb8ia.4ie.ln@mylinuxbox.net>
Source record: 137698

> What is the best all-round antenna for HF work, 80 to 10 meters?
>
>
> Dave/N1RZB

A half wave dipole for 80M centre fed with 600 Ohm
balanced line. If you have a good ground, you can
tune one side against ground and use it as an
inverted-L on 160M.

73, Ed. EI9GQ.

--
Remove 'X' to reply via e-mail.
http://homepage.eircom.net/~ei9gq
Linux 2.4.18

1995. Re: Best Allround Antenna ?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-31 09:49:04 UTC
From: Reg Edwards <g4fgq.regp@btinternet.com>
Message-ID: <ai8bqgcht1@venus.btinternet.com>
Source record: 137682

> What is the best all-round antenna for HF work, 80 to 10 meters?

==========

Horizontal dipole, overall length anywhere beween 100 and 150 feet, as high
as you can get it, fed with balanced openwire line of no particular
impedance or length. You can't beat it !

Reg

1996. Re: Best Allround Antenna ?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-31 11:21:49 UTC
From: Bjorn Henrik Vangstein <vangsteREMOVETHIS@online.no>
Message-ID: <hLP19.4580$sR2.81212@news4.ulv.nextra.no>
Source record: 137683

"N1RZB" <n1rzb@110.net> wrote in message
news:uke7c6tllniee5@corp.supernews.com...
> BlankI'm well aware that this question has been asked a thousand time but
I
> must ask.
>
> What is the best all-round antenna for HF work, 80 to 10 meters?
>
>
> Dave/N1RZB
>
>

If you have limited horizontal space: Hygain offers a vertical for 80 to 10
meters,
Cushcraft R8 covers 40 to 6 meters.

Henrik, LA5MDA

1997. Re: Shielded parallel feedlines

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-31 12:11:25 UTC
From: richardharrison@webtv.net
Message-ID: <16020-3D47D3ED-33@storefull-2391.public.lawson.webtv.net>
Source record: 137685

Arend, PA1ARE wrote:
"That is the way I did it, no sweat."

You brought the wires of a balanced transmission line together to pass through a single entrance hole and created no discontinuity?

The poster said the coax outer conductors floated, ungrounded.

Best regards, Richard Harrison, KB5WZI

1998. Re: Shielded parallel feedlines

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-31 12:30:15 UTC
From: richardharrison@webtv.net
Message-ID: <16021-3D47D857-15@storefull-2391.public.lawson.webtv.net>
Source record: 137684

I agree with Reg that Chris, W2PA could bring coax lines with their shields connected together through a single hole. No problem.

It was Bill who wrote: "And used parallel, properly spaced conductors of RG8X with the shield floating. These benefit from uniform spacing.

Best regards, Richard Harrison, KB5WZI

1999. Re: Shielded parallel feedlines

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-31 13:03:52 UTC
From: Reg Edwards <g4fgq.regp@btinternet.com>
Message-ID: <ai8n7n$1sd$1@paris.btinternet.com>
Source record: 137686

Richard, what point are you trying to make ?

Reg, G4FGQ

========================
"Richard Harrison" <richardharrison@webtv.net> wrote in message
news:16021-3D47D857-15@storefull-2391.public.lawson.webtv.net...
> I agree with Reg that Chris, W2PA could bring coax lines with their
> shields connected together through a single hole. No problem.
>
> It was Bill who wrote: "And used parallel, properly spaced conductors of
> RG8X with the shield floating. These benefit from uniform spacing.
>
> Best regards, Richard Harrison, KB5WZI
>

2000. Re: Best Allround Antenna ?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-31 13:11:12 UTC
From: John Passaneau <jxp16@psu.edu>
Message-ID: <ai8nlg$22hi@r02n01.cac.psu.edu>
Source record: 137687

Hi all:

Everyone recommends a vertical for limited space, but a vertical is NOT an limited space antenna especially if used on 40M and longer. Those radials take up a lot of room. I've been reading ON4UN's book on low band DXing and its clear that a vertical takes up more room than any dipole, if you want it to work well, or at all. While the visible part of a vertical is small the area that it takes up is not.

--
John Passaneau
Penn State University, State College Pa.
W3JXP
w3jxp@arrl.net

"Bjorn Henrik Vangstein" <vangsteREMOVETHIS@online.no> wrote in message news:hLP19.4580$sR2.81212@news4.ulv.nextra.no...
>
> "N1RZB" <n1rzb@110.net> wrote in message
> news:uke7c6tllniee5@corp.supernews.com...
> > BlankI'm well aware that this question has been asked a thousand time but
> I
> > must ask.
> >
> > What is the best all-round antenna for HF work, 80 to 10 meters?
> >
> >
> > Dave/N1RZB
> >
> >
>
> If you have limited horizontal space: Hygain offers a vertical for 80 to 10
> meters,
> Cushcraft R8 covers 40 to 6 meters.
>
> Henrik, LA5MDA
>
>

2001. Re: Best Allround Antenna ?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-31 13:36:40 UTC
From: richardharrison@webtv.net
Message-ID: <15127-3D47E7E8-27@storefull-2396.public.lawson.webtv.net>
Source record: 137688

Dave wrote:
"What is the best all-around antenna for HF work 80 to 10 meters?"

Commercial and military radio suppliers usually come up with the base-loaded vertical whip as their answer.

It fits a small space.

It is nearly omnidirectional.

It works over the wide range.

The loading coil can be made mechanically secure. It can tune out the reactance of the antenna to maximize antenna current.

The vertical antenna broadcasts in all azimuths. If you can`t predict a desired direction, omni capability is best.

See page 7-14 of the 19th edition of the ARRL "Antenna Book" for details, or see page 491 of the 18th edition of W6SAI`s "Radio Handbook".

Best regards, Richard Harrison, KB5WZI

2002. Re: Best Allround Antenna ?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-31 13:56:56 UTC
From: richardharrison@webtv.net
Message-ID: <15127-3D47ECA8-30@storefull-2396.public.lawson.webtv.net>
Source record: 137689

John Passaneau wrote:
"Everyone recommends a vertical for limited space, but a vertical is not a limited space antenna---."

Limited space limits performance.

The vertical can make good use of a 1/2-wave diameter circle containing many radials but this is most often compromised and the antenna still works.

Just look at whips mounted on vehicles. These often have small footprints.

Best regards, Richard Harrison, KB5WZI

2003. Re: Shielded parallel feedlines

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-31 14:10:13 UTC
From: richardharrison@webtv.net
Message-ID: <15128-3D47EFC5-9@storefull-2396.public.lawson.webtv.net>
Source record: 137692

Reg, G4FGQ wrote:
"Richard, what point are you trying to make?"

Floating shield coax cable is for most r-f purposes a fat wire.

Best regards, Richard Harrison, KB5WZI

2004. Re: Anyone use the SteppIR adjustable Yagi

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-31 14:30:50 UTC
From: "R. Scott" <washingtonham@yahoo.com>
Message-ID: <3D47F49A.3A485D41@yahoo.com>
Source record: 137693

"H. Adam Stevens" wrote:
>
> I sure like my SteppIR. I have the 3 element with the 6 meter bit. It's
> still on a short pole as the tower isn't up yet.
> As for the price, I think it's comparable to log periodic dipole arrays and
> anything else that can approach the performance.

Oh not arguing the price, its a neat beam and with the technology, most
likely well worth it, and if it becomes popular then the price may come
down. Just outta my reach right now HI.

> It's a simpler (at most 4 elements on 6 meters), lighter (lower tower, rotor
> costs), stronger (100 MPH),
> antenna than anything comparably priced that comes close in performance. The
> VSWR is always 1:1.

Thats what I like about it. Especially the 6 mtr part. Im limited in
cable runs right now and the 3 I have are the A3 the 80mtr and the
2/440. And the fact that it does 17 and 12 meters as a beam is a plus.

> I think it's correctly engineered and well executed. It does tricks nothing
> else can.
> I sure hope lightning doesn't find it attractive.
> H.
> NQ5H

True, lightning could sure muck up the electronics. Funny no one has
thought of this before. Im not worried about power through it because
Ive never in 25 years as a ham ran anything other than barefoot :).
Just the 6-20 is way way attractive to me.

Scotty N7HJ

2005. Re: Best Allround Antenna ?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-31 14:34:00 UTC
From: Reg Edwards <g4fgq.regp@btinternet.com>
Message-ID: <ai8sgo$9ev$2@venus.btinternet.com>
Source record: 137690

"Richard Harrison" wrote
> ARRL "Antenna Book" for
> details.

==========

A lot of people assume everybody else carries around with them copies of
ARRL books, like the infamous Little Red Books.

;o) Reg.

2006. Re: Best Allround Antenna ?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-31 14:45:24 UTC
From: aunwin@fgi.net
Message-ID: <c4becf19.0207310645.34babfd6@posting.google.com>
Source record: 137691

"Reg Edwards" <g4fgq.regp@btinternet.com> wrote in message
news:<ai8bqgcht1@venus.btinternet.com>...
> > What is the best all-round antenna for HF work, 80 to 10 meters?
>
> ==========
>
> Horizontal dipole, overall length anywhere beween 100 and 150 feet, as high
> as you can get it, fed with balanced openwire line of no particular
> impedance or length. You can't beat it !
> ---
> Reg

But how are you going to turn it when the other person is in one of
the many nulls of the radiation pattern ?.If you solve that and could
turn the antenna to remove the person from the null then you have a
BEST antenna! Does the horizontal polarisation of the antenna provide
better coverage overall than when
it is used as a system? I.E. use of the feeder to generate vertical
polarization. In other words what are the all the advantages and
disadvantages
that make this the BEST antenna.
Art

2007. Re: Kite and Balloon Antennas

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-31 15:55:59 UTC
From: aunwin@fgi.net
Message-ID: <c4becf19.0207310755.28641f45@posting.google.com>
Source record: 137694

"AC6V" <ac6v@amsat.org> wrote in message
news:<NdD19.45332$Fq6.3965229@news2.west.cox.net>...
> Ms Clipboard of the HOA can't see black antennas at night and that works
> well on the "night bands"
> Just my 2 milliwatts worth!
>
> AC6V Rod in oceanside, CA
> Ham Mega Page http://ac6v.com/
>
> "MD" <daveincanada2000@yahoo.com> wrote in message
> news:p7C19.3467$tY5.817031@news20.bellglobal.com...
> >
> > "Bob G4VGO" <ky0c@hotmail.com> wrote in message
> > news:3d46e9ba_2@news2.prserv.net...
> > > New Site with info for the CC&R disadvantaged.
> > >
> > > www.qsl.net/g4vgo
> > >
> > > Questions, just ask.
> > >
> > > Bob G4VGO

very good job with your page. I envy your ability to do such fine work
I could not read some of the pages because of the small script but as
you said ...work in progress.I found the idea of a pole that elevates
with the use of the bicycle interesting and also envy you for being
able to spend time in that wonderful county of Suffolk. I spent some
wonderfull times there in my childhood where the jerries destroyed our
home in East London and we had to wait for one in better state of
repair.i.e. huge timbers to stop the side of the house falling was the
best we could get. But Suffolk was so quiet and beutiful.
To this day I dream of the old church yards, the sugar beet fields and
gleaning
in the wheat fields. As I said,great job.
Art

2008. Re: Split vs Solid-core Ferrite

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-31 16:26:36 UTC
From: Al <aburzynski@swri.nojunk.edu>
Message-ID: <ukg3tt97u26rd3@corp.supernews.com>
Source record: 137695

Thanks for the info, I appreciate it.

Al
KA5JGV

2009. Re: Best Allround Antenna ?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-31 16:27:51 UTC
From: n7ws_at_yahoo.com
Message-ID: <3d480f9d.9335061@news.triconet.org>
Source record: 137696

On Tue, 30 Jul 2002 19:15:58 -0400, "N1RZB" <n1rzb@110.net> wrote:

|BlankI'm well aware that this question has been asked a thousand time but I
|must ask.
|
|What is the best all-round antenna for HF work, 80 to 10 meters?

A 3 to 30 MHz log periodic dipole on a 199 foot tower.

2010. Forty Shorty Question

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-31 16:54:33 UTC
From: ardujenski@aol.com
Message-ID: <20020731125433.09237.00000405@mb-fa.aol.com>
Source record: 137697

In the ARRL HANDBOOK (16th edition) and at this site:
http://www.flashwebhost.com/circuit/shortant.php
is a shortened 40m dipole. Can this be used on the upper bands as well or does the coil need to be switched out? Thanks Alan KB7MBI

2011. Re: Best Allround Antenna ?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-31 16:56:07 UTC
From: richardharrison@webtv.net
Message-ID: <24911-3D4816A7-56@storefull-2395.public.lawson.webtv.net>
Source record: 137699

Reg, G4FGQ wrote:
"A lot of people assume everybody else carries around with them copies of ARRL books, like the infamous Little Red Books."

Long responses to questions here may not be well received even if well considered and the responder has the time and energy to devote to the response.

Information in the Antenna Book has been checked, rechecked, then checked again, as they say of the tabloids here. My opinion may be suspect for a variety of reasons. The Antenna Book, on the other hand as Art Unwin noted, reprints much of the same information in edition after edition. Any significant mistake has probably been edited out, according to our understanding of the principles now.

I believe many readers can avail themselves of the Antenna Book or an equivalent. I gave a page number for reader convenience, but the same information can be found elsewhere. That`s up to the reader.

Best rergards, Richard Harrison, KB5WZI

2012. Re: coax choices?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-31 17:35:16 UTC
From: aunwin@fgi.net
Message-ID: <c4becf19.0207310935.2438d210@posting.google.com>
Source record: 137700

n7ws_at_yahoo.com (Wes) wrote in message news:<3d469d97.4311912@news.triconet.org>...
> 7/8" Heliax and you can forget the PVC pipe.

I Would not throw out the PVC pipe idea. I have never regreted the 6
inch dia PVC pipe that I put under ground as it gets all the wires out
of the way.
I would suggest that you also place a steel wire (1/4 dia) for the
length of the pipe portion to allow you to add replacement control
wires for the rotor and for any other control wires you may need in
the future for further experimentation (ie a means for pulling thru
new wires).
You have a lot of antennas on that tower and if you do not use a pvc
pipe for the underground stuff then look at Murphy siiting on the
fence with that grin of anticipation.I also use 7'8 dia Andrews coax
all the way to the tower top.
Art
>
>
> On Tue, 30 Jul 2002 13:49:57 GMT, "JTB" <shutup@nowhere.Lsu> wrote:
>
> |I am looking for info on what everyone's past experiences are w/ types of
> |coax, and recommendations for the following antenna types.
> |I am installing a 100 ft tower, w/ 6 antennas.
> |The antennas are:
> |VHF base station 6db gain (commercial use, for a repeater)
> |UHF base station 9db gain (commercial use, for a repeater)
> |Dual Band base station ham antenna (possible repeater at some point)
> |VHF Yagi on rotor
> |UHF Yagi also on the rotor
> |Low band base station antenna
> |
> |Discone scanner antenna on the roof peak.
> |
> |I'm not looking for extreme quality here, but of course as the saying goes,
> |you get what you pay for..
> |Cables will be buried in PVC pipe.
> |
> |Thanks
> |
> |Jeremy
> |KB1EJW
> |
> |

2013. Re: Best Allround Antenna ?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-31 17:41:49 UTC
From: Reg Edwards <g4fgq.regp@btinternet.com>
Message-ID: <ai97gs$r0a$1@paris.btinternet.com>
Source record: 137701

If you think the nulls in the radiation pattern of a dipole in the
horizontal plane are much like the theoretical, pretty patterns generated
produced by Eznec then have another think, Nothing is perfect. Radiation
from the feedline, reflections from the ground and the oceans, and other
propagation and ionospheric effects fill in the nulls. For practical
purposes a high dipole is omni-directional.

Art, if you can't propose a better antenna other than trailing a wire from a
spool behind a jumbo-jet, it must be assumed that what has been proposed and
used by 100's of thousands of others world-wide is indeed the best.

I havn't seen any noisy protests from G5RV supporters.
--
Regards, Reg, G4FGQ

========================
"Art Unwin KB9MZ" <aunwin@fgi.net> wrote in message
news:c4becf19.0207310645.34babfd6@posting.google.com...
> "Reg Edwards" <g4fgq.regp@btinternet.com> wrote in message
news:<ai8bqgcht1@venus.btinternet.com>...
> > > What is the best all-round antenna for HF work, 80 to 10 meters?
> > >
> > > ==============================
> > >
> > > Horizontal dipole, overall length anywhere beween 100 and 150 feet, as
high
> > > as you can get it, fed with balanced openwire line of no particular
> > > impedance or length. You can't beat it !
> > > ---
> > > Reg
> >
> > But how are you going to turn it when the other person is in one of
> > the many nulls of the radiation pattern ?.If you solve that and could
> > turn the antenna to remove the person from the null then you have a
> > BEST antenna! Does the horizontal polarisation of the antenna provide
> > better coverage overall than when
> > it is used as a system? I.E. use of the feeder to generate vertical
> > polarization. In other words what are the all the advantages and
> > disadvantages
> > that make this the BEST antenna.
> > Art

2014. Re: Shielded parallel feedlines

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-31 17:41:50 UTC
From: Reg Edwards <g4fgq.regp@btinternet.com>
Message-ID: <ai97gt$r0a$2@paris.btinternet.com>
Source record: 137702

> Floating shield coax cable is for most r-f purposes a fat wire.
>
> Best regards, Richard Harrison, KB5WZI

==========
Richard, I quite agree. It is completely ineffective for whatever the intended purpose might be. Of course, the polyethylene would provide the essential high-voltage insulation.
--
Reg.

2015. Re: coax choices?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-31 18:18:49 UTC
From: n7ws_at_yahoo.com
Message-ID: <3d4828e2.15804809@news.triconet.org>
Source record: 137703

On 31 Jul 2002 10:35:16 -0700, aunwin@fgi.net (Art Unwin KB9MZ) wrote:

|n7ws_at_yahoo.com (Wes) wrote in message news:<3d469d97.4311912@news.triconet.org>...
|> 7/8" Heliax and you can forget the PVC pipe.
|
|I Would not throw out the PVC pipe idea. I have never regreted the 6
|inch dia PVC pipe that I put under ground as it gets all the wires out
|of the way.
|I would suggest that you also place a steel wire (1/4 dia) for the
|length of the pipe portion to allow you to add replacement control
|wires for the rotor and for any other control wires you may need in
|the future for further experimentation (ie a means for pulling thru
|new wires).
|You have a lot of antennas on that tower and if you do not use a pvc
|pipe for the underground stuff then look at Murphy siiting on the
|fence with that grin of anticipation.I also use 7'8 dia Andrews coax
|all the way to the tower top.

I want to see you pull a seventh piece of 7/8" Heliax through that PVC
Art :)

All that I was suggesting was that the Heliax is good for direct
burial.

2016. Re: Anyone use the SteppIR adjustable Yagi

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-31 19:04:32 UTC
From: aunwin@fgi.net
Message-ID: <c4becf19.0207311104.5244d6c7@posting.google.com>
Source record: 137704

"H. Adam Stevens" <solo@totalaccess.net> wrote in message
news:<ukc61a6hep0a8b@corp.supernews.com>...
> I sure like my SteppIR. I have the 3 element with the 6 meter bit. It's
> still on a short pole as the tower isn't up yet.
> As for the price, I think it's comparable to log periodic dipole arrays and
> anything else that can approach the performance.
> It's a simpler (at most 4 elements on 6 meters), lighter (lower tower, rotor
> costs), stronger (100 MPH),
> antenna than anything comparably priced that comes close in performance. The
> VSWR is always 1:1.
> I think it's correctly engineered and well executed. It does tricks nothing
> else can.
> I sure hope lightning doesn't find it attractive.
> H.
> NQ5H
>
>
> <me@nowwhere.com> wrote in message news:3D45C06F.D3B7A7AD@swbell.net...
> >
> >
> > "R. Scott" wrote:
> >
> > > Looks interesting except price. Wonder if anyone has one and what if
> > > anything you think. Worked a guy this weekend and he fawned over it. But
> > > his home page is a big ad for the company so I figured he was bias'd
> > >
> > > http://www.steppir.com/
> > >
> > > Comments (besides price of 1075.00)
> > > Wondered when someone would do an antenna like this.
> > >
> > > Rick N7HJ
> >
> > have had one for 3 months. works like a fire hose on
> > 17m and up. works pretty good on 20m.
> >
> > try:
> >
> > http://groups.yahoo.com/group/SteppIR/
> >
> > larry
> > kd5foy
> >

Well I am glad you like it. It sure costs a lot of money, $1000 was it?.

For my money I would want a bit more gain on all frequencies and less complexity
in the moving parts area.I think I would rather make my own antenna to over come those problems. For those who cannot afford it using the old (20 years plus)
automatic antennas used on euro cars such as the mercedes 300 will do the same job at a much less cost. Only the rich could afford those car antennas in the old days but now the scrap yard sells them for around $20. Of course you can make your own antennas instead of buying and following their style of design you can produce a much better technical spec'd antenna for much less money.
If I was the IR componey I would work quickly to get rid of the step motor drive and its complexity before sales drop off completely but I am sure they are doing just that ?????
Art
Art

2017. FA....NICE ROLLER INDUCTOR...FA

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-31 19:10:54 UTC
From: kf4toh@aol.com
Message-ID: <20020731151054.02421.00000463@mb-fv.aol.com>
Source record: 137705

http://cgi.ebay.com/ws/eBayISAPI.dll?ViewItem&item=1369180650

NICE ROLLER INDUCTOR AROUND 27 TURNS OF FLAT COPPER STOCK GUESSING AROUND 24 TO 26 UH COIL SIZE IS 5 1/5 BY 6 FRAME SIZE IS 10 LONG BY 7 TALL USES A TWO WHEEL TYPE CONTAC HAS A 3/8 SHAFT COMES WITH A 3/8 TO 1/4 INSULATOR VERY GOOD COND

2018. Re: Best Allround Antenna ?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-31 19:24:23 UTC
From: 'Doc <w5lz@icok.net>
Message-ID: <3D483953.F3149700@icok.net>
Source record: 137706

And certainly can't be described as the 'best'!
'Doc

2019. Re: Best Allround Antenna ?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-31 20:05:02 UTC
From: John Passaneau <jxp16@psu.edu>
Message-ID: <ai9fth$rto@r02n01.cac.psu.edu>
Source record: 137707

Hi:

Well you still have to count the area of the car. If it's mounted on a 18
wheeler it sure is not small.

--
John Passaneau, W3JXP
Physics Dept. Electronics Shop
Penn State University
104 Davey Lab, University Park , Pa. 16802
814.863.4297, jxp16@psu.edu

"Richard Harrison" <richardharrison@webtv.net> wrote in message
news:15127-3D47ECA8-30@storefull-2396.public.lawson.webtv.net...
> John Passaneau wrote:
> "Everyone recommends a vertical for limited space, but a vertical is not
> a limited space antenna---."
>
> Limited space limits performance.
>
> The vertical can make good use of a 1/2-wave diameter circle containing
> many radials but this is most often compromised and the antenna still
> works.
>
> Just look at whips mounted on vehicles. These often have small
> footprints.
>
> Best regards, Richard Harrison, KB5WZI
>

2020. Re: Antenna trivia

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-31 20:23:57 UTC
From: Peter Fournia <pfournia@rochester.rr.com>
Message-ID: <3D48471E.5CE78B6C@rochester.rr.com>
Source record: 137708

test

2021. Cushcraft going out of business?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-31 20:26:01 UTC
From: Peter Fournia <pfournia@rochester.rr.com>
Message-ID: <3D484799.56C260F@rochester.rr.com>
Source record: 137709

What's up with Cushcraft? Twice I have ordered parts for antennas using their web site order form. Have not heard a word from them! Not even acknowledgment of receiving the order. Of course their parts pricing is not available on their web site either.

Does Cushcraft handle parts for their antennas? What's the secret? How do you get parts from them?

Peter Fournia, W2SKY
Penfield, NY

2022. FA: Archer All Band Scanner Antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-31 21:17:52 UTC
From: Camper <sgrubor@shaw.caNSPM>
Message-ID: <4uY19.79380$Ag2.3721539@news2.calgary.shaw.ca>
Source record: 137710
Cross-posted to: alt.radio.scanner,rec.radio.amateur.antenna,rec.radio.scanner

http://cgi.ebay.com/ws/eBayISAPI.dll?ViewItem&item=1370489302

--
*** Remove NSPM to reply ***

2023. Re: Forty Shorty Question

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-31 21:35:34 UTC
From: jgboyles@aol.com
Message-ID: <20020731173534.11808.00000714@mb-ma.aol.com>
Source record: 137711

>http://www.flashwebhost.com/circuit/shortant.php
>is a shortened 40m dipole. Can this be used on the upper bands as well or
>does
>the coil need to be switched out?

Hi Alan, The shorty fourty once tuned for 40m probably won't work on other bands. If you made the dipole elements about 22' instead of 18' and fed it with 450 ohm ladder line, with a suitable tuner, it would work well on 40m-10m.

73 Gary N4AST

2024. Re: Forty Shorty Question

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-31 21:52:42 UTC
From: ardujenski@aol.com
Message-ID: <20020731175242.03904.00000470@mb-cq.aol.com>
Source record: 137712

Gary
I plan to use two 20ft fishing poles but with a few helix turns can get all 22ft on the poles. Is open ladderline or 300ohm also acceptable or is 450 best for least losses? This will be going atop my extension ladder mast--Thanks Alan KB7MBI

2025. suggestions for antenna+preamp

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-31 22:32:06 UTC
From: Barun Gupta <barun@worldnet.att.net>
Message-ID: <GzZ19.13028$pg2.1048428@bgtnsc05-news.ops.worldnet.att.net>
Source record: 137713

I have a Sony SC1 scanner which as you know can be switched to different modes (NFM, WFM, AM) in any band. Since it covers the 225 - 400 MHz band and can be switched to NFM mode, I would like to try and listen to FLTSATCOM satellites.

a) My first question is what would you recommend as an antenna and a preamp (I've heard that you need a preamp to listen to some of these sats)? Price is always a consideration but if you can give me options that work I'm sure I can find the prices for new/used antennas or preamps.

b) My second question is whether there are any other sats that I can listen to. I'm not interested in the WX sats, so anything other than that and using a freq below 1300 MHz.

2026. Re: G5RV, coax/ladderline and remote tuner

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-31 22:37:41 UTC
From: richardharrison@webtv.net
Message-ID: <1201-3D4866B5-60@storefull-2394.public.lawson.webtv.net>
Source record: 137714

AG wrote:
"I`m wondering if I couldn`t just run the ladderline through the PVC?"

Buried plastic pipe would sap significant energy from ladderline unless the ladderline could be contained far away from the pipe. The distance needs to be many times the line spacing because the earth, unlike shielding on shielded-pair r-f cables, is usually very lossy.

The 19th edition of the ARRL Antenna Book suggests paralleled lengths of RG-63 (125 ohms) for a balanced line of 250 ohms that can be routed with little regard for the surroundings. (See page 24-20)

Best regards, Richard Harrison, KB5WZI

2027. Dipole question? How much shorter one side than other?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-31 23:06:29 UTC
From: StarGazer <pti@capnet.com>
Message-ID: <3D486D75.97812F9C@capnet.com>
Source record: 137725

How much length difference is tolerable in a dipole?

Is it OK to loop the wire through the insulator a couple of
times for added strength?

Or to wrap the excess length spirally around the ends of dipole?

2028. Discones, Reception & Trees: any "Elmer's" out there?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-31 23:06:43 UTC
From: Otis Cribblecoblis <alaininvc@86'DASPAMnetscape.net>
Message-ID: <ukgr74t3l0vr0f@corp.supernews.com>
Source record: 137715

Hello All,

Just moved to a new place in the mountains. Set the discone on a 20' post and received Los Angeles, 125+ miles away.

The only place for a permanent mount is on the back porch...right where a tree is growing! I've got the pole mounted in between two large branches that are growing out from the tree and away from the antenna. All the limbs surrounding the antenna are about 6' from the pole and the radials.

My question is: monitoring C.D.F. on 151 MHz and perhaps 800 MHz later on, is there a potential for signal strength loss by not pruning the limbs back? Will the limbs cause major reception/interference later on?

It's really a beautiful tree and I'd hate to prune it way back if it's not necessary.

Many thanks for taking the time to respond!

Alain...somewhere on Palomar Mtn. (where the 200" telescope is)

WPE2OLR (the old [1961] Newark [New Jersey] News Radio Club)

2029. J Pole

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-31 23:27:30 UTC
From: wa0goz@arrl.net
Message-ID: <3D487262.4416@arrl.net>
Source record: 137716

When making a J-pole antenna, does the shield go to the stub or the long length? I've seen it both ways. It seems to me that since your feeding the stub the shield should go to the long length and the center conductor go to the stub.

Various searches and various magazine articles show it both ways.

Thanks and 73

Henry WA0GOZ

2030. Re: coax choices?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-31 23:30:05 UTC
From: aunwin@fgi.net
Message-ID: <c4becf19.0207311530.2387039b@posting.google.com>
Source record: 137717

n7ws_at_yahoo.com (Wes) wrote in message news:<3d4828e2.15804809@news.triconet.org>...
> On 31 Jul 2002 10:35:16 -0700, aunwin@fgi.net (Art Unwin KB9MZ) wrote:
>
> |n7ws_at_yahoo.com (Wes) wrote in message news:<3d469d97.4311912@news.triconet.org>...
> |> 7/8" Heliax and you can forget the PVC pipe.
> |
> |I Would not throw out the PVC pipe idea. I have never regreted the 6
> |inch dia PVC pipe that I put under ground as it gets all the wires out
> |of the way.
> |I would suggest that you also place a steel wire (1/4 dia) for the
> |length of the pipe portion to allow you to add replacement control
> |wires for the rotor and for any other control wires you may need in
> |the future for further experimentation (ie a means for pulling thru
> |new wires).
> |You have a lot of antennas on that tower and if you do not use a pvc
> |pipe for the underground stuff then look at Murphy siiting on the
> |fence with that grin of anticipation.I also use 7'8 dia Andrews coax
> |all the way to the tower top.
>
> I want to see you pull a seventh piece of 7/8" Heliax through that PVC
> Art :)

That would be extremely dificult to do.
I was thinking that he would use a switch box at the tower top.
My PVC pipe has three coaxes running in it plus an untold number of
vaious
control wires which occasionaly get tangled up when I add to them.
> All that I was suggesting was that the Heliax is good for direct
> burial.
I would agree with that, but if he has other wires such as for the
rotor e.t.c
and the tower is a long way from the shack the wife would be very
happy to see those wires hanging in the trees put out of sight
underground. Anyway ythat has been my experiences over the years.
Art

2031. Re: Solarcon A99

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-31 23:30:28 UTC
From: "Thorvald." <thorvald@arendal.online.no>
Message-ID: <oq_19.4875$sR2.86030@news4.ulv.nextra.no>
Source record: 137718

"Dennis Kaylor" <k4oxg@tampabay.rr.com> skrev i melding
news:zpv19.35378$s8.844322@twister.tampabay.rr.com...
> i have one and it works great with a tuner i work 10-12-15-17
> and its only mounted about 7 feet off the ground
> "Thorvald." <thorvald@arendal.online.no> wrote in message
> news:8Eu19.4177$sR2.74145@news4.ulv.nextra.no...
> > Anyone with experiences with this antenna ?
> >
> > T.
> >
> >
> >
>
>

Thanks there, nice recommendations :-))

Guess my old one is due for a replacement...

Th.

2032. Re: Best Allround Antenna ?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-31 23:45:17 UTC
From: aunwin@fgi.net
Message-ID: <c4becf19.0207311545.4461d689@posting.google.com>
Source record: 137719

"Reg Edwards" <g4fgq.regp@btinternet.com> wrote in message
news:<ai97gs$r0a$1@paris.btinternet.com>...
> If you think the nulls in the radiation pattern of a dipole in the
> horizontal plane are much like the theoretical, pretty patterns generated
> produced by Eznec then have another think, Nothing is perfect. Radiation
> from the feedline, reflections from the ground and the oceans, and other
> propagation and ionospheric effects fill in the nulls. For practical
> purposes a high dipole is omni-directional.
>
> Art, if you can't propose a better antenna other than trailing a wire from a
> spool behind a jumbo-jet, it must be assumed that what has been proposed and
> used by 100's of thousands of others world-wide is indeed the best.
>
> I havn't seen any noisy protests from G5RV supporters.
> --
> Regards, Reg, G4FGQ
> Yes but what is it that you value about the G5RV ? There are other antennas
that are multiband or for that matter multi frequency. Even a loop
antenna
can be turned to a station that is in the null of the G5RV. Yes, the
interchange will be weak where with the G5RV it would be impossible.
If a dozen or so hams were to list what they would want from a
multiband antenna
my guess that would be an all round radiation pattern which points to
a vertical or, in the case of horizonatal polarisation it must have
the ability to turn
The G5RV has none of these attributes so what has the G5RV have to
warrant your enthusiam over other antennas ?
> ========================
> "Art Unwin KB9MZ" <aunwin@fgi.net> wrote in message
> news:c4becf19.0207310645.34babfd6@posting.google.com...
> > "Reg Edwards" <g4fgq.regp@btinternet.com> wrote in message
> news:<ai8bqgcht1@venus.btinternet.com>...
> > > > What is the best all-round antenna for HF work, 80 to 10 meters?
> > >
> > > ==============================
> > >
> > > Horizontal dipole, overall length anywhere beween 100 and 150 feet, as
> high
> > > as you can get it, fed with balanced openwire line of no particular
> > > impedance or length. You can't beat it !
> > > ---
> > > Reg
> >

> > But how are you going to turn it when the other person is in one of
> > the many nulls of the radiation pattern ?.If you solve that and could
> > turn the antenna to remove the person from the null then you have a
> > BEST antenna! Does the horizontal polarisation of the antenna provide
> > better coverage overall than when
> > it is used as a system? I.E. use of the feeder to generate vertical
> > polarization. In other words what are the all the advantages and
> > disadvantages
> > that make this the BEST antenna.
> > Art

2033. Re: Best Allround Antenna ?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-07-31 23:57:22 UTC
From: aunwin@fgi.net
Message-ID: <c4becf19.0207311557.7f9f4b5c@posting.google.com>
Source record: 137720

n7ws_at_yahoo.com (Wes) wrote in message news:<3d480f9d.9335061@news.triconet.org>...
> On Tue, 30 Jul 2002 19:15:58 -0400, "N1RZB" <n1rzb@110.net> wrote:
>
> |BlankI'm well aware that this question has been asked a thousand time but I
> |must ask.
> |
> |What is the best all-round antenna for HF work, 80 to 10 meters?
>
> A 3 to 30 MHz log periodic dipole on a 199 foot tower.

Now that I could agree with. How long would the boom be to cover the 3 MHZ
part of it? The gain on the 10 thru 20 would be a bit low tho.
Art

2034. Re: Best Allround Antenna ?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-01 00:24:24 UTC
From: n7ws_at_yahoo.com
Message-ID: <3d487c4f.16254629@news.triconet.org>
Source record: 137721

On 31 Jul 2002 16:57:22 -0700, aunwin@fgi.net (Art Unwin KB9MZ) wrote:

|n7ws_at_yahoo.com (Wes) wrote in message news:<3d480f9d.9335061@news.triconet.org>...
|> On Tue, 30 Jul 2002 19:15:58 -0400, "N1RZB" <n1rzb@110.net> wrote:
|>
|> |BlankI'm well aware that this question has been asked a thousand time but I
|> |must ask.
|> |
|> |What is the best all-round antenna for HF work, 80 to 10 meters?
|>
|> A 3 to 30 MHz log periodic dipole on a 199 foot tower.
|
|Now that I could agree with. How long would the boom be to cover the 3 MHZ
|part of it? The gain on the 10 thru 20 would be a bit low tho.
|Art

Well if we keep the boom length to managable 200 feet, and fudged the
lower frequency to 3.5 MHz, we could use 15 elements and get a bit
over 8 dBi throughout the range. That's 3 element Yagi territory.
This isn't great but by going QRO with a Henry 8K, you should do okay.
I think a five-inch gun mount could rotate the whole structure without
trouble.

The tower height is kind of low, but it won't require lights at this
modest height.

Too bad Frank, W6KPC, sold the farm and moved to town; he could have
tried this.

2035. Home Use of J-Pole

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-01 00:39:50 UTC
From: Perry Mason <pmason@legal.org>
Message-ID: <7m0hkus7ke5m38gbs0d10l44b8n4k2blrd@4ax.com>
Source record: 137722

Consider two scenarios. A city environment such as NYC and a country environment with large hills, not mountains. If one is looking to improve their FM reception, would a JPole be effective in both cases? Are there better options considering that this would be a DIY project?

2036. Re: Best Allround Antenna ?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-01 01:01:24 UTC
From: Bob Nielsen <nielsen@remove_this.oz.net>
Message-ID: <aia194npi0@216.39.144.81>
Source record: 137723

On 31 Jul 2002 16:57:22 -0700, Art Unwin KB9MZ wrote:
> n7ws_at_yahoo.com (Wes) wrote in message news:<3d480f9d.9335061@news.triconet.org>...
>> On Tue, 30 Jul 2002 19:15:58 -0400, "N1RZB" <n1rzb@110.net> wrote:
>>
>> |BlankI'm well aware that this question has been asked a thousand time but I
>> |must ask.
>> |
>> |What is the best all-round antenna for HF work, 80 to 10 meters?
>>
>> A 3 to 30 MHz log periodic dipole on a 199 foot tower.
>
> Now that I could agree with. How long would the boom be to cover the 3 MHZ
> part of it? The gain on the 10 thru 20 would be a bit low tho.
> Art

Somewhere I have a copy of Isbell's original article on the LPDA filed
away, however W8JK's book "Antennas" has some design information.

Using one of his examples, I ran the numbers and came up with a boom
length of 325 feet and 16 elements with lengths ranging from ~13 feet
to ~190 feet for a gain of 7 dBi.

Anybody want to calculate the wind load?

73,
Bob Nielsen, N7XY

2037. Re: Best Allround Antenna ?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-01 01:03:07 UTC
From: Reg Edwards <g4fgq.regp@btinternet.com>
Message-ID: <aia1cb$4b7$1@helle.btinternet.com>
Source record: 137724

Art, I'm sorry I didn't make my point clear.

The G5RV (God bless his soul) is about the worst of the sizeable so-called multiband antennas. Remove the coax and change the feeder to 600-ohm and you will be going places. Have you stopped using my programs ?

==========
Regards from Reg G4FGQ
Free Radio Design Software
Go to http://www.g4fgq.com
==========

2038. Back to Basics, etc

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-01 01:09:47 UTC
From: Reg Edwards <g4fgq.regp@btinternet.com>
Message-ID: <aia1oq$cg5$1@venus.btinternet.com>
Source record: 137726

Field strength E' at distance D metres from transmitter with Pt watts power output, and antenna gain Gt is -

E' = Sqrt(30 * Gt * Pt) / D volts per metre.

When a field strength meter is used at the other end of the path -

E' = 68.83 * Sqrt(Gr * Pr) / Lambda volts per metre,

where Pr is the matched receiver input power in watts, Gr is the receiving antenna gain and Lambda is the wavelength in metres.

The above pair of equations can be combined to describe the overall Tx to Rx path. Receiver input power for given transmitter output power turns out to be -

Pr = Gt *Gr * Pt * Square(Lambda / 4 / Pi / D) watts,

which, of course, is a reciprocal relationship and is easily converted to S-units. You can't have a linear transmission path which has a different loss in the other direction of transmission. Antenna gains are relative to an isotrope. The gain of an isotrope is 1. D is the straight line path length. Modify path loss accordingly for ground and ionospheric paths.

The foregoing is beautifully simple and is exact, easily understood by anyone who can do arithmetic. Every radio amateur worth his salt should be familiar with these basic concepts. But I've never seen anything of the sort in any so-called educational periodical, annual or compendium. (I havn't bothered to look lately.) Is this because technical editors and authors don't understand it themselves ? Or is it because ancient Elizabethan measurement units mixed with metric units result in frightening expressions?

It has been said elsewhere on this newsgroup it is time handbooks were re-written. Regurgitation of the old stuff by plagiarists, forever continuing popular misconceptions, will condemn the hobby to history, as interesting as the history of radio may be. Publishers have other objectives.

Except by saying we should get into the 21st century I don't know where we should go from here. But there is a serious handicap in whatever direction may be taken. And that is a general worship of the computer program. Any rubbish produced by a computer is willingly accepted as the gospel truth. Having lost or never had the ability to be logical or critical some people will manage to digest anything. Victims of antenna and SWR meter salesmen!

I remain optimistic. What are the Chinese doing? Good night dear friends.
;o)

Yours, Reg, G4FGQ

========================
Free Radio Design Software
Go to http://www.g4fgq.com
========================

2039. Re: Dipole question? How much shorter one side than other?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-01 01:29:52 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <3D488F10.4020100@eznec.com>
Source record: 137727

These things will appreciably affect a dipole's pattern, gain, or efficiency. They will affect the effective length, so if you're intending to make the dipole resonant so you can feed it without a tuner, you might have to adjust the length to compensate.

Roy Lewallen, W7EL

StarGazer wrote:
> How much length difference is tolerable in a dipole?
>
> Is it OK to loop the wire through the insulator a couple of
> times for added strength?
>
> Or to wrap the excess length spirally around the ends of dipole?
>

2040. Re: CAM?? 160m & 10 m Dipole?? Anyone

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-01 01:59:25 UTC
From: richardharrison@webtv.net
Message-ID: <16020-3D4895FD-99@storefull-2391.public.lawson.webtv.net>
Source record: 137728

StarGazer asked several questions about antennas being used in the wrong bands.

An 80m band dipole will perform better in the 160m band than does a 40m band dipole because it is less deficient.

If you have a good ground, the dipole and its feedline can almost be operated as a "T"-antenna against that ground connection (short the balanced line). This is a vertical antenna with a capacitive hat. Given the proper feedline length, this "T" antenna can be resonant in the 160m band though the dipole is cut for a higher frequency band.

A 40-meter band dipole will have fewer lobes than an 80-meter band dipole when operated on 10 meters. The better antenna happens to have a lobe in the direction of your target. This disregards the strength of the lobe and the interference to be found in reception from lobes which are not on target.

Best regards, Richard Harrison, KB5WZI

2041. Re: coax choices?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-01 02:25:18 UTC
From: "J. McLaughlin" <JCM@Power-Net.Net>
Message-ID: <ukh6vsge2rir64@corp.supernews.com>
Source record: 137729

I have placed Andrew coax, including the type that is intended to be RF leaky, into designs for decades. That includes a bunch that is placed on the ground or in a shallow cut in the ground.
I just measured a very long piece that was put in by me some 30 years ago. I could not measure any degradation. You get just what you pay for.
73 Mac N8TT

--
J. Mc Laughlin - Michigan USA
Home: JCM@Power-Net.Net
Office: JCM@McLMcL.Com
"Richard Harrison" <richardharrison@webtv.net> wrote in message news:16631-3D473966-9@storefull-2393.public.lawson.webtv.net...
> I agree with Wes, and don`t accept substitutes. Stick with Andrew.
>
> Best regards, Richard Harrison, KB5WZI
>

2042. Re: Best Allround Antenna ?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-01 03:01:20 UTC
From: Crazy George <munschNO@attglobal.net.SPAM>
Message-ID: <3d48aa2e_2@news1.prserv.net>
Source record: 137730

You guys need a catalog. AS-3195. 3.5-30 MHz LPA, with tower and rotator. Commercially available. Gain is just a dB or 2 at 3.5 MHz, but is up in the 7-8 dB range above 4 MHz. I can point to 2 of them just west of San Antonio, TX, and give several other locations overseas. There are a number of them installed stateside, but I don't have their locations handy.

--
Crazy George
Remove NO and SPAM from return address

2043. Re: Home Use of J-Pole

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-01 03:31:40 UTC
From: richardharrison@webtv.net
Message-ID: <1201-3D48AB9C-102@storefull-2394.public.lawson.webtv.net>
Source record: 137731

Perry Mason wrote:
"A city environment such as NYC and a country environment with large hills, not mountains."

For FM reception, a J-pole is likely not best for VHF music or amateur service.

In the city, multipath reception is a problem due to ample reflecting surfaces. Highly directive antennas sometimes make reception tolerable where destructive interference poses problems with non-directional antennas.

In rural sites with hills, you may need antenna height for line-of-sight and directivity for signal strength.

Both scenarios often call for directive antennas. The J-pole has no discrimination at any azimuth and has a little less gain than a dipole, ground-plane, or coaxial antenna, typically -2dBd, according to Arnold B. Bailey who holds U.S. Patent 2184729, 1939, on the coaxial antenna.

Best regards, Richard Harrison, KB5WZI

2044. Re: Hamstick With Radial

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-01 03:56:38 UTC
From: N4LQ <N4LQ@igLou.com>
Message-ID: <3d475fd4_2@news.iglou.com>
Source record: 137680

Would be better if the 65' of wire went vertical and the hamstick went horizontal. Then you would have a vertical with a poor ground. That's better than a ground with a poor vertical.

--
Steve Ellington N4LQ.
"marvin rosen" <raghead@worldnet.att.net> wrote in message news:1Eu19.10657$pg2.873331@bgtnsc05-news.ops.worldnet.att.net...
> Possible idea for an 80-10 mtr vertical/horizontal ant. One 75 mtr hamstick
> (7' or longer).
> One lead of ladderline connected to the vertical hamstick. The other lead of
> the
> ladderline connected to 65' of horizontal wire. The other two leads of the
> ladderline
> line would go to a balun and/or tuner. Does this idea have any merit?
>
>
> ---
> Outgoing mail is certified Virus Free.
> Checked by AVG anti-virus system (http://www.grisoft.com).
> Version: 6.0.375 / Virus Database: 210 - Release Date: 7/10/02
>
>

2045. Re: J Pole

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-01 04:42:09 UTC
From: Max <ve3tmt@rac.ca>
Message-ID: <a_229.2190$sl2.1195383@news20.bellglobal.com>
Source record: 137732

<wa0goz@arrl.net> wrote in message news:3D487262.4416@arrl.net...
> When making a J-pole antenna, does the shield go to the stub or the long
> length? I've seen it both ways. It seems to me that since your feeding
> the stub the shield should go to the long length and the center
> conductor go to the stub.
>
> Various searches and various magazine articles show it both ways.
>
> Thanks and 73
>
> Henry WA0GOZ

Henry,

I attached the shield to the 19" stub, center conductor to 57" side and I have no higher than 1.2:1 SWR across the entire 2m band according to my 249 analyzer.

Max

2046. Re: How many Hops on 40 m from coast to coast??

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-01 05:05:27 UTC
From: ":-) Bill" <therealexray@netscape.net>
Message-ID: <3D48C197.C09B288C@netscape.net>
Source record: 137737

"WB3FUP (Mike Hall)" wrote:
>
> Who cares, if it is open talk, if not try another band

or use CW :-)

-ex

2047. Re: J Pole

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-01 05:11:55 UTC
From: Gary Wescom <wescom@digitalputty.com>
Message-ID: <3d48c2d3$1@phoenix.digitalputty.com>
Source record: 137738

My experience with copper pipe J antennas is that when directly connecting the coax to the outside of the pipe, rf current on the outside of the feedline is a little lower when the coax is connected with the center conductor connected to the quarter wave stub and the shield connected directly across gap on the long leg. I also found that using a half wave balun did not seem work any better at decoupling the feed line than just directly connecting the coax. The location of the direct coax connection is a little lower on the stub than with the half wave balun but not as much as you might first guess. Not using the balun has the advantage of providing a DC path between center conductor and shield reducing static buildup. To the initiated, it looks like you are trying to feed a dead short.

Also a quick hint. I used liquid flux to solder the coax to a pair of screw type metal hose clamps. Slip the hose clamps over the copper pipe. You can then easily adjust the feed location. Center frequency of the antenna can be adjusted by changing long leg length or slight changes in the spacing of the stub opening.

Gary N0GW

<wa0goz@arrl.net> wrote in message news:3D487262.4416@arrl.net...
> When making a J-pole antenna, does the shield go to the stub or the long
> length? I've seen it both ways. It seems to me that since your feeding
> the stub the shield should go to the long length and the center
> conductor go to the stub.
>
> Various searches and various magazine articles show it both ways.
>
> Thanks and 73
>
> Henry WA0GOZ

2048. Re: Dipole question? How much shorter one side than other?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-01 05:59:06 UTC
From: 'Doc <w5lz@icok.net>
Message-ID: <3D48CE03.9E052850@icok.net>
Source record: 137739

'Gazer,
I'll pass on the first question cuz I 'not sure what it
means.
Is it okay to loop the wire through the insulator a couple
of times for added strength? Why would you bother? You don't
get an 'added strength' by doing that.
Does it hurt to wrap the excess length spirally around the
ends of the dipole? Nope. Works fine, lasts a long time, but
keep the excess length to a reasonable length. An 1/16 wave
length
is not reasonable. A couple of feet, or less is.
'Doc

2049. Re: Home Use of J-Pole

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-01 06:02:29 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <3D48CEF5.1000404@eznec.com>
Source record: 137740

Richard Harrison wrote:
> . . .
> Both scenarios often call for directive antennas. The J-pole has no
> discrimination at any azimuth and has a little less gain than a dipole,
> ground-plane, or coaxial antenna, typically -2dBd, according to Arnold
> B. Bailey who holds U.S. Patent 2184729, 1939, on the coaxial antenna.

Does Bailey say how this gain was determined?

Roy Lewallen, W7EL

2050. Re: Shielded parallel feedlines

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-01 06:08:08 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <3D48D048.2030403@eznec.com>
Source record: 137741

The fields from a twinlead feedline extend some distance from the wire. It seems to me that if you shield each wire and tie the shields together but otherwise float them, the fields will be confined to the insides of the shields -- *IF* the currents in the two twinlead conductors are equal and opposite. And if they are, placing the outside of the shields against a conductor should have no effect on the twinlead currents. This wouldn't be true of twinlead without the shields. Of course, if the currents are unbalanced, the difference current will flow on the outside of the shield and will couple to other objects.

Or am I missing something?

Roy Lewallen, W7EL

Reg Edwards wrote:
>>Floating shield coax cable is for most r-f purposes a fat wire.
>>
>>Best regards, Richard Harrison, KB5WZI
>
>
> ==========
> Richard, I quite agree. It is completely ineffective for whatever the
> intended purpose might be. Of course, the polyethylene would provide the
> essential high-voltage insulation.
> --
> Reg.
>
>

2051. Re: Shielded parallel feedlines

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-01 06:33:08 UTC
From: ":-) Bill" <therealexray@netscape.net>
Message-ID: <3D48D624.B7DB3037@netscape.net>
Source record: 137742

Roy Lewallen wrote:
>
> The fields from a twinlead feedline extend some distance from the wire.
> It seems to me that if you shield each wire and tie the shields together
> but otherwise float them, the fields will be confined to the insides of
> the shields -- *IF* the currents in the two twinlead conductors are
> equal and opposite. And if they are, placing the outside of the shields
> against a conductor should have no effect on the twinlead currents. This
> wouldn't be true of twinlead without the shields. Of course, if the
> currents are unbalanced, the difference current will flow on the outside
> of the shield and will couple to other objects.
>
> Or am I missing something?
>
> Roy Lewallen, W7EL

The specific point I was addressing seems to have been answered...a
floating shield would tend to act in harmony with the actual centre
conductor.
The idea was to ask if the configuration would give leeway to an open
line tacked up against a wall and if the coaxial shield in between would
offer any benefical isolation simply by its prescence.
I'm convinced that it wouldn't.

-WX4A

2052. Re: Shielded parallel feedlines

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-01 06:39:58 UTC
From: "Ian White, G3SEK" <G3SEK@ifwtech.co.uk>
Message-ID: <cnYN29A+eNS9EA9n@ifwtech.co.uk>
Source record: 137747

Roy Lewallen wrote:
>The fields from a twinlead feedline extend some distance from the wire.
>It seems to me that if you shield each wire and tie the shields
>together but otherwise float them, the fields will be confined to the
>insides of the shields -- *IF* the currents in the two twinlead
>conductors are equal and opposite. And if they are, placing the outside
>of the shields against a conductor should have no effect on the
>twinlead currents. This wouldn't be true of twinlead without the
>shields. Of course, if the currents are unbalanced, the difference
>current will flow on the outside of the shield and will couple to other >objects.
>
That logic works both ways, so how about deliberately forcing the
difference current towards zero? That could be done either by winding
the double coax into a bifilar choke, or by threading both lines
together through a string of ferrite beads.

By discouraging outer-surface currents on both shields, it should be
possible to force the currents on the connected twinlead to be more
exactly equal-and-opposite; in other words, to discourage common-mode
currents on the twinlead.

--
73 from Ian G3SEK Editor, 'The VHF/UHF DX Book'
'In Practice' columnist for RadCom (RSGB)

2053. Re: Shielded parallel feedlines

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-01 06:42:54 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <3D48D86E.7070007@eznec.com>
Source record: 137743

I apologize -- I thought we were talking about a twinlead conductor. For a single conductor, I agree entirely with what Bill and Reg said -- a floating shield wouldn't help. The current on the outside of the shield would simply be the same as the current on the wire, so the coupling to it would be the same.

So I was missing something. Thanks.

Roy Lewallen, W7EL

:-) Bill wrote:
> Roy Lewallen wrote:
>
>>The fields from a twinlead feedline extend some distance from the wire.
>>It seems to me that if you shield each wire and tie the shields together
>>but otherwise float them, the fields will be confined to the insides of
>>the shields -- *IF* the currents in the two twinlead conductors are
>>equal and opposite. And if they are, placing the outside of the shields
>>against a conductor should have no effect on the twinlead currents. This
>>wouldn't be true of twinlead without the shields. Of course, if the
>>currents are unbalanced, the difference current will flow on the outside
>>of the shield and will couple to other objects.
>>
>>Or am I missing something?
>>
>>Roy Lewallen, W7EL
>
>
> The specific point I was addressing seems to have been answered...a
> floating shield would tend to act in harmony with the actual centre
> conductor.
> The idea was to ask if the configuration would give leeway to an open
> line tacked up against a wall and if the coaxial shield in between would
> offer any benefical isolation simply by its prescence.
> I'm convinced that it wouldn't.
>
> -WX4A

2054. Re: Dipole question? How much shorter one side than other?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-01 06:48:28 UTC
From: ":-) Bill" <therealexray@netscape.net>
Message-ID: <3D48D9BC.136F341B@netscape.net>
Source record: 137744

'Doc wrote:
>
> 'Gazer,
> I'll pass on the first question cuz I 'not sure what it
> means.
> Is it okay to loop the wire through the insulator a couple
> of times for added strength? Why would you bother? You don't
> get an 'added strength' by doing that.
> Does it hurt to wrap the excess length spirally around the
> ends of the dipole? Nope. Works fine, lasts a long time, but
> keep the excess length to a reasonable length. An 1/16 wave
> length
> is not reasonable. A couple of feet, or less is.
> 'Doc

I think I get the gist of the question(s). Doc, not everybody has done wire ants before and may not have that 'gut' feel of how many inches can be fudged...although it may be questioned 'why fudge?'
That being said, if you measure per the formulas then it will usually work. An inch or few at 3.7 MHz is pretty irrelevant. Depends more on how picky you are rather than performance.
This bizness about spiral wrapping the ends that don't fit is a tricky subject. Suffice to say it can be made to work but don't bother looking for charts and stuff to tell how to do it. Makes more sense just to let the excess wire hang free.

-BM

2055. Re: Best Allround Antenna ?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-01 07:07:44 UTC
From: n7ws_at_yahoo.com
Message-ID: <3d48ddb9.41196408@news.triconet.org>
Source record: 137745

On Wed, 31 Jul 2002 22:01:20 -0500, "Crazy George"
<munschNO@attglobal.net.SPAM> wrote:

|You guys need a catalog. AS-3195. 3.5-30 MHz LPA, with tower and rotator.
|Commercially available. Gain is just a dB or 2 at 3.5 MHz, but is up in the
|7-8 dB range above 4 MHz. I can point to 2 of them just west of San
|Antonio, TX, and give several other locations overseas. There are a number
|of them installed stateside, but I don't have their locations handy.

I figured when you posted originally that you were speaking of a LPD.
A google search doesn't hit on that number however. Who makes it?

|
|

2056. Re: Shielded parallel feedlines

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-01 07:12:02 UTC
From: Arend Harteveld <a.harteveld@noio.tudelft.nl>
Message-ID: <aian04$ik1$1@news.tudelft.nl>
Source record: 137746

R> You brought the wires of a balanced transmission line together to pass
R> through a single entrance hole and created no discontinuity?
>
Yes, that is what I did. Sure there is a discontinuity, but it is physically small compared to a wavelength on HF.
The reflection from the beginning of the discontinuity will be cancelled by the one from the end because they are in opposite phase and the phase difference induced by the length of the discontinuity is negligible.

73, Arend

2057. Re: Back to Basics, etc

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-01 09:12:35 UTC
From: Harry Whitfield <harry.whitfield@ncl.ac.uk>
Message-ID: <010820021012350740%harry.whitfield@ncl.ac.uk>
Source record: 137748

In article <aia1oq$cg5$1@venus.btinternet.com>, Reg Edwards
<g4fgq.regp@btinternet.com> wrote:

> The above pair of equations can be combined to describe the overall Tx to Rx
> path. Receiver input power for given transmitter output power turns out to
> be -
>
> Pr = Gt *Gr * Pt * Square(Lambda / 4 / Pi / D) watts,
>

Pr = (Gt/Gr) * Pt * Square(Lambda / 4 / Pi / D) watts

G6AUC

2058. Re: Back to Basics, etc

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-01 09:51:47 UTC
From: Reg Edwards <g4fgq.regp@btinternet.com>
Message-ID: <aib0bijdu1@helle.btinternet.com>
Source record: 137749

> Pr = (Gt/Gr) * Pt * Square(Lambda / 4 / Pi / D) watts
>
> G6AUC
==========

The correct formula is as above.

Readers please note Gt*Gr has been replaced by (Gt/Gr).

Thank you G6AUC for noticing my error and supplying the correction.

Reg G4FGQ

2059. Re: 1 -2 GHz SWR meter

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-01 10:30:06 UTC
From: samsvl@nlr.nl
Message-ID: <577df64e.0208010230.1b5e1664@posting.google.com>
Source record: 137750

"Don Widders" <widders@talkwithoutdifficulty.org> wrote in message
news:<uic80895blul42@corp.supernews.com>...
> "Sam Storm van Leeuwen" <samsvl@nlr.nl> wrote in message
> news:Xns9242803228samsvlnlrnl@137.17.96.14...
> > I am looking for a diy design,
> > any pointers?
> >
> > Sam
> >
> If you've done any 2.4 GHz printed circuit board work it'll be a piece of
> cake. Look at page 12 of this pdf file:
> http://www.analog.com/productSelection/pdf/AD8314_a.pdf
>
> Above the AD8314 is a Murata directional coupler. Connect your antenna
> connector via 50 ohm stripline to pin 4 and the radio connector the same way
> to pin 8. Use PIN diodes to switch the input of the AD8314 between pins 1
> and 5 on the directional coupler (1 for forward power/calibration, 5 for
> reflected power/SWR.) Connect 50 ohm resistors between pin 7 and ground and
> pin 3 and ground.
>
> For less than $20 in parts you can build a VERY fine instrument!
>
> Don W.

Hi Don,

Thanks for this good idea. Availability of the AD8314 is no problem,
the representative over here is happy to send 2 samples.
The Murata coupler however is another story. Although Murata
have their European warehouse just around the corner, they can
not deliver the coupler in small quantities, neither can their local
representative. Moreover, the coupler you suggested is VERY
small, .08 in x .05 in. And within this footprint 8 terminals to be
soldered. That's way out of my SMD soldering capability.
Do you know of any alternative more readily available and larger?

Thanks again for your follow-up.

Cheers,

Sam

2060. Re: Best Allround Antenna ?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-01 10:36:54 UTC
From: DPH <rally2xs@compuserve.com>
Message-ID: <0p3iku05hsbi6sq92i5hcf5n85jg4u1mqc@4ax.com>
Source record: 137751

On Tue, 30 Jul 2002 19:15:58 -0400, "N1RZB" <n1rzb@110.net> wrote:

>BlankI'm well aware that this question has been asked a thousand time but I
>must ask.
>
>What is the best all-round antenna for HF work, 80 to 10 meters?
>
>
>Dave/N1RZB
>

How about a conical monopole?

http://www.highgain.co.kr/html/LPA102.htm

Dave Head
K8DH

2061. Re: Cushcraft going out of business?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-01 10:40:52 UTC
From: fractenna@aol.com
Message-ID: <20020801064052.22714.00000516@mb-de.aol.com>
Source record: 137752

>What's up with Cushcraft? Twice I have ordered parts for antennas using
>their web site order form. Have not heard a word from them! Not even
>acknowledgment of receiving the order. Of course their parts pricing is
>not available on their web site either.
>
>Does Cushcraft handle parts for their antennas? What's the secret? How
>do you get parts from them?
>
>Peter Fournia, W2SKY
>Penfield, NY
>

Hi Peter,

You are clearly frustrated, but I don't see how the comments lead to the subject.

You might try Steve Best, VE9SRB, who has helped other folks on this forum in the past on this issue.

I suspect he is on here, or maybe a friendly call to him would do it.

There are some intense rumors floating about regarding an antenna company north of Boston, but I have no factual information. Especially since there are a dozen antenna companies North of Boston...not to mention a few to the West and South!

73,
Chip N1IR

2062. Re: Best Allround Antenna ?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-01 10:55:48 UTC
From: Bjorn Henrik Vangstein <vangsteREMOVETHIS@online.no>
Message-ID: <Us829.4972$sR2.86915@news4.ulv.nextra.no>
Source record: 137753

The Cushcraft R8 has no burried radials, and the counterpoise radials
are much shorter than 1/2 wavelength, I beleive they are about 1 meter long.
The construction is 8,7 meters high and take less space than the 80-meter
dipole. (You need a larger property to span out a 40 meter long wire.)

The R8 is reported to be a better DX-performer than the dipole,
mainly because of its lower radiation angle.

Henrik

"John Passaneau" <jxp16@psu.edu> wrote in message
news:ai8nlg$22hi@r02n01.cac.psu.edu...
> Hi all:
>
> Everyone recommends a vertical for limited space, but a vertical is NOT an
> limited space antenna especially if used on 40M and longer. Those radials
> take up a lot of room. I've been reading ON4UN's book on low band DXing
and
> its clear that a vertical takes up more room than any dipole, if you want
it
> to work well, or at all. While the visible part of a vertical is small the
> area that it takes up is not.
>
>
>
>
> --
> John Passaneau
> Penn State University, State College Pa.
> W3JXP
> w3jxp@arrl.net
>
>
>
> "Bjorn Henrik Vangstein" <vangsteREMOVETHIS@online.no> wrote in message
> news:hLP19.4580$sR2.81212@news4.ulv.nextra.no...
> >
> > "N1RZB" <n1rzb@110.net> wrote in message
> > news:uke7c6tllniee5@corp.supernews.com...
> > > BlankI'm well aware that this question has been asked a thousand time
> but
> > I
> > > must ask.
> > >
> > > What is the best all-round antenna for HF work, 80 to 10 meters?

> > >
> > >
> > > Dave/N1RZB
> > >
> > >
> >
> > If you have limited horizontal space: Hygain offers a vertical for 80 to
> 10
> > meters,
> > Cushcraft R8 covers 40 to 6 meters.
> >
> > Henrik, LA5MDA
> >
> >
>
>

2063. Re: Cushcraft going out of business?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-01 11:36:38 UTC
From: k1bqt@aol.com
Message-ID: <20020801073638.07941.00000678@mb-mk.aol.com>
Source record: 137754

>...I have no factual information.<

Nothing new about that. When you find something out, Phil us in!

73

Rick K1BQT

2064. Re: Cushcraft going out of business?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-01 12:10:32 UTC
From: kk4bh1@aol.comnospam
Message-ID: <20020801081032.22307.00000880@mb-bj.aol.com>
Source record: 137756

>What's up with Cushcraft? Twice I have ordered parts for antennas using
>their web site order form. Have not heard a word from them! Not even
>acknowledgment of receiving the order. Of course their parts pricing is
>not available on their web site either.
>
>Does Cushcraft handle parts for their antennas? What's the secret? How
>do you get parts from them?
>
>Peter Fournia, W2SKY
>Penfield, NY

Peter,

I don't know what the problem is but it seems like Cushcraft is joining the ranks of MFJ. Some think their quality and service is great while others think it sucks. Check out eHam.net under product reviews for the MA5B Beam. There is a recent posting of a fellow who had trouble getting his to work and got good results from their service department. They determined there was a defective part and and sent him a new one. Maybe you can contact him and find out the "secret to his success". Myself, I had good relations with their service department regarding a R5 Antenna, but that was 10 years ago. Good luck.

73
Ken
KK4BH

2065. Re: J Pole

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-01 12:12:41 UTC
From: 'Doc <w5lz@icok.net>
Message-ID: <3D49259F.942D0A5C@icok.net>
Source record: 137757

Henry,
Since your dealing with an alternating current,
I don't think it makes any practical difference.
'Doc

2066. Re: Cushcraft going out of business?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-01 12:14:38 UTC
From: fractenna@aol.com
Message-ID: <20020801081438.15400.00000891@mb-dh.aol.com>
Source record: 137758

>
>>...I have no factual information.<
>
>Nothing new about that. When you find something out, Phil us in!
>
>73
>
>Rick K1BQT
>

Someone just sent me an e-mail about some company switching to smart radio/antennas. Perhaps you know more. But it sounded pretty factual. Say, what do you think? And something about a new guy in town...

And here's a handy new fact: guess who just retired from academia so that he can help grow a certain hi tech company to a $100M projected firm?:-) What sort of, shall we say, additional freedoms --especially in a formal sense--might one speculate are now in the cards?

Hmmm?

Facta are great. But if you don't stick to the facts, then its time to get formal;-]

America is a great place there Rick. Only here can a bright person plug away to shape a new vision for the future, and benefits for all:-)

Have a pleasant day:-)

73,
Chip N1IR

2067. Re: J Pole

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-01 12:21:44 UTC
From: "Ken Coghill III, WB4ZOH" <wb4zoh@arrl.net>
Message-ID: <3D4927C8.60508@arrl.net>
Source record: 137755

wa0goz@arrl.net wrote:
> When making a J-pole antenna, does the shield go to the stub or the long
> length? I've seen it both ways. It seems to me that since your feeding
> the stub the shield should go to the long length and the center
> conductor go to the stub.
>
> Various searches and various magazine articles show it both ways.
>
> Thanks and 73
>
> Henry WA0GOZ

I used this 'alternative' method of feeding the J-pole. Be sure to seal
the connector.

http://www.packetradio.com/bjpole1a.htm
--
Ken Coghill III, WB4ZOH

2068. Re: Dipole question? How much shorter one side than other?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-01 12:39:01 UTC
From: 'Doc <w5lz@icok.net>
Message-ID: <3D492BC5.28FD54E6@icok.net>
Source record: 137759

BM,
I may have misunderstood about the wrapping of wire
at the ends of a dipole. If it's done to increase the
dipoles length, I'd say it would be a waste of time, cuz
it doesn't. If it's done for convenience, while adjusting
length, then sure, why not. When it's wrapped back on it's
self, it effectively 'disappears' as far as the dipole is
concerned. When you're satisfied with the length adjustment,
and you don't feel like cutting the 'extra' length off, it
won't make any practical difference in performance. And if
you decide to operate at a lower frequency, it's much easier
to 'unwrap' a few inches than solder more wire on. If you
let the 'extra' wire dangle, it does become part of the
antenna's length (to some extent depending on the length of
the extra wire and the 'angle of the dangle').
The 'classic' formulas for dipole length have a little
'fudge factor' built into them (less as the frequency goes
up). The length will almost always be a bit longer than really
needed (easier to cut off than to add on). A very coarse rule
of thumb is that you will have some extra length equal two the
first one or two digits of the band the dipole is cut for, such
as '8' inches for 80 meters '2' inches for 2 meters, or '16'
inches for 160 meters. At least that's about what I've found
from experience with wire antennas. The treatment of the ends
of a wire dipole aren't really ~that~ critical at HF.
'Doc

2069. Re: How many Hops on 40 m from coast to coast??

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-01 12:58:57 UTC
From: Peter Völpel <qro1750@compuserve.de>
Message-ID: <3D493091.43FF66B4@compuserve.de>
Source record: 137760

"WB3FUP (Mike Hall)" wrote:
>
> Who cares, if it is open talk, if not try another band

I always knew:

There are no silly questions but silly answers....

Peter, DF3KV

2070. Re: Antenna trivia

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-01 13:03:51 UTC
From: John Passaneau <jxp16@psu.edu>
Message-ID: <aibbjm$rj8@r02n01.cac.psu.edu>
Source record: 137762

Well that was really trivial

--
John Passaneau
Penn State University, State College Pa.
W3JXP
w3jxp@arrl.net

"Peter Fournia" <pfournia@rochester.rr.com> wrote in message
news:3D48471E.5CE78B6C@rochester.rr.com...
> test

2071. Re: Discones, Reception & Trees: any "Elmer's" out there?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-01 13:04:33 UTC
From: Al <aburzynski@swri.nojunk.edu>
Message-ID: <ukicf1frl05q87@corp.supernews.com>
Source record: 137761

"Otis Cribblecoblis" <alaininvc@86'DASPAMnetscape.net> wrote in message
news:ukgr74t3l0vr0f@corp.supernews.com...
> It's really a beautiful tree and I'd hate to prune it way back if it's
> not necessary.

If it's a beautiful tree do everything you can to save it. Move the discone
and enjoy the beauty of the tree while listening to your receiver.

Al
KA5JGV
WPE6DJB

2072. Re: Back to Basics, etc

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-01 13:28:27 UTC
From: aunwin@fgi.net
Message-ID: <c4becf19.0208010528.69429b8e@posting.google.com>
Source record: 137763

"Reg Edwards" <g4fgq.regp@btinternet.com> wrote in message
news:<aia1oq$cg5$1@venus.btinternet.com>...
> Field strength E' at distance D metres from transmitter with Pt watts power
> output, and antenna gain Gt is -
>
> E' = Sqrt(30 * Gt * Pt) / D volts per metre.
>
> When a field strength meter is used at the other end of the path -
>
> E' = 68.83 * Sqrt(Gr * Pr) / Lambda volts per metre,
>
> where Pr is the matched receiver input power in watts, Gr is the receiving
> antenna gain and Lambda is the wavelength in metres.
>
> The above pair of equations can be combined to describe the overall Tx to Rx
> path. Receiver input power for given transmitter output power turns out to
> be -
>
> Pr = Gt *Gr * Pt * Square(Lambda / 4 / Pi / D) watts,
>
> which, of course, is a reciprocal relationship and is easily converted to
> S-units. You can't have a linear transmission path which has a different
> loss in the other direction of transmission. Antenna gains are relative to
> an isotrope. The gain of an isotrope is 1. D is the straight line path
> length. Modify path loss accordingly for ground and ionospheric paths.
>
> The foregoing is beautifully simple and is exact, easily understood by
> anyone who can do arithmetic. Every radio amateur worth his salt should be
> familiar with these basic concepts. But I've never seen anything of the
> sort in any so-called educational periodical, annual or compendium. (I
> havn't bothered to look lately.) Is this because technical editors and
> authors don't understand it themselves ? Or is it because ancient
> Elizabethan measurement units mixed with metric units result in frightening
> expressions?
>
> It has been said elsewhere on this newsgroup it is time handbooks were
> re-written. Regurgitation of the old stuff by plagiarists, forever
> continuing popular misconceptions, will condemn the hobby to history, as
> interesting as the history of radio may be. Publishers have other
> objectives.
>
> Except by saying we should get into the 21st century I don't know where we
> should go from here. But there is a serious handicap in whatever direction
> may be taken. And that is a general worship of the computer program. Any

> rubbish produced by a computer is willingly accepted as the gospel truth.
> Having lost or never had the ability to be logical or critical some people
> will manage to digest anything. Victims of antenna and SWR meter salesmen!
>
> I remain optimistic. What are the Chinese doing? Good night dear friends.
> ;o)
>
> Yours, Reg, G4FGQ
> ---
> ========================
> Free Radio Design Software
> Go to http://www.g4fgq.com
> ========================

I love it...I love it.
Especially the title. We are so lazy by following the books and where
they are regurgitated we fail to use the basics to validate or to
build on them.
Art

2073. STOP EVERYTHING

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-01 13:39:14 UTC
From: Reg Edwards <g4fgq.regp@btinternet.com>
Message-ID: <aibdm1$i3v$2@venus.btinternet.com>
Source record: 137764

I was right first time.

It is obvious receiver input power increases in proportion to both Tx and Rx antenna gains, so -

Pr = Gt *Gr * Pt * Square(Lambda / 4 / Pi / D) watts is correct.

However there's a similar error in the equation for the field strength meter.

When the dust has settled I'll go back to square one and tidy-up all 3 equations.

Proves my point about not believing everything seen on computers.

Red faced Reg, G4FGQ

2074. Re: Home Use of J-Pole

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-01 13:48:58 UTC
From: richardharrison@webtv.net
Message-ID: <15127-3D493C4A-227@storefull-2396.public.lawson.webtv.net>
Source record: 137765

Roy Lewallen wrote:
"Does Bailey say how this gain is determined?"

Glancing about doesn`t show me a description of how the data were determined.

Bailey provides a catalog of common antenna types. It includes a sketch, polar pattern diagrams in 3 mutually perpendicular planes, directional type, polarization, description, size at 200 MHz, transmission line recommendation, surge impedance (before reflection), resistance at 200 MHz, 200 MHz gain referred to a dipole, bandwidths for 1 db down and for 3 db down.

These are included in a remarkable book "TV and Other Receiving Antennas". Bailey tells how to determine antenna characteristics but I don`t remember a description of how data were obtained for his catalog.

For each antenna, Bailey gives references. For the "J" or "Zepp", Reference:
Zenneck,J., and Selig, A.E., "Wireless Telegraphy," McGraw-Hill Book Co., Inc., New York, N.Y., 1915; p. 163.

From what I`ve seen, Bailey is hardly more error prone than Terman. I would start with the assumption that what he has in his book is correct until proven wrong.

Best regards, Richard Harrison, KB5WZI

2075. Re: How many Hops on 40 m from coast to coast??

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-01 14:24:14 UTC
From: Reg Edwards <g4fgq.regp@btinternet.com>
Message-ID: <aibgadlmo1@venus.btinternet.com>
Source record: 137766

Assuming it's 3000 miles from coast to coast, at 7 MHz in daylight along the whole path, propagation will be via the F-layer at a height averaging about 300 miles. At this height the greatest possible one-hop distance is about 2000 miles. So 2 hops would be needed in daylight.

In darkness along the whole path, the F-layer falls to a height of about 200 miles, so 3 or 4 hops would be needed.

As the number of hops increases so does the path loss due to the loss at each reflection from the ground and from the ionosphere.

Whether communication can be established depends on ionospheric conditions. These depend on time of day, sun spots number, season of year and the 11-year solar cycle.

--
==========
Regards from Reg G4FGQ
Free Radio Design Software
Go to http://www.g4fgq.com
==========

2076. Re: STOP EVERYTHING

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-01 14:25:51 UTC
From: Gene Fuller <W4SZzzzzz@att.net>
Message-ID: <3D4944ED.94B341CF@att.net>
Source record: 137767

Reg,

Too bad the error was discovered and corrected so quickly.

I thought we were onto a real breakthrough. The incorrect equation would go a long way toward explaining how manufacturers of mediocre or poor antennas could claim high gain figures.

Seriously, however, your equation is not really new or unknown. It appears to be exactly the same as the Friis transmission formula, dating from at least the 1940's. This is covered in professional and academic texts, but perhaps not in amateur publications. (I assume you already know this quite well.)

Why is it seemingly ignored by the amateur? Who really knows, but it might be that the equation is not terribly useful for practical amateur purposes. Many professionals deal with a complete end-to-end transmission system, while most amateurs can control only one end of the transmission path.

73,
Gene
W4SZ

Reg Edwards wrote:
>
> I was right first time.
>
> It is obvious receiver input power increases in proportion to both Tx and Rx
> antenna gains, so -
>
> Pr = Gt *Gr * Pt * Square(Lambda / 4 / Pi / D) watts is correct.
>
> However there's a similar error in the equation for the field strength
> meter.
>
> When the dust has settled I'll go back to square one and tidy-up all 3
> equations.
>
> Proves my point about not believing everything seen on computers.
> ---
> Red faced Reg, G4FGQ

2077. Re: Archer All Band Scanner Antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-01 14:28:04 UTC
From: Bammit <bmattscheck@attbi.com>
Message-ID: <Uzb29.113177$uh7.18989@sccrnsc03>
Source record: 137768
Cross-posted to: alt.radio.scanner,rec.radio.amateur.antenna,rec.radio.scanner

Radio Shack Multi band scanner antenna. Cheap!

http://cgi.ebay.com/ws/eBayISAPI.dll?ViewItem&item=1369638971

2078. RE: Cushcraft going out of business?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-01 14:33:26 UTC
From: K4WGE <k4wge@msn.com>
Message-ID: <57176a1136ee820118cfb2ccebfd4d2a.8246@mygate.mailgate.org>
Source record: 137619

From: Peter Fournia <pfournia@rochester.rr.com>

>What's up with Cushcraft? Twice I have ordered parts for antennas >using their web site order form. Have not heard a word from them! >Not even acknowledgment of receiving the order. Of course their parts >pricing is not available on their web site either.

>Does Cushcraft handle parts for their antennas? What's the secret? >How do you get parts from them?

>Peter Fournia, W2SKY
>Penfield, NY

You could try these Cushcraft dealers:

Ham Central - 3 Neptune Rd., Poughkeepsie, 12601 (914-462-0415)

Durham Radio - 1380 Hopkins St., Unit 10, Whitby, Ontario, LIN 2C3
905-665-5466
Fax: 905-665-5460
Toll Free: 1-800-426-1688 (orders only)

Others at <http://www.cushcraft.com/amateur/support/dealers.htm>

--
Posted via Mailgate.ORG Server - http://www.Mailgate.ORG

2079. Re: J Pole

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-01 14:42:31 UTC
From: richardharrison@webtv.net
Message-ID: <18341-3D4948D7-115@storefull-2397.public.lawson.webtv.net>
Source record: 137624

Henry, WA0GOZ wrote:
When making a J-pole antenna, does the shield go to the stub or to the long length?"

My experience includes clips on the coax to find the best antenna match. It is easy in this situation to reverse connections to see if you can tell a difference.

The 19th edition of the ARRL Antenna Book has a Super-J in which the braid connects to the long stick (p.16-25). Arnold B. Bailey does the same in his J-Pole Antenna example. Unless experiment proved the reverse choice better, I`d "follow suit".

Best regards, Richard Harrison, KB5WZI

2080. Computing power from SWR

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-01 14:44:12 UTC
From: cprstn54zz@att.net
Message-ID: <3d4947e2.274433937@news-server.optonline.net>
Source record: 137620

I have a multiband (160M-10M) dipole on a 100 ft. RG-8X feedline.

On 80 meters, my radio's meter and my tuner's meter show that I have the rig tuned to SWR=1.0 and 10 watts power.

I put a Radio Shack digital meter after the tuner and before the feed line. It shows SWR=12.0 and power=24 watts. The SWR formula I know indicates that reflected power is 71% of forward power. What power is actually being radiated? Is this an OK situation?

Ken KC2JDY

Ken
(to reply via email
remove "zz" from address)

2081. Re: Hamstick With Radial

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-01 15:04:29 UTC
From: Damon Wascom <kc5cqw@excite.com>
Message-ID: <ukijg018dqm63f@corp.supernews.com>
Source record: 137621

Any antenna is better then no antenna! I would hate to read what these old cronies would say if I talked about how I use a 40m hamstick with my LDG auto tuner on my bicycle. Old cronies: say what you want about how bad this setup is, 20m qrp bike moble does work! Read my logbook!
I think the setup you discribe would work, however, you may want to try useing more the one wire and feed with coax. Is this for an appartment setup? I can help a little with that subject.
You could use two hamsticks together in a dipole form with the ladderline, just beware, two 75m hamsticks can get costly.
"marvin rosen" <raghead@worldnet.att.net> wrote in message news:1Eu19.10657$pg2.873331@bgtnsc05-news.ops.worldnet.att.net...
> Possible idea for an 80-10 mtr vertical/horizontal ant. One 75 mtr hamstick
> (7' or longer).
> One lead of ladderline connected to the vertical hamstick. The other lead of
> the
> ladderline connected to 65' of horizontal wire. The other two leads of the
> ladderline
> line would go to a balun and/or tuner. Does this idea have any merit?
>
>
> ---
> Outgoing mail is certified Virus Free.
> Checked by AVG anti-virus system (http://www.grisoft.com).
> Version: 6.0.375 / Virus Database: 210 - Release Date: 7/10/02
>
>

2082. Re: Building a hidden 2 meter antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-01 15:09:10 UTC
From: Damon Wascom <kc5cqw@excite.com>
Message-ID: <ukijoo8cf9ulcd@corp.supernews.com>
Source record: 137622

I went to Hobby Lobby and got a large spool of copper tape used for stained glass crafts. It costs about $4 for about 40ft. Just cut to fit and tape it up onto an eve or something. then paint over it Mine works really good for local stuff.
"Pendrgn2002" <pendrgn2002@aol.com> wrote in message news:20020730082408.10144.00000251@mb-mr.aol.com...
> Hello,
> The apartment I live in does not allow antennas to be put up unless the are
> hidden. I would like to know if anyone could tell me if there is a website or
> book I could get that discribes how to make one. What I was thinking was, if
> possible, making a coax lead that would go to basically just a copper(or some
> kind) of wire that I could streatch to look like a wash line in the back yard.
> Can anyon e give me help on this.
>
> Thanks,
> Mike Waters
>

2083. Re: J Pole

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-01 15:09:20 UTC
From: richardharrison@webtv.net
Message-ID: <18343-3D494F20-40@storefull-2397.public.lawson.webtv.net>
Source record: 137623

I wrote:
"The 19th edition of the ARRL Antenna Book has a Super-J in which the
braid connects to the long stick (p.16-25).

On page 16-23 of the same book is a J-antenna example in which the braid
connects to the short stick. But, this j-configuration lacks a
short-circuit (not quite so good for lightning protection).

Best regards, Richard Harrison, KB5WZI

2084. 6 meter antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-01 15:24:04 UTC
From: ssapachee@webtv.net
Message-ID: <12956-3D495294-205@storefull-2233.public.lawson.webtv.net>
Source record: 137628

I have a 13b2 2 meter antenna. ? i am wanting to make a 6 meter antenna out of it. Can someone help me out on this? Also wanting to know how many elements i can make out of it. If any one can help e-mail me @ http://ssapchee@webtv.net Thanks!!!!!!!!

2085. Re: Best Allround Antenna ?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-01 15:37:06 UTC
From: aunwin@fgi.net
Message-ID: <c4becf19.0208010737.a8cde6c@posting.google.com>
Source record: 137625

DPH <rally2xs@compuserve.com> wrote in message

This is all getting a bit silly . To really determine what is the BEST antenna
one must know what specification one has to meet to achieve or better it .

To say what is the BEST antenna one has to know in some order what the user is looking for i.e. what they must have as in advantages and also the disadvantages that some bring with them on the debit side.

Now many are opting for a G5RV or a long horizontal wire which in the majority of cases cannot be used by the average ham. His garden or yard is not large enough for it so they would be hard put to call it the BEST antenna.
In the same line of thought a list of ideal characteristics must be developed
so that one who strives for a BETTER antenna knows where to focus his thoughts.

I for one value multi frequency characteristics in the HF area where I can also tune outside of the amateur bands which is what the I.R. antennas do.
As an engineer I also look for little complexity which is where the I.R. antenna fails. At the same time I want the gain that goes with aperture or the air space available and rotatability and many antennas fail in this area to, and yet the amateur always cries for the max gain possible
in the final analysis.
So what is the best antenna and why? I have given the characteristics that I desire so I use a antenna that provides all or most of those characterics.
If somebody has a large garden or yard with two pink poles that allowes him to sling a wire inbetween with the minimum of effort then to his mind it is the best antenna, even tho he could build a antenna that meets my desired specs which can also can be verified by using first principles rather than a bit of apparent hokem that we see with the E/H antennas.

So I invite all hams to decide what 'they' desire from say a 'multi frequency'
antenna and use this criteria to determine the BEST antenna as I have done by listing what I desire regardless of availability and making one that meets those criteria with a minimum of complexity i.e those listed above.
As Reg would say.... Get back to first principles if you want to

search for the new or as in most cases novel innovations that use existing laws to satisfy your needs. For those who lack the understanding of first principles by all means
go to present day designs, (best source being the ARRL publications) but you must list your requirements first to aid in that search for the BEST antenna as only in the 'new' are we going to get the BEST 'overall' antenna. Some say you can't have everything but that is not true, humans have met their needs time and time again so why cannot hams strive for everything ? As one said ,'if we didn't innovate we would still live in caves !'
Have a great week end
Art

2086. Re: Confusing Conundrum/Pse email me--my replies keep bouncing!

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-01 15:39:09 UTC
From: Jerry Oxendine <joxendi@bellsouth.net>
Message-ID: <IBc29.76449$ND5.6664661@e3500-atl2.usenetserver.com>
Source record: 137630

SideBand <abNO8SPAMlr@csotbs.org> wrote in message
news:3D42C845.1020700@csotbs.org...
> Jerry:
>
> Done, but I also got the mail server fixed.. Sorry, I forgot to unfsck the
> DNS when I hopped ISP's, and it wasn't resolving properly... Got it fixed,
> so the csotbs.org address should be back up and running just fine...
>
> Thanks for plugging away and keeping with it.. Shows your customer service
> is second to none...
>
> 73 de AB8LR, Chris
>
> Jerry Oxendine wrote:
>
> > Email me with a good email--the one you are giving me won't work!
> >
> > Jerry
> > SideBand <abNO8SPAMlr@csotbs.org> wrote in message
> > news:3D33088B.2000903@csotbs.org...
> >
> >>Here's the deal.. I'm planning on running HF mobile in the truck. The
> >>problem is twofold here:
> >>
> >>1. The truck body is mostly fiberglass, which makes it difficult to find
a
> >>ground.
> >>2. When a ground is found, it is invariably plagued with noise from the
> >>fridge and the inverter.. (I know... don't run the fridge and the
> >>
> > inverter,
> >
>>right? Well, then my milk goes bad and I can't charge my cellphone.)
> >>
> >>So, I'm looking for a solution that will eliminate these problems.
> >>Isolating the RF ground from the body by setting up a separate
> >>
> > counterpoise
> >
> >>of some sort seems to be the way to go.. It worked on the 2M set,
anyway..
> >>The problem with that is size...
> >>
> >>I'd also thought about dipoling two screwdriver antennas, or a pair of

> >>hamsticks for each band I'm interested in, but again, the size issue...
> >>
> >>Any ideas?
> >>--
> >>73 de AB8LR, Chris
> >>
> >>http://csotbs.shopiwon.com/ for great deals on computer products.

I sent you a direct email. Let me know if you get it!

Jerry
> >>
> >>
> >
> >
> >
>
>
> --
> 73 de AB8LR, Chris
>
> http://csotbs.shopiwon.com/ for great deals on computer products.
>

2087. Re: Best Allround Antenna ?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-01 15:40:49 UTC
From: n7ws_at_yahoo.com
Message-ID: <3d495603.4993905@news.triconet.org>
Source record: 137626

On Thu, 01 Aug 2002 06:36:54 -0400, DPH <rally2xs@compuserve.com>
wrote:

|On Tue, 30 Jul 2002 19:15:58 -0400, "N1RZB" <n1rzb@110.net> wrote:
|
|>BlankI'm well aware that this question has been asked a thousand time but I
|>must ask.
|>
|>What is the best all-round antenna for HF work, 80 to 10 meters?
|>
|>
|>Dave/N1RZB
|>
|
|How about a conical monopole?
|
|http://www.highgain.co.kr/html/LPA102.htm

Has anyone besides me ever modeled one of these and seen anywhere near
the claimed performance?

|
|Dave Head

I knew a Dave Head in high school. I didn't buy a '36 Ford roadster
from you did I?

Wes

2088. Re: Best Allround Antenna ?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-01 15:42:06 UTC
From: Jerry Oxendine <joxendi@bellsouth.net>
Message-ID: <6Ec29.76469$ND5.6665482@e3500-atl2.usenetserver.com>
Source record: 137627

N1RZB <n1rzb@110.net> wrote in message
news:uke7c6tllniee5@corp.supernews.com...
> BlankI'm well aware that this question has been asked a thousand time but
I
> must ask.
>
> What is the best all-round antenna for HF work, 80 to 10 meters?
>
>
> Dave/N1RZB

Best "all round" antenna? Why a circular loop would be the "roundest"!
Sorry,
I got carried away. <<snicker>>

73

Jerry
K4KWH
>
>

2089. Re: Cushcraft going out of business?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-01 15:43:46 UTC
From: n7ws_at_yahoo.com
Message-ID: <3d495702.5248646@news.triconet.org>
Source record: 137629

On 01 Aug 2002 11:36:38 GMT, k1bqt@aol.com (Rick Littlefield) wrote:

|>...I have no factual information.<
|
|Nothing new about that. When you find something out, Phil us in!

ROTFLMAO
|
|73
|
|Rick K1BQT

2090. Re: J Pole

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-01 16:50:44 UTC
From: raiar@bbs.galilei.com.nospam
Message-ID: <3d496444.162250734@news.galilei.com>
Source record: 137631

Hi Henry

If it's a single band J-Pole, connect the feed to the stub and the shield to the vertical. On a multi-band J-Pole the feed should go to the vertical and the shield to the stub.

Although it works basically the same, either way it's connected, there are minor advantages on single band J-Poles by feeding the stub. One is reduced RF on the feedline, if you didn't enclose it inside the pipe, the other is less static discharge noise from the antenna itself. Placing 3 short non-resonant wires around the top cap of the vertical will also reduce the noise an equivalent amount.

TTUL
Gary

2091. Re: Antenna trivia

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-01 17:26:06 UTC
From: aunwin@fgi.net
Message-ID: <c4becf19.0208010926.3ca2d42f@posting.google.com>
Source record: 137632

k0bg@aol.com (K0bg) wrote in message news:<20020727125602.29007.00001179@mb-fm.aol.com>...
> Have you heard of Robert's Law?
>
> It says:
>
> Any antenna you wish to use is always 10 feet longer than your lot. The
> correlation is, if it fits your lot, the SWR is too high.
>
> Alan, Kï¿½BG

What about if the antenna is bigger it must be better.
Art

2092. Re: Back to Basics, etc

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-01 17:35:35 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <9kpikuc3bf89mhc8cnarlubi4ve3qt6717@4ax.com>
Source record: 137633

On 1 Aug 2002 06:28:27 -0700, aunwin@fgi.net (Art Unwin KB9MZ) wrote:

>"Reg Edwards" <g4fgq.regp@btinternet.com> wrote in message
news:<aia1oq$cg5$1@venus.btinternet.com>...
snip
>> Pr = Gt *Gr * Pt * Square(Lambda / 4 / Pi / D) watts,
snip
>
>I love it...I love it.
>Especially the title. We are so lazy by following the books and where
>they are regurgitated we fail to use the basics to validate or to
>build on them.
>Art

Hi Art,

Lazy? You accepted the math above without challenge (which, according to G6AUC, and confirmed, appears to be wrong), without going to the books to validate, without review at the bench, without discussion of basics, without....

You are quicker to characterize the readership of this group with:
>We are so lazy
than to test the technical content. -Speak for yourself- These posts exhibit classic examples from two sources how the snobbism of populist science (sic) mocks established learning for apparent failure and then fails in its own sub-standard of performance.

Like fractal/cfa/eh science, populist science (sic all around) can be recognized by the sly contempt held for the reader:
>>The foregoing is beautifully simple and is exact, easily understood by
>>anyone who can do arithmetic.
(now an ironic statement) or by inflamatory proclamation (denotes a weak technical statement being braced up by homilies and innuendo):
>>Regurgitation of the old stuff by plagiarists
which, when attended by math that is obviously derived from other's work without ascription - truly plagiaristic (and worse yet, rife with error) is hypocrisy in its most obvious form.

Any apologies?

73's
Richard Clark, KB7QHC

2093. Simple no tuner antenna 14-30 MHz?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-01 17:47:15 UTC
From: Fredrik Olofsson <574olofsson@telia.com>
Message-ID: <Due29.18421$p56.5948071@newsb.telia.net>
Source record: 137634

My simulating experience allows little conclusions, except that with a long radial (in the same direction) it might be worthwhile to share.

(Thought) experimental setup

Construction

1) Take a 14 meter long wire, a slightly longer rope and two pulleys.
2) Attach both ends of the wire to the other ends of the rope in some way
3) Attach the rope-wire "ring" to the pulleys so it can run between them.
4) Install one pulley in a tree at 5 m height and fasten the other to a pole at 1 m height
5) Run a coax from the shack to the pole and find some means to achieve electrical contact from coax center to the wire running at the pulley, and let the coax shield connect to a long radial.

Tuning procedure for frequency f

1) Search for the best SWR <= 3:1 in the vicinity of 214 / f meters wire length by
sliding the rope and wire
2) Mark this spot on the wire

Operating is straightforward: Find the right spot on the wire and make an electrical connection.

/Fredrik

2094. Re: Antenna trivia

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-01 17:51:06 UTC
From: Alan Beagley <abeagley@optonline.net>
Message-ID: <3D49750A.5010609@optonline.net>
Source record: 137635

What about: "An expensive trapped vertical can't possibly be as good as a piece of wire I put up myself"?

-=-
Alan, AB2OS

Art Unwin KB9MZ wrote:

> What about if the antenna is bigger it must be better.
> Art

2095. Re: Antenna trivia

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-01 18:13:25 UTC
From: John O'Flaherty <wewelcomespam@blackhole.net>
Message-ID: <9guikugpo49flm92v3rkd5b395mgo6cp95@4ax.com>
Source record: 137636

On Wed, 24 Jul 2002 21:59:04 -0600, George Tyrebyter
<GeoTyrebyter@netscape.net> wrote:

>"J. Harvey" wrote:
>>
>> "jimvm111"
>> > In time the resonant frequency of a wire antenna decreases.
>> > Does anyone else have a tid bit of old antenna lore?
>>
>> Do you mean that wires stretch a bit over the years ?
>
>I think that the electrons just get tired.

You just have to run some d.c. through it for a while every few years,
to flush out the old ones and replace them with fresh ones.

--
john

2096. Re: Back to Basics, etc

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-01 18:15:05 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <datikusscequabn0a7e32kaovmm66tm3c0@4ax.com>
Source record: 137637

On Thu, 01 Aug 2002 17:35:35 GMT, Richard Clark <kb7qhc@attbi.com>
wrote:

>Like fractal/cfa/eh science, populist science (sic all around) can be
>recognized by the sly contempt held for the reader:
>>>The foregoing is beautifully simple and is exact, easily understood by
>>>anyone who can do arithmetic.
>(now an ironic statement)

Hi All,

As Alice would say, it is all getting curiouser and curiouser as
Punchinello, our favorite plagiarist ironically continues with:
>I was right first time.
>
>It is obvious receiver input power increases in proportion to both Tx and Rx
>antenna gains, so -
>
>Pr = Gt *Gr * Pt * Square(Lambda / 4 / Pi / D) watts is correct.
>
>However there's a similar error in the equation for the field strength
>meter.
>
Punchinello was right and there's a similar error elsewhere - Huh?
Clowning as always.... Can you tell when? ;-)

Myself, I prefer Frank L. Baum's fictive observation "pay no attention
to that man behind the curtains." More class, still plays to the
hicks, and contains more entertainment value as well as teaching a
life's-lesson about charlatans.

73's
Richard Clark, KB7QHC

2097. Re: Computing power from SWR

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-01 18:23:26 UTC
From: aunwin@fgi.net
Message-ID: <c4becf19.0208011023.2063632f@posting.google.com>
Source record: 137638

cprstn54zz@att.net (Ken) wrote in message
news:<3d4947e2.274433937@news-server.optonline.net>...
> I have a multiband (160M-10M) dipole on a 100 ft. RG-8X feedline.
>
> On 80 meters, my radio's meter and my tuner's meter show that I have
> the rig tuned to SWR=1.0 and 10 watts power.
>
> I put a Radio Shack digital meter after the tuner and before the feed
> line. It shows SWR=12.0 and power=24 watts. The SWR formula I know
> indicates that reflected power is 71% of forward power. What power is
> actually being radiated? Is this an OK situation?
>
> Ken KC2JDY
>
> ---
> Ken
> (to reply via email
> remove "zz" from address)

Ken, First I would have a relook at the Radio shack SWR meter. I
bought quite a few of those for checking SWR at the antenna plus the
use of a peep hole camera.
Check it against a known reliable meter at different power levels to
see if the digital one needs recalibrating.
If you do not know how to recalibrate get in touch with me and I will
see if I can find the instructions
Art

2098. Re: Oil in dummy loads vs. SWR.

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-01 18:30:30 UTC
From: g0wbm <g0wbm@supanet.com>
Message-ID: <aic1uo$2da$1@chilli.nntp.netline.net.uk>
Source record: 137643
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.equipment

The resistor can absorb oil and alter its properties, an article on
this appeared in radcom some while ago [technical topics[
SkyKing <gyewug@egfurg.com> wrote in message
news:8hvpjuoa7q4dgu85t19mmk7hgaprojsofv@4ax.com...
> On Mon, 22 Jul 2002 19:13:35 GMT, jeff <wd4nmq@earthlink.net> wrote:
>
> >I feel that I am once again going to open the old debate which oil to
> >use in a dummy load for heat conduction.
> >
> >But, that is not my question. Mine has do with the oil's effect on SWR
> >vs. frequency.
>
> The RF is fed into the resistor, which is the actual dummy load.
> The oil is only there to dissipate the heat.
>

2099. Re: suggestions for antenna+preamp

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-01 18:39:57 UTC
From: aunwin@fgi.net
Message-ID: <c4becf19.0208011039.277d1a0@posting.google.com>
Source record: 137639

"Barun Gupta" <barun@worldnet.att.net> wrote in message
news:<GzZ19.13028$pg2.1048428@bgtnsc05-news.ops.worldnet.att.net>...
> I have a Sony SC1 scanner which as you know can be switched to different
> modes (NFM, WFM, AM) in any band. Since it covers the 225 - 400 MHz band and
> can be switched to NFM mode, I would like to try and listen to FLTSATCOM
> satellites.
>
> a) My first question is what would you recommend as an antenna and a preamp
> (I've heard that you need a preamp to listen to some of these sats)? Price
> is always a consideration but if you can give me options that work I'm sure
> I can find the prices for new/used antennas or preamps.
>
> b) My second question is whether there are any other sats that I can listen
> to. I'm not interested in the WX sats, so anything other than that and using
> a freq below 1300 MHz.

I would imagine that the first requirement would be to obtain a preamp
that will achieve low noise levels across the frequency range of
225-400 Mhz rather than
putting emphasis on gain and also using a standard ham antenna used
for 440.
Combinations of pre amp and antenna I expect are available
commercially.
Hopefully somebody else can help you with the extended frequency range
you speak of in question (b)as I imagine it could be difficult to
obtain a low noise amplifier to cover satisfactoraly the extended
frequency range spoken of.
Good luck
Art

2100. Re: Home Use of J-Pole

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-01 18:57:04 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <3D498480.200@eznec.com>
Source record: 137640

Most interesting. I had no idea that the J pole had been around since 1915. Or that they had the ability to measure antenna gain with that precision back then. Live and learn.

The gain he quotes for a J pole is in disagreement with modern modeling programs, which are operating well within their capabilities in analyzing that sort of antenna. On that basis, and considering the 1915 source of his data, I'm prone to believe he's wrong.

Roy Lewallen, W7EL

Richard Harrison wrote:
> . . .
> For each antenna, Bailey gives references. For the "J" or "Zepp",
> Reference:
> Zenneck,J., and Selig, A.E., "Wireless Telegraphy," McGraw-Hill Book
> Co., Inc., New York, N.Y., 1915; p. 163.
>
> From what I`ve seen, Bailey is hardly more error prone than Terman. I
> would start with the assumption that what he has in his book is correct
> until proven wrong.
>
> Best regards, Richard Harrison, KB5WZI
>

2101. Re: STOP EVERYTHING

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-01 19:08:23 UTC
From: aunwin@fgi.net
Message-ID: <c4becf19.0208011108.42ac9406@posting.google.com>
Source record: 137641

Gene Fuller <W4SZzzzzz@att.net> wrote in message news:<3D4944ED.94B341CF@att.net>...
> Reg,
>
> Too bad the error was discovered and corrected so quickly.
>
snip
>
> Why is it seemingly ignored by the amateur? Who really knows, but it
> might be that the equation is not terribly useful for practical amateur
> purposes. Many professionals deal with a complete end-to-end
> transmission system, while most amateurs can control only one end of the
> transmission path.
>
> 73,
> Gene
> W4SZ
>
Gene, you make an excellent point with the above.The professional in
most cases
is given a task to which he must supply a workable solution. Unlike
the weather man or meterolist who have the luxury of getting it right
half the time
he as an engineer must get it right the first time.
This requires attention to first principles rather than hunches to
ensure we make something that meets the object required by the
employer. In many cases new ideas come to the fore but unless they are
relevent to the field or task at hand they are filed or placed on the
back burner if even tho they may be valid and meet basic first
principles.
In general the ham is a hobbyist who instead of examining what the
task is at hand, can afford to be wrong or can afford to fall back to
the books to get any antenna, because he has not a definable task to
solve .But then it is just a hobby that attracts people of many
background many of which are willingly to experiment without the rules
in the hope they find the Eldorado or buy a lottery ticket with the
same odds for success.

2102. Re: Burial of 10BaseT and 10Base2 cables

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-01 19:24:32 UTC
From: Uncle Peter <radioconnectionNO@cox.netSPAM>
Message-ID: <QVf29.303697$DB.8429460@news1.east.cox.net>
Source record: 137642
Cross-posted to: rec.radio.amateur.antenna,comp.sys.mac.system

There is always the option of a pair of TUTs repeaters, any reasonable
copper pair will do betweent them.

Pete

"Kerry Kingsbury" <kkingsbury.spam.me.not@greenmountainaccess.net> wrote in
message news:uk6f317nvl0463@corp.supernews.com...
> If I were to do it I would use a router hub and use 3/4" plastic pvc
> schedule 40 pvc conduit and the best CAT5 plenum or direct burial cable I
> could afford. Distance, by the way, between a machine and a hub is on the
> order of 100 meters or so it says in my D-Link DFE-530TX+ manual. I love
> these nics. Others will hate them. Since the CAT5 is twisted pair some
> might argue that 1 inch conduit would allow for the cable (likely RG6/u)
and
> the CAT5 to be in the same tube.
>
> Also there is another thought for the conduit. How about 1" semi rigid
> plastic pipe that is used for well to house connections. Unless you are
in
> a heavy ground frost area with gravel for soil it should last for years
even
> though it isn't buried feet below the surface. It saves on the time gluing
> each joint etc though feeding the wire through may be tougher.
>
> "David or Jo Anne Ryeburn" <ryeburn@sfu.caz> wrote in message
> news:ryeburn-2607022130170001@207.6.87.119...
> > Over in the newsgroup comp.sys.mac.system, giarcman <giarcman@attbi.com>
> > in article <X0%%8.116182$_51.87455@rwcrnsc52.ops.asp.att.net> wrote:
> >
> > > Here's sitch. I'm moving to a new home in September. I work at home,
> > > and my new place actually has a little guest cottage in the back of
the
> > > property where I'm going to set up my office. Luckily, the prior
owners
> > > had cable running out there, and I'm hoping it won't be too much of a
> > > hassle to use that line for broadband (ISP is Charter Communications).
> > >
> > > However, my wife, who will be in the "main" house, also needs access.
> > > Presently we use an Airport Base Station to solve the 2 computer
issue.
> >
> >
> > (The Airport Base Station is a 2.4 GHz system that can be quickly
attached

> > to any recent Mac computer; it's very popular for use in conjunction
with
> > current Mac portables, which have relatively inefficient internal
antennas
> > already present whether ordered from the factory with an Airport card or
> > not. Airport is compatible with most of the other currently available
> > "WiFi" systems.)
> >
> >
> > > I doubt an ABS would work in this situation, since the guest cottage
is
> > > quite far from the main house and my TiBook doesn't get the best
> > > reception anyway. So...sounds like a router is called for.
> > >
> > > However, a router would involve me running an ethernet line a
looooooong
> > > way from one house to the other. That's doable in theory, but does
> > > anyone know if length of line affects ethernet transmission? Also,
any
> > > other suggestions other than running the really looooooooong line? I'm
> > > guessing it would be hundreds of feet, since I'd probably go around
the
> > > perimeter of the property to avoid the "what a nice yard, why is there
a
> > > cable running past my face?" syndrome.
>
>
>

2103. Re: Computing power from SWR

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-01 19:46:24 UTC
From: cprstn54zz@att.net
Message-ID: <3d498c5e.2478718@news-server.optonline.net>
Source record: 137644

On 1 Aug 2002 11:23:26 -0700, aunwin@fgi.net (Art Unwin KB9MZ) wrote:
>Ken, First I would have a relook at the Radio shack SWR meter. I
>bought quite a few of those for checking SWR at the antenna plus the
>use of a peep hole camera.
>Check it against a known reliable meter at different power levels to
>see if the digital one needs recalibrating.
>If you do not know how to recalibrate get in touch with me and I will
>see if I can find the instructions

The Radio Shack meter gets the dummy load SWR right. I could try a few readings on the dipole without the tuner and compare them with my radio's SWR meter. I think I did that once before and the two were in the same ball park (e.g. RS SWR 1.4 vs 1.2 per radio; RS power 9.6 watts vs. 10 watts per radio). In fact, tonight I will move the RS meter between the radio and the tuner and check it again.

However, if you have the info on calibration, I would appreciate it. The user manual doesn't cover it and makes it sound like a big operation.

I am thinking that with the 100' feed line (plus another 12 ft for various additions) I am getting close to 1/2 the wavelength on 80M. Maybe I am just getting a big standing wave in the coax, which is starting to resonate in the first (zeroth?) mode. Would a ferrite toroid choke in the middle help? Or would it choke off my signal and melt the PVC cover? Should I care what is happening if my tuner gets me to SWR=1.0? At full legal power, would I overload my tuner because of the 2.4X power amplification?

Ken KC2JDY

Ken
(to reply via email
remove "zz" from address)

2104. Re: Home Use of J-Pole

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-01 20:23:43 UTC
From: richardharrison@webtv.net
Message-ID: <16020-3D4998CF-212@storefull-2391.public.lawson.webtv.net>
Source record: 137645

Roy Lewallen wrote:
"---I`m prone to believe he`s wrong."

I`m surprised that Bailey shows a 2 db loss as compared with a 1/2-wave dipole. The J-pole is a 1/2-wave dipole. The 1/4-wave stub is just a matching device.

Even so, the circle representing the horizontal pattern is drawn 2 db smaller than those for 9 other vertical antennas. The data sheet also says gain: -2dBd. So the exceptional J-pole is conspicuous. I would only speculate that Bailey considered it proper to repeat data reported by Zennek and Seelig which they published in 1915.

I`m prone to agree with Roy that Bailey is wrong in this instance simply because I see no place to develop 2 db loss if the same care is taken with the J-pole as with the other vertical antennas. There may be some other mistake lurking in "TV and Other Receiving Antennas", but I`d still wager that they are few and far between because the author knew his subject. This 1950 book is a first edition.

Best regards, Richard Harrison, KB5WZI

2105. Re: Home Use of J-Pole

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-01 20:36:27 UTC
From: richardharrison@webtv.net
Message-ID: <16020-3D499BCB-213@storefull-2391.public.lawson.webtv.net>
Source record: 137646

I think I just said: "The J-pole is a 1/2-wave dipole." The J-pole is not a doublet or dipole. It is end-fed. But the method of feed has little to do with antenna radiation characteristics in this case.

The J-pole antenna is a 1/2-wave radiator and has essentially the same characteristics as a 1/2-wave dipole. My motor is sometimes not running when I shift to drive.

Best regards, Richard Harrison, KB5WZI

2106. Coax Length for Fixed Frequency Antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-01 21:07:14 UTC
From: Al <aburzynski@swri.nojunk.edu>
Message-ID: <ukj8o37iv0n15b@corp.supernews.com>
Source record: 137647

I plan to build a simple dipole and operate on 14.070MHz only (yes, I like PSK) using about 30 watts max. In an article on balanced systems in

http://www.moonraker.com.au/techni.feeders.htm

the author talks about the transmission line approaching an electrical 1/4 wave length. I do not understand if this is desirable or undesirable. In other words should my feedline be a multiple of 1/4 wave or 1/2 wave if I'm going to use it on one frequency only? Or is all of this really quite unnecessary and should I just use any reasonable length of coax?

A second question. This antenna will be about 4 feet above the eave of my house, running the full length of the eave. The underside of the eave is covered with vinyl coated aluminum. Will the nearness of the antenna to this aluminum covered eave be a serious problem?

I'm not going to ask anything about the balun I plan to use. I don't want to start any wars just yet.

Thank you.
Al
KA5JGV

2107. Re: Back to Basics, etc

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-01 21:32:25 UTC
From: klocko@toad.net
Message-ID: <224d9cd4.0208011332.66cfd2e1@posting.google.com>
Source record: 137648

"Reg Edwards" <g4fgq.regp@btinternet.com> wrote in message
news:<aib0bijdu1@helle.btinternet.com>...
> > Pr = (Gt/Gr) * Pt * Square(Lambda / 4 / Pi / D) watts
> >
> > G6AUC
> ==========
>
> The correct formula is as above.
>
> Readers please note Gt*Gr has been replaced by (Gt/Gr).

Hi Reg,
Don't be so quick to change what you had originally. Why should
antenna gain at the ends of the path be given by the term Gt/Gr? The
transmit antenna contributes gain and the receive antenna also
contributes gain. 73,
Bill N3WK

2108. Re: Computing power from SWR

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-01 21:36:34 UTC
From: Gary McAdams <g.m.mcadams@worldnet.att.net>
Message-ID: <CRh29.14513$pg2.1155335@bgtnsc05-news.ops.worldnet.att.net>
Source record: 137649

Hi Ken,

Thoughts below...

> On 80 meters, my radio's meter and my tuner's meter show that I have
> the rig tuned to SWR=1.0 and 10 watts power.

Ok, so far so good.

>
> I put a Radio Shack digital meter after the tuner and before the feed
> line. It shows SWR=12.0 and power=24 watts.

Problem. The meter is showing the total of the original
forward power and the reflected power. The power meter
will only be close to accurate if it is looking into its design
impedance of 50 ohms. Putting a meter after the tuner
is pointless, as it will not work correctly.

The tuner will provide a match to the transmitter and will
take the input power and apply it to the load. How much
of that is actually radiated depend on several factors, the most
important of which is the loss in the coax feed. This loss will
be fairly high, depending what the actual load impedance is
and the type of coax used. With a 12:1 SWR on the coax, I would expect
losses to be fairly high. Of your original 10 watts, some is
being lost in the coax.

How much? Probably not enough to lose sleep over.

The SWR formula I know
> indicates that reflected power is 71% of forward power. What power is
> actually being radiated? Is this an OK situation?
>

Ken, as long as the tuner provides a match, and does not
arc, you are OK. Personally, I would ditch the coax and
feed the antenna with ladder line. The ladder line will
have very low loss even at high values of SWR. This
will ensure that more of those ten watts will be radiated
instead of being wasted in heating up the coax.

Cheaper too!

73

Gary WG7X

2109. Re: New Poster

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-01 21:45:09 UTC
From: "W.G Ewald" <wgewald@att.net>
Message-ID: <vvajkuc19nk9j0jjfnblso42h0o6vjto4f@4ax.com>
Source record: 137650

On 31 Jul 2002 08:57:57 GMT, Valerie <ihatespamjikk1882@msn.com>
wrote:

>Hi! nice newsgroup. any rules I should know before I start posting?
>is there an faq?
>Thanks!

Yep. It clearly says NO crossposting to alt.bad clams,
"Valerie".

Any posts from "Fractenna" are followed up on alt,usenet.kooks...

2110. Re: FAS going out of business?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-01 21:47:20 UTC
From: "W.G Ewald" <wgewald@att.net>
Message-ID: <d7bjku4hubtlk7daqnvsvr2knmoh5r0bkk@4ax.com>
Source record: 137651

On 01 Aug 2002 10:40:52 GMT, fractenna@aol.com (Fractenna) wrote:

>There are some intense rumors floating about regarding an antenna company north
>of Boston, but I have no fractual information.

Good/

2111. Re: Coax Length for Fixed Frequency Antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-01 21:47:50 UTC
From: Ralph Mowery <rmowery@dialpoint.net>
Message-ID: <aicaglamq1@newsreader.cetlink.net>
Source record: 137653

Just run any length of coax you want to . Just make sure it will reach from the antenna to the rig..hihi..

If the aluminum is running that near the antenna for the whole (or biggest part of) length it will probably have some effect on the antenna. Just how much is not known . Try to move it somewhere else.

Forget the balun and if you really want to at the feedpoint you can wrap the coax in a coil of about 6 turns around 6 inches in diameter.

"Al" <aburzynski@swri.nojunk.edu> wrote in message
news:ukj8o37iv0n15b@corp.supernews.com...
> I plan to build a simple dipole and operate on 14.070MHz only (yes, I like
> PSK) using about 30 watts max. In an article on balanced systems in
>
> http://www.moonraker.com.au/techni.feeders.htm
>
> the author talks about the transmission line approaching an electrical 1/4
> wave length. I do not understand if this is desirable or undesirable. In
> other words should my feedline be a multiple of 1/4 wave or 1/2 wave if
I'm
> going to use it on one frequency only? Or is all of this really quite
> unnecessary and should I just use any reasonable length of coax?
>
> A second question. This antenna will be about 4 feet above the eave of my
> house, running the full length of the eave. The underside of the eave is
> covered with vinyl coated aluminum. Will the nearness of the antenna to
this
> aluminum covered eave be a serious problem?
>
> I'm not going to ask anything about the balun I plan to use. I don't want
to
> start any wars just yet.
>
> Thank you.
> Al
> KA5JGV
>
>
>

2112. Re: Best Allround Antenna ?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-01 21:51:44 UTC
From: DPH <rally2xs@compuserve.com>
Message-ID: <q8bjku4qsaogpafi82pkn0ojdjsm4f4ug9@4ax.com>
Source record: 137652

On Thu, 01 Aug 2002 15:40:49 GMT, n7ws_at_yahoo.com (Wes) wrote:

>On Thu, 01 Aug 2002 06:36:54 -0400, DPH <rally2xs@compuserve.com>
>wrote:
>
>|On Tue, 30 Jul 2002 19:15:58 -0400, "N1RZB" <n1rzb@110.net> wrote:
>|
>|>BlankI'm well aware that this question has been asked a thousand time but I
>|>must ask.
>|>
>|>What is the best all-round antenna for HF work, 80 to 10 meters?
>|>
>|>
>|>Dave/N1RZB
>|>
>|
>|How about a conical monopole?
>|
>|http://www.highgain.co.kr/html/LPA102.htm
>
>Has anyone besides me ever modeled one of these and seen anywhere near
>the claimed performance?

I would expect maybe dipole-like gain. What did you get? Its big
claim to fame is bandwidth. It should work fairly well just because
it is big. But, maybe not.
|
>|Dave Head
>
>I knew a Dave Head in high school. I didn't buy a '36 Ford roadster
>from you did I?

No, never had one of those.

Dave Head

>
>Wes

2113. Re: How many Hops on 40 m from coast to coast??

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-01 21:52:09 UTC
From: StarGazer <pti@capnet.com>
Message-ID: <3D49AD89.BDD8BDD2@capnet.com>
Source record: 137654

I care. Or I wouldn't have asked.

"WB3FUP (Mike Hall)" wrote:

> Who cares, if it is open talk, if not try another band
>
> "StarGazer" <pti@capnet.com> wrote in message
> news:3D46EA0C.2C8E6ED2@capnet.com...
> > ..
> > >

2114. Re: Cushcraft going out of business?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-01 22:23:52 UTC
From: k1bqt@aol.com
Message-ID: <20020801182352.07999.00000926@mb-mk.aol.com>
Source record: 137655

>And here's a handy new fact: guess who just retired from academia...<

If it's you, then there IS a god (thank you John Silber)!

Rick K1BQT

2115. Re: Best Allround Antenna ?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-01 22:25:07 UTC
From: Crazy George <munschNO@attglobal.net.SPAM>
Message-ID: <3d49ba17_3@news1.prserv.net>
Source record: 137656

Wes:

Grainger made all those the government uses. I thought Antenna Products picked up the model, but their catalog shows their LPH-1A and LPH-89I as being the nearest equivalents. Both of these go down to 2 MHz. There is a lot of good stuff out here which never sees a URL. Too limited a market. I have to recover my other catalogs and see who the present manufacturer is. Maybe Sabre.
--
Crazy George
Remove NO and SPAM from return address

<n7ws_at_yahoo.com (Wes)> wrote in message
news:3d48ddb9.41196408@news.triconet.org...
> On Wed, 31 Jul 2002 22:01:20 -0500, "Crazy George"
> <munschNO@attglobal.net.SPAM> wrote:
>
> |You guys need a catalog. AS-3195. 3.5-30 MHz LPA, with tower and
rotator.
> |Commercially available. Gain is just a dB or 2 at 3.5 MHz, but is up in
the
> |7-8 dB range above 4 MHz. I can point to 2 of them just west of San
> |Antonio, TX, and give several other locations overseas. There are a
number
> |of them installed stateside, but I don't have their locations handy.
>
> I figured when you posted originally that you were speaking of a LPD.
> A google search doesn't hit on that number however. Who makes it?
>
> |
> |
>

2116. A TUTORIAL

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-01 22:30:38 UTC
From: aunwin@fgi.net
Message-ID: <c4becf19.0208011430.5cef278b@posting.google.com>
Source record: 137657

If one looks at designing a dipole that gives more gain than the standard dipole
then one has to incorporate a quasi collinear design. If we want a 'variable frequency design we must then design to accommodate the extreme space provided for our antenna . Cecil (CAM)has shown that you can get multi BAND use by the provision of variable length feeder lines or their equal in a similar fashion
of the Zepp family where collinear gains are realised by using the feed line
to provide a 'dead zone' at the center which provides for side lobes if the radiation is not exactly cancelled. Designs that are based on radiation cancellation are not good candidates for multi frequency use because of it's reliance on the feed line. The grid dip meter operates by mixing two resonant frequencies to where the current flow dips to near zero, a situation that produce ZERO radiation.So if we have two resonant circuits that are placed
close together to produce a portion of zero current flow and a consequential
lack of radiation. If we combine into one circuit for maximum coupling and use a conventional 20 meter dipole as the 'other' resonant circuit in conjunction with a variable loop antenna we start to aproach a collinear dipole antenna IF we drive the 20 meter portion of the dipole instead of the loop.
The basics of the above was shown in the ARRL Antenna book 17th edition as the the 'Resonance Breaker' and in the Radcom of the UK, both in the year '79 and regurgitated ever since. In later editions of the ARRL book the circular
loop design was transformed into an oblong shape when it was realised that maximum efficiency should give way to maximum coupling. For feeding purposes
one can intuitively place at the extremes of what now appears as a parallel circuit around the center, so that the 20 meter dipole is being driven .
Fortunatly this fits in with the delta match design which provides for reducing a high impedance into a more manageable impedance value. With this design
and the addition of a 4:1 balun acceptable SWR values can be achieved over the whole frequency range Of 20 thru 10. And above ten if one can live with multi rotatable radiation lobes and gaps in continual frequequency use. For areas below 20 meters I was fortunate that the 200b feet of coax that I used gave me use of both 40 and 80 where the coax came into play and where the 'antenna' moved from a
bi-directional antenna to a 'flat top' vertical. I will leave it to any interested reader to compare advantages and disadvantages to his

own list of desirables to see if this combination loop/dipole antenna meets their priorities and needs. This antenna is free from any restrictions in use as all relavent patents of mine have now been abandoned.

Art UN win KB9MZ

2117. Re: Home Use of J-Pole

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-01 23:11:31 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <3D49C023.8060909@eznec.com>
Source record: 137659

I was questioning your earlier statement that:

>Both scenarios often call for directive antennas. The J-pole has no
>discrimination at any azimuth and has a little less gain than a dipole,
>ground-plane, or coaxial antenna, typically -2dBd, according to Arnold
>B. Bailey who holds U.S. Patent 2184729, 1939, on the coaxial antenna.

which says that the J-Pole typically has 2 dB less gain than a dipole, according to Bailey. I maintain that Bailey is wrong about this (unless he's comparing a J-pole with coupled feedline to a vertical dipole with decoupled feedline). Do you agree, or do you believe Bailey?

Roy Lewallen, W7EL

Richard Harrison wrote:
> I think I just said: "The J-pole is a 1/2-wave dipole." The J-pole is
> not a doublet or dipole. It is end-fed. But the method of feed has
> little to do with antenna radiation characteristics in this case.
>
> The J-pole antenna is a 1/2-wave radiator and has essentially the same
> characteristics as a 1/2-wave dipole. My motor is sometimes not running
> when I shift to drive.
>
> Best regards, Richard Harrison, KB5WZI
>

2118. Re: Cushcraft going out of business?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-01 23:12:05 UTC
From: fractenna@aol.com
Message-ID: <20020801191205.11744.00000831@mb-ck.aol.com>
Source record: 137658

>If it's you, then there IS a god (thank you John Silber)!
>
>Rick K1BQT

Sometimes, Rick, ya gotta recognize that you have to be what you are, even if that is beyond how you may have seen yourself.

I, for example, can see that my options are blessed and that no door closes when you enter a bigger room--you can always go back in a grander one akin to your stature.

I love to help people. And it is a very rewarding time to be at the cutting edge of electromagnetics.

Wishing you the very best,

73,
Chip N1IR

2119. SUPERNEC

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-01 23:15:44 UTC
From: fractenna@aol.com
Message-ID: <20020801191544.11744.00000832@mb-ck.aol.com>
Source record: 137660

I understand this is an E-Z to use program; always looking for useful and transportable sim software,especially good ones for my younger and less experienced colleagues.

Appreciate comments on Supernec from users, especially those who have used other NEC derivatives in the past.

E-mail is fine, if you wish.

73,
Chip N1IR

2120. Coaxial Notch Filter

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-01 23:24:18 UTC
From: fractenna@aol.com
Message-ID: <20020801192418.11715.00000844@mb-ck.aol.com>
Source record: 137661

Wondering what kind of attenuation you can practically expect at HF.
Thanks!

73,
Chip N1IR

2121. Re: Stagnating antenna designs

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-01 23:28:16 UTC
From: fractenna@aol.com
Message-ID: <20020801192816.11733.00000931@mb-ck.aol.com>
Source record: 137662

> Check the newest edition of the ARRL's Handbook,
>fractal antennas are listed under the sections on
>dummy loads and insulators.
> 'Doc

My goodness; it doesn't seem to be there under those rubrics. Perhaps you have not understood the facts correctly? Look again and fill us in.

73,
Chip N1IR

2122. Re: Antenna suggestion For 30 MHz To About 2 GHz ?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-01 23:35:22 UTC
From: fractenna@aol.com
Message-ID: <20020801193522.11733.00000935@mb-ck.aol.com>
Source record: 137663

Such antennas, with good gain, small size, and very broad bandwidth, do exist.

Unfortunately I am not aware of availability to the amateur radio service nor SWL'ers. An unfortunate restriction based on the times we live in...

73,
Chip N1IR

2123. Re: STOP EVERYTHING

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-01 23:47:28 UTC
From: dennis@wawa.juniper.net
Message-ID: <aichag$2her$1@heap.juniper.net>
Source record: 137666

Reg Edwards <g4fgq.regp@btinternet.com> wrote:
>I was right first time.
>
>It is obvious receiver input power increases in proportion to both Tx and Rx
>antenna gains, so -
>
>Pr = Gt *Gr * Pt * Square(Lambda / 4 / Pi / D) watts is correct.
>
>However there's a similar error in the equation for the field strength
>meter.
>
>When the dust has settled I'll go back to square one and tidy-up all 3
>equations.
>
>Proves my point about not believing everything seen on computers.

I agree that the equation needs to be this, but I'd be interested
to know if you could resolve an apparent paradox that seems to exist
with this equation.

If I have two parallel 1/2 Lambda dipoles, with gain Gd, in free space
separated by distance D, one of which is attached to a transmitter putting
power Ptd into the antenna, I can use the equation to compute the power
delivered to a receiver matched to the other dipole, Prd.

Now suppose I instead consider to parallel 1/4 Lambda monopoles on
a perfect ground plane, operating at the same frequency and separated
by the same distance as the dipoles. I expect to be able to predict
the behaviour of the monopoles from the behaviour of the dipoles. To
reproduce the same field as existed between the dipoles (only with
half the total energy since it is restricted to a hemisphere instead
of a sphere) I need to produce the same current distribution in the
transmitting monopole, but since the feed point impedance for the
monopole is half the dipole this requires only half the power. This
means that

Ptm = Ptd / 2

Since I'm producing the same free-space field with half the power the
gain of the monopole is twice that of the dipole, i.e.

Gm = Gd * 2

Since the field is the same at the receiving monopole as it was for
the receiving dipole, I expect the same current distribution to be
induced at the monopole as the dipole. Since the feedpoint impedance

of the monopole is half that of the dipole, however, the power delivered to a matched receiver by this current will be half, i.e.

Prm = Prd / 2

This seems correct. The free-space field and the currents in the transmitting and receiving antennas are the same for the dipoles and monopoles, and to achieve this the powers into the transmitting antenna, out of the receiving antenna and propagated away into free space (of which there is half as much in the monopole case) by the field are all halved. If you believe that monopoles over perfect ground have an analogy to dipoles in free space it seems this must be true.

It isn't true according to your equation, however. If I substitute

Ptm = Ptd / 2
Gm = Gd * 2

into the equation I get

Prm = Prd * 2

That is, your (simple) equation says I'll get 4 times more power out of the receiving monopole as I would expect from consideration of the (even simpler) monopole/dipole analogy. One of these has to be incorrect.

As another data point, there was a discussion here a few weeks ago about a paper which compared NEC computations to that equation and also found that the equation overestimated the receiver power in the monopole-over-ground case by a factor of 4 compared to NEC.

I believe that your field strength meter equation has a greater dependence on the receiving antenna geometry than can be parameterized by a single gain value, and that the equation in the text books really only works for dipole receiving antennas. I could easily be wrong, though.

Dennis Ferguson

2124. Re: Back to Basics, etc

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-01 23:48:47 UTC
From: aunwin@fgi.net
Message-ID: <c4becf19.0208011548.677b859c@posting.google.com>
Source record: 137664

Richard Clark <kb7qhc@attbi.com> wrote in message
news:<9kpikuc3bf89mhc8cnarlubi4ve3qt6717@4ax.com>...
> On 1 Aug 2002 06:28:27 -0700, aunwin@fgi.net (Art Unwin KB9MZ) wrote:
>
> >"Reg Edwards" <g4fgq.regp@btinternet.com> wrote in message
news:<aia1oq$cg5$1@venus.btinternet.com>...
> snip
> >> Pr = Gt *Gr * Pt * Square(Lambda / 4 / Pi / D) watts,
> snip
> >
> >I love it...I love it.
> >Especially the title. We are so lazy by following the books and where
> >they are regurgitated we fail to use the basics to validate or to
> >build on them.
> >Art
>
> Hi Art,
>
> Lazy? You accepted the math above without challenge (which, according
> to G6AUC, and confirmed, appears to be wrong), without going to the
> books to validate, without review at the bench, without discussion of
> basics, without....
>
> You are quicker to characterize the readership of this group with:
> >We are so lazy
> than to test the technical content. -Speak for yourself- These posts
> exhibit classic examples from two sources how the snobbism of populist
> science (sic) mocks established learning for apparent failure and then
> fails in its own sub-standard of performance.
>
> Like fractal/cfa/eh science, populist science (sic all around) can be
> recognized by the sly contempt held for the reader:
> >>The foregoing is beautifully simple and is exact, easily understood by
> >>anyone who can do arithmetic.
> (now an ironic statement) or by inflamatory proclamation (denotes a
> weak technical statement being braced up by homilies and innuendo):
> >>Regurgitation of the old stuff by plagiarists
> which, when attended by math that is obviously derived from other's
> work without ascription - truly plagiaristic (and worse yet, rife with
> error) is hypocrisy in its most obvious form.
>
> Any apologies?
>
> 73's

> Richard Clark, KB7QHC

Richard what I liked was the 'back to basics' aproach and to be honest I do not understand the formula that Reg presented and nor do I desire to.
But frankly Richard you are getting to be a pain in the arse. You are not an expert with respect to antennas and frankly the idea that anything must be validated by you I find preposterous. Your career aparently is that of a weather man or meteroligist that looks after a herd of iterations, accepts with satisfaction the multi weather forcasts that are generaly wrong and tries to speak as Shakespeare would. This is not generally a sign of a good engneer let alone a antenna designer which both you and I are not, where it is common what is right first time. The idea of you criticizing me is tantamount to you giving the weather forcast for the previous day. True I may be ripe for attack because of my writing but that doesn't make me an idiot. Try talking slowly and loudly to a Canadian in Quebec as if he was an imbecile first time around and you will get a physical surprise for your arrogance. And no, I will not try to get along with you by accepting the blame or turning the other cheek. I am sure you can provide serious comment with respect to antennas but you cannot go the extra mile as a quasi antenna expert as all will see thru you as just 'mouth and trouser.'
To boot, if you think your acid comments will compel me to drop the antenna idea
you can forget it I have a bit more spine than you think. So lighten up, have a change in attitude or withdraw from the thread and go and play with your itterations or other animals that you apparently cavort with.

Your friend the Englishman
Art KB9MZ....XG and proud of it.

2125. Fractalantenna going out of business

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-01 23:52:54 UTC
From: prozmah@aol.com
Message-ID: <aichkm$2hd$1@news.netmar.com>
Source record: 137667
Cross-posted to: rec.radio.amateur.antenna,alt.usenet.kooks

On 01 Aug 2002 12:14:38 GMT, fractenna@aol.com (Fractenna) wrote:

>Someone just sent me an e-mail about some company switching to smart
>radio/antennas. Perhaps you know more. But it sounded pretty factual. Say,
what
>do you think? And something about a new guy in town...

Cohen fantasizes anew. Say, what's Phil doing now == did he go back to
serving health juice?

>
>And here's a handy new fact: guess who just retired from academia so that he
>can help grow a certain hi tech company to a $100M projected firm?:-) What
sort
>of, shall we say, additional freedoms --especially in a formal sense--might
one
>speculate are now in the cards?

Was Hohlfield denied tenure at BU? How's your London office looking?

>
>Hmmm?
>
>Facta are great. But if you don't stick to the facts, then its time to get
>formal;-]

Facta are greata, Stephano?
>
>America is a great place there Rick. Only here can a bright person plug away
to
>shape a new vision for the future, and benefits for all:-)

How much money did old Hymie leave you there, Chipper? What are you gonna
do
when it runs out?

>
>Have a pleasant day:-)
>
>73,
>Chip N1IR

Jeeze, why do you need to run over here and posture for everybody's
attention? A real business man runs his business, he doesn't need to toot
his horn for people who don't care.

Right? :-)

See

www.fractenna.com
www.fractalantenna.com

for some real laughs, folks.

----- Posted via NewsOne.Net: Free (anonymous) Usenet News via the Web -----
http://newsone.net/ -- Free reading and anonymous posting to 60,000+ groups
NewsOne.Net prohibits users from posting spam. If this or other posts
made through NewsOne.Net violate posting guidelines, email abuse@newsone.net

2126. Re: Cushcraft going out of business?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-01 23:53:01 UTC
From: k1bqt@aol.com
Message-ID: <20020801195301.20574.00000574@mb-mn.aol.com>
Source record: 137665

>I, for example, can see that my options are blessed...<

I'm sure your departure was, indeed, with someone's blessing! :-) Like the Velvetine Rabbit, are you now "real"?

--Rick

2127. Re: Fractalantenna going out of business

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-01 23:55:11 UTC
From: prozmah@aol.com
Message-ID: <aichov$2ka$1@news.netmar.com>
Source record: 137668

In article <20020801182352.07999.00000926@mb-mk.aol.com>, Rick Littlefield
<k1bqt@aol.com> writes:
>>And here's a handy new fact: guess who just retired from academia...<
>
>If it's you, then there IS a god (thank you John Silber)!
>
>Rick K1BQT
>

Nah, it's Hohlfield; didn't get tenure. :-)

----- Posted via NewsOne.Net: Free (anonymous) Usenet News via the Web -----
http://newsone.net/ -- Free reading and anonymous posting to 60,000+ groups
NewsOne.Net prohibits users from posting spam. If this or other posts
made through NewsOne.Net violate posting guidelines, email abuse@newsone.net

2128. Re: Back to Basics, etc

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-02 00:30:48 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <1kkjkuk3agphpln6orlbe43k1nhgcdeoor@4ax.com>
Source record: 137569

On 1 Aug 2002 16:48:47 -0700, aunwin@fgi.net (Art Unwin KB9MZ) wrote:

>Your career
>aparently is that of a weather man or meteroligist

:-)

Hi Art,

OK, so no profuse apologies.

But don't cloud up and rain on us all of the sudden. ;-)

73's
Richard Clark, KB7QHC

2129. Re: Computing power from SWR

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-02 00:34:11 UTC
From: Owen Duffy <owen@oda.com.au>
Message-ID: <3D49D383.77F29F5D@oda.com.au>
Source record: 137570

Ken wrote:
>
> I have a multiband (160M-10M) dipole on a 100 ft. RG-8X feedline.

Matched line loss is around 0.55dB at 3.6MHz.

>
> On 80 meters, my radio's meter and my tuner's meter show that I have
> the rig tuned to SWR=1.0 and 10 watts power.

Lets assume the radio is rated to deliver 10W to a 50ohm load.

>
> I put a Radio Shack digital meter after the tuner and before the feed
> line. It shows SWR=12.0 and power=24 watts. The SWR formula I know
> indicates that reflected power is 71% of forward power. What power is
> actually being radiated? Is this an OK situation?

If power figure you quote is the forward power and the instrument is correct for both power reading and VSWR (big assumption!); you have 24 watts travelling toward the antenna at the tuner end of the feedline; about 7 watts net power into the feeder at the tuner; VSWR at the antenna is around 50; and about 1.6W (or about 16% of the rated transmitter output) absorbed by the antenna.

Looks like the tuner losses and line losses (exacerbated by high VSWR) are consuming 84% of your output power. Of course, this doesn't consider antenna losses.

Despite the sensitivity to instrument error, the underlying message is that it is not working well, and bears serious investigation.

The tuner meter didn't tell us much at all, did it! It shouldn't give you any comfort.

Owen

>
> Ken KC2JDY
>
> ---
> Ken
> (to reply via email
> remove "zz" from address)

2130. Re: Cushcraft going out of business?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-02 00:50:30 UTC
From: fractenna@aol.com
Message-ID: <20020801205030.21183.00000981@mb-cv.aol.com>
Source record: 137571

>
>>I, for example, can see that my options are blessed...<
>
>I'm sure your departure was, indeed, with someone's blessing! :-) Like the
>Velvetine Rabbit, are you now "real"?
>
>--Rick
>

I am one happy man Rick. Thanks for asking.

In fact I am always happy there amigo:-)

Try it; nothing spruces up sour attitudes like being alive and making a
contribution.

73,
Chip N1IR

2131. Re: A TUTORIAL

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-02 01:07:42 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <3D49DB5E.3060306@eznec.com>
Source record: 137572

The purpose of a tutorial is to teach, but I'm having some trouble learning. Hopefully you can clarify a few issues to enhance the learning process.

Art Unwin KB9MZ wrote:
> If one looks at designing a dipole that gives more gain than the
> standard dipole
> then one has to incorporate a quasi collinear design. If we want a
> 'variable frequency design we must then design to accommodate the
> extreme space provided for our antenna . Cecil (CAM)has shown that
> you can get multi BAND use by the provision of variable length feeder
> lines or their equal in a similar fashion
> of the Zepp family where collinear gains are realised by using the
> feed line
> to provide a 'dead zone' at the center which provides for side lobes
> if the radiation is not exactly cancelled.

Can you please explain this last sentence further? The 'dead zone' is at the center of what -- the antenna, the antenna pattern? How does a 'dead zone' create side lobes? The radiation from what is being cancelled?

> Designs that are based on
> radiation cancellation are not good candidates for multi frequency use
> because of it's reliance on the feed line.

What kinds of antennas are "based on" radiation cancellation? Can you give a few examples? The fields from the elements in a W8JK partially or fully cancel in all directions -- that is, they don't completely reinforce in any direction. Yet it's a good broadband design because it maintains its pattern over quite a wide frequency range. Is this the "cancellation" you're talking about, and what does it have to do with feedlines?

> The grid dip meter operates
> by mixing two resonant frequencies to where the current flow dips to
> near zero, a situation that produce ZERO radiation.So if we have two
> resonant circuits that are placed
> close together to produce a portion of zero current flow and a
> consequential
> lack of radiation.

The grid dip meters I've seen oscillate at only a single frequency. Although the grid current dips when there's maximum coupling to another circuit, the meter's coil certainly continues to radiate. Where is this "portion of zero current flow" you mention?

> If we combine into one circuit for maximum coupling
> and use a conventional 20 meter dipole as the 'other' resonant circuit
> in conjunction with a variable loop antenna we start to aproach a
> collinear dipole antenna IF we drive the 20 meter portion of the
> dipole instead of the loop.
> The basics of the above was shown in the ARRL Antenna book 17th
> edition as the the 'Resonance Breaker' and in the Radcom of the UK,
> both in the year '79 and regurgitated ever since.

Unless I'm mistaken, a "resonance breaker" resembles a gamma match. But what it does is *prevent* current from flowing beyond the "breaker" section. In the "breaker" section itself, the currents on the two parallel wires are nearly equal and out of phase (although they can be large), so little net radiation takes place. This method is used in the AM broadcast industry to de-resonate parasitic conductors to prevent pattern distortion. In what way does this resemble a collinear dipole, which has substantial current along the whole length?

> In later editions of
> the ARRL book the circular
> loop design was transformed into an oblong shape when it was realised
> that maximum efficiency should give way to maximum coupling. For
> feeding purposes
> one can intuitively place at the extremes of what now appears as a
> parallel circuit around the center, so that the 20 meter dipole is
> being driven .
> Fortunatly this fits in with the delta match design which provides for
> reducing a high impedance into a more manageable impedance value. With
> this design
> and the addition of a 4:1 balun acceptable SWR values can be achieved
> over the whole frequency range Of 20 thru 10. And above ten if one can
> live with multi rotatable radiation lobes and gaps in continual
> frequequency use. For areas below 20 meters I was fortunate that the
> 200b feet of coax that I used gave me use of both 40 and 80 where the
> coax came into play and where the 'antenna' moved from a
> bi-directional antenna to a 'flat top' vertical.

In what way does the coax "come into play"? Do you mean it's radiating? If so, what makes it radiate on 40 and 80 but not on 20 and above?

> I will leave it to
> any interested reader to compare advantages and disadvantages to his
> own list of desirables to see if this combination loop/dipole antenna
> meets their priorities and needs. This antenna is free from any
> restrictions in use as all relavent patents of mine have now been
> abandoned.
>
> Art UN win KB9MZ

Clarifications would be welcome.

Roy Lewallen, W7EL

2132. Re: Shielded parallel feedlines

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-02 01:10:04 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <3D49DBEC.3000600@eznec.com>
Source record: 137574

That's really a great insight. You still have the potential problem of getting an impedance sufficiently larger than the common mode impedancance. But it should eliminate the potential loss due to differential mode coupling between the twinlead and the core. Neat idea.

Roy Lewallen, W7EL

Ian White, G3SEK wrote:
> Roy Lewallen wrote:
>
>> The fields from a twinlead feedline extend some distance from the
>> wire. It seems to me that if you shield each wire and tie the shields
>> together but otherwise float them, the fields will be confined to the
>> insides of the shields -- *IF* the currents in the two twinlead
>> conductors are equal and opposite. And if they are, placing the
>> outside of the shields against a conductor should have no effect on
>> the twinlead currents. This wouldn't be true of twinlead without the
>> shields. Of course, if the currents are unbalanced, the difference
>> current will flow on the outside of the shield and will couple to
>> other >objects.
>>
> That logic works both ways, so how about deliberately forcing the
> difference current towards zero? That could be done either by winding
> the double coax into a bifilar choke, or by threading both lines
> together through a string of ferrite beads.
>
> By discouraging outer-surface currents on both shields, it should be
> possible to force the currents on the connected twinlead to be more
> exactly equal-and-opposite; in other words, to discourage common-mode
> currents on the twinlead.
>
>

2133. Re: Cushcraft going out of business?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-02 01:12:14 UTC
From: Peter Fournia <pfournia@rochester.rr.com>
Message-ID: <3D49DC2F.B81D65D5@rochester.rr.com>
Source record: 137573

Lee at Cushcraft called me today and took my order. The antenna is out of production, but, I feel satisfied that my parts are on order and I will get then at a fair price in reasonable time.

Lesson Learned:
1) Don't bother ordering parts via the Cushcraft web site.
2) Use the telephone to call technical service.
3) Failing that, keep telephoning and leave a message with your telephone number.

Two other people responded to this thread indicating they also had difficulties ordering parts from the web site. They suggested telephoning or using a Cushcraft dealer.

Peter Fournia, W2SKY

Peter Fournia wrote:
>
> What's up with Cushcraft? Twice I have ordered parts for antennas using
> their web site order form. Have not heard a word from them! Not even
> acknowledgment of receiving the order. Of course their parts pricing is
> not available on their web site either.
>
> Does Cushcraft handle parts for their antennas? What's the secret? How
> do you get parts from them?
>
> Peter Fournia, W2SKY
> Penfield, NY

2134. Re: Fractalantenna going out of business

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-02 01:23:15 UTC
From: k3bu@aol.com
Message-ID: <20020801212315.08482.00001132@mb-mq.aol.com>
Source record: 137575

>See
>
>www.fractenna.com
>www.fractalantenna.com
>
>for some real laughs, folks.
>

...or barf!

Yipeee!
Now freaktals have inhouse manufacturing, no more outhouse manurefacturing!

Bada BUm

2135. Re: Back to Basics, etc

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-02 01:42:29 UTC
From: mpc@asiaa.sinica.edu.tw
Message-ID: <397c1e3.0208011742.17a039b8@posting.google.com>
Source record: 137576

Dear OM,

I am not here to judge things not related to antenna. but i do agree
with Reg that ARRL antenna book(s) need to be updated largely. why?
Its obvious that there is a tremendious gap in basics presented here on this
NG, by you gurus like Roy, Reg, etc. I am a new ham with no EE background but
with basic logic i could understand what Reg or Roy exemplify while
reading ARRL books i fail to follow.

With as huge a book as the ARRL antenna bible, many basic
underlying concepts are missing. yes reading chapters
after chapters and i cannot find the formula for a field meter.
or when i read about the lightning part, i almost learn nothing yet reading
Richard Harrison or Tom's posts here i learn a lot.

I thank Reg for his wonderful programs. not only are they
free but they are of the highest ingenious quality. Reading the brief
"introduction" part in the respective program alone has taught me a
lot more than what the ARRL bible conveys. the programs may not be
100% precise but they are educational at its best.

73, Frank Chen, bv2wn

2136. Re: Back to Basics, etc

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-02 02:11:48 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <jaqjkuko5dhdpfk409mb4gpatp98948pr7@4ax.com>
Source record: 137577

On 1 Aug 2002 18:42:29 -0700, mpc@asiaa.sinica.edu.tw (Meng-Po Chen)
wrote:

>Dear OM,
>
> I am not here to judge things not related to antenna. but i do
>agree
>with Reg that ARRL antenna book(s) need to be updated largely. why?

Hi Frank,

The ARRL books are not "People Magazine" twisting with the tide of
fashion.

Besides, there many other books to choose from. Blaming the ARRL is
cursing the darkness (and pointless to boot).

73's
Richard Clark, KB7QHC

2137. Re: Antenna suggestion For 30 MHz To About 2 GHz ?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-02 02:18:32 UTC
From: "J. Harvey" <JM002.Harvey_ANTI*SPAM_@Sympatico.ca>
Message-ID: <tZl29.2598$sl2.1387829@news20.bellglobal.com>
Source record: 137582

Regarding "Antenna....30 MHz To About 2 GHz ?"

"Fractenna" postured foolishly:
> Such antennas, with good gain, small size, and
> very broad bandwidth, do exist. Unfortunately
> I am not aware of availability to the amateur
> radio service nor SWL'ers. An unfortunate
> restriction based on the times we live in...

Bull.

2138. Re: How Many Beads Makes a Choke?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-02 02:19:49 UTC
From: k1bqt@aol.com
Message-ID: <20020801221949.03837.00000681@mb-cq.aol.com>
Source record: 137578

>What happens to all that "choked" RF?<

Depends. Ideally, the blocking impedence of the choke looks high enough so that virtually all of the current ends up on the low impedance antenna leg rather than on the cable. If the blocking impedance isn't high enough, and if the blocking component is more resistive than reactive, the beads will heat up like resistors. However, the idea isn't to have the beads soak up the power, the idea is to make the path so "unattractive" that the beads don't have to soak up anything.

--Rick K1BQT

2139. Re: Cushcraft going out of business?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-02 02:24:39 UTC
From: 'Doc <w5lz@icok.net>
Message-ID: <3D49ED4D.E5DC151B@icok.net>
Source record: 137579

Oh, great. First, he's a failed teacher. Then he's
a failed antenna designed. Now, he's working on being
the "Dear Abbey" of the "electromagnetics" world, where he
thinks he's on the 'cutting edge'. Hang on to your ass
people! It sounds like he's trying to worm his way in
to politics. ...or astrology, either of which would be
further degraded by his presences.
'Doc

2140. Re: Cushcraft going out of business?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-02 02:27:02 UTC
From: fractenna@aol.com
Message-ID: <20020801222702.21313.00000950@mb-cv.aol.com>
Source record: 137580

>
>Lee at Cushcraft called me today and took my order. The antenna is out
>of production, but, I feel satisfied that my parts are on order and I
>will get then at a fair price in reasonable time.
>
>Lesson Learned:
> 1) Don't bother ordering parts via the Cushcraft web site.
> 2) Use the telephone to call technical service.
> 3) Failing that, keep telephoning and leave a message with your
>telephone number.
>
>Two other people responded to this thread indicating they also had
>difficulties ordering parts from the web site. They suggested
>telephoning or using a Cushcraft dealer.
>
>Peter Fournia, W2SKY
>
>Peter Fournia wrote:
>>
>> What's up with Cushcraft? Twice I have ordered parts for antennas using
>> their web site order form. Have not heard a word from them! Not even
>> acknowledgment of receiving the order. Of course their parts pricing is
>> not available on their web site either.
>>
>> Does Cushcraft handle parts for their antennas? What's the secret? How
>> do you get parts from them?
>>
>> Peter Fournia, W2SKY
>> Penfield, NY
>
>

That's great that you got closure Peter; I'm not surprised with the happy ending:-)

Now: Can we end the subject please? It seems the subject was just as inappropriate then as now.

And to answer the question, it would seem to be 'no'.

73,
Chip N1IR

2141. Re: Coaxial Notch Filter

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-02 02:28:02 UTC
From: 'Doc <w5lz@icok.net>
Message-ID: <3D49EE19.223877DA@icok.net>
Source record: 137581

Chip'ster,
You will be 'notched' at what ever frequency you
attempt to pontificate on.
'Doc

2142. Re: Cushcraft going out of business?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-02 02:30:10 UTC
From: fractenna@aol.com
Message-ID: <20020801223010.21313.00000952@mb-cv.aol.com>
Source record: 137583

>
>
> Oh, great. First, he's a failed teacher. Then he's
>a failed antenna designed. Now, he's working on being
>the "Dear Abbey" of the "electromagnetics" world, where he
>thinks he's on the 'cutting edge'. Hang on to your ass
>people! It sounds like he's trying to worm his way in
>to politics. ...or astrology, either of which would be
>further degraded by his presences.
> 'Doc
>

I don't follow.

Who, and what, are you talking about??

73,
Chip N1IR

2143. Re: A TUTORIAL

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-02 02:36:08 UTC
From: 'Doc <w5lz@icok.net>
Message-ID: <3D49EFFE.14B59992@icok.net>
Source record: 137584

Art,
Are you really 'Fractenna' in disguise?
'Doc

2144. Re: Coax Length for Fixed Frequency Antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-02 02:52:34 UTC
From: 'Doc <w5lz@icok.net>
Message-ID: <3D49F3D8.716417DE@icok.net>
Source record: 137585

Al,
Unless you need a linear transformer for
impedance matchig, or 'phasing', there isn't
any particular reason to use a multiple 1/4
wave feed line. As long as the feed line is
long enought to reach between antenna and radio,
it should work just fine.
Anything close to an antenna will affect it's
performance or characteristics. How it will be
affected is a good question. It would be 'better'
if you could move the antenna further from the
metal in the eaves, but if that isn't possible,
it really shouldn't be ~that~ much of a problem.
Since you don't want to bring us the subject
of a balun, I won't either...
'Doc

2145. Re: Back to Basics, etc

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-02 03:49:38 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <3D4A0152.1000504@eznec.com>
Source record: 137586

Think of how many hams there are, the kinds of antennas they use, and the purposes they use them for. Also consider the range of experience, knowledge, and math ability they represent. Then try to think of what you'd include in the Antenna Book that would satisfy the largest number of them. No matter what you include or exclude, you'll get a large number of gripers and armchair quarterbacks complaining about it and bragging about how they could do better. Oh, I forgot to mention -- you've got to find capable authors willing to work for next to nothing, so you can sell it for a fraction of the cost of most textbooks -- otherwise most hams wouldn't buy it.

You think it ought to be updated more often? Get out your word processor and start writing. Or would you rather quadruple your dues or pay $150 a copy so the ARRL could hire some professional writers?

If you're interested in fundamental antenna theory, there are plenty of good textbooks out there. Get one and read it. But you'll have a hard time finding good and reasonably accurate information that's of practical everyday use to a large number of amateurs, anywhere except the ARRL Antenna Book. If the Antenna Book replaced its contents with the same information that's already available in numerous texts, then where would you go to get the information that's in the Antenna Book now?

I've written most of a chapter of the ARRL Antenna Book. How 'bout somebody else take a turn? But I realize it's so much easier just to bellyache about what "they" aren't doing to suit you.

And Reg, they'll happily accept manuscripts from Limeys -- you don't have to be an ARRL member. Shucks, you don't even need to like Americans. Here's your chance to do something constructive, and show a thing or two to that world of old wives, gurus, fools, and incompetents that people your world.

Roy Lewallen, W7EL

2146. Re: Home Use of J-Pole

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-02 03:55:11 UTC
From: richardharrison@webtv.net
Message-ID: <24913-3D4A029F-103@storefull-2395.public.lawson.webtv.net>
Source record: 137587

Roy Lewallen wrote:
"I was questioning your earlier statement that:
----which says that the J-pole typically has 2 dB less gain than a dipole."

Let me be clear, I was wrong. Simple logic says a 1/2-wave radiator is a 1/2-wave radiator. If done right, how the 1/2-wave radiator is fed won`t affect its efficiency. So, a J-pole should have 0dBd gain.

Why I erred is unimportant. I was just careless and non-critical of material I passed along. I apologize. I will try to give more thought to my responses to avoid future errors.

2 db loss is unimportant to the point I intended to make. The question was the suitability of a non-directional antenna for FM reception in a city like NY,NY and in a rural hilly area. My reply was that the J-pole was probably not the best choice.

The reason the J-pole is not likely the best choice in either location:
The city is usually rife wirth multipath signals.
The hilly rural area has obstacles and distance from senders in the city.
Directive antennas are useful in both city and rural areas to overcome common reception problems, even when an attenuator may be needed to avoid signal overload.
The J-pole is a non-directional antenna. It is susceptible to multipath signals which may be found in town and in the country. The J-pole has no gain which distance from senders may require in the rural setting. A directive antenna is often a better choice. When signals from many directions are to be received, the directive antenna can be used with a rotator.

Best regards, Richard Harrison, KB5WZI

2147. Re: Back to Basics, etc

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-02 04:26:49 UTC
From: tdonaly@aol.com
Message-ID: <20020802002649.27882.00001026@mb-mb.aol.com>
Source record: 137588

>
>Dear OM,
>
> I am not here to judge things not related to antenna. but i do
>agree
>with Reg that ARRL antenna book(s) need to be updated largely. why?
>Its obvious that there is a tremendious gap in basics presented here
>on this
>NG, by you gurus like Roy, Reg, etc. I am a new ham with no EE
>background but
>with basic logic i could understand what Reg or Roy exemplify while
>reading ARRL books i fail to follow.
>
> With as huge a book as the ARRL antenna bible, many basic
>underlying concepts are missing. yes reading chapters
>after chapters and i cannot find the formula for a field meter.
>or when i read about the lightning part, i almost learn nothing yet
>reading
>Richard Harrison or Tom's posts here i learn a lot.
>
> I thank Reg for his wonderful programs. not only are they
>free but they are of the highest ingenious quality. Reading the brief
>"introduction" part in the respective program alone has taught me a
>lot more than what the ARRL bible conveys. the programs may not be
>100% precise but they are educational at its best.
>
>
>73, Frank Chen, bv2wn
>
>

Hi Frank,
I think you may be much more satisfied with the knowledge you
gain from the newsgroup's ancient engineers if you do some research and
experimentation, and verify, for yourself, that what they say is correct.
Some of them - but not necessarily the ones you mentioned - have been guilty of
posting some real stretchers (lies).
73
Tom Donaly KA6RUH

2148. Re: Back to Basics, etc

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-02 04:41:57 UTC
From: Chris Codella <codella@frontiernet.net>
Message-ID: <ukk3e3dgn1vaa5@corp.supernews.com>
Source record: 137590

"Roy Lewallen" <w7el@eznec.com> wrote in message
news:3D4A0152.1000504@eznec.com...
> .... (snip)....
> If you're interested in fundamental antenna theory, there are plenty of
> good textbooks out there. Get one and read it. But you'll have a hard
> time finding good and reasonably accurate information that's of
> practical everyday use to a large number of amateurs, anywhere except
> the ARRL Antenna Book. If the Antenna Book replaced its contents with
> the same information that's already available in numerous texts, then
> where would you go to get the information that's in the Antenna Book now?
> .... (snip)....

I have to strongly agree. I generally find the writing in the ARRL book to be excellent (though the cross referencing could be better), and I've noticed a marked improvement over the last, say, 20 years or so. When I want to understand something that's puzzling me related to antennas I'll pick up the "Book" before I'll go get my copy of Stratton or Jackson. But they're there should I want to go deep (and risk drowning).

Chris, W2PA

2149. Re: How Many Beads Makes a Choke?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-02 04:43:42 UTC
From: tdonaly@aol.com
Message-ID: <20020802004342.27882.00001027@mb-mb.aol.com>
Source record: 137589

>
>>What happens to all that "choked" RF?<
>
>Depends. Ideally, the blocking impedence of the choke looks high enough so
>that
>virtually all of the current ends up on the low impedance antenna leg rather
>than on the cable. If the blocking impedance isn't high enough, and if the
>blocking component is more resistive than reactive, the beads will heat up
>like
>resistors. However, the idea isn't to have the beads soak up the power, the
>idea is to make the path so "unattractive" that the beads don't have to soak
>up
>anything.
>
>--Rick K1BQT
>

What is a "low impedance antenna leg" and how do you measure the impedance
provided such leg exists?

Tom Donaly KA6RUH

2150. The Radio Path From Tx to Rx

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-02 07:00:37 UTC
From: Reg Edwards <g4fgq.regp@btinternet.com>
Message-ID: <aidamk$f1f$1@venus.btinternet.com>
Source record: 137591

There was a surprising amount of interest and heat generated by the 3
'back-to-basics' equations in which a typo-error caused a little confusion.
Here they are again - hopefully error free - plus two more of lesser
interest.

==========

The following equations are exact. No approximations are involved.

D = straight line Tx-to-Rx distance, metres.
Pt = transmitter power output, watts.
Pr = receiver power input, watts.
Gt = gain of transmitting antenna rel. isotrope.
Gr = gain of receiving antenna rel. isotrope.
Lambda = wavelength, metres.
E' = Far-field field strength, volts/metre.
Pd = power-density, watts per square metre.
A = antenna aperture, square metres.

Equation 1.
========
Pr = Gr*Gt*Pt*Square(Lambda/4/Pi/D) watts.

Equation 2.
========
E' = Sqrt(30*Gt*Pt)/D volts/metre.

Equation 3.
========
E' = 4*Pi*Sqrt(30*Pr/Gr) volts/metre.

Equation 4.
========
Pd = Pt/4/Pi/Square(D) watts/square metre.

Equation 5
========
G = 4*Pi*A/Square(Lambda)

The power gain of an isotrope is 1.

==========

It is now necessary only to take into account efficiency of the antenna +
feeder + ground systems and losses in the ionosphere.

2151. Re: Back to Basics, etc

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-02 07:06:54 UTC
From: mpc@asiaa.sinica.edu.tw
Message-ID: <397c1e3.0208012306.3b2adcf2@posting.google.com>
Source record: 137592

Richard Clark <kb7qhc@attbi.com> wrote in message
news:<jaqjkuko5dhdpfk409mb4gpatp98948pr7@4ax.com>...
>
> Hi Frank,
>
>
> Besides, there many other books to choose from. Blaming the ARRL is
> cursing the darkness (and pointless to boot).
>
> 73's
> Richard Clark, KB7QHC

Dear Richard OM,

thanks for enlightening me. i am in no way to blame ARRL antenna
books.
they are good ones. I just hope they could cover a bit more topics.
maybe
some more basic theory stuff. there are many "how to contruct"
articles but not many "why" counterparts. besides, many poor people
like me can only afford one antenna book:-)

to me, you and Reg et al are all antenna gurus. i appreciate your
contribution to this NG very much.

73, frank chen, bv2wn

2152. Re: How Many Beads Makes a Choke?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-02 07:14:15 UTC
From: "Ian White, G3SEK" <G3SEK@ifwtech.co.uk>
Message-ID: <SZ2uZqBHFjS9EA+O@ifwtech.co.uk>
Source record: 137593

Rick Littlefield wrote:
>>What happens to all that "choked" RF?<
>
>Depends. Ideally, the blocking impedence of the choke looks high enough so that
>virtually all of the current ends up on the low impedance antenna leg rather
>than on the cable. If the blocking impedance isn't high enough, and if the
>blocking component is more resistive than reactive, the beads will heat up like
>resistors. However, the idea isn't to have the beads soak up the power, the
>idea is to make the path so "unattractive" that the beads don't have to soak up
>anything.

If you make it "unattractive" for unwanted currents to flow on the
outside of the feedline, all the current flows in the antenna instead.

Whenever you change something in the antenna-feedline setup, the RF
currents will always rearrange themselves to cope with the new
situation.

--
73 from Ian G3SEK Editor, 'The VHF/UHF DX Book'
'In Practice' columnist for RadCom (RSGB)

2153. Re: Cushcraft going out of business?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-02 10:35:14 UTC
From: k1bqt@aol.com
Message-ID: <20020802063514.07999.00001080@mb-mk.aol.com>
Source record: 137594

>And to answer the question, it would seem to be 'no'.<

I have it on very good authority that you are correct.

Rick K1BQT

2154. Final final final correction now applied. (Equ.3)

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-02 11:08:47 UTC
From: Reg Edwards <g4fgq.regp@btinternet.com>
Message-ID: <aidp7v$365$1@paris.btinternet.com>
Source record: 137595

Damn these printers. All now OK. Safe to copy it into your note books. Try not to make a mistake. ;o)

==========

The following equations are exact. No approximations are involved.

D = straight line Tx-to-Rx distance, metres.
Pt = transmitter power output, watts.
Pr = receiver power input, watts.
Gt = gain of transmitting antenna rel. isotrope.
Gr = gain of receiving antenna rel. isotrope.
Lambda = wavelength, metres.
E' = Far-field field strength, volts/metre.
Pd = power-density, watts per square metre.
A = antenna aperture, square metres.

Equation 1.
========
Pr = Gr*Gt*Pt*Square(Lambda/4/Pi/D) watts.

Equation 2.
========
E' = Sqrt(30*Gt*Pt)/D volts/metre.

Equation 3.
========
E' = 4*Pi*Sqrt(30*Pr/Gr)/Lambda volts/metre.

Equation 4.
========
Pd = Pt/4/Pi/Square(D) watts/square metre.

Equation 5
========
G = 4*Pi*A/Square(Lambda)

The power gain of an isotrope is 1.

==========

It is now necessary only to take into account efficiency of the antenna + feeder + ground systems, losses in the ionosphere and reflections from the ground.

2155. Re: Coaxial Notch Filter

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-02 11:11:29 UTC
From: David Robbins <k1ttt@arrl.net>
Message-ID: <aidpd307i4@enews4.newsguy.com>
Source record: 137598

see the various stub discussions at
http://www.k1ttt.net/technote/techref.html#filters

"Fractenna" <fractenna@aol.com> wrote in message
news:20020801192418.11715.00000844@mb-ck.aol.com...
> Wondering what kind of attenuation you can practically expect at HF.
> Thanks!
>
> 73,
> Chip N1IR

2156. Re: Cushcraft going out of business?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-02 11:30:03 UTC
From: fractenna@aol.com
Message-ID: <20020802073003.09236.00000964@mb-mf.aol.com>
Source record: 137597

>>And to answer the question, it would seem to be 'no'.<
>
>I have it on very good authority that you are correct.
>
>Rick K1BQT
>

Ah!

Another fact!

Facts are good.

73,
Chip N1IR

2157. Re: The Radio Path From Tx to Rx

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-02 11:31:34 UTC
From: fractenna@aol.com
Message-ID: <20020802073134.09236.00000965@mb-mf.aol.com>
Source record: 137596

I am somewhat confused on why we need to 'go back to basics'.

Is there something wrong with the Friis equation?

73
Chip N1IR

2158. Re: Coaxial Notch Filter

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-02 12:16:52 UTC
From: fractenna@aol.com
Message-ID: <20020802081652.00641.00000653@mb-df.aol.com>
Source record: 137599

>"Fractenna" <fractenna@aol.com> wrote in message
>news:20020801192418.11715.00000844@mb-ck.aol.com...
>> Wondering what kind of attenuation you can practically expect at HF.
>> Thanks!
>>
>> 73,
>> Chip N1IR
>

Thanks Dave;

That's about what I expected. We've seen something that's giving 50 dB attenuation which is not a coax stub, and that amount struck me as unusual.

Nice notes on you link!

73
Chip N1IR

2159. Re: Final final final correction now applied. (Equ.3)

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-02 12:26:06 UTC
From: "J. Harvey" <JM002.Harvey_ANTI*SPAM_@Sympatico.ca>
Message-ID: <6Tu29.6588$tY5.1881875@news20.bellglobal.com>
Source record: 137600

"Reg Edwards"
> Pr = Gr*Gt*Pt*Square(Lambda/4/Pi/D) watts.
> E' = Sqrt(30*Gt*Pt)/D volts/metre.
> E' = 4*Pi*Sqrt(30*Pr/Gr)/Lambda volts/metre.

I get confused by "(Lambda/4/Pi/D)" - which order should the "/"s be applied
?

Quickly, I'm curious where the "30" comes from (in terms of first
principles) ?

2160. Re: Back to Basics, etc

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-02 12:32:00 UTC
From: "J. Harvey" <JM002.Harvey_ANTI*SPAM_@Sympatico.ca>
Message-ID: <DYu29.6621$tY5.1882916@news20.bellglobal.com>
Source record: 137601

"Roy Lewallen"
> ...ARRL Antenna Book.
> ...they'll happily accept manuscripts from Limeys...

RSGB has some nice antenna books.

2161. Discone TX questions

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-02 12:51:07 UTC
From: cprstn54zz@att.net
Message-ID: <3d4a7efb.60277750@news-server.optonline.net>
Source record: 137602

(1) Will the usual discone with 6M whip also transmit on the marine
VHF band (156cm-163cm)?

(2) Has anyone tried the Antenna Warehouse "Super Discone" ($42)?
http://users.cis.net/kingpop/Superdiscone.htm

(3) How do these things compare performancewise to homebrew J-Poles on
the frequencies the J-Pole is cut for?

Ken KC2JDY

Ken
(to reply via email
remove "zz" from address)

2162. Re: Final final final correction now applied. (Equ.3)

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-02 12:57:32 UTC
From: Harry Whitfield <harry.whitfield@ncl.ac.uk>
Message-ID: <020820021357322233%harry.whitfield@ncl.ac.uk>
Source record: 137603

In article <6Tu29.6588$tY5.1881875@news20.bellglobal.com>, J. Harvey
<JM002.Harvey_ANTI*SPAM_@Sympatico.ca> wrote:

> "Reg Edwards"
> > Pr = Gr*Gt*Pt*Square(Lambda/4/Pi/D) watts.
> > E' = Sqrt(30*Gt*Pt)/D volts/metre.
> > E' = 4*Pi*Sqrt(30*Pr/Gr)/Lambda volts/metre.
>
> I get confused by "(Lambda/4/Pi/D)" - which order should the "/"s be applied
> ?

Pr = Gr*Gt*Pt*Square(Lambda/(4*Pi*D)) watts.

> Quickly, I'm curious where the "30" comes from (in terms of first
> principles) ?

For an isotropic radiator, the power density on a sphere of radius D
is going to be

Pt/(4*Pi*D*D).

For a non-isotropic radiator, we would get

Pt*Gt/(4*Pi*D*D) in a particular direction.

This has to be equal to E*E/Z0 where Z0 is the characteristic impedance
of free space, which is 120*Pi (if we take the speed of light as
3*10**8 m/s.)

So we get E*E/(120*Pi) = Gt * Pt /(4 * Pi * D*D), which reduces to the
second equation.

Harry (G6AUC).

2163. 603 beam and tower 4sale

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-02 13:08:24 UTC
From: Jeff <j.dauphinais@worldnet.att.net>
Message-ID: <cvv29.15296$pg2.1236158@bgtnsc05-news.ops.worldnet.att.net>
Source record: 137604
Cross-posted to: rec.radio.amateur.digital.misc,rec.radio.amateur.antenna,rec.radio.amateur.dx

I have for sale 1 full size "HY-Gain" beam 10 meters. fully assembled for your inspection. 13' Boom and longest element is 22' $100.00 I also have a steel tower totaling 25'. this is in 3 sections 1 10 foot st8 and 1 5foot st8 and 1 10 foot top section. I don't not have a rotator. $50.00. pickup only from Nashua,NewHampshire. I am selling these because they are to big for my new QTH. This beam has spent a large portion of its life in storage. 73's Jeff AA1GR

2164. Re: Final final final correction now applied. (Equ.3)

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-02 13:11:43 UTC
From: "J. Harvey" <JM002.Harvey_ANTI*SPAM_@Sympatico.ca>
Message-ID: <Sxv29.6834$tY5.1890556@news20.bellglobal.com>
Source record: 137605

"Harry Whitfield"
> Pr = Gr*Gt*Pt*Square(Lambda/(4*Pi*D)) watts.

Thanks !

> > ...curious where the "30" comes from... ?
> ...
> ...characteristic impedance of free space....120*Pi...
> E*E/(120*Pi) = Gt * Pt /(4 * Pi * D*D)
> ...

Ah, "30" comes from "120" and "4" (both of which are famous 'first
principles' numbers).

Thanks !

2165. Re: Fractalantenna going out of business

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-02 13:41:07 UTC
From: dan <danlx@execpc.com>
Message-ID: <3d4a8d6f$0$1425$272ea4a1@news.execpc.com>
Source record: 137606

On 02 Aug 2002 01:23:15 GMT, k3bu@aol.com (Yuri Blanarovich) wrote:

>>See
>>
>>www.fractenna.com
>>www.fractalantenna.com
>>
>>for some real laughs, folks.
>>
>
>...or barf!
>
>Yipeee!
>Now freaktals have inhouse manufacturing, no more outhouse manurefacturing!
>
>Bada BUm
Too true on both counts. I noticed military listed on the
applications list. Just what product does this buffoon (Buffoon
status determined by years of acting like a buffoon on the newsgroups,
proof is in the pudding, so to speak) make that meets mil.spec. or has
passed any military testing (US military only, no third world crap)???

Has anyone ever seen a company web page that touts the warnings it
supposedly has made to another company? News outlets do that but, I
can't ever remember any "real" companies doing that ;<}

Dan

I've rambled enough, back to the rocking chair. ZZZZZZZZZ
Remove left x for a direct reply.

2166. Re: coax choices?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-02 14:18:45 UTC
From: JTB <shutup@nowhere.Lsu>
Message-ID: <9xw29.30441$Ru5.11130@rwcrnsc52.ops.asp.att.net>
Source record: 137607

Thanks everyone for your comments. I will certainly use your ideas in the
near future.
Jeremy

"JTB" <shutup@nowhere.Lsu> wrote in message
news:9Qw19.701040$352.151305@sccrnsc02...
> I am looking for info on what everyone's past experiences are w/ types of
> coax, and recommendations for the following antenna types.
> I am installing a 100 ft tower, w/ 6 antennas.
> The antennas are:
> VHF base station 6db gain (commercial use, for a repeater)
> UHF base station 9db gain (commercial use, for a repeater)
> Dual Band base station ham antenna (possible repeater at some point)
> VHF Yagi on rotor
> UHF Yagi also on the rotor
> Low band base station antenna
>
> Discone scanner antenna on the roof peak.
>
> I'm not looking for extreme quality here, but of course as the saying
goes,
> you get what you pay for..
> Cables will be buried in PVC pipe.
>
> Thanks
>
> Jeremy
> KB1EJW
>
>

2167. Re: Back to Basics, etc

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-02 14:33:35 UTC
From: aunwin@fgi.net
Message-ID: <c4becf19.0208020633.14763aec@posting.google.com>
Source record: 137608

Richard Clark <kb7qhc@attbi.com> wrote in message
news:<1kkjkuk3agphpln6orlbe43k1nhgcdeoor@4ax.com>...
> On 1 Aug 2002 16:48:47 -0700, aunwin@fgi.net (Art Unwin KB9MZ) wrote:
>
> >Your career
> >aparently is that of a weather man or meteroligist
>
>
> :-)
>
> Hi Art,
>
> OK, so no profuse apologies.
>
> But don't cloud up and rain on us all of the sudden. ;-)
>
> 73's
> Richard Clark, KB7QHC

What an idiot you are ! When Roy entered the fray with his comments
I took it to heart because of my 'apparent' handicap I am unable to
express
my self clearly so as to write it up. This is clearly shown by my
subsequential effort in the 'Tutorial' thread. As a gentleman I
included you in my apology but
I over did it because I now realise you are a pompous arse hole and
should be treated as such. As far as raining on your parade you may
wish to examine the colour of that rain whether it comes from me or
others. So instead of waxing poetically to the foreign gentleman who
followed this post, go back to your private hole, put your panty hose
on plus your knickers which apparently are in a twist and resume your
conversation with 'Punchy' since you cannot be polite to the other
gentleman. Am I being impolite? You bet I am when I am addressing you
because as I said earlier you are a pompous arse hole and politeness
is seen by you as a weakness . Well you guessed wrong in this case you
have just stiffened my spine.

Art Unwin KB9MZ

2168. Re: Discone TX questions

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-02 14:36:53 UTC
From: rhatley <rhatley@zero.net>
Message-ID: <fp5lkug7nukd9iljns5vcvn1sv215nall7@4ax.com>
Source record: 137609

On Fri, 02 Aug 2002 12:51:07 GMT, cprstn54zz@att.net (Ken) wrote:

>(1) Will the usual discone with 6M whip also transmit on the marine
>VHF band (156cm-163cm)?

The discone part of the antenna will, but with no gain. Now if the
vertical section is designed to operate in the marine band, the
results would be about the same as a vertical marine band antenna.

>
>(2) Has anyone tried the Antenna Warehouse "Super Discone" ($42)?
>http://users.cis.net/kingpop/Superdiscone.htm

A discone operates over a 10x frequency range. It appears from the
description that this one is designed for 120-1200 (they say 1300)
MHz. The vertical section is added for the lower frequencies..... it
will be similar to your basic, base loaded mobile antenna.

>
>(3) How do these things compare performancewise to homebrew J-Poles on
>the frequencies the J-Pole is cut for?

The jpole will be better than the discone for a single frequency.

rh

>
>Ken KC2JDY
>
>Ken
>(to reply via email
>remove "zz" from address)

2169. Re: Fractalantenna going out of business--Nope

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-02 15:09:53 UTC
From: fractenna@aol.com
Message-ID: <20020802110953.20498.00001560@mb-cg.aol.com>
Source record: 137610

That may be your desire, sir, but the reality is very different.

73,
Chip N1IR

2170. Re: A TUTORIAL

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-02 16:12:15 UTC
From: aunwin@fgi.net
Message-ID: <c4becf19.0208020812.1344ad21@posting.google.com>
Source record: 137611

Roy Lewallen <w7el@eznec.com> wrote in message news:<3D49DB5E.3060306@eznec.com>...
> The purpose of a tutorial is to teach, but I'm having some trouble
> learning. Hopefully you can clarify a few issues to enhance the learning
> process.
First thankyou for your interest. I also want to add that I in no way
impune your presentations. Whith out you in the hobby both I and many
others would be totally in the dark. I applaude your efforts and your
sharing
>
> Art Unwin KB9MZ wrote:
> > If one looks at designing a dipole that gives more gain than the
> > standard dipole
> > then one has to incorporate a quasi collinear design. If we want a
> > 'variable frequency design we must then design to accommodate the
> > extreme space provided for our antenna . Cecil (CAM)has shown that
> > you can get multi BAND use by the provision of variable length feeder
> > lines or their equal in a similar fashion
> > of the Zepp family where collinear gains are realised by using the
> > feed line
> > to provide a 'dead zone' at the center which provides for side lobes
> > if the radiation is not exactly cancelled.
>
> Can you please explain this last sentence further? The 'dead zone' is at
> the center of what -- the antenna, the antenna pattern? How does a 'dead
> zone' create side lobes? The radiation from what is being cancelled?

To make two ponts of maximum current which are in phase the zepp uses
part of the dipole arrangement at its center PLUS a portion of the
feed line.
This center section also radiates together with some cancellation.
This radiation of the center portion of the antenna does not fully
cancel
and thus produces side lobes which is evident on the Zepp style
antenna where the energy supplied to form those side lobes are wasted
because they do not supply a useful purpose. The choice of the phrase
Dead zone is probably a poor one which I tried to emphasise by
enclosing it within '....'

> > Designs that are based on
> > radiation cancellation are not good candidates for multi frequency use
> > because of it's reliance on the feed line.
>
> What kinds of antennas are "based on" radiation cancellation? Can you
> give a few examples? The fields from the elements in a W8JK partially or
> fully cancel in all directions -- that is, they don't completely

> reinforce in any direction. Yet it's a good broadband design because it
> maintains its pattern over quite a wide frequency range. Is this the
> "cancellation" you're talking about, and what does it have to do with
> feedlines?
Well I do not have the over all knoweledge of antennas as you have so
I don't want to muddy up the waters by bring the W8JK into the
discussion but what I am trying to put emphasis on is that to obtain
the advantages of collinear gain
you have to use part of the feed line which complicates the priority
that I have
to have continual tuning as with the LOOP design that does not
incorporate the feed line. But bring up the point of cancellation is
important to my disscussion
because I was able to some what duplicate it by providing a section of
ZERO radiation instead of cancellation which provided side lobes as in
the ZEPP

>
> > The grid dip meter operates
> > by mixing two resonant frequencies to where the current flow dips to
> > near zero, a situation that produce ZERO radiation.So if we have two
> > resonant circuits that are placed
> > close together to produce a portion of zero current flow and a
> > consequential
> > lack of radiation.
>
> The grid dip meters I've seen oscillate at only a single frequency.
> Although the grid current dips when there's maximum coupling to another
> circuit, the meter's coil certainly continues to radiate. Where is this
> "portion of zero current flow" you mention?

Well I mentioned that possibly in error is to enlarge on the meaning
of the current drop to emphasis that when current drops to zero in a
circuit then there cannot be any radiation

> > If we combine into one circuit for maximum coupling
> > and use a conventional 20 meter dipole as the 'other' resonant circuit
> > in conjunction with a variable loop antenna we start to aproach a
> > collinear dipole antenna IF we drive the 20 meter portion of the
> > dipole instead of the loop.
> > The basics of the above was shown in the ARRL Antenna book 17th
> > edition as the the 'Resonance Breaker' and in the Radcom of the UK,
> > both in the year '79 and regurgitated ever since.
>
> Unless I'm mistaken, a "resonance breaker" resembles a gamma match. But
> what it does is *prevent* current from flowing beyond the "breaker"
> section. In the "breaker" section itself, the currents on the two
> parallel wires are nearly equal and out of phase (although they can be
> large), so little net radiation takes place.
No, I must respectfully disagree with you but I am guilty of using the
word 'Current' loosely as a ac 'current' will radiate where as a dc

current will not radiate. When dealing with mixing frequencies when we get to a point of zero frequency it does not negate the presence of dc current but only the absence of ac current (frequency)which radiates.

This method is used in the
> AM broadcast industry to de-resonate parasitic conductors to prevent
> pattern distortion. In what way does this resemble a collinear dipole,
> which has substantial current along the whole length?

To proved for the collinear effect which is the provision of two high current points in phase but separated in horizonal fachion to emulate two physically separated dipoles so one has to 'neutralise' the center portion as with the zepp.
In the method I show I am doing the same thing by providing for a 'no radiating
zone' by the mixture of two frequencies which can be varied by the use of a variable capacitor ala a LOOP which does not rely on a feeder or 'stub'
>
> > In later editions of
> > the ARRL book the circular
> > loop design was transformed into an oblong shape when it was realised
> > that maximum efficiency should give way to maximum coupling. For
> > feeding purposes
> > one can intuitively place at the extremes of what now appears as a
> > parallel circuit around the center, so that the 20 meter dipole is
> > being driven .
> > Fortunatly this fits in with the delta match design which provides for
> > reducing a high impedance into a more manageable impedance value. With
> > this design
> > and the addition of a 4:1 balun acceptable SWR values can be achieved
> > over the whole frequency range Of 20 thru 10. And above ten if one can
> > live with multi rotatable radiation lobes and gaps in continual
> > frequequency use. For areas below 20 meters I was fortunate that the
> > 200b feet of coax that I used gave me use of both 40 and 80 where the
> > coax came into play and where the 'antenna' moved from a
> > bi-directional antenna to a 'flat top' vertical.

>
> In what way does the coax "come into play"? Do you mean it's radiating?
> If so, what makes it radiate on 40 and 80 but not on 20 and above?

Good point.

First I must add that I use 'perforated' 7/8 Andrew heliax and as yet I have been unable to locate any contribution of the perforations that could explain some things.

Before I tackled the remainder of my task which was to be able to use other lower frequences I checked out the veracity of the design so far by feeding the combination antenna with the feed line I use with other designs to feed antennas at the top of my 66 foot or so tower which

is some distance away from the house and to which the feed line is buried. The radiation pattern were similar to what I expected which was a dipole pattern without side lobes
and performed quite well as I rotated it. After this exercize I naturally
looked at the other frequencies I found that the SWR dipped in both of the
10 and 40 areas so I got on those bands which I am not particulary attracted to
ala bare foot and with a transmitter has one of those inbuilt tuners that are supposedly good for up to 3:1 I got on the air. I have no trouble in obtaining contacts with what was termed by others as a very good signal what ever that means. I also found that it appeared that I could vary the single frequency
by variation of the capacitor by tuning out TVI as well as generating it so the tuning capacitor still had an affect outside the 20-10 envelope.
So what greates the ability to operate outside the envelope ?
When I got down in the 7 and 3 Mhz area the use of the capacitor minimal as it was gradually lost its effect, I think I was using a capacitor with a range upto
around 200pFwith no consideration of particular high volages as needed withe loop.
With these observations I concluded that I had gyrated from the antenna alone as a radiator but to a SYSTEM that included the feed line where I had both horizontal and verticle radiation. I have a 1/2 acre buriud grid under the tower
which helps I presume.

Thus I came to the conclusion that when the capacitor was functional for changing frequency the combo antenna was radiating tho minimally to the point that when it didn't affect frequency change it bacame a system similar to a vertical where the antenna worked as a top hat. At this point I dropped the pursuit of TOTAL frequency response in the area tjho I continued to didle with this line of thought and did not pursue in practice. So yes, the feeder must be radiating which suggests SWR on the line but it was of no consequence to my transmitter.
>
> > I will leave it to
> > any interested reader to compare advantages and disadvantages to his
> > own list of desirables to see if this combination loop/dipole antenna
> > meets their priorities and needs. This antenna is free from any
> > restrictions in use as all relavent patents of mine have now been
> > abandoned.
> >
> > Art UN win KB9MZ
>
> Clarifications would be welcome.
It is my pleasure to communicate with with somebody who has so much

knoweledge on the subject and always remains a gentleman despite
agravation from the less knoweledgable such as I.
Warmest regards
Art Unwin KB9MZ

>
> Roy Lewallen, W7EL

2171. Re: Coaxial Notch Filter

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-02 16:54:18 UTC
From: paul harris <paul@sandwitch.org>
Message-ID: <4A8A59F2BDCDD311BFC800508BA36AC80DDB662F@www.premiersi.com>
Source record: 137614

Generally, that depends upon the degree of inefficiency the particular antenna. I practically expect close to 100% for antennas that are small fractions of a wavelength.

"Fractenna" <fractenna@aol.com> wrote in message news:20020801192418.11715.00000844@mb-ck.aol.com...
> Wondering what kind of attenuation you can practically expect at HF.
> Thanks!
>
> 73,
> Chip N1IR

2172. 160m antenna??

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-02 17:01:54 UTC
From: StarGazer <pti@capnet.com>
Message-ID: <3D4ABB02.71124573@capnet.com>
Source record: 137615

Would running a 250' insulated wire all over trees... going here and there at different angles work better than my 80 m dipole on 160 m?

The 80 m dipole is at 22' and that is about as high as I could get the wire.

2173. Re: Final final final correction now applied. (Equ.3)

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-02 17:05:25 UTC
From: dennis@wawa.juniper.net
Message-ID: <aiee4l$2frt$1@heap.juniper.net>
Source record: 137613

Reg Edwards <g4fgq.regp@btinternet.com> wrote:
>The following equations are exact. No approximations are involved.

But they still don't seem to get the right answer for (at least) a
monopole over ground. Why is that?

Dennis Ferguson

2174. FA: 30' Crank Up Military Antenna Mast

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-02 17:08:03 UTC
From: Whitey on the Moon <heywood.jablowmie@yourplace>
Message-ID: <sPy29.109983$Og3.25783281@e3500-atl1.usenetserver.com>
Source record: 137612
Cross-posted to:
alt.ham-radio.marketplace,rec.ham-radio.swap,rec.radio.amateur.antenna,rec.radio.amateur.equipment,rec.radio.amateur.misc

Ultimate Field Day Toy

1 unit on eBay for auction, several available.

http://cgi.ebay.com/ws/eBayISAPI.dll?ViewItem&item=2041623838

Vist link for more info;

http://www.n2ojq.com/masts.html

--

2175. Re: 30' Crank Up Military Antenna Mast

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-02 17:40:23 UTC
From: Jeff Maass <jmaass@columbus.rr.com>
Message-ID: <buz29.26563$s6.6537790@twister.columbus.rr.com>
Source record: 137616
Cross-posted to:
alt.ham-radio.marketplace,rec.ham-radio.swap,rec.radio.amateur.antenna,rec.radio.amateur.equipment,rec.radio.amateur.misc

This item number is a bidet toilet seat, not a crank-up mast!

--
Jeff Maass jmaass@columbus.rr.com Located near Columbus Ohio
USPSA # L-1192 NROI/CRO Amateur Radio K8ND
Maass' IPSC Resources Page: http://home.columbus.rr.com/jmaass
"Whitey on the Moon" <heywood.jablowmie@yourplace> wrote in message
news:sPy29.109983$Og3.25783281@e3500-atl1.usenetserver.com...
> Ultimate Field Day Toy
>
> 1 unit on eBay for auction, several available.
>
> http://cgi.ebay.com/ws/eBayISAPI.dll?ViewItem&item=2041623838
>
> Vist link for more info;
>
> http://www.n2ojq.com/masts.html
>
>
>
> --
>
>
>
>
>
>
>
>
>

2176. Re: A TUTORIAL

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-02 17:44:38 UTC
From: richardharrison@webtv.net
Message-ID: <11760-3D4AC506-296@storefull-2398.public.lawson.webtv.net>
Source record: 137520

Art Unwin wrote:
"The grid dip meter operates by mixing two resonant frequencies to where the current flow dips near zero, a situation that produces ZERO radiation."

Not to quibble, but I will present a different explanation of the dip meter`s operation using a solid-state dip meter as my example.

A dip meter can couple maximum energy into a circuit when that circuit is resonant at the oscillator frequency. At resonance, circuit impedance is reduced to only resistance as reactance is zero. Energy accepted from the dip oscillator rises sharply at resonance. My Heath HD-1250 samples the r-f voltage across the oscillator coil.

As energy taken from the dip coil rises, voltage across the coil dips and this is indicated on the internal r-f voltmeter of the dip meter.

A standing-wave antenna, such as a dipole, is a resonant antenna (circuit) when its reactances are equal in magnitude and opposite in type, that is they cancel. At resonance, only radiation and loss resistances remain to oppose current in the antenna. Resonant frequency excitation maximizes antenna current.

My Heath Instruction Manual advises checking for antenna resonance at a high-current (low-impedance) point in the antenna.

Best regards, Richard Harrison, KB5WZI

2177. Re: Coaxial Notch Filter

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-02 17:54:58 UTC
From: fractenna@aol.com
Message-ID: <20020802135458.15335.00001188@mb-dh.aol.com>
Source record: 137617

>
>Generally, that depends upon the degree of inefficiency the particular
>antenna. I practically expect close to 100% for antennas that are small
>fractions of a wavelength.
>
>"Fractenna" <fractenna@aol.com> wrote in message
>news:20020801192418.11715.00000844@mb-ck.aol.com...
>> Wondering what kind of attenuation you can practically expect at HF.
>> Thanks!
>>
>> 73,
>> Chip N1IR
>
>

I don't follow.... coax notch filters use open/closed 1/4 (also work at other frequencies, such as corresponding 3/4 wave) wave stubs, usually thru T connectors, to null out specific frequencies by inverse phasing.

I wasn't asking about antennas OM:-) Notching has nothing to do with the antenna size, but the ability to phase- cancel using the stub.

73,
Chip N1IR

2178. Re: STOP EVERYTHING

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-02 18:01:14 UTC
From: Reg Edwards <g4fgq.regp@btinternet.com>
Message-ID: <aiehd8piv1@knossos.btinternet.com>
Source record: 137618

"Gene Fuller" wrote
> Reg,
>
> Too bad the error was discovered and corrected so quickly.
>
> I thought we were onto a real breakthrough. The incorrect equation would
> go a long way toward explaining how manufacturers of mediocre or poor
> antennas could claim high gain figures.
>
> Seriously, however, your equation is not really new or unknown. It
> appears to be exactly the same as the Friis transmission formula, dating
> from at least the 1940's. This is covered in professional and academic
> texts, but perhaps not in amateur publications. (I assume you already
> know this quite well.)
==========

Never heard of Friis. Can't remember anybody else's name either. A few days ago somebody asked how to calculate field strength from receiver input volts using a 1/4-wave vertical. So I reversed the usual formula Pr = f(E') which has been in my tattered notebook for 40 or 50 years. It's been used at times to check whether anyone is exceeding the max power licence conditions.
==========

> Why is it seemingly ignored by the amateur?
==========

Because it doesn't appear in the ARRL Bible.
==========

> Many professionals deal with a complete end-to-end
> transmission system, while most amateurs can control only one end of the
> transmission path.
==========
Not so true anymore perhaps. How to do the calculations was well known to people like Heaviside 100 years back. They just did not write the formulae in the way I have done. Line transmission engineers had been using formulae for some years before then with the line characteristics in the place of the radio path. But their notebooks looked different to mine although they were probably no-more complicated.

Things really got going in the early 1930's when world-wide HF radio-telephone circuits blossomed. Radio-telephone circuit design became a routine matter. Oceanic and transcontinental telegraph cables now had a competitor. Design formulae were formalised in the engineering design and maintenance text books in the form we now see. Both ends of a radio circuit received equal consideration. Equipments and antennas were often identical.

A more common engineering way of describing a complete radio circuit is in terms of decibels. But I think the sight of equations in algebraic form is far more informative about what is really happening.

These days amateurs are concerned with both ends in such matters as setting up VHF repeaters. It was a fellow doing field strength measurements who raised the field strength question. He had searched high and low without result. So it was convenient to use the formula to introduce the subject of bringing amateur radio publications up to date. Then the non-existent errors began !

2179. Re: Back to Basics, etc

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-02 18:08:49 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <5aflkugg2engu6o5smkuibls5q3ou69evn@4ax.com>
Source record: 137519

On 2 Aug 2002 00:06:54 -0700, mpc@asiaa.sinica.edu.tw (Meng-Po Chen)
wrote:

>Dear Richard OM,
>
> thanks for enlightening me. i am in no way to blame ARRL antenna
>books.
>they are good ones. I just hope they could cover a bit more topics.
>maybe
>some more basic theory stuff. there are many "how to contruct"
>articles but not many "why" counterparts. besides, many poor people
>like me can only afford one antenna book:-)
>
> to me, you and Reg et al are all antenna gurus. i appreciate your
>contribution to this NG very much.
>
>
>73, frank chen, bv2wn

Hi Frank,

More topics, as has been pointed out, often leaves out MORE topics.
Or at least that is the perception of those whose champion was left
out in the last draft.

There is a world more variability in design in the SHF spectrum. The
scale of construction allows for more complexity. This same
complexity is construction overload at HF.

In HF design, rarely do you get into geometries beyond half wavelength
in overall dimension. When you do, it comes as consequence of an
opportunistic low band antenna. That is, using your 40M dipole at
10M.

If you had to buy one book, the ARRL's is as good as any; and quite
possibly much better than most. ALL texts have their problems, so it
serves no purpose to criticize the ARRL against a "higher standard."

The first book I bought on antennas, was from a bookseller in Frisco
where I was stationed 30 odd years ago. "Electronic and Radio
Engineering," Frederick Terman. This is not strictly an antenna book.
Rather, it is a comprehensive work on the mechanics of radio
engineering. It is not unusual to find this work offered in this
group as a reference to answer some technical criticism.

This is available at:
http://www.alibris.com/

for less than $20

http://www.amazon.com
for around $20

I find alibris very much better with rare or obscure titles; the example title above reveals alibris is ready to ship at $12 where amazon will hold your order at $20 for up to 8 weeks.

73's
Richard Clark, KB7QHC

2180. Re: 30' Crank Up Military Antenna Mast

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-02 18:16:05 UTC
From: Buyer Beware <BuyerBeware@hotmail.com>
Message-ID: <F%z29.316634$DB.8712442@news1.east.cox.net>
Source record: 137521
Cross-posted to:
alt.ham-radio.marketplace,rec.ham-radio.swap,rec.radio.amateur.antenna,rec.radio.amateur.equipment,rec.radio.amateur.misc

You need a cramp-up shitter as well as a crank-up mast..

"Jeff Maass" <jmaass@columbus.rr.com> wrote in message
news:buz29.26563$s6.6537790@twister.columbus.rr.com...
>
> This item number is a bidet toilet seat, not a crank-up mast!
>
> --
> Jeff Maass jmaass@columbus.rr.com Located near Columbus Ohio
> USPSA # L-1192 NROI/CRO Amateur Radio K8ND
> Maass' IPSC Resources Page: http://home.columbus.rr.com/jmaass
> "Whitey on the Moon" <heywood.jablowmie@yourplace> wrote in message
> news:sPy29.109983$Og3.25783281@e3500-atl1.usenetserver.com...
> > Ultimate Field Day Toy
> >
> > 1 unit on eBay for auction, several available.
> >
> > http://cgi.ebay.com/ws/eBayISAPI.dll?ViewItem&item=2041623838
> >
> > Vist link for more info;
> >
> > http://www.n2ojq.com/masts.html
> >
> >
> >
> > --
> >
> >
> >
> >
> >
> >
> >
> >
> >
> >
>
>

2181. Re: A TUTORIAL

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-02 18:57:29 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <3D4AD619.4010303@eznec.com>
Source record: 137522

Richard Harrison wrote:
> . . .
> A standing-wave antenna, such as a dipole, is a resonant antenna
> (circuit) when its reactances are equal in magnitude and opposite in
> type, that is they cancel. At resonance, only radiation and loss
> resistances remain to oppose current in the antenna. Resonant frequency
> excitation maximizes antenna current.
>. . .

Resonant frequeny excitation maximizes antenna current only if the antenna is driven with a constant impedance source. For a given applied power, resonance has no bearing on the magnitude of antenna current -- it's a function only of the feedpoint resistance (I = P/R^2). If you use a matching device and adjust it so your rig can deliver full power to the antenna, antenna resonance won't make any difference in determining the antenna current.

Roy Lewallen, W7EL

2182. Re: Back to Basics, etc

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-02 19:00:38 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <3D4AD6D6.7030104@eznec.com>
Source record: 137523

J. Harvey wrote:
> "Roy Lewallen"
>
>>...ARRL Antenna Book.
>>...they'll happily accept manuscripts from Limeys...
>
>
> RSGB has some nice antenna books.

Good point. Reg, do the RSGB antenna books live up to your standards? If not, maybe you'd feel more comfortable contributing to them rather than the Yank publications.

Roy Lewallen, W7EL

2183. Re: Coaxial Notch Filter

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-02 19:06:22 UTC
From: n7ws_at_yahoo.com
Message-ID: <3d4ad671.20680509@news.triconet.org>
Source record: 137524

On 02 Aug 2002 17:54:58 GMT, fractenna@aol.com (Fractenna) wrote:

[snip]

|I don't follow.... coax notch filters use open/closed 1/4 (also work at other
|frequencies, such as corresponding 3/4 wave) wave stubs, usually thru T
|connectors, to null out specific frequencies by inverse phasing.

We don't follow you either. Your original post said:

"Wondering what kind of attenuation you can practically expect at HF."

Note than you did not describe anything of the configuration, the
frequency range, the method of construction, the allowable insertion
loss, etc.

So, based on the parameters you provided, the answer is 53.271 dB.

You're welcome.

2184. Re: 160m antenna??

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-02 19:47:32 UTC
From: 'Doc <w5lz@icok.net>
Message-ID: <3D4AE1B7.F3BB0FFE@icok.net>
Source record: 137525

StarGazer,
Only one way to find out for sure! We can all
make guesses about it, but that's all that they
are without a lot more information about how your
80 meter antenna is set up, and how the 250 foot
wire will be set up. Why don't you try it and then
tell us if it does better?
'Doc

2185. Re: Fractalantenna going out of business

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-02 19:54:15 UTC
From: 'Doc <w5lz@icok.net>
Message-ID: <3D4AE34A.C91EB89D@icok.net>
Source record: 137526

prozmah,
I hate to disagree with you, but how can
ol'Frac go -out- of buiness when he's never
been -in- business? Unless what he dribbles
about the 'fractal' signal attenuatershe calls
antennas on this NG can be called business?
'Doc

2186. Re: A TUTORIAL

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-02 20:21:07 UTC
From: aunwin@fgi.net
Message-ID: <c4becf19.0208021221.58082fc8@posting.google.com>
Source record: 137527

'Doc <w5lz@icok.net> wrote in message news:<3D49EFFE.14B59992@icok.net>...
> Art,
> Are you really 'Fractenna' in disguise?
> 'Doc

I wish....If I had a doctorate I suspect it would
open doors for me and my ideas. Especially if I
took on the cloak of an antenna expert, people would
hesitate before throwing a 'right hander' or as said
in the old country ' a bunch of fives'
As for 'fractenna' I respect anyone who is willing to
take flack and not lose his resolve regardless of the
value of his ideas.
Doctor UN win..... that does have a nice ring!
Art Unwin KB9MZ

2187. Re: STOP EVERYTHING

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-02 21:05:23 UTC
From: Reg Edwards <g4fgq.regp@btinternet.com>
Message-ID: <aies6i$e88$1@knossos.btinternet.com>
Source record: 137528

> I believe that your field strength meter equation has a greater
> dependence on the receiving antenna geometry than can be parameterized
> by a single gain value, and that the equation in the text books really
> only works for dipole receiving antennas. I could easily be wrong,
though.
>
> Dennis Ferguson
==========

The equations are exact. They apply to all antennas.

It is necessary of course to insert the correct value of antenna gain,
taking into account radiating efficiency of a system.

Check into the antenna gain of a vertical 1/4-wave antenna above a perfect
ground relative to an isotrope.

Yours, Reg,

2188. Re: A TUTORIAL

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-02 21:06:15 UTC
From: richardharrison@webtv.net
Message-ID: <25204-3D4AF447-299@storefull-2393.public.lawson.webtv.net>
Source record: 137531

Roy Lewallen wrote:
"---its a function only of the matching resistance (I = P/R^2).

P = IR^2 ?
I think it`s P = I squared R.

But, I am determining the resonance of a 1/2-wavelength of wire by exciting it with a dip oscillator. A center-fed dipole has a short across its feed to determine this first resonance point. The short would be the high-current point and the place to be checking for resonance.

Best regards, Richard Harrison, KB5WZI

2189. Centerfed Dipole With Balun

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-02 21:08:51 UTC
From: marvin rosen <raghead@worldnet.att.net>
Message-ID: <DxC29.15960$pg2.1272722@bgtnsc05-news.ops.worldnet.att.net>
Source record: 137529

Because of extenuating circumstances i cannot have
ladder line near my house. Is it feasable to have 50'
of coax from the shack to a current balun, (1:1 or 4:1 ?)
then ladder line from the balun to an 80-10 mtr dipole?
Commercial ferrite balun or 7-10 turn coax type on a 5"
diameter form?

Outgoing mail is certified Virus Free.
Checked by AVG anti-virus system (http://www.grisoft.com).
Version: 6.0.375 / Virus Database: 210 - Release Date: 7/10/02

2190. Re: Final final final correction now applied. (Equ.3)

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-02 21:12:47 UTC
From: Reg Edwards <g4fgq.regp@btinternet.com>
Message-ID: <aieskfett1@knossos.btinternet.com>
Source record: 137530

"Dennis Ferguson" wrote
> >The following equations are exact. No approximations are involved.
>
> But they still don't seem to get the right answer for (at least) a
> monopole over ground. Why is that?
>
==========
It seems you might have the wrong value of antenna gain relative to an
isotrope.

But it's not an important matter. The answer is still in the right
ball-park.

Regards Reg.

2191. Re: Centerfed Dipole With Balun

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-02 21:31:01 UTC
From: ":-) Bill" <therealexray@netscape.net>
Message-ID: <3D4AFA15.4F8D5756@netscape.net>
Source record: 137532

marvin rosen wrote:
>
> Because of extenuating circumstances i cannot have
> ladder line near my house. Is it feasable to have 50'
> of coax from the shack to a current balun, (1:1 or 4:1 ?)
> then ladder line from the balun to an 80-10 mtr dipole?
> Commercial ferrite balun or 7-10 turn coax type on a 5"
> diameter form?

> What kind of dipole is this? If its some type of commercially made trap dipole, or multiband 'fan' dipole the impedance will match the coax better than the ladder line. You didn't mention a tuner so I'm guessing this is the case.
Unless you have a really long feedline I don't see where jumping between cable/ladder line is going to help you.
Ladder line certainly has less loss but this really only becomes a major factor when the SWR is high or the line is extremely long...or both.
-BM

2192. Re: Centerfed Dipole With Balun

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-02 21:45:38 UTC
From: marvin rosen <raghead@worldnet.att.net>
Message-ID: <64D29.16018$pg2.1274860@bgtnsc05-news.ops.worldnet.att.net>
Source record: 137533

I should have elaborated: This is a 100' long dipole fed with 50-60' of ladder line
":-) Bill" <therealexray@netscape.net> wrote in message news:3D4AFA15.4F8D5756@netscape.net...
> marvin rosen wrote:
> >
> > Because of extenuating circumstances i cannot have
> > ladder line near my house. Is it feasable to have 50'
> > of coax from the shack to a current balun, (1:1 or 4:1 ?)
> > then ladder line from the balun to an 80-10 mtr dipole?
> > Commercial ferrite balun or 7-10 turn coax type on a 5"
> > diameter form?
>
> > What kind of dipole is this? If its some type of commercially made trap dipole, or multiband 'fan' dipole the impedance will match the coax better than the ladder line. You didn't mention a tuner so I'm guessing this is the case.
> Unless you have a really long feedline I don't see where jumping between
> cable/ladder line is going to help you.
> Ladder line certainly has less loss but this really only becomes a major
> factor when the SWR is high or the line is extremely long...or both.
> -BM

Outgoing mail is certified Virus Free.
Checked by AVG anti-virus system (http://www.grisoft.com).
Version: 6.0.375 / Virus Database: 210 - Release Date: 7/10/02

2193. Re: Fractalantenna going out of business--Nope

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-02 21:45:39 UTC
From: fractenna@aol.com
Message-ID: <20020802174539.11741.00001661@mb-cu.aol.com>
Source record: 137535

>Reality is that you are going to cut your fingers with such cutting
>edge technology.
>

Brother, I can show you the scars;-)

73
Chip N1IR

2194. Re: Fractalantenna going out of business

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-02 21:46:14 UTC
From: "W.G Ewald" <wgewald@att.net>
Message-ID: <ejvlkuk7kaok8uukthos1m4f9krjhgictc@4ax.com>
Source record: 137534

On Fri, 02 Aug 2002 08:41:07 -0500, dan <danlx@execpc.com> wrote:

>On 02 Aug 2002 01:23:15 GMT, k3bu@aol.com (Yuri Blanarovich) wrote:
>
>>>See
>>>
>>>www.fractenna.com
>>>www.fractalantenna.com
>>>
>>>for some real laughs, folks.
>>>
>>
>>...or barf!
>>
>>Yipeee!
>>Now freaktals have inhouse manufacturing, no more outhouse manurefacturing!
>>
>>Bada BUm
>Too true on both counts. I noticed military listed on the
>applications list. Just what product does this buffoon (Buffoon
>status determined by years of acting like a buffoon on the newsgroups,
>proof is in the pudding, so to speak) make that meets mil.spec. or has
>passed any military testing (US military only, no third world crap)???
>
>Has anyone ever seen a company web page that touts the warnings it
>supposedly has made to another company? News outlets do that but, I
>can't ever remember any "real" companies doing that ;<}
>
>Dan

Nothing about fractakantenna is real.

>
>I've rambled enough, back to the rocking chair. ZZZZZZZZZ
>Remove left x for a direct reply.

2195. Re: Coaxial Notch Filter

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-02 21:49:06 UTC
From: fractenna@aol.com
Message-ID: <20020802174906.11741.00001662@mb-cu.aol.com>
Source record: 137536

>On 02 Aug 2002 17:54:58 GMT, fractenna@aol.com (Fractenna) wrote:
>
>[snip]
>
>|I don't follow.... coax notch filters use open/closed 1/4 (also work at
>other
>|frequencies, such as corresponding 3/4 wave) wave stubs, usually thru T
>|connectors, to null out specific frequencies by inverse phasing.
>
>We don't follow you either. Your original post said:
>
>"Wondering what kind of attenuation you can practically expect at HF."
>
>Note than you did not describe anything of the configuration, the
>frequency range, the method of construction, the allowable insertion
>loss, etc.
>
>So, based on the parameters you provided, the answer is 53.271 dB.
>
>You're welcome.
>

Actually, the problem was well-posed, and K1TTT's own discussion on his links answered my question. The answer is that 25-30 dB of attenuation is common with HF using practical coax options for stub notch filters.

Thank you for your help anyway.

73,
Chip N1IR

2196. Re: Antenna suggestion For 30 MHz To About 2 GHz ?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-02 21:51:44 UTC
From: fractenna@aol.com
Message-ID: <20020802175144.11741.00001663@mb-cu.aol.com>
Source record: 137537

>> Such antennas, with good gain, small size, and very broad bandwidth, do
>exist.
>
>Yes they do exist.
>
>You forgot to tell us that they are also omnidirectionals and that there is
>a black box (with free lunch inside) at the base of each of these antennas.
>
>--

No; its a black cylinder (not a box); contains no food; and their is pattern distortion from omni caused by asymmetry in the vehicular mount.

Good guess tho.

73,
Chip N1IR

2197. Re: Best Allround Antenna ?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-02 22:42:38 UTC
From: lousherry <lousherry@lanset.com>
Message-ID: <3D4B0ADE.2080402@lanset.com>
Source record: 137538

I have been using the GAP Titan for 10 years. Good all around HF
antenna. I use it from 6m to 80M Have use it on 160M with very high
SWR. I understand its been use on 2m but not by me.
Lou KB6FFT

DPH wrote:

> On Thu, 01 Aug 2002 15:40:49 GMT, n7ws_at_yahoo.com (Wes) wrote:
>
>
>>On Thu, 01 Aug 2002 06:36:54 -0400, DPH <rally2xs@compuserve.com>
>>wrote:
>>
>>|On Tue, 30 Jul 2002 19:15:58 -0400, "N1RZB" <n1rzb@110.net> wrote:
>>|
>>|>BlankI'm well aware that this question has been asked a thousand time but I
>>|>must ask.
>>|>
>>|>What is the best all-round antenna for HF work, 80 to 10 meters?
>>|>
>>|>
>>|>Dave/N1RZB
>>|>
>>|
>>|How about a conical monopole?
>>|
>>|http://www.highgain.co.kr/html/LPA102.htm
>>
>>Has anyone besides me ever modeled one of these and seen anywhere near
>>the claimed performance?
>>
>
> I would expect maybe dipole-like gain. What did you get? Its big
> claim to fame is bandwidth. It should work fairly well just because
> it is big. But, maybe not.
> |
>
>>|Dave Head
>>
>>I knew a Dave Head in high school. I didn't buy a '36 Ford roadster
>>
>>from you did I?
>
> No, never had one of those.
>

> Dave Head
>
>
>>Wes
>>
>

2198. Re: New Poster

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-02 22:43:26 UTC
From: lousherry <lousherry@lanset.com>
Message-ID: <3D4B0B0E.2000505@lanset.com>
Source record: 137539

Post and enjoy!

W.G Ewald wrote:

> On 31 Jul 2002 08:57:57 GMT, Valerie <ihatespamjikk1882@msn.com>
> wrote:
>
>
>>Hi! nice newsgroup. any rules I should know before I start posting?
>>is there an faq?
>>Thanks!
>>
>
> Yep. It clearly says NO crossposting to alt.bad clams,
> "Valerie".
>
> Any posts from "Fractenna" are followed up on alt,usenet.kooks...
>
>
>

2199. Re: A TUTORIAL

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-02 23:00:13 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <3D4B0EFD.7030500@eznec.com>
Source record: 137540

You're right on both accounts.

Roy Lewallen, W7EL

Richard Harrison wrote:
> Roy Lewallen wrote:
> "---its a function only of the matching resistance (I = P/R^2).
>
> P = IR^2 ?
> I think it`s P = I squared R.
>
> But, I am determining the resonance of a 1/2-wavelength of wire by
> exciting it with a dip oscillator. A center-fed dipole has a short
> across its feed to determine this first resonance point. The short would
> be the high-current point and the place to be checking for resonance.
>
> Best regards, Richard Harrison, KB5WZI
>

2200. Re: A TUTORIAL

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-02 23:32:39 UTC
From: aunwin@fgi.net
Message-ID: <c4becf19.0208021532.23c2a1d6@posting.google.com>
Source record: 137541

Roy Lewallen <w7el@eznec.com> wrote in message news:<3D4AD619.4010303@eznec.com>...
> Richard Harrison wrote:
> > . . .
> > A standing-wave antenna, such as a dipole, is a resonant antenna
> > (circuit) when its reactances are equal in magnitude and opposite in
> > type, that is they cancel. At resonance, only radiation and loss
> > resistances remain to oppose current in the antenna. Resonant frequency
> > excitation maximizes antenna current.
> >. . .
>
> Resonant frequeny excitation maximizes antenna current only if the
> antenna is driven with a constant impedance source. For a given applied
> power, resonance has no bearing on the magnitude of antenna current --
> it's a function only of the feedpoint resistance (I = P/R^2). If you use
> a matching device and adjust it so your rig can deliver full power to
> the antenna, antenna resonance won't make any difference in determining
> the antenna current.
>
> Roy Lewallen, W7EL
I appreciate the discuusion guys but, the set up that I proposed is
where the other resonant circuit is driven that, is the 20 meter
element and not the loop resonant circuit. I may have used the example
improperly but my intent was to illustrate that the radiation can be
made to drop to zero at a varying length
at the center area of the 20 meter dipole in a way that most people
would understand as most hams have played with such an instrument and
have seen the meter 'drop' to zero . As I said, it may have been the
wrong aproach to prove a point where for a different reason the
current amplitude dropped to zero. The important thing to focus on is
that what changes in the current occurs it also
provides for collinear radiation which is extremely important.
I would readily accept a better explanation from those skilled in the
art of communication where I obviously fail but I am not the smartest
guy on the block.
Please keep looking at the antenna in it's entirety, I need to get rid
of this load I have imposed on myself. I am concerned that the thread
may drift away
or be side tracked to a point that all will lose patience with me. Roy
gets so many letters, e mails calls e.t.c that call on his generousity
and his kindness.
Tho I may not deserve it he is apparently again giving his time to me,
as he has done in the past to point out where I have slipped up. I
value his attention which is not to say I don't value others but
goodness, this means a lot to me.

Best regards to you Rich as you have also helped me out in the past
with your wise advice and knowledge.
Art Unwin KB9MZ

2201. Re: Back to Basics, etc

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-02 23:40:06 UTC
From: aunwin@fgi.net
Message-ID: <c4becf19.0208021540.1f2e206e@posting.google.com>
Source record: 137542

tdonaly@aol.com (Tdonaly) wrote in message
news:<20020802002649.27882.00001026@mb-mb.aol.com>...
> >
Snip.
> >
> >
> >73, Frank Chen, bv2wn
> >
> >
>
> Hi Frank,
> I think you may be much more satisfied with the knowledge you
> gain from the newsgroup's ancient engineers if you do some research and
> experimentation, and verify, for yourself, that what they say is correct.
> Some of them - but not necessarily the ones you mentioned - have been guilty of
> posting some real stretchers (lies).
> 73
> Tom Donaly

Ouch..... I am feeling guilty already
Art

2202. Re: A TUTORIAL

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-02 23:49:37 UTC
From: richardharrison@webtv.net
Message-ID: <1201-3D4B1A91-376@storefull-2394.public.lawson.webtv.net>
Source record: 137545

Roy Lewallen wrote:
"You`re right on both counts."

Thank you. I have the same experiences. As humans we somtimes glance at things from the wrong perspective. The readers are best served when we come to agreement and remove as many unmerited doubts as we can.

Roy shows more interest in good information than perception. I applaud him for his attitude.

Best regards, Richard Harrison, KB5WZI

2203. Re: Coaxial Notch Filter

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-02 23:57:56 UTC
From: CW <clinton.magers@attbi.com>
Message-ID: <80F29.229296$Wt3.190027@rwcrnsc53>
Source record: 137543

Did you read the header? Didn't you deduce that he was talking about the
subject line? Pretty obvious, I thought.
--

CW
KC7NOD

<n7ws_at_yahoo.com (Wes)> wrote in message
news:3d4ad671.20680509@news.triconet.org...
> On 02 Aug 2002 17:54:58 GMT, fractenna@aol.com (Fractenna) wrote:
>
> [snip]
>
> |I don't follow.... coax notch filters use open/closed 1/4 (also work at
other
> |frequencies, such as corresponding 3/4 wave) wave stubs, usually thru T
> |connectors, to null out specific frequencies by inverse phasing.
>
> We don't follow you either. Your original post said:
>
> "Wondering what kind of attenuation you can practically expect at HF."
>
> Note than you did not describe anything of the configuration, the
> frequency range, the method of construction, the allowable insertion
> loss, etc.
>
> So, based on the parameters you provided, the answer is 53.271 dB.
>
> You're welcome.
>
>

2204. Re: Computing power from SWR

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-03 00:15:03 UTC
From: Owen Duffy <owen@oda.com.au>
Message-ID: <3D4B2087.B3D46C34@oda.com.au>
Source record: 137544

Owen Duffy wrote:

> If power figure you quote is the forward power and the instrument is
> correct for both power reading and VSWR (big assumption!); you have 24
> watts travelling toward the antenna at the tuner end of the feedline;
> about 7 watts net power into the feeder at the tuner; VSWR at the
> antenna is around 50; and about 1.6W (or about 16% of the rated
> transmitter output) absorbed by the antenna.
>

For those who asked, the full calculator results used to source the
above analysis (excuse the format, pasting a html page doesn't work
elegantly in Netscape 4.x):

VSWR calculator results
10W tx on 3.6MHz, 100ft RG-8/X
Input values:
Parameter Value
Transmitter power output into matched load (W) 10
Forward power (W) 24
VSWR 12
Line loss to transmitter (dB) 0
Line loss to antenna (dB) 0.55
Antenna gain (dB) 0

Calculated values:
Parameter Value
Transmission efficiency (%) 24.09
Line loss due to VSWR (dB) 5.63
Effectiveness (%) 16.42
EIRP (W) 1.64

Parameter Transmitter Antenna
Fwd Power (W) 24.000 21.145
Ref Power (W) 17.183 19.503
Net Power (W) 6.817 1.642
VSWR 12.00 49.50
Return Loss (dB) 1.5 0.4
Voltage reflection coefficient (pu) 0.846 0.960
Power reflection coefficient (pu) 0.716 0.922

2205. Re: Back to Basics, etc

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-03 00:47:33 UTC
From: "J. McLaughlin" <JCM@Power-Net.Net>
Message-ID: <ukma0hnjndpd5c@corp.supernews.com>
Source record: 137547

Well said, Roy!
Supplement with a copy of Kraus (Antennas) and one is ready to
understand. Even a first edition of Kraus is remarkably straight
forward in the first chapters. I know that his book is available in
several languages and, because of the lucid English, probably translates
in an effective manner.

To paraphrase a part of what Roy said: one can only place a finite
amount of information within a finite number of pages. The art is in
the selection.
73 Mac N8TT
--
J. Mc Laughlin - Michigan USA
Home: JCM@Power-Net.Net

2206. Re: Coaxial Notch Filter

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-03 00:56:15 UTC
From: n7ws_at_yahoo.com
Message-ID: <3d4b2711.17928284@news.triconet.org>
Source record: 137548

On Fri, 02 Aug 2002 23:57:56 GMT, "CW" <clinton.magers@attbi.com>
wrote:

|Did you read the header? Didn't you deduce that he was talking about the
|subject line? Pretty obvious, I thought.

Of course I read the header. Despite what you and Chirp think, the
question was not "well-posed" and is more oblivious than obvious.

Suppose we build a coaxial structure by hogging it out of a solid
block of coin silver?

That certainly meets the subject requirements doesn't it?

Or suppose we so lightly couple into the structure to maintain a high
Q that the off-resonance attenuation is 30 dB. That meets the subject
requirements too, doesn't it?

There are an infinite number of ways to implement this and an infinite
number of answers. 53.271 dB is one of the answers and is as good as
any other given the stated parameters.

And to think that this query was from a guy that proposes to sell crap
to the military.

|--
|
|CW
|KC7NOD
|
|<n7ws_at_yahoo.com (Wes)> wrote in message
|news:3d4ad671.20680509@news.triconet.org...
|> On 02 Aug 2002 17:54:58 GMT, fractenna@aol.com (Fractenna) wrote:
|>
|> [snip]
|>
|> |I don't follow.... coax notch filters use open/closed 1/4 (also work at
|other
|> |frequencies, such as corresponding 3/4 wave) wave stubs, usually thru T
|> |connectors, to null out specific frequencies by inverse phasing.
|>
|> We don't follow you either. Your original post said:
|>
|> "Wondering what kind of attenuation you can practically expect at HF."
|>
|> Note than you did not describe anything of the configuration, the
|> frequency range, the method of construction, the allowable insertion

```
|> loss, etc.
|>
|> So, based on the parameters you provided, the answer is 53.271 dB.
|>
|> You're welcome.
|>
|>
|
|
```

2207. Re: Antenna suggestion For 30 MHz To About 2 GHz ?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-03 01:16:01 UTC
From: "J. Harvey" <JM002.Harvey_ANTI*SPAM_@Sympatico.ca>
Message-ID: <l9G29.7727$672.1757864@news20.bellglobal.com>
Source record: 137549

"Fractenna"
> No; its a black cylinder (not a box);
> contains no food; and their [there?]
> is pattern distortion from omni caused
> by asymmetry in the vehicular mount.

I've seen 30-400 MHz, but they DO NOT have good gain at the low end. More like -15dBi. This is NOT "good gain".

The boys at JTRS are still trying to figure out how the heck they're going to cover 2MHz to 2GHz (or to 40GHz - crazy...).

Can you quote a National [or NATO] Stock Number (NSN) for the 'Antenna, Mobile, Miracle" to which you refer ? I'd like to order one to try it out...

Or is it....a 'secret' ?

2208. Re: Coaxial Notch Filter

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-03 01:21:16 UTC
From: fractenna@aol.com
Message-ID: <20020802212116.08566.00000853@mb-fx.aol.com>
Source record: 137550

>On Fri, 02 Aug 2002 23:57:56 GMT, "CW" <clinton.magers@attbi.com>
>wrote:
>
>|Did you read the header? Didn't you deduce that he was talking about the
>|subject line? Pretty obvious, I thought.
>
>Of course I read the header. Despite what you and Chirp think, the
>question was not "well-posed" and is more oblivious than obvious.
>
>Suppose we build a coaxial structure by hogging it out of a solid
>block of coin silver?
>
>That certainly meets the subject requirements doesn't it?
>
>Or suppose we so lightly couple into the structure to maintain a high
>Q that the off-resonance attenuation is 30 dB. That meets the subject
>requirements too, doesn't it?
>
>There are an infinite number of ways to implement this and an infinite
>number of answers. 53.271 dB is one of the answers and is as good as
>any other given the stated parameters.
>
>And to think that this query was from a guy that proposes to sell crap
>to the military.
>
>|--
>|
>|CW
>|KC7NOD
>|
>|<n7ws_at_yahoo.com (Wes)> wrote in message
>|news:3d4ad671.20680509@news.triconet.org...
>|> On 02 Aug 2002 17:54:58 GMT, fractenna@aol.com (Fractenna) wrote:
>|>
>|> [snip]
>|>
>|> |I don't follow.... coax notch filters use open/closed 1/4 (also work at
>|other
>|> |frequencies, such as corresponding 3/4 wave) wave stubs, usually thru T
>|> |connectors, to null out specific frequencies by inverse phasing.
>|>
>|> We don't follow you either. Your original post said:
>|>
>|> "Wondering what kind of attenuation you can practically expect at HF."

>|>
>|> Note than you did not describe anything of the configuration, the
>|> frequency range, the method of construction, the allowable insertion
>|> loss, etc.
>|>
>|> So, based on the parameters you provided, the answer is 53.271 dB.
>|>
>|> You're welcome.
>|>
>|>
>|

Let me be explicit:

Thanks to K1TTT, I got the info I needed and I appreciate it.

I desire no more info or comments on this subject, let alone off-topic ones.

73 to all,
Chip N1IR

2209. Re: Antenna suggestion For 30 MHz To About 2 GHz ?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-03 01:23:22 UTC
From: fractenna@aol.com
Message-ID: <20020802212322.08566.00000854@mb-fx.aol.com>
Source record: 137551

>> No; its a black cylinder (not a box); contains no food; and their is
>pattern
>> distortion from omni caused by asymmetry in the vehicular mount.
>
>black helicopters.

I will not say what its designed for. Discussion closed.

73,
Chip N1IR

2210. Re: Final final final correction now applied. (Equ.3)

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-03 01:25:27 UTC
From: "J. Harvey" <JM002.Harvey_ANTI*SPAM_@Sympatico.ca>
Message-ID: <biG29.7738$672.1759535@news20.bellglobal.com>
Source record: 137552

"Reg Edwards"
> But it's not an important matter. The answer is
> still in the right ball-park.

If I knew as much about 'antenna basics' as some of you guys do, then I wouldn't let it go that easily. Such discrepanices are worthy of investigation.

2211. Re: Antenna suggestion For 30 MHz To About 2 GHz ?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-03 01:29:42 UTC
From: fractenna@aol.com
Message-ID: <20020802212942.08554.00000867@mb-fx.aol.com>
Source record: 137553

>bellglobal.com>
>
>"Fractenna"
>> No; its a black cylinder (not a box);
>> contains no food; and their [there?]
>> is pattern distortion from omni caused
>> by asymmetry in the vehicular mount.
>
>I've seen 30-400 MHz, but they DO NOT have good gain at the low end. More
>like -15dBi. This is NOT "good gain".
>
>The boys at JTRS are still trying to figure out how the heck they're going
>to cover 2MHz to 2GHz (or to 40GHz - crazy...).
>
>Can you quote a National [or NATO] Stock Number (NSN) for the 'Antenna,
>Mobile, Miracle" to which you refer ? I'd like to order one to try it
>out...
>
>Or is it....a 'secret' ?
>

We seem to be discussing different things. I believe you do not qualify for purchase.

If you have an interest you can pursue off line .

73,
Chip N1IR

2212. Re: Antenna suggestion For 30 MHz To About 2 GHz ?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-03 01:58:43 UTC
From: "J. Harvey" <JM002.Harvey_ANTI*SPAM_@Sympatico.ca>
Message-ID: <ING29.7757$672.1768060@news20.bellglobal.com>
Source record: 137554

"Fractenna"
> Unfortunately I am not aware of availability to the
> amateur radio service nor SWL'ers. An unfortunate
> restriction based on the times we live in...

Damn those terrorists ! If it wasn't for them, we would all have a 'miracle antenna' on top of our all band walkie-talkie by now.

> I will not say what its designed for. Discussion closed.

First you hint that you've seen/touched/built (?) some advanced antenna technology that provide good gain, small size, and very broad bandwidth (30 MHz to 2 GHz), but you can't tell us anything about it - because it's a "SECRET"... Your claim is indistiguishable from ��Sh�?.

> I believe you do not qualify for purchase.

Probably do qualify actually...

2213. Re: Back to Basics, etc

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-03 02:17:36 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <3D4B3D40.4090609@eznec.com>
Source record: 137555

A few days ago I spotted a used copy of _Antennas_, First Ed., at technical branch of Powell's book store in Portland. I see from their web site it's still available, and by mail order, priced at only $34. A bargain. You can find it at http://www.powells.com with a search, or you can paste the following link together and go directly to the right page:

http://www.powells.com/search/DTSearch/search?kw=&isbn=&author=kraus&publisher=&title=antennas&section=&class=all&binding=any&sort=by_title&sort2=by_author&store=all&perpage=25

Anyone really interested in antenna fundamentals at the level of understanding the equations we've seen here should have this book or a similar one.

Roy Lewallen, W7EL

J. McLaughlin wrote:
> . . .
> Supplement with a copy of Kraus (Antennas) and one is ready to
> understand. Even a first edition of Kraus is remarkably straight
> forward in the first chapters. I know that his book is available in
> several languages and, because of the lucid English, probably translates
> in an effective manner.
> . . .

2214. Re: A TUTORIAL

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-03 02:23:12 UTC
From: richardharrison@webtv.net
Message-ID: <1201-3D4B3E90-386@storefull-2394.public.lawson.webtv.net>
Source record: 137556

Art Unwin wrote:
"If one looks at designing a dipole that gives more gain than the
standard dipole then one has to incorporate a quasi collinear design."

Art must have additional unstated limitations in mind because dipoles
can be arranged in several ways other than end-to-end to produce gain.

Mattress arrays make a broadside array of dipoles in the same plane. In
these dipoles are placed parallel to each other as well as end-to-end.

Dipoles can also be placed in front of and behind each other to give
more gain.

So, collinear is just one of several options to "give more gain than the
standard dipole".

Art mentions CAM`s feedline length selection plan for antenna matching.
I suspect Art has an antenna matching plan in mind to compete with the
CAM system. I gather it is a tuner directly at the antenna feedpoint
which consist of a tuned circuit employing a low-resistance loop and a
motor-driven capacitor.

I may be wrong because I get confused by talk of multiple reflectors,
etc.

If Art would parcel out one problem at a time we might give better
answers.

Best regards, Richard Harrison, KB5WZI

2215. Re: Coaxial Notch Filter

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-03 02:47:48 UTC
From: n7ws_at_yahoo.com
Message-ID: <3d4b43d9.25298199@news.triconet.org>
Source record: 137557

On 03 Aug 2002 01:21:16 GMT, fractenna@aol.com (Fractenna) wrote:
[snip]
|
|Let me be explicit:

It's about damned time.
|
|Thanks to K1TTT, I got the info I needed and I appreciate it.
|
|I desire no more info or comments on this subject, let alone off-topic ones.

Chirp has spoken!

THIS THREAD IS CLOSED!

2216. Re: STOP EVERYTHING

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-03 03:27:41 UTC
From: richardharrison@webtv.net
Message-ID: <648-3D4B4DAD-73@storefull-2398.public.lawson.webtv.net>
Source record: 137558

Reg, G4FGQ wrote:
"Line transmission engineers had been using for some years before then with the line characteristics in place of the radio path."

Yes, but these are quite different.

Before someone jumps to the wrong conclusion, it may be well to note that when you double the distance from a radio sender, you cut the signal voltage only in half no matter how large that doubled distance increment is! After a few iterations of this principle, doubling the distance is incresing the distance by many miles.

In the transmission line example, each mile of line extension extracts the same percentage loss on the remaining signal if it is the first mile or the millionth mile.

We now use radio over a path of millions of miles. Doubling this huge path length only increases total path attenuation by 6 db.

If cable loss is only one db per mile, one million miles of this cable has a path loss of one million db.

The formulas for radio and cable attenuations are distinctly different.

Best regards, Richard Harrison, KB5WZI

2217. Re: Antenna suggestion For 30 MHz To About 2 GHz ?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-03 03:57:40 UTC
From: dan <danlx@execpc.com>
Message-ID: <3d4b5634$0$3567$272ea4a1@news.execpc.com>
Source record: 137559

On 03 Aug 2002 01:23:22 GMT, fractenna@aol.com (Fractenna) wrote:

>>> No; its a black cylinder (not a box); contains no food; and their is
>>pattern
>>> distortion from omni caused by asymmetry in the vehicular mount.
>>
>>black helicopters.
>
>I will not say what its designed for. Discussion closed.
ROFLMFAO at you.
>
>73,
>Chip N1IR

Dan

I've rambled enough, back to the rocking chair. ZZZZZZZZZ
Remove left x for a direct reply.

2218. Re: Antenna suggestion For 30 MHz To About 2 GHz ?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-03 04:09:15 UTC
From: dan <danlx@execpc.com>
Message-ID: <3d4b58ea$0$3567$272ea4a1@news.execpc.com>
Source record: 137561

On 03 Aug 2002 01:29:42 GMT, fractenna@aol.com (Fractenna) wrote:

>>bellglobal.com>
>>
>>"Fractenna"
>>> No; its a black cylinder (not a box);
>>> contains no food; and their [there?]
>>> is pattern distortion from omni caused
>>> by asymmetry in the vehicular mount.
>>
>>I've seen 30-400 MHz, but they DO NOT have good gain at the low end. More
>>like -15dBi. This is NOT "good gain".
>>
>>The boys at JTRS are still trying to figure out how the heck they're going
>>to cover 2MHz to 2GHz (or to 40GHz - crazy...).
>>
>>Can you quote a National [or NATO] Stock Number (NSN) for the 'Antenna,
>>Mobile, Miracle" to which you refer ? I'd like to order one to try it
>>out...
>>
>>Or is it....a 'secret' ?
>>
>
>We seem to be discussing different things. I believe you do not qualify for
>purchase.
>
>If you have an interest you can pursue off line .
Meet me at the third mailbox South, or is it East, of the fourth block
west, or is it North, of the Outhouse Manufacturing plants rear side
door. I will then determine if you can qualify for a uh mm a mm uh,
oh yea, a purchase. Bring a large wagon as a purchase can be very
heavy to carry over long distances. Don't forget to wear your
invisibility cloak!!! I will not deal with anyone that forgets to
wear their cloak. There are people watching me all the time. They
actually see me!!!
>
>73,
>Chip N1IR

Dan

I've rambled enough, back to the rocking chair. ZZZZZZZZZ
Remove left x for a direct reply.

2219. Re: Computing power from SWR

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-03 04:19:11 UTC
From: cprstn54zz@att.net
Message-ID: <3d4b5418.4468296@news-server.optonline.net>
Source record: 137560

On Sat, 03 Aug 2002 10:15:03 +1000, Owen Duffy <owen@oda.com.au>
wrote:
>(see below)

Almost all of this goes right over my head. Why do you state that the
24 watt reading on the Radio Shack digital wattmeter is forward power?
I thought it was the total power and that it was the sum of the
forward and reflected power. Based on the simple formula for SWR that
I know, I get 14 watts forward and 10 watts reflected. Are you
possibly saying that of the 14 watts forward, no more than 4 of those
watts are making it out onto the antenna, with 10 watts reflected
back?

Assuming that under some simplified model my understanding is roughly
correct, what is causing the problem on this one band? SWR is much
lower on 160M and 40M using the same rig. If it is resonance in the
feedline, would it help to put a ferrite choke on the feedline (in
addition ot the one at the feedpoint)?

Making for more confusion, the antenna manufacturer says, Not to
worry: Even though there is some bouncing around in the feedline, a
decent signal will get out if the tuner says SWR=1.0. What principle
(principal?) is he travelling on?

Ken KC2JDY

>For those who asked, the full calculator results used to source the
>above analysis (excuse the format, pasting a html page doesn't work
>elegantly in Netscape 4.x):

>VSWR calculator results
>10W tx on 3.6MHz, 100ft RG-8/X
>Input values:
>Parameter Value
>Transmitter power output into matched load (W) 10
>Forward power (W) 24
>VSWR 12
>Line loss to transmitter (dB) 0
>Line loss to antenna (dB) 0.55
>Antenna gain (dB) 0
>
>Calculated values:
>Parameter Value
>Transmission efficiency (%) 24.09

>Line loss due to VSWR (dB) 5.63
>Effectiveness (%) 16.42
>EIRP (W) 1.64
>
>
>Parameter Transmitter Antenna
>Fwd Power (W) 24.000 21.145
>Ref Power (W) 17.183 19.503
>Net Power (W) 6.817 1.642
>VSWR 12.00 49.50
>Return Loss (dB) 1.5 0.4
>Voltage reflection coefficient (pu) 0.846 0.960
>Power reflection coefficient (pu) 0.716 0.922

Ken
(to reply via email
remove "zz" from address)

2220. WTB: 18-26GHz waveguide

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-03 04:49:57 UTC
From: wdizney@yahoo.com
Message-ID: <c44869b7.0208022049.36a9866a@posting.google.com>
Source record: 137562
Cross-posted to:
rec.radio.amateur.antenna,sci.electronics.equipment,misc.industry.electronics.marketplace,alt.ham-radio.marketplace

Hi,

I'm looking to buy the following:

3) 18-26GHz waveguide to SMA FEMALE transitions
1) 18-26GHz waveguide directional coupler(3 or 10dB)
1) 26-40GHz waveguide directional coupler(3 or 10dB)
Coaxial cable good up to 40GHz (SMA to SMA)

If you have any of these lying around, or know were I can find these
email me your asking price to: wdizney@yahoo.com

Thanks for looking
Mike

2221. Re: Antenna suggestion For 30 MHz To About 2 GHz ?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-03 04:58:03 UTC
From: "W.G Ewald" <wgewald@att.net>
Message-ID: <oqomku4nera2of6j02dc7hkqduk079v79u@4ax.com>
Source record: 137563

On Fri, 2 Aug 2002 21:58:43 -0400, "J. Harvey"
<JM002.Harvey_ANTI*SPAM_@Sympatico.ca> wrote:

>"Fractenna"
>> Unfortunately I am not aware of availability to the
>> amateur radio service nor SWL'ers. An unfortunate
>> restriction based on the times we live in...
>
>Damn those terrorists ! If it wasn't for them, we would all have a 'miracle
>antenna' on top of our all band walkie-talkie by now.
>
>> I will not say what its designed for. Discussion closed.
>
>First you hint that you've seen/touched/built (?) some advanced antenna
>technology that provide good gain, small size, and very broad bandwidth (30
>MHz to 2 GHz), but you can't tell us anything about it - because it's a
>"SECRET"... Your claim is indistiguishable from ï¿½ï¿½Shï¿½?.
>
>> I believe you do not qualify for purchase.
>
>Probably do qualify actually...
>
>

Maybe Chip's usenet rantings should be forwarded to a certain gummint
project officer. Think that would shut him up?

2222. Re: FA: AC/DC PATHFINDER 10 BAND RADIO RECEIVER

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-03 05:13:15 UTC
From: w9wi@linux1.localdomain
Message-ID: <slrnakmpr4.i7g.w9wi@linux1.localdomain>
Source record: 137564
Cross-posted to: rec.antiques.radio+phono,rec.radio.amateur.antenna,alt.radio.scanner,alt.radio.pirate,rec.radio.amateur.dx,rec.radio.amateur.equipment,rec.radio.amateur.homebrew

On Fri, 02 Aug 2002 11:08:17 -0500, martbalt <martbalt@netscape.net> wrote:
>This is a multi-part message in MIME format.

(followed by 837 more lines of HTML and JavaScript...)

Yikes.
--
Doug Smith W9WI
Pleasant View (Nashville), TN EM66
http://www.w9wi.com

2223. Re: Computing power from SWR

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-03 07:27:10 UTC
From: Owen Duffy <owen@oda.com.au>
Message-ID: <3D4B85CE.851C0B98@oda.com.au>
Source record: 137565

Ken wrote:
>
> On Sat, 03 Aug 2002 10:15:03 +1000, Owen Duffy <owen@oda.com.au>
> wrote:
> >(see below)
>
> Almost all of this goes right over my head. Why do you state that the

I am sorry, I wasn't trying to confuse you.

> 24 watt reading on the Radio Shack digital wattmeter is forward power?

If the power reading was from a non-directional sensor, it is probably (almost certainly) only calibrated if the VSWR is 1 and means absolutely nothing otherwise.

I am not familiar with the instrument you have used, so you will need to check its documentation. You do need to understand what it measures, what it indicates, under what assumptions.

I assumed that since you offered it as a power reading, then it was from a directional wattmeter indicating forward power (ie the wave travelling towards the antenna).

Some of my calcs are based on that assumption (as I stated) and will be incorrect if that assumption is invalid.

Anyway, if the VSWR measurement was valid, then some of the calcs remain valid. The VSWR at the antenna is 50, and the transmission line loss is 6dB.

If you are thinking that the VSWR being 12 is tolerable, the VSWR of 100 ft of RG-8X on 3.6MHz with nothing connected to the far end (ie o/c) should be under 16. 2000 ft of the same line with nothing on the end will deliver a VSWR of better than 1.2, you need to consider the effect of cable loss on your measurements.

> I thought it was the total power and that it was the sum of the
> forward and reflected power. Based on the simple formula for SWR that
> I know, I get 14 watts forward and 10 watts reflected. Are you
> possibly saying that of the 14 watts forward, no more than 4 of those
> watts are making it out onto the antenna, with 10 watts reflected
> back?
>
> Assuming that under some simplified model my understanding is roughly
> correct, what is causing the problem on this one band? SWR is much
> lower on 160M and 40M using the same rig. If it is resonance in the

> feedline, would it help to put a ferrite choke on the feedline (in
> addition ot the one at the feedpoint)?
>
> Making for more confusion, the antenna manufacturer says, Not to
> worry: Even though there is some bouncing around in the feedline, a
> decent signal will get out if the tuner says SWR=1.0. What principle
> (principal?) is he travelling on?

That sounds very much like a commercial approach (post sale).

His comments re "some bouncing around in the feedline" (interesting turn of phrase - I don't think it came from any radio texts) is suggesting that the intention is to operate the feedline at high VSWR and transformed to the the desired transmitter load with an antenna tuner (the so called tuned feeder configuration). We don't usually operate coax at high VSWR, because it is lossy even when matched, and when operated at high VSWR the losses are much higher. Rather, we would usually use open wire feeder of a low loss construction to operate with VSWR of two digits.

The principle is that you can afford high VSWR on the feeder if it has very low loss, whether it is coax or open wire feeder. It is just that at the frequencies that you are taking about, it is generally harder to get very low loss with coax.

The thing you have to try to discover, is whether the ugly VSWR and attendant cable losses are a sign of something faulty in implementation or a "design feature".

If the manufacturer is suggesting that you don't worry about losing a bit (not sure of how much now) of power in the antenna tuner, 75% of the power leaving the tuner being lost in the cable, what other compromises might exist in the multiband antenna (baluns, conductor, traps, earth etc). That is not to say that you won't get contacts, but we usually expect to getway better than half the transmitter rated power to the antenna.

Owen

2224. Re: Computing power from SWR

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-03 07:48:07 UTC
From: ":-) Bill" <therealexray@netscape.net>
Message-ID: <3D4B8AB7.ECCC6696@netscape.net>
Source record: 137566

Owen Duffy wrote:

> If the manufacturer is suggesting that you don't worry about losing a
> bit (not sure of how much now) of power in the antenna tuner, 75% of the
> power leaving the tuner being lost in the cable, what other compromises
> might exist in the multiband antenna (baluns, conductor, traps, earth
> etc). That is not to say that you won't get contacts, but we usually
> expect to getway better than half the transmitter rated power to the
> antenna.
>
> Owen

There's way too many apples and oranges in the mix here.
First off, a cheapo Radio Shack meter (and many others) are simply
reading rectified voltage...both forward or reflected. You can take
Ohms Law and easily enough calculate watts as long as the impedance is
staying at a known value....that which the device is optimized for. Its
not a wattmeter, its a voltmeter and there's a big difference. Log10 vs
Log20 for starters.
But throw in any amount of mismatch and the whole computation goes to
heck because you don't know the Z to plug into the calculation. Neither
does the meter.
Such a meter is fine as long as you have a 'low' vswr. I wouldn't
bother trying to figure it out if it says something like 12:1.
Obviously the effort could be better spent working on the antenna.
-WX4A

2225. Re: Computing power from SWR

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-03 09:58:09 UTC
From: cprstn54zz@att.net
Message-ID: <3d4ba56a.14745515@news-server.optonline.net>
Source record: 137567

On Sat, 03 Aug 2002 17:27:10 +1000, Owen Duffy <owen@oda.com.au>
wrote:
>I am not familiar with the instrument you have used, so you will need to
>check its documentation. You do need to understand what it measures,
>what it indicates, under what assumptions.

Well, it was quite popular but was nevertheless discontinued by Radio
Shack. Information is still posted at:
http://www.radioshack.com/ProdSupport/DocumentDetail/DocumentDetailIndex.asp?URL=http://su
pport.radioshack.com/support_electronics/26476.htm

One is for sale on eBay and a pic of the box with photo is shown:
http://cgi.ebay.com/ws/eBayISAPI.dll?ViewItem&item=1370331557

I see nothing there (or in my user manual) that illuminates the issue.
Do your more expereinced eyes see something that gives a clue?

If indeed this instrument is telling me little that is useful, what
can I use to measure my signal strength? I have a field-strength
meter with a 6" solid rod antenna. Could I replace the rod with a
length of shielded cable having 6" of center conductor exposed at the
tip and use that on the end of a long stick (fishing rod) that I wave
over my dipole? Can I compare relative strength on 10M and 20M where
SWR is low without the tuner to that on 40-80-160?

I started out using a Yachtboy 400 a half mile away to measure signal
strength, but with 40-80-160, most of my signal is going up. I would
need to be in a balloon.

Ken KC2JDY

Ken
(to reply via email
remove "zz" from address)

2226. Re: Antenna suggestion For 30 MHz To About 2 GHz ?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-03 11:21:21 UTC
From: fractenna@aol.com
Message-ID: <20020803072121.00671.00000824@mb-df.aol.com>
Source record: 137568

You guys are off the wall.

I don't know anything about any classified stuff. I don't seem to recall discussing anything like that.

The technology to do this type of bandwidth , with performance better than mentioned by a Canadian poster, exists, and such antennae exist. They are controlled distribution. Hams and SWL's can't get them. Its not a matter of whether they should or shouldn't; they simply can't. That's all there is to it--with respect to this venue.

This has nothing to do with anything else you guys mention. How you pose a happy, inventive guy as something else is fantastically amusing.

If there is a compelling reason why more factual information is needed, it can be discussed off line.

..and I believe that has already been said, so let others question your motivations. Its quite clear to me.

73,
Chip N1IR

2227. FRACTAL ANTENNA DEBATE STATUS

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-03 11:47:45 UTC
From: fractenna@aol.com
Message-ID: <20020803074745.00688.00000754@mb-df.aol.com>
Source record: 137469

Five weeks ago, I requested that Steve Best, VE9SRB, engage in a scholarly public debate on the subject of fractal antennas.

The motivations for said debate are:

1) fractal antennas are rapidly becoming a major research interest of the professional and academic antenna community;

2) Steve Best has made a distinct point, in the last three years, to become an assiduous investigator into fractal antennas, indeed it has apparently become a dominant topic of his research interests, with well over a dozen public talks and publications;

3) through his work, Steve Best has posited himself as the key, and I believe the only published, criticiser of fractal antenna work, what some would discuss as an alleged 'debunker' .

4) IF fractal antennas have no value, and the hundreds of publications which report research investigations are incorrect, then the antenna community ethically requires a clear and timely presentation of the lack of such merits, in a way that settles the issue, and removes the facts from their mere interpretation (or misinterpretation). In other words, paradigm shifts should be resolve one way or the other. Historically, public, scholarly debates have accomplished such objectives;

5) Steve and I are friends and colleagues and it may be assumed that our motivations are purely scientific;

6) as founder of the field of fractal element antennas, and as the principle researcher and publisher of aspects of the paradigm, I am a logical choice to discuss the scientific aspects of fractal antennas and, indeed, Steve's periodical citing and public talks confirm this.

I must report that Steve Best has not responded to my offer to debate, at least to my knowledge. I look forward to his response.

Cordially,

Nathan 'Chip' Cohen N1IR

2228. Re: Computing power from SWR

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-03 13:04:18 UTC
From: CAM <w5dxp@hotmail.com>
Message-ID: <3D4BD4D2.855FB8EB@hotmail.com>
Source record: 137470

Ken wrote:
>
> On Sat, 03 Aug 2002 10:15:03 +1000, Owen Duffy <owen@oda.com.au>
> wrote:
> >(see below)
>
> Almost all of this goes right over my head. Why do you state that the
> 24 watt reading on the Radio Shack digital wattmeter is forward power?
> I thought it was the total power and that it was the sum of the
> forward and reflected power.

Wattmeters have a directional coupler that separates the forward conditions
from the reflected conditions. My Autek WM-1 indicates forward power and
SWR.

> Assuming that under some simplified model my understanding is roughly
> correct, what is causing the problem on this one band?

You're learning a lesson in what to believe from antenna manufacturers.
There's no such thing as a free lunch. Have you modeled the antenna?

> Making for more confusion, the antenna manufacturer says, Not to
> worry:

Of course the antenna manufacturer is not worried. He made his
exorbitant profit on a compromised antenna. Hope you enjoy QRP.

> Even though there is some bouncing around in the feedline, a
> decent signal will get out if the tuner says SWR=1.0. What principle
> (principal?) is he travelling on?

The power delivered to the load is forward power minus reflected power.
If at the input of the tuner you have 10 watts forward and zero watts
reflected and at the output of the tuner you have 24 watts forward and
17 watts reflected (assuming those figures are accurate), there is 7 watts
delivered to the transmission line and the tuner is dissipating 3 watts.
Subtract your transmission line losses and you will know the power being
delivered to the antenna.

But just because you can obtain a match with an antenna tuner is no
guarantee that "a decent signal will get out". Of course, the antenna
manufacturer has an entirely different definition of "decent" than
you or I do.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
------== Over 80,000 Newsgroups - 16 Different Servers! =-----

2229. Re: Cushcraft going out of business?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-03 13:12:16 UTC
From: VE9SRB <srbest@att.net>
Message-ID: <QEQ29.21301$Kl6.1374904@bgtnsc04-news.ops.worldnet.att.net>
Source record: 137471

"Fractenna" <fractenna@aol.com> wrote in message >
> You might try Steve Best, VE9SRB, who has helped other folks on this forum
in
> the past on this issue.
>
> I suspect he is on here, or maybe a friendly call to him would do it.
>

Steve Best, VE9SRB, is not associated with Cushcraft Corporation.

Steve

2230. Re: FRACTAL ANTENNA DEBATE STATUS

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-03 13:31:17 UTC
From: k1bqt@aol.com
Message-ID: <20020803093117.00658.00000922@mb-df.aol.com>
Source record: 137472

>Five weeks ago, I requested that Steve Best, VE9SRB, engage in a scholarly public debate on the subject of fractal antennas.<

Gosh Chip, it seems to me that Steve has chosen the academic high road by publishing his work and rendering his presentations through the IEEE where ALL players in fractal research are represented. Why not put on your pants like everyone else and represent your views there?

Rick K1BQT

2231. Re: STOP EVERYTHING

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-03 13:32:27 UTC
From: "J. Harvey" <JM002.Harvey_ANTI*SPAM_@Sympatico.ca>
Message-ID: <iXQ29.10198$tY5.2203624@news20.bellglobal.com>
Source record: 137473

"Richard Harrison"
> If cable loss is only one db per mile, one million miles
> of this cable has a path loss of one million db.

One million dB - hmmmm... That's 'a lot' - isn't it ?

:-)

2232. Re: FRACTAL ANTENNA DEBATE STATUS

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-03 13:49:09 UTC
From: "W.G Ewald" <wgewald@att.net>
Message-ID: <o5nnku06vh9a5b99r30n50prbotcouu7rt@4ax.com>
Source record: 137474

On 03 Aug 2002 11:47:45 GMT, fractenna@aol.com (Fractenna) wrote:

>Five weeks ago, I requested that Steve Best, VE9SRB, engage in a scholarly
>public debate on the subject of fractal antennas.
>
>The motivations for said debate are:
>
>1) fractal antennas are rapidly becoming a major research interest of the
>professional and academic antenna community;
>
>2) Steve Best has made a distinct point, in the last three years, to become an
>assiduous investigator into fractal antennas, indeed it has apparently become a
>dominant topic of his research interests, with well over a dozen public talks
>and publications;
>
>3) through his work, Steve Best has posited himself as the key, and I believe
>the only published, criticiser of fractal antenna work, what some would discuss
>as an alleged 'debunker' .
>
>4) IF fractal antennas have no value, and the hundreds of publications which
>report research investigations are incorrect, then the antenna community
>ethically requires a clear and timely presentation of the lack of such merits,
>in a way that settles the issue, and removes the facts from their mere
>interpretation (or misinterpretation). In other words, paradigm shifts should
>be resolve one way or the other. Historically, public, scholarly debates have
>accomplished such objectives;
>
>5) Steve and I are friends and colleagues and it may be assumed that our
>motivations are purely scientific;
>
>6) as founder of the field of fractal element antennas, and as the principle
>researcher and publisher of aspects of the paradigm, I am a logical choice to
>discuss the scientific aspects of fractal antennas and, indeed, Steve's
>periodical citing and public talks confirm this.
>
>I must report that Steve Best has not responded to my offer to debate, at least
>to my knowledge. I look forward to his response.
>
>Cordially,
>
>Nathan 'Chip' Cohen N1IR

Here is Steve's response from last time, just to jog your memory:
==========
Steve wrote:

This is not intended to be a "debate", just a statement of opinion (or fact depending on your perspective). This is also very long - sorry. I won't post any other long statements on this subject.

The electromagnetic behavior and performance properties of a wire antenna are a function of the antenna's physical properties. These physical properties include the antenna's size (height, area, occupied volume, etc.), total wire length, geometry and wire diameter. If we conclude that the electromagnetic behavior and/or performance properties of an antenna are uniquely or primarily a function of one of these physical properties, we must also conclude that significantly modifying this one physical property will significantly modify the antenna's electromagnetic behavior and/or performance properties.

If we are to conclude that antennas having fractal geometry behave in a manner differently or better than antennas with a non-fractal or some arbitrary geometry, then we must fix all of the antenna's other physical properties (size, total wire length and wire diameter) and compare the electromagnetic behavior and performance properties of the fractal antenna with those of antennas having different geometries. This is something that none of the proponents of fractal geometry have done in the open literature.

Not one. Let's consider this further.

1) Cohen, in a series of Communications Quarterly articles, published the performance properties of the Minkowski Island fractal loop antenna. He demonstrated that with increasing fractal iteration these antennas exhibit a lower resonant frequency than a Euclidean (square or rectangular) loop of the same size (occupied area). He also demonstrated that in some regions of low frequency, the Minkowski Island fractal loops exhibit a higher radiation resistance than the Euclidean loop of the same size. Cohen concluded that the electromagnetic behavior and relative performance properties of the Minkowski Island fractal loops are primarily a function of the loops' fractal geometry. It is significant to note that two physical parameters of the antenna change with increasing fractal iteration. One is the antenna's geometry and the other is the antenna's total wire length. While the performance data presented by Cohen is mostly accurate, his conclusion is scientifically flawed because he is varying two of the antenna's physical properties but concludes that the antenna's electromagnetic behavior is primarily a function of only one of these physical property - its fractal geometry.

To scientifically validate his hypothesis, Cohen would have to compare the electromagnetic behavior and performance properties of the Minkowski Island fractal loop with those of other geometry loops having the same size, total wire length and wire diameter. He did not do this. When we compare the Minkowski Island loop with loops of differing geometries but otherwise having the same size, total wire length and wire diameter, it is evident that they exhibit very similar electromagnetic behavior and performance properties. In some cases, the arbitrarily shaped loops behave better than the fractal loop and

in some cases, the fractal loop behaves better than the arbitrarily shaped loop. In all of this however, the most significant fact to note is the following: when the total wire length of the arbitrarily shaped loops is adjusted such that their resonant frequency matches that of the Minkowski Island fractal loop, they have virtually identical radiation resistance and bandwidth. The resonant behavior of these loops is primarily a function of the loop size with respect to the resonant wavelength and the resonant properties of these loops are essentially the same independent of the differences in loops' geometry and total wire length.

2) Puente's work on the Koch fractal monopole suffers from the same scientific flaws as Cohen's work on the Minkowski Island loops. Puente describes the behavior and performance properties of the Koch fractal monopole as a function of increasing fractal iteration (increasing total wire length) and demonstrates that, when compared to a Euclidean (straight) monopole of the same height, the Koch fractal monopoles exhibit lower resonant frequency and increased radiation resistance in some regions of low frequency. Puente even goes as far as claiming that the complex shape of the Koch fractal curve enhances its radiation properties. Again, it is significant to note that Puente did not bother to compare the performance of the Koch fractal monopole with another monopole of different geometry but otherwise having the same physical properties (height, total wire length and wire diameter). For example, if we compare the Koch fractal monopole with a simple meander line monopole and normal mode helix of the same height and total wire length, we see that these simple geometries exhibit significantly lower resonant frequency and higher radiation resistance at low frequencies. As a function of height and total wire length, these simple structures are more effective radiators. Two points are even more significant: a) when the wire length of the meander line and normal mode helix antennas is shortened (while maintaining the same height) such that their resonant frequency matches that of the Koch fractal, they exhibit virtually identical radiation resistance and bandwidth. The resonant behavior of these monopole structures is primarily a function of their height with respect to the resonant wavelength and is essentially the same independent of the differences in geometry and total wire length. b) below the small antenna limit (ka < 0.5, k = 2pi/WL and a is the radius of a sphere encompassing the maximum dimension of the antenna), the radiation resistance of all these antennas converges to that of a Euclidean monopole of the same height.

3) One of the most profound and yet totally unsubstantiated conclusions regarding fractal antennas is that stated by Vinoy et al in an article titled "Hilbert Curve Fractal Antenna: A Small Resonant Antenna for VHF/UHF Applications" published in Microwave and Optical Technology Letters. In this article the authors claim "A fourth iterated fractal Hilbert curve geometry inscribed in a square of 7 cm is shown to result in a resonant frequency of 267 MHz, which is much lower than any other resonant antenna of similar size." How many

other resonant antennas of the same size did they compare with the Hilbert curve antenna? - zero, no even one. I fabricated a simple meander line antenna of the same size and total wire length as the Hilbert curve and it had a resonant frequency of 154 MHz.

The trend in the study of fractal wire antennas is to compare the fractal antenna with a simple Euclidean antenna and jump to a range of conclusions that are, for the most part, unsubstantiated. Comparing the fractal antennas with other geometry antennas of the same size, wire length and wire diameter provides clear evidence of this. It should be inherently obvious that increasing the wire length in a fixed size antenna lowers its resonant frequency and increases its radiation resistance over some range of low frequencies as compared to a straight Euclidean antenna. This behavior is simply not unique to antennas with fractal geometry. There is no inherent or unique benefit to a fractal geometry antenna compared to an antenna with virtually any other geometry. Fractal wire antennas do not behave in a unique manner nor do they behave in a manner significantly different than antennas with other geometries. This is especially true when the antennas are made to be resonant at the same frequency. It is interesting to note however, that in most cases, a self-similar fractal geometry is generally the least effective geometry in terms of lowering resonant frequency as a function of total wire length.

If the discussion turns to the concept that all bent wire geometries are "fractal" then the discussion gets even more ridiculous - we have assigned a new term to bent wire geometries but have learned nothing new about the fundamental behavior of antennas.

Steve VE9SRB

2233. Re: Cushcraft going out of business?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-03 13:49:09 UTC
From: "W.G Ewald" <wgewald@att.net>
Message-ID: <amnnkukp0o9gnn9n669es3h5jf307gs50e@4ax.com>
Source record: 137475

On Sat, 03 Aug 2002 13:12:16 GMT, "VE9SRB" <srbest@att.net> wrote:

>
>"Fractenna" <fractenna@aol.com> wrote in message >
>> You might try Steve Best, VE9SRB, who has helped other folks on this forum
>in
>> the past on this issue.
>>
>> I suspect he is on here, or maybe a friendly call to him would do it.
>>
>
>
>Steve Best, VE9SRB, is not associated with Cushcraft Corporation.
>
>Steve
>

Well, as usual, Cohen has bad information.

I believe he only tells the truth by accident.

2234. Re: FRACTAL ANTENNA DEBATE STATUS

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-03 13:59:41 UTC
From: DonB <7432D63DBB01D03A196B1EDD80E8@comcastt.net>
Message-ID: <hlR29.84043$cm.2697308@bin3.nnrp.aus1.giganews.com>
Source record: 137476

May I make a guess?

Because if you "put your pants on", you then create the opportunity to be "caught with your pant down" at some point in the future.

"Rick Littlefield" <k1bqt@aol.com> wrote in message news:20020803093117.00658.00000922@mb-df.aol.com...
> >Five weeks ago, I requested that Steve Best, VE9SRB, engage in a scholarly
> public debate on the subject of fractal antennas.<
>
> Gosh Chip, it seems to me that Steve has chosen the academic high road by
> publishing his work and rendering his presentations through the IEEE where ALL
> players in fractal research are represented. Why not put on your pants like
> everyone else and represent your views there?
>
> Rick K1BQT

2235. Re: FRACTAL ANTENNA DEBATE STATUS

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-03 14:09:28 UTC
From: tdonaly@aol.com
Message-ID: <20020803100928.28669.00001134@mb-da.aol.com>
Source record: 137477

>
>>Five weeks ago, I requested that Steve Best, VE9SRB, engage in a scholarly
>public debate on the subject of fractal antennas.<
>
>Gosh Chip, it seems to me that Steve has chosen the academic high road by
>publishing his work and rendering his presentations through the IEEE where
>ALL
>players in fractal research are represented. Why not put on your pants like
>everyone else and represent your views there?
>
>Rick K1BQT
>

What would a couple of antenna gurus know about debating? Most of the
disagreements on this newsgroup usually end in sophomoric
name-calling and arguments over definitions. Besides, real debates
don't reveal the truth of the various arguments so much as they do
the level of sophistry of the participants.

Tom Donaly KA6RUH

2236. Re: A TUTORIAL

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-03 14:39:02 UTC
From: aunwin@fgi.net
Message-ID: <c4becf19.0208030639.3b23863f@posting.google.com>
Source record: 137478

richardharrison@webtv.net (Richard Harrison) wrote in message
news:<1201-3D4B3E90-386@storefull-2394.public.lawson.webtv.net>...
> Art Unwin wrote:
> "If one looks at designing a dipole that gives more gain than the
> standard dipole then one has to incorporate a quasi collinear design."
>
> Art must have additional unstated limitations in mind because dipoles
> can be arranged in several ways other than end-to-end to produce gain.
>
> Mattress arrays make a broadside array of dipoles in the same plane. In
> these dipoles are placed parallel to each other as well as end-to-end.
>
> Dipoles can also be placed in front of and behind each other to give
> more gain.
>
> So, collinear is just one of several options to "give more gain than the
> standard dipole".

Quite correct. My search was for collinear gains in the most simple of
cases as with the loop antenna which tho it meets my goal with respect
to frequency coverage it had too many disadvantages.

> Art mentions CAM`s feedline length selection plan for antenna matching.

Yes but that faied my goal with respect to complexity.

> I suspect Art has an antenna matching plan in mind to compete with the
> CAM system. I gather it is a tuner directly at the antenna feedpoint
> which consist of a tuned circuit employing a low-resistance loop and a
> motor-driven capacitor.

You are right on the mark Richard.....it produces collinear gain
and does
have a variable capacitor to achieve variable frequency use
> I may be wrong because I get confused by talk of multiple reflectors,
> etc.

Multiple reflectors was part of another another thread and has no
technical connection

> If Art would parcel out one problem at a time we might give better
> answers.
>
> Best regards, Richard Harrison, KB5WZI

But Richard your respnses on this particular thread have articulated
my antenna

extremely well, much better than I could possibly do and I amm not conciously trying to confuse. I have previously supplied a picture of the actual antenna that was based on 10 meter use tho it used a 20 meter element which incidently is one driven reonant circuit. To this I have added a parallel circuit which contains a variable capacitor. To obtain maximum coupling to the loop (an oblong shape resonant circuit) I have merged them into one.
I also have chosen 20 meter portion(s) to be the reonant circuit to be the driver leaving the capacitor in the 'loop' to modify the radiation pattern to obtain a quasi collinear radiation pattern that varies with the use of a capacitor.
I realise that the concept is difficult to follow and is probably the reason why the concept has not been used for the last twenty odd years. Like most things
that are 'different' sometimes they are so obvious they are overlooked.
May be it would be better to model the antenna that I roughly drew, note how the
quasi collinear is formed with two max current points along its length and go forward from there. Apparently no one has used a antenna computor program to look at the simple wire diagram given because when this is done the 'penny drops'
Any way good job on the analysis. Now how do we explain it to others so all may share.
Best regards
Art KB9MZ

2237. Re: G5RV, coax/ladderline and remote tuner

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-03 15:05:16 UTC
From: W4WNT <w4wnt@carolina.rr.com>
Message-ID: <MiS29.36189$xj6.2168869@twister.southeast.rr.com>
Source record: 137479

An alternative is :

Rig ---> coax jumper---> Tuner --->Coke Bottle Balun---> ladder line--> Antenna

The Coke Bottle Balun is 6-8 loops of coax wrapped around an empty 2 liter bottle of Coke (Pepsi if you prefer) with the ladder line connected to the coax coming off the bottle. I've used it with G5RVs and it keeps the RF out of the shack.

This way you can keep the tuner on your desk where it is reachable.

Good luck,

Bill, W4WNT

"A. Gordon Lyph" <a_g_lyph@hotmail.com> wrote in message news:f8479612.0207300937.7321c204@posting.google.com...
> Hello-
>
> I managed to get a G5RV about 22-24' up in the air a month or so ago
> and it has been working wonderfully. It is currently (no pun
> intended) fed by approximately 80' of Belden 213-type coax, which is
> connected to an Emtech ZM-2 tuner which is connect to the rig by a
> short jumper. So far, so good. Even had some success at QRP during
> the WTRC weekend, using my FT-817.
>
> In planning for the coming cold weather, however, I would like to
> extend the feed into the house. I'm not terribly excited about having
> the tuner at the rig, as I'm concerned about RF on the coax feeder
> running out to the antenna. What I'm considering, and what I would
> like comments on, is the possibility of using a remote antenna tuner,
> say an SGC-239 or LDG RT-11, mounted to the side of the (wooden) shed
> which the ladderline from the G5RV hangs next to. From looking at the
> SGC literature, I can use an 4:1 balun to go between the tuner output
> and the ladder line. So, I would have:
>
> rig -> ~80' RG-213 -> [SGC-239 | RT-11] -> 4:1 balun ->
> ladderline/G5RV
>
> Is this a logical approach or is the remote tuner directly to
> ladderline not advisable? Is the balun necessary? Am I missing
> anything important here?[1]
>
> Assuming this is a logical solution[2], any comments on the SGC vs.
> the RT-11?

>
> Many thanks in advance,
>
> AG
>
> [1] I'm sure I have, be gentle... :)
> [2] Well, even if it's not, I'd still like to hear input on the two
> ATUs

2238. Re: Home Use of J-Pole

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-03 15:06:58 UTC
From: Charles Gallo <Charlie@thegallos.com>
Message-ID: <6ksnku8q1vdvs4nq0mjfhp139djmpmjks0@4ax.com>
Source record: 137480

On Thu, 1 Aug 2002 22:55:11 -0500 (CDT), richardharrison@webtv.net
(Richard Harrison) wrote:
<snip>
>So, a J-pole should have 0dBd gain.
<snip>

Don't you mean a 1 dB gain? It is a ratio

Charlie

--
73
KC2IXE

For the Children - RKBA!

"Arms in the hands of the citizens may be used at individual discretion for
the defense of the country, the overthrow of tyranny or private self defense."
-- John Adams

2239. Re: Computing power from SWR

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-03 15:37:41 UTC
From: cprstn54zz@att.net
Message-ID: <3d4bf5a9.35288734@news-server.optonline.net>
Source record: 137481

On Sat, 03 Aug 2002 08:04:18 -0500, CAM <w5dxp@hotmail.com> wrote:
>The power delivered to the load is forward power minus reflected power.
>If at the input of the tuner you have 10 watts forward and zero watts
>reflected and at the output of the tuner you have 24 watts forward and
>17 watts reflected (assuming those figures are accurate), there is 7 watts
>delivered to the transmission line and the tuner is dissipating 3 watts.
>Subtract your transmission line losses and you will know the power being
>delivered to the antenna.

The light is starting to go on.

Seven watts out of ten I can live with. Maybe that is what the
manufacturer was talking about. At 100 watts into the tuner, or 600
(if I ever get my amp back from Yaesu) I am certainly not in QRP
territory. It is a compromise antenna, but it only cost $150 and I
can't fit anything more capable on my property. BTW, I don't think
this manufacturer is one of the irresponsible ones and most users get
good results with this antenna, although some don't.

What about my other question? WIll putting a ferrite toroid (with say
10 turns of the coax feedline) around 40 ft away from the feed point
quiet the feed line down and improve efficiency? I already have one
at the feedpoint. I say 40 ft. because the feedline radiates a great
deal at 40M also and I would like to use one toroid to kill two birds.
I would just try it but for the fact that it is a hairy job to unpull
and pull my feedline.

Ken KC2JDY.
Ken
(to reply via email
remove "zz" from address)

2240. Re: Antenna suggestion For 30 MHz To About 2 GHz ?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-03 15:41:00 UTC
From: Jim Pennino <jimp@specsol.com>
Message-ID: <aigticdmg2@mail.specsol.com>
Source record: 137482

Fractenna <fractenna@aol.com> wrote:
> You guys are off the wall.

> I don't know anything about any classified stuff. I don't seem to recall
> discussing anything like that.

> The technology to do this type of bandwidth , with performance better than
> mentioned by a Canadian poster, exists, and such antennae exist. They are
> controlled distribution. Hams and SWL's can't get them. Its not a matter of
> whether they should or shouldn't; they simply can't. That's all there is to
> it--with respect to this venue.

> This has nothing to do with anything else you guys mention. How you pose a
> happy, inventive guy as something else is fantastically amusing.
>
> If there is a compelling reason why more factual information is needed, it can
> be discussed off line.

> ..and I believe that has already been said, so let others question your
> motivations. Its quite clear to me.

> 73,
> Chip N1IR

Translation: Chirp has a wonder antenna he won't allow to fall in the
hands of someone who may be critical of it's perfomance.

--
Jim Pennino

2241. Re: FRACTAL ANTENNA DEBATE STATUS

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-03 15:55:17 UTC
From: Jim Pennino <jimp@specsol.com>
Message-ID: <aigud5$h56$1@mail.specsol.com>
Source record: 137483

Fractenna <fractenna@aol.com> wrote:
> Five weeks ago, I requested that Steve Best, VE9SRB, engage in a scholarly
> public debate on the subject of fractal antennas.

> The motivations for said debate are:

> 1) fractal antennas are rapidly becoming a major research interest of the
> professional and academic antenna community;

> 2) Steve Best has made a distinct point, in the last three years, to become an
> assiduous investigator into fractal antennas, indeed it has apparently become a
> dominant topic of his research interests, with well over a dozen public talks
> and publications;

> 3) through his work, Steve Best has posited himself as the key, and I believe
> the only published, criticiser of fractal antenna work, what some would discuss
> as an alleged 'debunker' .

> 4) IF fractal antennas have no value, and the hundreds of publications which
> report research investigations are incorrect, then the antenna community
> ethically requires a clear and timely presentation of the lack of such merits,
> in a way that settles the issue, and removes the facts from their mere
> interpretation (or misinterpretation). In other words, paradigm shifts should
> be resolve one way or the other. Historically, public, scholarly debates have
> accomplished such objectives;

> 5) Steve and I are friends and colleagues and it may be assumed that our
> motivations are purely scientific;

> 6) as founder of the field of fractal element antennas, and as the principle
> researcher and publisher of aspects of the paradigm, I am a logical choice to
> discuss the scientific aspects of fractal antennas and, indeed, Steve's
> periodical citing and public talks confirm this.

> I must report that Steve Best has not responded to my offer to debate, at least
> to my knowledge. I look forward to his response.

> Cordially,

> Nathan 'Chip' Cohen N1IR

Just goes to show the total and utter lack of understanding of science
by Chirp.

Science is not a debate, it is the publication the methods, experiments,
and results such that they may be performed by others to validate them.

Steve Best provided science in his QEX article; Chirp provides rhetoric
in his post.

Such it has been all along with fractal antennas.

--
Jim Pennino

2242. Re: FRACTAL ANTENNA DEBATE STATUS

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-03 15:56:56 UTC
From: dan <danlx@execpc.com>
Message-ID: <3d4bfec9$0$3570$272ea4a1@news.execpc.com>
Source record: 137485

On 03 Aug 2002 11:47:45 GMT, fractenna@aol.com (Fractenna) wrote:

>Five weeks ago, I requested that Steve Best, VE9SRB, engage in a scholarly
>public debate on the subject of fractal antennas.
>
>The motivations for said debate are:
>
>1) fractal antennas are rapidly becoming a major research interest of the
>professional and academic antenna community;
>
>2) Steve Best has made a distinct point, in the last three years, to become an
>assiduous investigator into fractal antennas, indeed it has apparently become a
>dominant topic of his research interests, with well over a dozen public talks
>and publications;
>
>3) through his work, Steve Best has posited himself as the key, and I believe
>the only published, criticiser of fractal antenna work, what some would discuss
>as an alleged 'debunker' .
>
>4) IF fractal antennas have no value, and the hundreds of publications which
>report research investigations are incorrect, then the antenna community
>ethically requires a clear and timely presentation of the lack of such merits,
>in a way that settles the issue, and removes the facts from their mere
>interpretation (or misinterpretation). In other words, paradigm shifts should
>be resolve one way or the other. Historically, public, scholarly debates have
>accomplished such objectives;
>
>5) Steve and I are friends and colleagues and it may be assumed that our
>motivations are purely scientific;
>
>6) as founder of the field of fractal element antennas, and as the principle
>researcher and publisher of aspects of the paradigm, I am a logical choice to
>discuss the scientific aspects of fractal antennas and, indeed, Steve's
>periodical citing and public talks confirm this.
>
>I must report that Steve Best has not responded to my offer to debate, at least
>to my knowledge. I look forward to his response.
>
>Cordially,
>
>Nathan 'Chip' Cohen N1IR
Please see posts in a previous thread for my definition of BUFFOON!!!
Or you can reread the above.

Dan

I've rambled enough, back to the rocking chair. ZZZZZZZZZ
Remove left x for a direct reply.

2243. Re: A TUTORIAL

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-03 16:01:40 UTC
From: aunwin@fgi.net
Message-ID: <c4becf19.0208030801.7c3d6834@posting.google.com>
Source record: 137484

richardharrison@webtv.net (Richard Harrison) wrote in message
news:<1201-3D4B3E90-386@storefull-2394.public.lawson.webtv.net>...
> Art Unwin wrote:
dsnip
must have additional unstated limitations in mind because dipoles
> can be arranged in several ways other than end-to-end to produce gain.
>
> Mattress arrays make a broadside array of dipoles in the same plane. In
> these dipoles are placed parallel to each other as well as end-to-end.
>
> Dipoles can also be placed in front of and behind each other to give
> more gain.
>
> So, collinear is just one of several options to "give more gain than the
> standard dipole".
>
> Art mentions CAM`s feedline length selection plan for antenna matching.
> I suspect Art has an antenna matching plan in mind to compete with the
> CAM system. I gather it is a tuner directly at the antenna feedpoint
> which consist of a tuned circuit employing a low-resistance loop and a
> motor-driven capacitor.
>
> I may be wrong because I get confused by talk of multiple reflectors,
> etc.
>
> If Art would parcel out one problem at a time we might give better
> answers.
>
> Best regards, Richard Harrison, KB5WZI

OOOOPS
what I am descibing is a single wire radiator not an array.

I failed earlier to note " a tuner directly at the feed point"
that is incorrect tho I personally use a balun here because of the
antenna high impedance. The4 capacitor you have reffered to is the
capacitor on the resonant
loop circuit is the one that is used in all loops which provides for
changes in frequency. That capacitor is required so that changes in
the resonant resonant frequency of one resonant circuit can induce a
varing frequency on the
combination of two resonant circuits that I have now melded into one.
The antenna except for the use of the balun is exactly as drawn
earlier.
Why is it that all do not apply one of the many available computor

programs
which consists of about ten lines on the 'wires' portion and let it go
at that
and then list advantages against disadvantages and we can then leave
it to the gurus that have the applical skills of comunication to
explain what is happening and why? This is not directed at you Richard
because I believe that you have already enunciated the salient points
of the antenna. What is now left is to list the advantages verses
disadvantages to see if I have a viable BEST
antenna. I would remind all that most innovations or approaches are a
product of using all available resources to meet an employers needs or
a pre ordained target. This is a way of life for all. One rarely
invents anything on a whim
natural laws in the main part are already known. Whorth while changes
usually
only come around by useing existing sources around which one can
innovate to provide a useable solution. I set a series of advantages
t5hat I wanted from an antenna and used existing resource to obtain
them. I have invented nothing
I have only used existing writings to achieve my requirements which
may well not meet the requirements of others. I am not an antenna
expert I am only a user
of what has been printed previously and subsequently forgotten because
it met my targetted means. Please do not try to make this antenna
complicated it is not,
It is as simple as my drawing. Frankly if Richard combined his
comments in this thread it is as a complete description of my antenna
that supplants all the
confusing descriptions that I have given. Well done.
Art UN win KB9MZ

2244. For sale: JRC NRD-545 & Dressler ARA-60

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-03 16:06:37 UTC
From: nrd545@bluewin.ch
Message-ID: <3d4bff8d$1_3@news.bluewin.ch>
Source record: 137486

For sale:

JRC NRD-545 Shortwave Receiver
Serial Number: above 7000
Voltage: 100/120/220/240V
Condition: fine
Accessories (included): NVA-319 Speaker Unit, AC power cord, DC power cord, RS-232C cable, original box, instruction manual (in English), service manual (in English), inspection card

with

Dressler ARA-60 Active Antenna
Voltage: 220V
Condition: near good (has been in outdoor use for 1 1/2 years)

PRICE: $1300 / Euro 1315.-- (registered shipping to all US/EC destinations
included)

Please inquire by e-mail. Thanks!

With best regards,
Ivan
Switzerland

2245. Re: A TUTORIAL

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-03 16:29:05 UTC
From: nm5k@wt.net
Message-ID: <25eb70d7.0208030829.51ea28fc@posting.google.com>
Source record: 137488

aunwin@fgi.net (Art Unwin KB9MZ) wrote in message
> Please keep looking at the antenna in it's entirety, I need to get rid
> of this load I have imposed on myself. I am concerned that the thread
> may drift away
> or be side tracked to a point that all will lose patience with me. Roy
> gets so many letters, e mails calls e.t.c that call on his generousity
> and his kindness.

Well, I done stepped in it now I guess...I did model the antenna you
are describing.
But with a slight difference...I used a 40 meter dipole instead of a
20m.
I saw a few interesting things about the loopadipole, but overall, I
think my first "off the cuff" remarks about that antenna are proving
to be fairly correc t. " I think anyway.." It is not really working as
you describe. To really describe all the testing I did would take a
few web pages to cover. I tested it on most all bands, 40-10 m.
Lets start with a 40m dipole in free space and note the gain on all
bands 40-10.
40m-2.13 dbi
30m-2.59 dbi
20m-3.67 dbi
17m-5.07 dbi
15m-2.91 dbi
12m-3.73 dbi
10m-3.89 dbi

If you used this antenna in the real world with a low loss feedline
such as ladder line, the antenna would be fairly efficient on all
bands.

Now lets compare the loop-dipole setup.
40m-1.78 dbi ---needed 164 pf to tune on 40m.
30m-1.13 dbi ---needed 76 pf to tune on 30m
20m-1.97 dbi ---needed 36.99 pf to tune on 20m, less on the higher
bands..
17m-2.40 dbi
15m-3.51 dbi with a very low Z input of about 2-3 ohms
10m-2.02 dbi

The only band that the loop-dipole showed a better gain was 15m, and I
think this is deceptive being as the impedance is so low.

As a comparison , the 20m magloop on it's own did -.031 dbi . So the
loopadipole on 20m is an improvement,"20m magloop and a 40m dipole"
but I think it's mostly parasitic gain. The loop seems to do most all

the radiating in that case. I can watch the current on these antennas, and can tell which radiator is doing most of the radiating. So anyway, wasn't a real scientific test, but seems to confirm my earlier guesses. If you have two sources, and one is low Z, and the other is high Z, most of the power will follow the low Z load if you are feeding with low Z coax. Also, I did properly tune the tuning cap on each band to get the best match I could. I found it very picky. I'm fairly sure in the real world, the antenna would be very sharp tuning in regard to the cap. As far as collinear gain, I can see ways you can change the pattern, but when you get to that point in tuning, the input Z is so low that I don't see how you could get much power to the antenna. So as far as collinear gain, using another dipole would be a much better plan. Anyway, you asked someone to model it, and I did it. "I said I would.." It seems to not work as you describe. BTW, I couldn't use Roy's program for this as the demo doesn't have enough segments, and I've been too cheap to order a full working program of EZNEC. I should do that one of these days, as EZNEC has a few advantages I think. So anyway, I ended up using MMANA. One reason was it already had a 20m magloop already made up and ready to go. That made it much easier as I didn't have to design a magloop model from scratch. All I had to do was add a dipole to the loop. I used seperate sources in phase to feed the loop, and the dipole. As far as testing the loop-dipole, the current distribution plots tell a lot. You can tell which element is doing the bulk of radiating. When the dipole shows a hi-z, as it does on 20m, "using a 40m dipole", the loop is doing most of the radiating. And it's not real efficient either. "As I earlier guessed". Of course, if anyone has any problems with my testing methods, I'm all ears...Or should I say, eyes, here on my puter monitor. MK

2246. Re: Confusing Conundrum/Pse email me--my replies keep bouncing!

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-03 16:33:11 UTC
From: SideBand <abNO8SPAMlr@csotbs.org>
Message-ID: <3D4C05C7.5000207@csotbs.org>
Source record: 137487

Yep.. Got it. Thx

73 de AB8LR, Chris

Jerry Oxendine wrote:

> SideBand <abNO8SPAMlr@csotbs.org> wrote in message
> news:3D42C845.1020700@csotbs.org...
>
>>Jerry:
>>
>>Done, but I also got the mail server fixed.. Sorry, I forgot to unfsck the
>>DNS when I hopped ISP's, and it wasn't resolving properly... Got it fixed,
>>so the csotbs.org address should be back up and running just fine...
>>
>>Thanks for plugging away and keeping with it.. Shows your customer service
>>is second to none...
>>
>>73 de AB8LR, Chris
>>
>>Jerry Oxendine wrote:
>>
>>
>>>Email me with a good email--the one you are giving me won't work!
>>>
>>>Jerry
>>>SideBand <abNO8SPAMlr@csotbs.org> wrote in message
>>>news:3D33088B.2000903@csotbs.org...
>>>
>>>
>>>>Here's the deal.. I'm planning on running HF mobile in the truck. The
>>>>problem is twofold here:
>>>>
>>>>1. The truck body is mostly fiberglass, which makes it difficult to find
>>>>
> a
>
>>>>ground.
>>>>2. When a ground is found, it is invariably plagued with noise from the
>>>>fridge and the inverter.. (I know... don't run the fridge and the
>>>>
>>>>
>>>inverter,
>>>
>>>

>>>>right? Well, then my milk goes bad and I can't charge my cellphone.)
>>>>
>>>>So, I'm looking for a solution that will eliminate these problems.
>>>>Isolating the RF ground from the body by setting up a separate
>>>>
>>>>
>>>counterpoise
>>>
>>>
>>>>of some sort seems to be the way to go.. It worked on the 2M set,
>>>>
> anyway..
>
>>>>The problem with that is size...
>>>>
>>>>I'd also thought about dipoling two screwdriver antennas, or a pair of
>>>>hamsticks for each band I'm interested in, but again, the size issue...
>>>>
>>>>Any ideas?
>>>>--
>>>>73 de AB8LR, Chris
>>>>
>>>>http://csotbs.shopiwon.com/ for great deals on computer products.
>>>>
>
> I sent you a direct email. Let me know if you get it!
>
> Jerry
>
>>>>
>>>
>>>
>>
>>--
>>73 de AB8LR, Chris
>>
>>http://csotbs.shopiwon.com/ for great deals on computer products.
>>
>>
>
>
>

--
73 de AB8LR, Chris

http://csotbs.shopiwon.com/ for great deals on computer products.

2247. Re: Cushcraft going out of business?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-03 16:56:13 UTC
From: fractenna@aol.com
Message-ID: <20020803125613.08004.00001141@mb-mk.aol.com>
Source record: 137489

>Steve Best, VE9SRB, is not associated with Cushcraft Corporation.
>
>Steve
>

I was not aware of that. I do wish you the best in whatever the new position is you are pursuing, or will be pursuing. I suspect its not a stretch to say that is the feeling of NG readers.

73,
Chip N1IR

2248. FRACTAL ANTENNA DEBATE QUALIFICATION CHALLENGE

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-03 17:40:14 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <lq1okus2bgvefa1u39mb7a5irfuqlarugm@4ax.com>
Source record: 137490

Dear prospective debate participant,

To qualify to participate you must demonstrate skills in fractal antenna proficiency as demonstrated by your answers to the battery of questions that follow.

All questions apply to a 6th iteration Sierpinski, 5th resonance at 28.41MHz, built from #14 wire, over 48 radials, 0.33wl radius, above Real/High Accuracy, Medium Ground:

1.) how tall is the radiator?

2.) how much wire is required to construct the radiator?

3.) in which direction is the greatest radiation?

4.) what is the bandwidth?

5.) what is its mismatch to 50 Ohms?

6.) what is its performance at 10ï¿½ elevation (any azimuth)?

7.) list the answers above that exceed a 28.41MHz resonant monopole in performance.

8.) list the lower four resonant frequencies.

9.) provide references to all answers above that cite peer reviewed, published literature; the citations must be focused on fractal issues and citations offered must lead to a specific, numeric answer for the battery question being responded to.

ONE correct answer (without citation) is sufficient to indicate a mastery of the topic.

73's
Richard Clark, KB7QHC

2249. Re: Cushcraft going out of business?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-03 18:05:05 UTC
From: k0bg@aol.com
Message-ID: <20020803140505.28458.00001233@mb-cs.aol.com>
Source record: 137491

When Bob Cushman left the business, it started the downward sprial into oblivion. Cushcraft, if it fails as a company, will be yet another example of what happens when your customer service becomes customary lack of service.

2250. Re: FRACTAL ANTENNA DEBATE STATUS

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-03 18:05:33 UTC
From: 'Doc <w5lz@icok.net>
Message-ID: <3D4C1B69.FEB64FBF@icok.net>
Source record: 137492

Frac,
The phrase, "a scholarly public debate", is
an oxymoron. When we consider the source, it
is entirely understandable.
'Doc

2251. Re: Centerfed Dipole With Balun

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-03 18:14:38 UTC
From: 'Doc <w5lz@icok.net>
Message-ID: <3D4C1D8A.3E1E5F88@icok.net>
Source record: 137493

Marvin,
The antenna and feed line as you described will
be very little improvement over a feed line entirely
of coax. Rather than try to make one antenna work
all bands with the extenuating circumstances you have,
I think you would find that using multiple dipoles
fed from the same feed point, using coax feed line,
would probably be an improvement. There would be less
compromise (meaning losses), in the long run.
'Doc

2252. Re: Coaxial Notch Filter

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-03 18:45:20 UTC
From: CW <clinton.magers@attbi.com>
Message-ID: <4xV29.39718$Ru5.14311@rwcrnsc52.ops.asp.att.net>
Source record: 137494

Apparently, you were they guy they were thinking of went they started
putting warning labels on gun barrels.
<n7ws_at_yahoo.com (Wes)> wrote in message
news:3d4b2711.17928284@news.triconet.org...
> On Fri, 02 Aug 2002 23:57:56 GMT, "CW" <clinton.magers@attbi.com>
> wrote:
>
> |Did you read the header? Didn't you deduce that he was talking about the
> |subject line? Pretty obvious, I thought.
>
> Of course I read the header. Despite what you and Chirp think, the
> question was not "well-posed" and is more oblivious than obvious.
>
> Suppose we build a coaxial structure by hogging it out of a solid
> block of coin silver?
>
> That certainly meets the subject requirements doesn't it?
>
> Or suppose we so lightly couple into the structure to maintain a high
> Q that the off-resonance attenuation is 30 dB. That meets the subject
> requirements too, doesn't it?
>
> There are an infinite number of ways to implement this and an infinite
> number of answers. 53.271 dB is one of the answers and is as good as
> any other given the stated parameters.
>
> And to think that this query was from a guy that proposes to sell crap
> to the military.
>
> |--
> |
> |CW
> |KC7NOD
> |

2253. Re: A TUTORIAL

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-03 19:18:19 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <tgaoku08e99o077uptuek4qmn581t4ul2e@4ax.com>
Source record: 137495

On 3 Aug 2002 09:29:05 -0700, nm5k@wt.net (Mark Keith) wrote:

> I tested it on most all bands, 40-10 m.
>Lets start with a 40m dipole in free space and note the gain on all
>bands 40-10.
>40m-2.13 dbi
>30m-2.59 dbi
>20m-3.67 dbi
>17m-5.07 dbi
>15m-2.91 dbi
>12m-3.73 dbi
>10m-3.89 dbi
>
>If you used this antenna in the real world with a low loss feedline
>such as ladder line, the antenna would be fairly efficient on all
>bands.
>
>Now lets compare the loop-dipole setup.
>40m-1.78 dbi ---needed 164 pf to tune on 40m.
>30m-1.13 dbi ---needed 76 pf to tune on 30m
>20m-1.97 dbi ---needed 36.99 pf to tune on 20m, less on the higher
>bands..
>17m-2.40 dbi
>15m-3.51 dbi with a very low Z input of about 2-3 ohms
>10m-2.02 dbi
>
Hi Mark,

A lot of work indeed. As for a basis of comparison and to answer a
longstanding question of mine: is there more than a dB difference?
40m-down 0.3 dB - no
30m-down 1.4 dB - yes
20m-down 1.7 dB - yes
17m-down 2.6 dB - yes
15m-down 1.6 dB - yes
10m-down 1.8 dB - yes

73's
Richard Clark, KB7QHC

2254. Re: STOP EVERYTHING

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-03 19:52:17 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <3D4C3471.1030809@eznec.com>
Source record: 137496

J. Harvey wrote:
> "Richard Harrison"
>
>>If cable loss is only one db per mile, one million miles
>>of this cable has a path loss of one million db.
>
>
> One million dB - hmmmm... That's 'a lot' - isn't it ?
>
> :-)

When you consider that 280 dB is the ratio of total light output from the Sun to the light output from a two-cell flashlight, yes, that's a LOT. I remember being staggered when I came across an article on transatlantic cables where the total attenuation was, as I recall, in the tens of thousands of dB. Took me a while to believe it was true, but it is. As a ratio, it's impossible for me to comprehend. It's possible to get a signal from one end to the other in the face of this mind-boggling attenuation by putting amplifiers of sufficient gain and noise figure at frequent enough intervals along the cable.

The reason that path loss and cable loss calculations are different is that path loss isn't really loss. That is, the calculation assumes that nothing is really dissipated -- all it calculates is the thinning of the field as it expands with distance. Cable loss, on the other hand, is real loss, and it adds up quickly as Richard pointed out.

Roy Lewallen, W7EL

2255. Re: A TUTORIAL

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-03 20:00:59 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <3D4C367B.4010406@eznec.com>
Source record: 137497

Unless you can rotate the antenna, gain doesn't mean much unless it just happens to be in the direction(s) you want. I could care less how much "gain" an antenna has if that gain is in any other direction that the one I'm using to communicate at the moment. What I regard as a good feature of a trapped dipole is that the pattern is essentially the same on all bands. I can point the antenna at the directions of interest, and it'll be effective to those regions on all bands. So what kind of pattern does Art's antenna have? Is it essentially the same on all bands like a trapped dipole, or does it split into multiple lobes on higher frequencies like the plain dipole?

Roy Lewallen, W7EL

2256. Re: Home Use of J-Pole

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-03 20:05:43 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <3D4C3797.8060309@eznec.com>
Source record: 137498

If two antennas have the same gain, the relative gain is 1. For power, dB = 10 * log(ratio). 10 * log(1) = 10 * 0 = 0. So a relative gain (ratio) of 1 is 0 dB.

Roy Lewallen, W7EL

Charles Gallo wrote:
> On Thu, 1 Aug 2002 22:55:11 -0500 (CDT), richardharrison@webtv.net
> (Richard Harrison) wrote:
> <snip>
>
>>So, a J-pole should have 0dBd gain.
>
> <snip>
>
> Don't you mean a 1 dB gain? It is a ratio
>
> Charlie

2257. Re: Anyone Using STEPPIR Yagi

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-03 21:09:38 UTC
From: miket@jake.cybatek.co.uk
Message-ID: <aihgqiomr1@newsg4.svr.pol.co.uk>
Source record: 137499

Hi !

Did you buy it from Vine or direct from the USA ?
Just had major ranglings and insults from Vine trying to get
a sensible price ...

Finally got the US manufacturer to agree to supply me direct ...
Now waiting for shipping costs ...

Would be interested to hear from anyone who is using one of these in the UK!

Cheers!

MikeT ...
M0AWS

In article <ujb3g3hjqulv82@corp.supernews.com>,
"H. Adam Stevens" <solo@totalaccess.net> writes:
> Not up yet, but the assembly is going well.
> Everything fits.
> It was this or a log periodic.
> H.
> NQ5H
>
> "John Seney" <wd1v@amsat.org> wrote in message
> news:wd1v-F4C8B7.22320416072002@netnews.attbi.com...
>> The design is cool - curious to hear from someone with
>> real on-the-air experiences.
>>
>> JS
>> Scope FAQ at http://www.qsl.net/wd1v
>>
>>
>
>

2258. Re: Centerfed Dipole With Balun

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-03 21:41:58 UTC
From: Michel Morin <morin.michel@csdgs.qc.ca.nospam>
Message-ID: <3d4c4e25_1@news.cybersurf.net>
Source record: 137500

Marvin

As for myself, I use four (4) dipoles in parallel fed by coax through a 1 to 1 balun. They are cut for 10, 20, 40 and 80 meters and I had some trimming to do. This setup is up at about 25 feet in the center because I can't go any higher for now. With my Kenwood TS-570S, all HF amateur bands except 160 meters can be tuned with the auto tuner including 6 meters. If you need more information, use me email and remove ".nospam" at the end. Take care.

73 de VE2CJW
Michel Morin.

2259. Re: Computing power from SWR

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-03 21:51:00 UTC
From: Owen Duffy <owen@oda.com.au>
Message-ID: <3D4C5044.129F7CF6@oda.com.au>
Source record: 137501

Ken wrote:

> Seven watts out of ten I can live with. Maybe that is what the

Antenna tuners are not perfect, and at high transformation ratios, you might expect efficiencies well below 90%, indeed 75% might be quite realistic from commercial ham products. (You generally can't look the efficiency up in a specification, antenna tuner manufacturers revel in the fact that it is difficult to produce a specification scheme that allows simple expression of the efficiency characteristics of a tuner that would allow apples with apples comparisions with competitive products.)

If you use a 600W PEP transmitter, and your tuner was 75% efficient, you will lose 150W PEP in the tuner, leaving 450W to the transmission line / antenna system. (I didn't say you were dissipating 150W in the tuner, the average power of an SSB transmitter under uncompressed speech modulation is probably about 13dB below PEP, so the dissipation might be around 7W.)

If your VSWR is 12 and you are using 100ft of RG-8/X at 3.6MHz, you are loosing 75% of the power in transmission line losses. Your 450W PEP is now 113W PEP at the antenna terminals.

Somehow, I am getting the message that this isn't what concerns you, but rather you are concerned with stray RF in the shack probably energy flowing into the shack on the outer of the feedline, and hence your determination to use a toroid somewhere.

RF in the shack might be a further symptom, but is not the primary problem.

I would be concerned with the overall efficiency of your tuner / feedline / antenna system and fix that first, then if necessary, address any issues with RF in the shack. You should be able to achieve tuner / feedline efficiency better than 60% without too much difficulty.

These are complex configurations, and there will be interaction between the sub-systems, but attacking the symptoms rather than the cause will not lead to quick and effective remediation.

Focus on the antenna and get its feedpoint impedance to a realistic value to feed with a long run of coax. The VSWR at your antenna terminals is huge (~50), and is not conducive to efficient operation of 100ft of RG-8/X.

If you can't get the VSWR on the coax below say, 3, you should think of better cable. For 100 ft at 3.6 MHz, RG-8/X with VSWR=5 has about the same loss (~0.9dB) as 9913 with VSWR=8.

Owen

2260. Re: Computing power from SWR

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-03 22:01:16 UTC
From: CAM <w5dxp@hotmail.com>
Message-ID: <3D4C52AC.E1252BE@hotmail.com>
Source record: 137502

":-) Bill" wrote:
> First off, a cheapo Radio Shack meter (and many others) are simply
> reading rectified voltage...both forward or reflected. You can take
> Ohms Law and easily enough calculate watts as long as the impedance is
> staying at a known value....that which the device is optimized for. Its
> not a wattmeter, its a voltmeter and there's a big difference. Log10 vs
> Log20 for starters.
> But throw in any amount of mismatch and the whole computation goes to
> heck because you don't know the Z to plug into the calculation. Neither
> does the meter.

Most commercial SWR meters assume Z0=50 ohms and report accordingly.
Since the RS SWR meter is in a 50 ohm environment, there's no reason
to suspect the readings are grossly inaccurate. Vectorally adding a
calibrated sensed voltage in phase with the main voltage to a calibrated
sensed voltage in phase with the main current yields a voltage proportional
to forward power, i.e. the reflected energy is phased out of the measurement
assuming the calibration boundary conditions are met. Anyone who has
waded through the vector math associated with a wattmeter has been rewarded
with an understanding of the required boundary conditions and the accuracy
of the instrument. This applies to cheap RS SWR/power meters as well as
Bird wattmeters.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
------== Over 80,000 Newsgroups - 16 Different Servers! =-----

2261. Re: Cushcraft going out of business?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-03 22:04:55 UTC
From: fractenna@aol.com
Message-ID: <20020803180455.01254.00001324@mb-cr.aol.com>
Source record: 137503

>When Bob Cushman left the business, it started the downward sprial into
>oblivion. Cushcraft, if it fails as a company, will be yet another example of
>what happens when your customer service becomes customary lack of service.
>

I think this is unfair.

Cushcraft is obviously aware of the issues and solves them. From time to time we all see these gripes on this NG, and as best as I can tell, all of them get resolved. So why is it a 'downhill spiral'?

The fact is that its hard to be in business selling ham radio antennas, or anything else to hams for that matter. I suspect the margins on ham antennas are VERY low and has gone down--not up-- in the last twenty years. Most OEM's would answer that challenge by going offshore. Obviously Cushcraft is an American company which , I presume, takes pride in being an American OEM.

I just looked at their news page and they make a comment on defining a new focus on wireless devices, if I read that correctly. One would hope, for the sake of needy hams, that they don't chuck the ham antenna business. I see no indication of that, mind you, but its a tough road out there selling to a smaller--and aging-- ham audience.

If one of the remaining ham antenna companies moves on to other markets, many, many hams will be scrambling for alternatives.

Not good for the ham community.

Just my opinions, take them or leave them as you wish.

73,
Chip N1IR

2262. Re: Fractal Antenna Debate?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-03 22:20:38 UTC
From: "W.G Ewald" <wgewald@att.net>
Message-ID: <u2bokusrc2m3tqk86q7kig2tb9sprpd77n@4ax.com>
Source record: 137504

On Sat, 03 Aug 2002 10:56:56 -0500, dan <danlx@execpc.com> wrote:

>On 03 Aug 2002 11:47:45 GMT, fractenna@aol.com (Fractenna) wrote:
>
>>Five weeks ago, I requested that Steve Best, VE9SRB, engage in a scholarly
>>public debate on the subject of fractal antennas.
>>
>>The motivations for said debate are:
>>
>>1) fractal antennas are rapidly becoming a major research interest of the
>>professional and academic antenna community;
>>
>>2) Steve Best has made a distinct point, in the last three years, to become an
>>assiduous investigator into fractal antennas, indeed it has apparently become a
>>dominant topic of his research interests, with well over a dozen public talks
>>and publications;
>>
>>3) through his work, Steve Best has posited himself as the key, and I believe
>>the only published, criticiser of fractal antenna work, what some would discuss
>>as an alleged 'debunker' .
>>
>>4) IF fractal antennas have no value, and the hundreds of publications which
>>report research investigations are incorrect, then the antenna community
>>ethically requires a clear and timely presentation of the lack of such merits,
>>in a way that settles the issue, and removes the facts from their mere
>>interpretation (or misinterpretation). In other words, paradigm shifts should
>>be resolve one way or the other. Historically, public, scholarly debates have
>>accomplished such objectives;
>>
>>5) Steve and I are friends and colleagues and it may be assumed that our
>>motivations are purely scientific;
>>
>>6) as founder of the field of fractal element antennas, and as the principle
>>researcher and publisher of aspects of the paradigm, I am a logical choice to
>>discuss the scientific aspects of fractal antennas and, indeed, Steve's
>>periodical citing and public talks confirm this.
>>
>>I must report that Steve Best has not responded to my offer to debate, at least
>>to my knowledge. I look forward to his response.
>>
>>Cordially,
>>
>>Nathan 'Chip' Cohen N1IR

>Please see posts in a previous thread for my definition of BUFFOON!!!
>Or you can reread the above.
>
>Dan

Cohen has a certain cunning. If Steve did agree to the debate, he would at least imply that he accepted Cohen's "conditions" above.

Are any of them valid? Each has at least one element of untruth.

Cohen is a liar; who could benefit from debating a liar?

This is yet another ploy to get attention, from the happy and inventive Chirp.

2263. Re: Computing power from SWR

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-03 22:23:39 UTC
From: CAM <w5dxp@hotmail.com>
Message-ID: <3D4C57EB.9B389B3C@hotmail.com>
Source record: 137505

Ken wrote:
> Seven watts out of ten I can live with. Maybe that is what the
> manufacturer was talking about.

But remember, that's into the transmission line. Someone else calculated a transmission line loss of 6dB so you are getting only 1.75 watts to the antenna if that figure is correct. In other words, the efficiency on that band appears to be about 25% neglecting tuner losses. Is 25% efficiency good or bad? Well, that's pretty good for a 40m mobile antenna. Only you can decide if that's good enough for your present application.

> What about my other question? WIll putting a ferrite toroid (with say
> 10 turns of the coax feedline) around 40 ft away from the feed point
> quiet the feed line down and improve efficiency?

It will probably help but you will probably not be able to tell the difference except maybe for a reduction of "RF in the shack". The basic problem is the high SWR on the coax and it seems to have been designed that way. Take a look at my web page for an efficient solution to an all-HF-band dipole.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
------== Over 80,000 Newsgroups - 16 Different Servers! =-----

2264. Angled Elements for a Yagi?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-03 22:58:37 UTC
From: David McDaniel <david@mcdaniel.net>
Message-ID: <3d4c6019$0$19640$4c41069e@reader1.ash.ops.us.uu.net>
Source record: 137506

Hi, TV antenna makers have used yagis with elements angled forward to increase gain in their VHF antennas for a long time. Has anyone heard of Hams trying the same thing? Seems that aside from structual support issues the idea has some merit. Am I missing something? Thanks,
David

2265. Re: Home Use of J-Pole

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-03 23:21:16 UTC
From: Charles Gallo <Charlie@thegallos.com>
Message-ID: <ufpokusu75solcanra052nnr7q03190bnq@4ax.com>
Source record: 137508

On Sat, 03 Aug 2002 13:05:43 -0700, Roy Lewallen <w7el@eznec.com>
wrote:

<snip>
> So a relative gain
>(ratio) of 1 is 0 dB.
<snip>

Yep, your right - brain fart on my part

Charlie

--
73
KC2IXE

For the Children - RKBA!

"To preserve liberty, it is essential that the whole body of people always possess arms,
and be taught alike, especially when young, how to use them..."
-- Richard Henry Lee, 1787

2266. Antenna basics

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-03 23:23:26 UTC
From: "David D." <daviddiamond@comcast.net>
Message-ID: <aihoh0$14aouo$1@ID-128035.news.dfncis.de>
Source record: 137507

What is a good starter resource for antenna theory for someone starting from scratch, with no prior background?

- David

2267. Re: Angled Elements for a Yagi?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-03 23:25:09 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <3D4C6655.9070904@eznec.com>
Source record: 137509

What this does is to align the lobes at the frequency where the element is about 3/2 wavelengths long, changing the pattern from the 4 lobed pattern of a straight 3/2 wavelength dipole to a two lobed (bidirectional) pattern. This is the shortest practical "V beam", which you'll find described in various handbooks. If you take, say, a 40 meter dipole and bend the legs 30 degrees each, you'll have a very nice bidirectional antenna for 15 meters, and it won't have much of an effect on the pattern at 40 meters. I've done this, and had quite an effective antenna for Europe on 15 as a result, along with a decent 40 meter antenna. It's done with TV antennas because one group of VHF channels is in a frequency range that's about 3 times the frequency of another group of channels. So by bending the elements the beam is effective for both groups.

I wouldn't expect the technique to do much for you except on bands that are related by an odd frequency ratio (3, 5, etc.). And then, it would be tricky to come up with element spacings that would give satisfactory performance on both bands. The criteria for a decent TV antenna are somewhat different than for an amateur transmitting beam. It might be possible, though, to come up with a workable design.

You might use the technique to get additional gain on a single band, by optimizing the beam with 3/2 wavelength elements. But it might be more beneficial to simply use 1/2 wave elements and more of them instead. There were some articles some years ago (in Ham Radio if I recall correctly) describing Yagis with strangely shaped elements of unusual length in order to optimize performance. It never caught on, though, probably because of the difficulty in constructing them.

Roy Lewallen, W7EL

David McDaniel wrote:
> Hi, TV antenna makers have used yagis with elements angled forward to
> increase gain in their VHF antennas for a long time. Has anyone heard of
> Hams trying the same thing? Seems that aside from structual support issues
> the idea has some merit. Am I missing something? Thanks,
> David
>
>

2268. SWL Antenna help PLES!

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-03 23:49:18 UTC
From: jkporter2000@yahoo.com
Message-ID: <925F88C14jkporterhawaiirrcom@66.75.162.198>
Source record: 137510

I have a Sangean AST909 minus the back batery cover (lost it some place)
no big deal! Any way it has an Antenna jack on the side of it and I was
thinking of putting together an antenna that is about 30 to 50' long (
coper wire) and have it rolled up like kite string so that I can toss it
over tree branches or string it up in other ways for much better solutions.
Any one have any better ideas?
Thanks and I am all "ears" here!

2269. Re: Cushcraft going out of business?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-04 00:01:16 UTC
From: RaOuL <russ@bit-net.nospam.com>
Message-ID: <V8_29.1161$_T4.94168@news.bit-net.com>
Source record: 137511

Not good for me either! As a ham who lives about 10 miles from Cushcraft's Manchester, NH headquarters and as a ham who works in the RF equipment manufacturing industry I have always considered Cushcraft as a potential employer if my current gig should come to an end. It would be a shame to see them change their manufacturing focus or move operations offshore.

I wonder if they offer an employee discount program.....

73,
Russ KB1GKN

--SNIP--
> If one of the remaining ham antenna companies moves on to other markets,
many,
> many hams will be scrambling for alternatives.
>
> Not good for the ham community.
>
> Just my opinions, take them or leave them as you wish.
>
> 73,
> Chip N1IR

2270. Re: FRACTAL ANTENNA DEBATE STATUS

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-04 00:26:55 UTC
From: fractenna@aol.com
Message-ID: <20020803202655.08554.00001005@mb-fx.aol.com>
Source record: 137512

>YOU must prove that your fractacal antennas have any value,
>not the other way round.
>

Done. That's what the 'science project' stage of 1988-1999 was all about:-)

>You pretend to be a Doktor, you should be ashamed to ignore
>such basics rule

Nothing pretend about it. And I have nothing to be ashamed of.

73,
Chip N1IR

2271. Re: Angled Elements for a Yagi?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-04 00:29:41 UTC
From: fractenna@aol.com
Message-ID: <20020803202941.08554.00001006@mb-fx.aol.com>
Source record: 137513

>
>Hi, TV antenna makers have used yagis with elements angled forward to
>increase gain in their VHF antennas for a long time. Has anyone heard of
>Hams trying the same thing? Seems that aside from structual support issues
>the idea has some merit. Am I missing something? Thanks,
>David
>

Hi David,

This is the simplest way to shape elements, and affords about a 1-1.5 dB addition of gain. It is impractical on HF trapped beams because of the shear it adds to the clamps. You can DO it, but its more expensive mechanically and less robust.

TV antennas are, of course, smaller, and have much shorter, lighter, and thinner tubed elements.

73,
Chip N1IR

2272. Re: Solarcon A99

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-04 00:32:19 UTC
From: mharris3 <mharris3@peoplepc.com>
Message-ID: <ukotgs3fpnr410@corp.supernews.com>
Source record: 137514

I have made 150 DXCC contacts (confirmed) on 10M with this antenna w/
radials. The time period was 18 months.
I use it for 10 - 12 meters only. I use a G5RV for 15 - 80 meters.

Mark KC8IDF

"Thorvald." <thorvald@arendal.online.no> wrote in message
news:8Eu19.4177$sR2.74145@news4.ulv.nextra.no...
> Anyone with experiences with this antenna ?
>
> T.
>
>

2273. Re: 160m antenna??

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-04 00:34:44 UTC
From: N4LQ <N4LQ@igLou.com>
Message-ID: <3d4b2502$1_1@news.iglou.com>
Source record: 137546

I would assume the 250 ft wire would do much better than your 80m dipole.
Get some wire at Home Depot and give it a try.

--
Steve Ellington N4LQ.
"StarGazer" <pti@capnet.com> wrote in message
news:3D4ABB02.71124573@capnet.com...
> Would running a 250' insulated wire all over trees... going here and
> there at different angles work better than my 80 m dipole on 160 m?
>
> The 80 m dipole is at 22' and that is about as high as I could get the
> wire.
>

2274. Re: FRACTAL ANTENNA DEBATE STATUS

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-04 00:46:58 UTC
From: Jim Pennino <jimp@specsol.com>
Message-ID: <aihti2fim2@mail.specsol.com>
Source record: 137515

Fractenna <fractenna@aol.com> wrote:
>>YOU must prove that your fractacal antennas have any value,
>>not the other way round.
>>

> Done. That's what the 'science project' stage of 1988-1999 was all about:-)

>>You pretend to be a Doktor, you should be ashamed to ignore
>>such basics rule

> Nothing pretend about it. And I have nothing to be ashamed of.

> 73,
> Chip N1IR

I must have missed those peer reviewed published results of your
"science project"...

--
Jim Pennino

2275. "W5QJR antenna"

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-04 00:57:23 UTC
From: Fredrik Olofsson <574olofsson@telia.com>
Message-ID: <TZ_29.2151$HY3.671211@newsc.telia.net>
Source record: 137516

http://www.antennex.com/preview/New/w5qjr2.htm

What is the verdict?

2276. Re: FRACTAL ANTENNA DEBATE QUALIFICATION CHALLENGE

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-04 01:09:36 UTC
From: "J. Harvey" <JM002.Harvey_ANTI*SPAM_@Sympatico.ca>
Message-ID: <k9%29.9326$672.2017747@news20.bellglobal.com>
Source record: 137517

"Richard Clark"
> 7.) list the answers above that exceed a 28.41MHz resonant
> monopole in performance.
> ONE correct answer (without citation) is sufficient to indicate
> a mastery of the topic.

7) None of the above.

(I'm guessing.)

2277. Re: FRACTAL ANTENNA DEBATE STATUS

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-04 01:17:02 UTC
From: "J. Harvey" <JM002.Harvey_ANTI*SPAM_@Sympatico.ca>
Message-ID: <hg%29.9342$672.2018822@news20.bellglobal.com>
Source record: 137518

> >You pretend to be a Doktor...

"Fractenna"
> Nothing pretend about it.

Still looking at Uranus ?

2278. Re: "W5QJR antenna"

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-04 02:37:05 UTC
From: k1bqt@aol.com
Message-ID: <20020803223705.20597.00000902@mb-mn.aol.com>
Source record: 137419

Looks like a bent monopole and it's performance is likely fairly dependent on the integrity of the ground system underneath it. I wouldn't buy into the H/V component stuff too much--the highest current levels will occur in the vertical portion of the radiator. Nothing magic at all in this configuration--it's a top-loaded monopole.

Rick K1BQT

2279. Ouch! Bent antennas after severe storms in NJ!

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-04 03:04:00 UTC
From: vhfradiobuff@aol.comspamsux
Message-ID: <20020803230400.10061.00001549@mb-cj.aol.com>
Source record: 137420

Well, I was out last night and we had some terrible storms here in NJ. I woke up this morning, went outside and saw that winds had actually bent my 6m vertical in half and bent the reflector on my 6m yagi into an upside down V shape. I tested them out on the air and was able to tune them to almost 1:1 SWR! Tested the 6m vertical on a local 6m repeater and I'm getting into them! I've gotta get up on the roof and see if I can straighten them out now! What a mess!

=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-

73! de Andy KC2SSB (ex: KF4KHC/HL9HCT)
Beachwood, NJ USA! Grid FM29vw
http://vhfradiobuff.tripod.com

2280. Unknown Quad

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-04 03:18:48 UTC
From: Raymond Hansmeier <rhansmeier@attbi.com>
Message-ID: <q2139.242110$Wt3.231061@rwcrnsc53>
Source record: 137421

I was given a 4 element cubical quad last night by a good old ham buddies of mine. It was a commercial antenna. The condition is excellent but I was wondering if anyone had the manual associated with its manufacture. The only identifying mark is on the boom to mast clamp. "Kirk" ....The only thing I have found associated with the name "Kirk" and quads is an article back in ARRL archives about an antenna by Sky Lane Products with a reference to "Kirk" The fiberglass arms are 9 feet in length and the hubs are beautifully manufactured out of aluminum (cast) The boom is 2" OD.

So anyone remember this antenna? The article was a review in Nov of 75 Qst. If anyone has that and could see if it is on a 4 element 2 band quad. I believe 10/15 meters. Feed with quarterwave matching sections of RG-11. I have not measured them yet, but I am sure it was for 10 and 15....any help would be appreciated greatly.

TIA

K7FU

2281. Re: white coax?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-04 03:22:33 UTC
From: Erich <oetting@qwest.net>
Message-ID: <oetting-6A8C0D.21223303082002@news.uswest.net>
Source record: 137422

In article <LV4%8.5757$C44.1802313@news2.news.adelphia.net>,
"Mark E. Sunderlin \(Dr. Megabyte\)" <megabyte@adelphia.net> wrote:

> Looking to make my lead in less visible against my white house, does anyone
> make coax with the outer shield white rather than black?

Belden makes a white version of RG-8x.

Radio Shack's online store <http://www.radioshack.com/> carries it as
part number 910-1581 for 29 cents/ft.

... Erich (KI0SK)

2282. Re: FA: 30' Crank Up Military Antenna Mast

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-04 03:29:49 UTC
From: vhfradiobuff@aol.comspamsux
Message-ID: <20020803232949.10061.00001559@mb-cj.aol.com>
Source record: 137424

>1 unit on eBay for auction, several available.
>
>http://cgi.ebay.com/ws/eBayISAPI.dll?ViewItem&item=2041623838

More like: http://cgi.ebay.com/ws/eBayISAPI.dll?ViewItem&item=1370693706
=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-
73! de Andy KC2SSB (ex: KF4KHC/HL9HCT)
Beachwood, NJ USA! Grid FM29vw
http://vhfradiobuff.tripod.com

2283. Re: A TUTORIAL

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-04 03:29:55 UTC
From: nm5k@wt.net
Message-ID: <25eb70d7.0208031929.65b5dd2e@posting.google.com>
Source record: 137423

Roy Lewallen <w7el@eznec.com> wrote in message So what kind of
> pattern does Art's antenna have? Is it essentially the same on all bands
> like a trapped dipole, or does it split into multiple lobes on higher
> frequencies like the plain dipole?

The pattern of the one I tried was fairly omnidirectional on most bands. Mostly like a distorted magloop, except on 40 and 15m. 15 meters had some pretty strange lobes, but I think that is due to the 40m dipole being resonant as a 3/4 wave on 15m and having a greater effect than say 17 or 12 or 10 meters. The main point of my test was not really to compare gains, but to show that when you have two elements, one a low Z, and one a hi Z, and you are feeding with low Z coax, that the hi-z element will not accept too much power, and basically be ignored. "Same as if running parallel 40/20 dipoles with a single 52 ohm coax". That scenario would occur if you were using Art's antenna on 20m. "40m dipole with a square magloop 1 meter long per side tuned with a 36 pf cap. As far as I can tell, the loop is accepting the bulk of the power. The magloop is in the center of the dipole, right next to it. As far as I can tell, this is the description Art gave for the antenna. Now, if you could feed the magloop and the dipole with each having it's own autotuner at each antenna, it would be a different story I would think. They should equally split the power from the rig. But I don't see any reason or real advantage to doing that over the single dipole with the autotuner. If I wanted to run two antennas and change the phasing to steer, I'd rather use a second dipole, not a small loop as a second antenna. To my way of thinking, adding a small fairly inefficient antenna in parallel with a fairly efficient antenna will always result in a loss of overall efficiency. Say as in connecting a dummy load in parallel with a tuned dipole at the feedpoint. I would think your signal would drop by appx 3 db if both were equal 50 ohm loads. Am I making an error here? :/ I don't want to lead any astray with any self induced bafflegab I might come up with... MK

2284. Re: Ouch! Bent antennas after severe storms in NJ!

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-04 03:34:20 UTC
From: w9gb <gregory.beat@attbi.com>
Message-ID: <0h139.42750$Ru5.16508@rwcrnsc52.ops.asp.att.net>
Source record: 137425

Yes,

I was on telephone with old friend in Tinton Falls, NJ when the storm front hit ... he lost power and his computer systems in basement was then on battery ... ended call ... since he had to go through controlled shut down !

w9gb

"VHFRadioBuff" <vhfradiobuff@aol.comspamsux> wrote in message news:20020803230400.10061.00001549@mb-cj.aol.com...
> Well, I was out last night and we had some terrible storms here in NJ. I woke
> up this morning, went outside and saw that winds had actually bent my 6m
> vertical in half and bent the reflector on my 6m yagi into an upside down V
> shape. I tested them out on the air and was able to tune them to almost 1:1
> SWR! Tested the 6m vertical on a local 6m repeater and I'm getting into them!
> I've gotta get up on the roof and see if I can straighten them out now! What a
> mess!
> =-
> 73! de Andy KC2SSB (ex: KF4KHC/HL9HCT)
> Beachwood, NJ USA! Grid FM29vw
> http://vhfradiobuff.tripod.com

2285. Re: Home Use of J-Pole

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-04 03:35:55 UTC
From: richardharrison@webtv.net
Message-ID: <16021-3D4CA11B-204@storefull-2391.public.lawson.webtv.net>
Source record: 137427

Charlie Gallo wrote:
"Don`t you mean 1 dB gain? It is a ratio."

Indeed the power ratio has a value of one. That`s why the dB value is zero. Plus 1 dB is a gain. Minus 1 dB is a loss. Zero dB is the same power in and out, that is, zero gain and zero loss.

Roy Lewallen, W7EL already hit the nail on the head. The ratio of two equals is one. But dB`s are logarithmic, using a base of 10.

I am only replying to share a memory aid which works for me. I just remember to start with the value of an exponent.

The logarithm of a number is the power or exponent that the base, a fixed number, (in decibels it`s 10), must be raised to so that the result is a desired number called the antilogarithm.

Why the complication? So we can add and subtract instead of multiplying and dividing. Also, so we can multiply and divide by exponents instead of raising to powers and exttracting roots. It really is simpler.

In our example, the power ratio is one. The first question is: What power does the base 10 have to be raised to, to equal an antilogarithm of 1.00, the value of our power ratio. Our case is especially easy because it so happens that any number raised to the zero power has a value of one (1.00).

No need to worry in this special case about 10x or 20x for power or voltage ratios. Either value multiplied by zero equals zero.

Best regards, Richard Harrison, KB5WZI

2286. Re: Angled Elements for a Yagi?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-04 03:43:39 UTC
From: Roger Leone <arleone@inreach.com>
Message-ID: <uq139.878$hA2.69568571@news.inreach.com>
Source record: 137426

David:

The ARRL Antenna Compendiums, Vol 1 and 2 both have log periodic designs with elements angled forward. I think I have seen others but can't find the references right now.

73,

Roger K6XQ

2287. Re: A TUTORIAL

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-04 04:02:45 UTC
From: aunwin@fgi.net
Message-ID: <c4becf19.0208032002.6d3535d@posting.google.com>
Source record: 137428

nm5k@wt.net (Mark Keith) wrote in message
news:<25eb70d7.0208030829.51ea28fc@posting.google.com>...
> aunwin@fgi.net (Art Unwin KB9MZ) wrote in message
> > Please keep looking at the antenna in it's entirety, I need to get rid
> > of this load I have imposed on myself. I am concerned that the thread
> > may drift away
> > or be side tracked to a point that all will lose patience with me. Roy
> > gets so many letters, e mails calls e.t.c that call on his generousity
> > and his kindness.
>
> Well, I done stepped in it now I guess...I did model the antenna you
> are describing.
> But with a slight difference...I used a 40 meter dipole instead of a
> 20m.
Snip.

For goodness sakes why ? I stated a 20 meter dipole. Let's confirm the
viability
of what I described first before you decide on
adding.....'improvements' !

> I saw a few interesting things about the loopadipole, but overall, I
> think my first "off the cuff" remarks about that antenna are proving
> to be fairly correc t. " I think anyway.." It is not really working as
> you describe. To really describe all the testing I did would take a
> few web pages to cover. I tested it on most all bands, 40-10 m.
snip> such as ladder line, the antenna would be fairly efficient on
all
> bands.
>
> Now lets compare the loop-dipole setup.
sting methods, I'm all ears...Or should I say, eyes, here on my
> puter monitor. MK

I don't think your aproach is quite fair, you have made changes.
As Roy stated, an antenna with directivity is some what lacking if it
cannot be rotated and I fully agree, rotateability is a very
important requirement in my search on this antenna. Just do as I said
earlier using a 20 meter dipole
as one resonator, add a parallel circuit to it which includes a
variable capacitor (minimum 10-40 Pico as with the normal loop
antenna.) This parallel circuit will be around 40-50 inches either
side of the center with say 6-12 inches distance spacing but connected
to the main 20 meter dipole. For starters use a horizontal dipole
length of around 200 inches aside.

I really did not want to have elements longer than this because of ROTATION requirements and so this became my maximum 'airspace' for this antenna.
Method of feeding the antenna can be of your choice and again for starters you can use the connecting two junctions of the parallel circuit for your choice of best feed methods.
All impedances at the feed point which I assumed would be a gamma match
MUST be 50 ohms or above which was another one of my requirements. You can choose 200 ohms so any analysis will not introduce a 'apples and oranges' argument. At no time in the range of 20 thru 10 Mhz must the pattern deviate from a the normal dipole figure 8 pattern or provide LESS gain,
again a major requirement of mine.
So if you are getting impedances below that figure (50 ohms) it would not meet my requirements as it tends to affect efficiency, my last requirement.

PLEASE, do not introduce differences to my original drawing as that solicits
free rein to many who wish for failure. Again, use the dimension for starters
and it will put you in the ballpark from which you can make minor corrections
to maximise gains , efficiency and a common impedance value at the comb antenna feed point. There is nothing missing in the above description and to standardise
I would suggest you stick to a 1 inch dia design of the members because it has to be rotatable and survive the inclement weather(ice included) we have in Central Illinois. If in doubt you are welcome to send private E mail except by doing that you omit infomation from others.For a final point the only moving part is the variable capacitor shown tho a balanced to unbalance balun can be used with a suitable ratio so that the impedace can be brought down to the standard 50 ohm coax. If the programs you have allowes for capacitor impedance
this is a real plus as you can plug in a figure 200 or above instead of playing with literal capacitance values.
Have a great week end

Art Unwin KB9MZ

2288. Re: FRACTAL ANTENNA DEBATE STATUS

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-04 04:09:40 UTC
From: nm5k@wt.net
Message-ID: <25eb70d7.0208032009.68308600@posting.google.com>
Source record: 137429

fractenna@aol.com (Fractenna) wrote in message
> I must report that Steve Best has not responded to my offer to debate, at least
> to my knowledge. I look forward to his response.

Why must you report this? Is there any good reason? Like we really
care...
But anyway, I suspect he's probably busy. A $1000 check might boost
his energy level a bit...He may be fed up with your previous "offers".
I also suspect he enjoys watching you squirm in anticipation of said
public debate, which probably will never happen. I suspect it would be
something like appearing on the Art Bell show. :/ MK

2289. Re: Home Use of J-Pole

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-04 04:29:56 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <3D4CADC4.2070707@eznec.com>
Source record: 137430

Noah, it is said, had difficulty getting the serpents to mate during his epic voyage. After trying everything he could think of, he finally got a Devine Inspiration: Slice a log in half, and place the snakes on it. Sure enough, it did the trick.

"But tell me, why did that work?" asked Noah.

"Because," came the reply from On High, "even adders can multiply with a log table."

Sorry, I realize that a good part of the audience won't know what a log table is -- it's one of those things only we OFs know. Like what it means to "wind a watch".

Roy Lewallen, W7EL

Richard Harrison wrote:
> . . .
> Why the complication? So we can add and subtract instead of multiplying
> and dividing. Also, so we can multiply and divide by exponents instead
> of raising to powers and exttracting roots. It really is simpler.
> . . .

2290. Re: Home Use of J-Pole

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-04 04:45:02 UTC
From: paulfriedman@attbi.com
Message-ID: <ij239.754099$352.165489@sccrnsc02>
Source record: 137431

Haven't heard that story since I stopped reaching for my slapstick (slide rule which is based on logs, young folks <grin>) and started pulling out the calculator.

Paul

"Roy Lewallen" <w7el@eznec.com> wrote in message news:3D4CADC4.2070707@eznec.com...
> Noah, it is said, had difficulty getting the serpents to mate during his
> epic voyage. After trying everything he could think of, he finally got a
> Devine Inspiration: Slice a log in half, and place the snakes on it.
> Sure enough, it did the trick.
>
> "But tell me, why did that work?" asked Noah.
>
> "Because," came the reply from On High, "even adders can multiply with a
> log table."
>
> Sorry, I realize that a good part of the audience won't know what a log
> table is -- it's one of those things only we OFs know. Like what it
> means to "wind a watch".
>
> Roy Lewallen, W7EL
>
> Richard Harrison wrote:
> > . . .
> > Why the complication? So we can add and subtract instead of multiplying
> > and dividing. Also, so we can multiply and divide by exponents instead
> > of raising to powers and exttracting roots. It really is simpler.
> > . . .
>

2291. Re: Ouch! Bent antennas after severe storms in NJ!

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-04 06:04:19 UTC
From: mensch90249@yahoo.com
Message-ID: <o3fpku0r7hv73rr20bomuf4oih174ic38d@4ax.com>
Source record: 137432

On 04 Aug 2002 03:04:00 GMT, vhfradiobuff@aol.comspamsux
(VHFRadioBuff) wrote:

>Well, I was out last night and we had some terrible storms here in NJ. I woke
>up this morning, went outside and saw that winds had actually bent my 6m
>vertical in half and bent the reflector on my 6m yagi into an upside down V
>shape. I tested them out on the air and was able to tune them to almost 1:1
>SWR! Tested the 6m vertical on a local 6m repeater and I'm getting into them!
>I've gotta get up on the roof and see if I can straighten them out now! What a
>mess!
>=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-
>73! de Andy KC2SSB (ex: KF4KHC/HL9HCT)
>Beachwood, NJ USA! Grid FM29vw
>http://vhfradiobuff.tripod.com

Darn wind.....why couldn't it bend the driven element and directors
all the same so you could at least maintain the proper spacing between
elements 8-}

Poor attempt at wit aside; good luck getting things back in order.
Don't worry too much about getting the reflector dead-nuts back to
where it was - settle for as close as you can get without further
damaging the element.

Best of luck & 73,
Howard KE6MAK

2292. Re: Coaxial Notch Filter

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-04 06:17:31 UTC
From: n7ws_at_yahoo.com
Message-ID: <3d4cc235.51276135@news.triconet.org>
Source record: 137433

On Sat, 03 Aug 2002 18:45:20 GMT, "CW" <clinton.magers@attbi.com>
wrote:

Chirp said he doesn't want to hear any more about this. I said the
thread was closed. Nevertheless, Clinton won't go away (nothing new
here) and makes the following bewildering statement:

|Apparently, you were they guy they were thinking of went they started
|putting warning labels on gun barrels.

I happen to own guns, and I don't recall seeing one with a warning
label on the barrel. But standby let me check the closest one....

Nope. I just pulled my Ruger P95 out of my pocket, field stripped it
and the only thing it says on the barrel is "9mm X 19".

What this has to do with anything previous discussed is way beyond me.
I would ask you to clarify, but I doubt you can, so don't bother. You
obviously have the ability to read things that aren't there and your
post is proof positive.

When I was the responsible engineer for the Phoenix Missile
transmitter, I specified coaxial lines that *were* machined out of
solid silver, (I wanted to use gold but the program wouldn't go for
it.) Also, it isn't unusual when trying to reject a carrier in a lab
setup (say the input of a spectrum analyzer where insertion loss is a
non-issue) to purposely undercouple a cavity to increase the Q. So
each of my examples is "real-world", and since I can't read minds like
you can, could have been what Chirp was looking for.

But thanks for the reminder... I need to get out to the firing range
soon and keep in practice. There are a lot of nut cases out there.

2293. Re: A TUTORIAL

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-04 06:31:13 UTC
From: richardharrison@webtv.net
Message-ID: <18343-3D4CCA31-177@storefull-2397.public.lawson.webtv.net>
Source record: 137434

Art Unwin, KB9MZ wrote:
"At no time in the range of 20 through 10 MHz must the pattern deviate from a normal dipole "figure 8" pattern---."

I think Art may have posted an implication that his loop resembled a delta match. If so, would it need to be large to produce broadside radiation to support the dipole radiation? Or if the loop is small with significant radiation, should it be perpendicular to the dipole for their nulls to coincide?

Best regards, Richard Harrison, KB5WZI

2294. Re: 160m antenna??

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-04 08:20:02 UTC
From: Mustache Boy <technomoose@starband.net>
Message-ID: <boopkukd9qrdqnepljmo7e38ojm4n6d7e1@4ax.com>
Source record: 137435

You might consider using a "shortened" dipole for 160 meters - that
is, a dipole with loading coils installed in the horizontal radiators.
In some cases these can actually be shorter than your 80 meter dipole,
if space is a problem.

Another possiblity is a 160/80 trap dipole.

But there's really no good substitute for getting the physical length
as close as possible to the required electrical length.

On Fri, 02 Aug 2002 10:01:54 -0700, StarGazer <pti@capnet.com> wrote:

>Would running a 250' insulated wire all over trees... going here and
>there at different angles work better than my 80 m dipole on 160 m?
>
>The 80 m dipole is at 22' and that is about as high as I could get the
>wire.

2295. Re: Anyone Using STEPPIR Yagi

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-04 10:27:10 UTC
From: "H. Adam Stevens" <solo@comwerx.net>
Message-ID: <9l739.681$Qo1.127793@newsfeed.slurp.net>
Source record: 137436

direct
NQ5H

"Mike Tatum" <miket@jake.cybatek.co.uk> wrote in message
news:aihgqiomr1@newsg4.svr.pol.co.uk...
> Hi !
>
> Did you buy it from Vine or direct from the USA ?
> Just had major ranglings and insults from Vine trying to get
> a sensible price ...
>
> Finally got the US manufacturer to agree to supply me direct ...
> Now waiting for shipping costs ...
>
> Would be interested to hear from anyone who is using one of these in the
UK!
>
> Cheers!
>
> MikeT ...
> M0AWS
>
> In article <ujb3g3hjqulv82@corp.supernews.com>,
> "H. Adam Stevens" <solo@totalaccess.net> writes:
> > Not up yet, but the assembly is going well.
> > Everything fits.
> > It was this or a log periodic.
> > H.
> > NQ5H
> >
> > "John Seney" <wd1v@amsat.org> wrote in message
> > news:wd1v-F4C8B7.22320416072002@netnews.attbi.com...
> >> The design is cool - curious to hear from someone with
> >> real on-the-air experiences.
> >>
> >> JS
> >> Scope FAQ at http://www.qsl.net/wd1v
> >>
> >>
> > >
> > >

2296. Re: A TUTORIAL

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-04 10:38:37 UTC
From: aunwin@fgi.net
Message-ID: <c4becf19.0208040238.c00199@posting.google.com>
Source record: 137437

richardharrison@webtv.net (Richard Harrison) wrote in message
news:<18343-3D4CCA31-177@storefull-2397.public.lawson.webtv.net>...
> Art Unwin, KB9MZ wrote:
> "At no time in the range of 20 through 10 MHz must the pattern deviate
> from a normal dipole "figure 8" pattern---."
>
> I think Art may have posted an implication that his loop resembled a
> delta match. If so, would it need to be large to produce broadside
> radiation to support the dipole radiation? Or if the loop is small with
> significant radiation, should it be perpendicular to the dipole for
> their nulls to coincide?
>
> Best regards, Richard Harrison, KB5WZI

Richard, if it is the feed method that radiates gives a problem then
choose your own method of feed . My method of feed does radiate of
course, but it is of
no real consequence to me.

loop
50 " -50 "
xxxxx cap xxxxxxxxx
x x
x x
ZZZZZZZZZZZZZZZZZZZZZZZZZZZZZZZZZZZZZZZZZZZZZZZZZZZZZZZZZZZZZZZZZZZZ
200 20 metre dipole
-200"

Regards
Art Unwin KB9MZ

2297. Re: FRACTAL ANTENNA DEBATE STATUS

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-04 11:04:41 UTC
From: JEEPMON <JEEPMON@HOTMAIL.COM>
Message-ID: <dT739.143229$uh7.21729@sccrnsc03>
Source record: 137438

Here Here!!

"Tdonaly" <tdonaly@aol.com> wrote in message
news:20020803100928.28669.00001134@mb-da.aol.com...
> >
> >>Five weeks ago, I requested that Steve Best, VE9SRB, engage in a
scholarly
> >public debate on the subject of fractal antennas.<
> >
> >Gosh Chip, it seems to me that Steve has chosen the academic high road by
> >publishing his work and rendering his presentations through the IEEE
where
> >ALL
> >players in fractal research are represented. Why not put on your pants
like
> >everyone else and represent your views there?
> >
> >Rick K1BQT
> >
>
> What would a couple of antenna gurus know about debating? Most of the
> disagreements on this newsgroup usually end in sophomoric
> name-calling and arguments over definitions. Besides, real debates
> don't reveal the truth of the various arguments so much as they do
> the level of sophistry of the participants.
>
> Tom Donaly KA6RUH

2298. Re: Coaxial Notch Filter

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-04 11:27:45 UTC
From: fractenna@aol.com
Message-ID: <20020804072745.09226.00001486@mb-mf.aol.com>
Source record: 137439

>On Sat, 03 Aug 2002 18:45:20 GMT, "CW" <clinton.magers@attbi.com>
>wrote:
>
>Chirp said he doesn't want to hear any more about this. I said the
>thread was closed. Nevertheless, Clinton won't go away (nothing new
>here) and makes the following bewildering statement:
>
>|Apparently, you were they guy they were thinking of went they started
>|putting warning labels on gun barrels.
>
>I happen to own guns, and I don't recall seeing one with a warning
>label on the barrel. But standby let me check the closest one....
>
>Nope. I just pulled my Ruger P95 out of my pocket, field stripped it
>and the only thing it says on the barrel is "9mm X 19".
>
>What this has to do with anything previous discussed is way beyond me.
>I would ask you to clarify, but I doubt you can, so don't bother. You
>obviously have the ability to read things that aren't there and your
>post is proof positive.
>
>When I was the responsible engineer for the Phoenix Missile
>transmitter, I specified coaxial lines that *were* machined out of
>solid silver, (I wanted to use gold but the program wouldn't go for
>it.) Also, it isn't unusual when trying to reject a carrier in a lab
>setup (say the input of a spectrum analyzer where insertion loss is a
>non-issue) to purposely undercouple a cavity to increase the Q. So
>each of my examples is "real-world", and since I can't read minds like
>you can, could have been what Chirp was looking for.
>
>But thanks for the reminder... I need to get out to the firing range
>soon and keep in practice. There are a lot of nut cases out there.
>
>

Sir--

As someone who has just retired from academe, I realize that one has to focus.

Why don't you fire up the rig and enjoy yourself? That is a great focus.

These odd posts don't reflect well on you, and focusing on me only brings the
reader to wondering about you.

73,
Chip N1IR

2299. Mosley & Tig-Array MP-33-N-WARC

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-04 11:38:55 UTC
From: K4IA <K4ia@novacoxmail.com>
Message-ID: <jn839.325935$DB.9200886@news1.east.cox.net>
Source record: 137440

Anyone using and care to comment on this antenna or Mosely in general? Too few reviews on eHam to make a decision.
--
Radio K4IA
Craig "Buck"
Fredericksburg, Virginia USA

FISTS 6702 CC 788 Diamond 64
K1♯ 470 K2♯ 2460

2300. Fractalantenna NOT going out of business

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-04 11:39:47 UTC
From: fractenna@aol.com
Message-ID: <20020804073947.09231.00001374@mb-mf.aol.com>
Source record: 137441

Just so everyone knows.

I would appreciate any other cases of libel and harassment from WG Ewald, of Apex, NC being brought to my attention.

With Best wishes,

Nathan Cohen

2301. How to remove HF QRM from aerial power lines ?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-04 11:49:21 UTC
From: lombryt@hotmail.com
Message-ID: <db35a0c.0208040349.bcc55d3@posting.google.com>
Source record: 137442

Hi,

In a site near mine a friend has is radio shack located very near
12/20 KV aerial power line. His antenna, a Levy, is placed 3 m high
and for one 2m from the line and the other about 6m aways from the
lines.

We observe a heavy QRM on the HF bands, at level S4-6 which does not
allow any QSO. The Levy placed over 6m away does not capture this QRM.

Is there a solution to remove this QRM, excepting to move the aerial
away from the power line ?
I think about chocke and other solenoids ? Do you know such anti RFI
devices ? Some brands/models ? Are there efficient ? Is a big gun like
IC-775DSP able to reject such heavy QRM thanks to is excellent N.B.
able to suppress pulsed noises?

Thanks
Thierry, ONL5183

2302. Re: Computing power from SWR

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-04 12:07:34 UTC
From: cprstn54zz@att.net
Message-ID: <3d4d1624.109139609@news-server.optonline.net>
Source record: 137443

On Sun, 04 Aug 2002 07:51:00 +1000, Owen Duffy <owen@oda.com.au>
wrote:
>If your VSWR is 12 and you are using 100ft of RG-8/X at 3.6MHz, you are
>loosing 75% of the power in transmission line losses. Your 450W PEP is
>now 113W PEP at the antenna terminals.

Well, I used the RG-8/X because I was told it was more than adequate
for a 100 ft. run on HF. I do not understand why folks think it is OK
if it so lossy on 80M.

I have two options. I left slack in the RG-8/X because I might yet
relocate my shack. I could trim it to around 75 ft. Any reason to
think this will greatly improve the situation?

Because most of the feedline run from my current shack location is in
my attic, I could switch to 75 ft. of ladder line all the way from my
tuner (MFJ-986) -- which accommodates ladder line and has a built-in
4:1 balun -- to the antenna's terminals. Will this solve my problem?
Are there any drawbacks?

Ken KC2JDY

Ken
(to reply via email
remove "zz" from address)

2303. Re: How to remove HF QRM from aerial power lines ?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-04 12:08:01 UTC
From: Joe O <jenjoeo@zianet.com>
Message-ID: <3d4d1a47.0@oracle.zianet.com>
Source record: 137444

I used the MFJ-1026 Noise Canceller to reduce power line BUZZ from S-9 down
to S-3. The key is to couple only the interference and not the desired
signal into the Aux input. Once my neighbor's pole mounted power
transformer's arcing finally caught fire the problem was gone.

I think your antennas are too close to the power lines.
73s Joe O

"Thierry" <lombryt@hotmail.com> wrote in message
news:db35a0c.0208040349.bcc55d3@posting.google.com...
> Hi,
>
> In a site near mine a friend has is radio shack located very near
> 12/20 KV aerial power line. His antenna, a Levy, is placed 3 m high
> and for one 2m from the line and the other about 6m aways from the
> lines.
>
> We observe a heavy QRM on the HF bands, at level S4-6 which does not
> allow any QSO. The Levy placed over 6m away does not capture this QRM.
>
> Is there a solution to remove this QRM, excepting to move the aerial
> away from the power line ?
> I think about chocke and other solenoids ? Do you know such anti RFI
> devices ? Some brands/models ? Are there efficient ? Is a big gun like
> IC-775DSP able to reject such heavy QRM thanks to is excellent N.B.
> able to suppress pulsed noises?
>
> Thanks
> Thierry, ONL5183

2304. Re: Computing power from SWR

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-04 13:34:32 UTC
From: CAM <w5dxp@hotmail.com>
Message-ID: <3D4D2D68.36560D53@hotmail.com>
Source record: 137446

Ken wrote:
>
> On Sun, 04 Aug 2002 07:51:00 +1000, Owen Duffy <owen@oda.com.au>
> wrote:
> >If your VSWR is 12 and you are using 100ft of RG-8/X at 3.6MHz, you are
> >loosing 75% of the power in transmission line losses. Your 450W PEP is
> >now 113W PEP at the antenna terminals.
>
> Well, I used the RG-8/X because I was told it was more than adequate
> for a 100 ft. run on HF. I do not understand why folks think it is OK
> if it so lossy on 80M.

According to the Wirebook III, 100ft of RG8x on 80m has a loss of about
0.6dB/100ft on 80m when the SWR is 1:1. According to the ARRL Handbook
graph, a 12:1 SWR causes an additional loss of about 1.4dB for a total
of 2dB loss. I got into this discussion late so I may be missing something.

> I have two options. I left slack in the RG-8/X because I might yet
> relocate my shack. I could trim it to around 75 ft. Any reason to
> think this will greatly improve the situation?

Slightly, not greatly.

> Because most of the feedline run from my current shack location is in
> my attic, I could switch to 75 ft. of ladder line all the way from my
> tuner (MFJ-986) -- which accommodates ladder line and has a built-in
> 4:1 balun -- to the antenna's terminals. Will this solve my problem?
> Are there any drawbacks?

That will solve the feedline loss problem and will move the matching
problems to a location where they are relatively easy to solve.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

2305. Long wire Antenna Question

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-04 13:38:56 UTC
From: Robert Rose <rgsrose@tiac.net>
Message-ID: <aijatt$4f3$1@slb1.atl.mindspring.net>
Source record: 137447

Hello:

Thanks to everyone for all the past help; really appreciate it.

I have rigged a simple 'long-wire" antenna around my attic walls, and then vertically down to my receiver on the floor below.
Works reasonably well. Do listening only, up to 30 MHz.

Many have suggested that a much better way of doing this would be to use coax from the receiver to where the
antenna actually starts the horizontal run/loop around the attic.

I understand that I would also need a Balun to match the coax Z to the 600 ohms Z or so of the long wire.

Just to learn a bit more-

Is the "only" advantage of this scheme, as contrasted to the long wire all the way, to minimize noise pickup?

The vertical run from my reciver on our upstairs floor to the attic does not go near any PC's, or AC lines.

Think it's still worth doing? Why?

If so, suggested coax type for (<30 MHz) (would be to 50 ohm Z receiver input) ?

Thanks,
Bob

2306. Re: Ouch! Bent antennas after severe storms in NJ!

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-04 13:44:11 UTC
From: Bill Crocker <billcrocker@ameritech.net>
Message-ID: <20020804094413505-0400@news.det.sbcglobal.net>
Source record: 137448

Good luck! If the elements are tubular, then they will be kinked, and
it would be next to impossible to straighten them out. If they're sold,
and you try to bend them back, they'll probably break.

Time to call your home owners insurance...see if they can help.

Bill Crocker

In <20020803230400.10061.00001549@mb-cj.aol.com> VHFRadioBuff wrote:
> Well, I was out last night and we had some terrible storms here in NJ.
> I woke up this morning, went outside and saw that winds had actually
> bent my 6m vertical in half and bent the reflector on my 6m yagi into
> an upside down V shape. I tested them out on the air and was able to
> tune them to almost 1:1 SWR! Tested the 6m vertical on a local 6m
> repeater and I'm getting into them! I've gotta get up on the roof and
> see if I can straighten them out now! What a mess! =-=-=-=-=-=-=-=-=-=-
> =-=-=-=-=-=- 73! de Andy KC2SSB (ex: KF4KHC/HL9HCT) Beachwood, NJ USA!
> Grid FM29vw http://vhfradiobuff.tripod.com
>

2307. Re: WTB: 18-26GHz waveguide

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-04 13:45:18 UTC
From: Bill Crocker <billcrocker@ameritech.net>
Message-ID: <20020804094521019-0400@news.det.sbcglobal.net>
Source record: 137449
Cross-posted to:
rec.radio.amateur.antenna,sci.electronics.equipment,misc.industry.electronics.marketplace,alt.ham-radio.marketplace

There is a lot of this stuff posted on Ebay.

Bill Crocker

In <c44869b7.0208022049.36a9866a@posting.google.com> Michael Bender
wrote:
> Hi,
>
> I'm looking to buy the following:
>
> 3) 18-26GHz waveguide to SMA FEMALE transitions
> 1) 18-26GHz waveguide directional coupler(3 or 10dB)
> 1) 26-40GHz waveguide directional coupler(3 or 10dB)
> Coaxial cable good up to 40GHz (SMA to SMA)
>
> If you have any of these lying around, or know were I can find these
> email me your asking price to: wdizney@yahoo.com
>
> Thanks for looking
> Mike
>

2308. Re: Antenna basics

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-04 13:52:29 UTC
From: Clinton <clinton@_nospam_netidea.com>
Message-ID: <aij83p0eg7@enews2.newsguy.com>
Source record: 137445

Have a look at http://ac6v.com/antprojects.htm

Clinton Peebles VE7KNL
Salmo, B.C. Canada
Remove _nospam_ to reply

"David D." <daviddiamond@comcast.net> wrote in message
news:aihoh0$14aouo$1@ID-128035.news.dfncis.de...
> What is a good starter resource for antenna theory for someone starting
from
> scratch, with no prior background?
>
> - David
>
>
>
>

2309. Re: Antenna basics

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-04 14:37:18 UTC
From: "David D." <daviddiamond@comcast.net>
Message-ID: <aije2i$14bj8q$1@ID-128035.news.dfncis.de>
Source record: 137450

Thanks, Clinton.

This looks like a great collection of links.

AC6V e-mailed me a direct link to the "Antenna Basics" reference.
I'll absorb that one and then tackle some of the other links on his page.

- David

"Clinton" <clinton@_nospam_netidea.com> wrote in message
news:aij83p0eg7@enews2.newsguy.com...
> Have a look at http://ac6v.com/antprojects.htm
>
> ---
> Clinton Peebles VE7KNL
> Salmo, B.C. Canada
> Remove _nospam_ to reply
>
> "David D." <daviddiamond@comcast.net> wrote in message
> news:aihoh0$14aouo$1@ID-128035.news.dfncis.de...
> > What is a good starter resource for antenna theory for someone starting
> from
> > scratch, with no prior background?
> >
> > - David
> >
> >
> >
> >
>
>

2310. Re: Long wire Antenna Question

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-04 14:46:11 UTC
From: Bob Miller <bamiller@texas.net>
Message-ID: <+zxNPXJws733C8ZM6D4ypLw+8lXs@4ax.com>
Source record: 137451

"Robert Rose" <rgsrose@tiac.net> wrote:

>Hello:
>
>Thanks to everyone for all the past help; really appreciate it.
>
>I have rigged a simple 'long-wire" antenna around my attic walls, and then
>vertically down to my receiver on the floor below.
>Works reasonably well. Do listening only, up to 30 MHz.
>
>Many have suggested that a much better way of doing this would be to use
>coax from the receiver to where the
>antenna actually starts the horizontal run/loop around the attic.
>
>I understand that I would also need a Balun to match the coax Z to the 600
>ohms Z or so of the long wire.
>
>Just to learn a bit more-
>
> Is the "only" advantage of this scheme, as contrasted to the long wire
>all the way, to minimize noise pickup?

That is the only advantage. But if you are not picking up household noise, there's no reason to add the coax. Even if you have the noise, and if you install the coax, since your antenna is in the attic, it may pick up household noise, anyway.

If nothing's broken, there's nothing to fix. And, if you don't plan to move your antenna away from the house, it may be a futile measure, to begin with.

Good luck...

Bob
k5qwg
>
>The vertical run from my reciver on our upstairs floor to the attic does not
>go near any PC's, or AC lines.
>
>Think it's still worth doing? Why?
>
>If so, suggested coax type for (<30 MHz) (would be to 50 ohm Z receiver
>input) ?
>
>Thanks,
>Bob
>

2311. Re: Antenna basics

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-04 15:22:40 UTC
From: Bob Miller <bamiller@texas.net>
Message-ID: <+0VNPXpXMug2ZTyGicM=6fbJ7msf@4ax.com>
Source record: 137452

"David D." <daviddiamond@comcast.net> wrote:

>What is a good starter resource for antenna theory for someone starting from
>scratch, with no prior background?
>
> - David
>
>
>

The ARRL Antenna Book. Available at http://www.arrl.org -- in the book/product section. It answers most of the questions you see on this newsgroup. The book includes from-scratch theory, as well as practical "how-to" projects.

Bob
k5qwg

2312. Re: HF Antenna Suggestion

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-04 15:23:07 UTC
From: Michael Taddeo <mike.taddeo@shaw.ca>
Message-ID: <3D4D4767.1B116B3F@shaw.ca>
Source record: 137453

Good morning all.

I have a vertical which was my first antenna. I pondered and looked at reviews and I ended up purchasing the Butternut HF9V. It's an all band 80 - 6m which I also bought the 160m kit as I am space challenged here in the city limits. If I would be doing this again I would not spend the money on the 160m but that's just my personal opinion. as for antenna performance, I cannot complain with the performance of the HF9V. I have it mounted 3' from the ground (feed point), and bought the radial kit which has improved the performance a lot. I have the installation of it on a web site so if your interested feel free to check it out. Will give somewhat a life sized view of the antenna.
I am a new amateur and in 3 weeks I worked over 30 countries off of the vertical. I now have a beam but I still use the vertical on 40 and 80 a lot. It was expensive I think for an antenna however it seems to work very well and I do not regret buying that antenna just the 160m kit. I would recommend the radial lit, its does make a huge difference.
You can view the installation here.
http://www.apothecarytech.ca/va6mjt
Good luck with the choice you make. There is also a beam available on my web site that I have posted as well for the spacially challenged lots and city limits. Feel free to e-mail me if you would like to know more, that was the purpose of the web site.
Thanks and have a great weekend !

Pappy@USA.net wrote:

> I have been investigating vertical antennas. Now that I have looked at
> 5 different antennas I am confused as which one to purchase.
>
> I am leaning toward the Cushcraft MA5V. Said vertical antenna will be
> mounted on a 30' tower and fed with 1/4" hard line.
>
> Which one would you fellow hams like to suggest?

--

Michael Taddeo
mike.taddeo@shaw.ca
ICQ# 221086
VA6MJT
HTTP://www.apothecarytech.ca/va6mjt

2313. Re: A TUTORIAL

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-04 16:09:35 UTC
From: nm5k@wt.net
Message-ID: <25eb70d7.0208040809.ad58670@posting.google.com>
Source record: 137454

aunwin@fgi.net (Art Unwin KB9MZ) wrote in message
news:<c4becf19.0208032002.6d3535d@posting.google.com>...
> nm5k@wt.net (Mark Keith) wrote in message
news:<25eb70d7.0208030829.51ea28fc@posting.google.com>...
> > aunwin@fgi.net (Art Unwin KB9MZ) wrote in message
> > > Please keep looking at the antenna in it's entirety, I need to get rid
> > > of this load I have imposed on myself. I am concerned that the thread
> > > may drift away
> > > or be side tracked to a point that all will lose patience with me. Roy
> > > gets so many letters, e mails calls e.t.c that call on his generousity
> > > and his kindness.
> >
> > Well, I done stepped in it now I guess...I did model the antenna you
> > are describing.
> > But with a slight difference...I used a 40 meter dipole instead of a
> > 20m.
> Snip.
>
>
> For goodness sakes why ? I stated a 20 meter dipole. Let's confirm the
> viability
> of what I described first before you decide on
> adding.....'improvements' !

I started this the other day before you started "this" thread. You did
not specify the band the dipole was measured to. You just said a
dipole and a loop.
I quote:
***As most of the 'old' wire designs use a transmission line to aid in
the phasing of an antenna so that gains from collinear designs can be
realised, it would appear to me that replacing traps,stubs, specific
transmission line lengths with a loop antenna addition would be more
user friendly, whether it is used for a fixed frequency or a multi
frequency antenna or even a trapped dipole antenna
Since many of the contributors to antenna articles are members ofthis
group
perhaps some could explain this ommision whether it is because of lack
of merit or because as a group we are more intent expressing
thedisadvantages***

>
>
> I don't think your aproach is quite fair, you have made changes.

No, I didn't. I just doubled the size of the antenna. Anyway, you
didn't specify any specific antenna until this thread. I asked you in
another post if the antenna I described was correct, and you didn't
say anything.

> As Roy stated, an antenna with directivity is some what lacking if it
> cannot be rotated and I fully agree, rotateability is a very
> important requirement in my search on this antenna. Just do as I said
> earlier using a 20 meter dipole
> as one resonator, add a parallel circuit to it which includes a
> variable capacitor (minimum 10-40 Pico as with the normal loop
> antenna.) This parallel circuit will be around 40-50 inches either
> side of the center with say 6-12 inches distance spacing but connected
> to the main 20 meter dipole. For starters use a horizontal dipole
> length of around 200 inches aside.

That sounds about like what I did, except for the longer dipole.

> I really did not want to have elements longer than this because of
> ROTATION requirements and so this became my maximum 'airspace' for
> this antenna.

It doesn't matter. This test was to see if that theory of operation
will work. Not to design a new antenna with exact sizes.

> Method of feeding the antenna can be of your choice and again for
> starters you can use the connecting two junctions of the parallel
> circuit for your choice of best feed methods.

I don't understand what you mean. I have two sources in parallel. One
to the dipole, which is not tuned, and one to the loop which is tuned
by the cap.
> All impedances at the feed point which I assumed would be a gamma
> match
> MUST be 50 ohms or above which was another one of my requirements.

How are you going to remotely tune a gamma match? The match would have
to be adjusted for each band. In the previous thread, you made no
mention of tuning the dipole. I have a hard time understanding your
description of the 20 m dipole version. I do not have a diagram of the
"resonance breaker".

> You can choose 200 ohms so any analysis will not introduce a 'apples
> and oranges' argument.

Choose 200 ohms for what? The impedance of the dipole?

At no time in the range of 20 thru 10 Mhz must
> the pattern deviate from a the normal dipole figure 8 pattern or
> provide LESS gain,
> again a major requirement of mine.

Good luck...The ONLY band that showed a fig 8 pattern was 40m. The
band the dipole was a 1/2 wave. Most all other bands had a pattern of
a distorted magloop. But of course, on those bands, the dipole showed

a high impedance in comparison to the loop which was tuned to match 50 ohms. Are you saying I must tune both the loop AND the dipole?
> So if you are getting impedances below that figure (50 ohms) it
> would not meet my requirements as it tends to affect efficiency, my
> last requirement.

I don't quite get what you mean here either. In most of the cases I tried the feed impedance was lower than 50 ohms.
>
> PLEASE, do not introduce differences to my original drawing as that
> solicits
> free rein to many who wish for failure. Again, use the dimension for
> starters
> and it will put you in the ballpark from which you can make minor
> corrections
> to maximise gains , efficiency and a common impedance value at the
> comb antenna feed point. There is nothing missing in the above
> description and to standardise

Are you serious? What drawing? From your description of "this threads" antenna, I still don't really have any idea what you mean as far as feeding.

> I would suggest you stick to a 1 inch dia design of the members
> because it has to be rotatable and survive the inclement weather(ice
> included) we have in Central Illinois. If in doubt you are welcome to
> send private E mail except by doing that you omit infomation from
> others.

How is that going to effect the electrical properties?

For a final point the only moving part is the variable
> capacitor shown tho a balanced to unbalance balun can be used with a
> suitable ratio so that the impedace can be brought down to the
> standard 50 ohm coax. If the programs you have allowes for capacitor
> impedance
> this is a real plus as you can plug in a figure 200 or above instead
> of playing with literal capacitance values.

You have me nearly totally confused I'm afraid. If the only movable part allowed is the cap, how are you going to have an adjustable gamma match to feed the dipole? As far as the cap, why would I not want to use literal values?
I'm afraid with this design, either you are going to have to model it, or you are going to have to draw a picture or something. You have me nearly totally lost. The "gamma match" for one thing. A gamma match will have to be retuned for each band in use. I'm assuming you are matching the dipole with the gamma match??? MK

2314. Re: A TUTORIAL

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-04 16:22:45 UTC
From: nm5k@wt.net
Message-ID: <25eb70d7.0208040822.515e29f0@posting.google.com>
Source record: 137455

aunwin@fgi.net (Art Unwin KB9MZ) wrote in message
>
> loop
> 50 " -50 "
> xxxxx cap xxxxxxxxx
> x x
> x x
> ZZZZZZZZZZZZZZZZZZZZZZZZZZZZZZZZZZZZZZZZZZZZZZZZZZZZZZZZZZZZZZZZZZZZ
> 200 20 metre dipole

This drawing is almost exactly what I made, except double the size of the dipole. The loop I used was 1 meter "appx 3 ft" per side. Now , where does the gamma match come in? Hummm, it just occured to me. Are you using the dipole wire as the "4th" side of the loop? In that case, you would seem to have an ajustable gamma match of sorts. ??? In the model I made the loop was seperate with it's own 4 sides, and placed off to the side of the dipole. Now, if you are using this as a dipole fed with an adjustable gamma match, the pattern will be as for a 20m single dipole. IE: The patterns on the high bands will have pattern unlike a 1/2 wave dipole. It would be the same as using an autotuner at the dipole feedpoint. MK

2315. Re: Home Use of J-Pole

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-04 16:43:10 UTC
From: Charles Gallo <Charlie@thegallos.com>
Message-ID: <vfmqkuctim3jialbe44qhc3de8mduv43c3@4ax.com>
Source record: 137456

On Sat, 3 Aug 2002 22:35:55 -0500 (CDT), richardharrison@webtv.net
(Richard Harrison) wrote:

<snip>
>Roy Lewallen, W7EL already hit the nail on the head. The ratio of two
>equals is one. But dB`s are logarithmic, using a base of 10.
<snop>

Richard,
As I said, brain fart on my part - I KNOW this - 10 years ago
(in another life) I was an electronic tech - I used to do this all the
time - it's called being late at night, and not thinking (plus being
10 years since I did it)
--
73
KC2IXE

For the Children - RKBA!

"It is in vain, Sir, to extenuate the matter.
Gentlemen may cry, Peace, Peace! -- but there is no peace.
The war is actually begun!
The next gale that sweeps from the North will bring to our ears the clash of resounding
arms!
Our brethren are already in the field! Why stand we here idle?
What is it that Gentlemen wish? What would they have?
Is life so dear, or peace so sweet, as to be purchased at the price of chains and slavery?
Forbid it, Almighty God! I know not what course others may take; but as for me,
give me liberty or give me death!"
-- Patrick Henry, March, 1775

2316. SWR/wattmeters

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-04 18:20:44 UTC
From: CAM <w5dxp@hotmail.com>
Message-ID: <3D4D707C.836E84F8@hotmail.com>
Source record: 137459

There seems to be some confusion about wattmeters and forward/reflected power. Before displaying forward "power", the wattmeter uses a directional coupler to separate the forward values from the reflected values. This is done by vectorally adding two phasor voltages proportional to the total voltage and total current after calibrating the wattmeter for a particular characteristic impedance. This effectively changes the standing wave to forward and reflected traveling waves.

Let's say that a particular wattmeter has a voltage divider to give us a voltage proportional to the total voltage and a toroidal pickup coil to give us a voltage proportional to the total current. Using a 200 watt source, we calibrate the instrument for Z0=50 ohms into a 50 ohm load.

Total voltage equals 100 volts. Voltage divider voltage equals 10 volts. Total current equals 2 amps. Toroidal pickup voltage equals 10 volts. Since these two voltages are in phase, vectorally adding them yields 20 volts. So 20 volts indicates 200 watts. At any 50 ohm point up and down the 50 ohm coax, these same conditions will exist (neglecting losses).

Let's say we move a quarter-wavelength up or down the coax from a 50 ohm point and the SWR is 5.83:1 which means that the reflected power is one half of the forward power. The following conditions exist. Total voltage equals 170.7 volts. Voltage divider voltage equals 17.07 volts. Total current equals 0.586 amps. Toroidal pickup voltage equals 2.93 volts. Since these two voltages are in phase, vectorally adding them yields 20 volts. 20 volts indicates 200 watts, just as before. Note that we are measuring at the voltage maximum point instead of the above current maximum point.

Let's say we move 1/8 wavelength up or down the coax from either of the above two points. The forward voltage is 90 degrees out of phase with the reflected voltage. Their sum is 122.47 volts. The forward current is 90 degrees out of phase with the reflected current. Their sum is 2.449 amps. The phase angle between the total voltage and total current is 70.52 degrees. The voltage divider voltage will be 12.247 volts at (assume) zero degrees. The toroidal pickup voltage will be 12.247 volts at 70.52 degrees. Vectorally adding 12.247 volts at zero degrees with 12.247 volts at 70.52 yields 20 volts again indicating forward power equals 200 watts.

In a lossless transmission line where the SWR/wattmeter is calibrated for the characteristic impedance of the line, the wattmeter will read the same forward power no matter where the wattmeter is located up and down the line and no matter what the SWR (within reason). A Bird wattmeter is guaranteed to read within 5% of the actual value.

--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
------== Over 80,000 Newsgroups - 16 Different Servers! =-----

2317. Re: A TUTORIAL

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-04 18:25:11 UTC
From: aunwin@fgi.net
Message-ID: <c4becf19.0208041025.667bf778@posting.google.com>
Source record: 137458

aunwin@fgi.net (Art Unwin KB9MZ) wrote in message
news:<c4becf19.0208032002.6d3535d@posting.google.com>...
> nm5k@wt.net (Mark Keith) wrote in message
news:<25eb70d7.0208030829.51ea28fc@posting.google.com>...
> > aunwin@fgi.net (Art Unwin KB9MZ) wrote in message
> > > Please keep looking at the antenna in it's entirety, I need to get rid

. If the programs you have allowes for capacitor
> impedance
> this is a real plus as you can plug in a figure 200 or above instead
> of playing with literal capacitance values.
> Have a great week end
>
> Art Unwin KB9MZ

In used the word 'impedance' where the term should be REACTANCE. For
those who are now getting in to an unfamiliar area, the capacitance
used in a loop antenna
must have consistant impedance and is chosen by use of the graph
supplied in the Handbook which pretty much relies on the MINIMUM
variable capacitor
value that you can obtain bearing in mind that when using the lowest
capacitance that supplies the constant reactance and also meets the
design range
requirement rarely agrees with in the field trials because of stray
capacitance.
So again the term should have been REACTANCE in ohms which when used
in sweep programs (I believe that W7EL programs can handle) gets rid
of the varying capacitance struggle for those not adept as some with
antenna computor prorams
in which I include myself. For those unfamiliar with the chart I
quoted a figure of around 220 ohms makes a nice fit for the frequency
range when using
butter fly type varying capacitors that are in most junk boxes.

Regards
Art Unwin KB9MZ

My son Roger who is a "name" in computing informs me that my laptop
has a virus
which I believe explains a lot to me when letters appear or do not
appear
on my copy of the post yet mysteriously appear/disappear on google
posts.
Help is at hand, I am getting a 'hand me down' laptop which is also

faster which will be in use this week ! Thanks son, if only you was close enough to also transfer info from this laptop to your old one. The virus reminds me of one that my co workers played on me when I was tring to debug a fortran program of mine .I was very unhappy tho they whooped into laughter as some of the numbers slid to the bottom of the screen and disappeared
unnoticed by me.

2318. Re: A TUTORIAL

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-04 18:30:50 UTC
From: nm5k@wt.net
Message-ID: <25eb70d7.0208041030.1d69e4f0@posting.google.com>
Source record: 137460

aunwin@fgi.net (Art Unwin KB9MZ) wrote in message
>
> Richard, if it is the feed method that radiates gives a problem then
> choose your own method of feed . My method of feed does radiate of
> course, but it is of
> no real consequence to me.
>
> loop
> 50 " -50 "
> xxxxx cap xxxxxxxxx
> x x
> x x
> ZZZZZZZZZZZZZZZZZZZZZZZZZZZZZZZZZZZZZZZZZZZZZZZZZZZZZZZZZZZZZZZZZZZZ
> 200 20 metre dipole
> -200"
>
>
> Regards
> Art Unwin KB9MZ

Ok, I remade the antenna to match this picture. 20m dipole, and a loop with those dimensions. The "4th side" of the loop nearest the dipole, is made from the dipole itself. An adustable matching device.
Actually, almost seems to be an adjustable hairpin match it would seem. The antenna worked no problem on all bands 20-10. I adjusted the cap for each band to get a match under 2:1. As I earlier expected, the antenna acts the same as a dipole fed with an autotuner.
It has the same pattern, and gains as any other 20m dipole fed on all bands with an autotuner or low loss ladder line. Just to make sure, does this picture equal what you describe?

http://web.wt.net/~nm5k/loopole.jpg

That is the basic picture taken in the modeling program. To match on 20m took 5 pf. 17m, 44 pf. 15m, 30 pf, 12m, 18 pf, 10m, 12 pf. As you can see I prefer literal cap values...:) The antenna works, but no different than any other 20m dipole. You are just using a different version of an autotuner. The antenna would act the same with one of those fancy SGC autotuners. Or as far as I can tell anyway. BTW, it's really not that much work for me to do this. I'm fairly fast...The first test probably didn't take me over an hour total time. This one, less. MK

2319. Thrust bearing

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-04 18:32:04 UTC
From: wa2elz <wa2elz@nospamworldnet.att.net>
Message-ID: <Eqe39.18724$pg2.1504729@bgtnsc05-news.ops.worldnet.att.net>
Source record: 137461

So far I have found 3 sources of thrust bearings:

1. Glen Martin TB-25 approx $90
2. RadioShack 940-0014 $80
3. Yeasu GS-065 (not sure of manufacture) $50

I need a thrust bearing for a 2 inch mast. Any one have any other sources ?

Any help is greatly appreciated.

2320. Re: FRACTAL ANTENNA DEBATE QUALIFICATION CHALLENGE

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-04 18:53:51 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <qosqku4g95ldv6jl2ff3mtepagh0j4pkk3@4ax.com>
Source record: 137462

On Sat, 3 Aug 2002 21:09:36 -0400, "J. Harvey"
<JM002.Harvey_ANTI*SPAM_@Sympatico.ca> wrote:

>"Richard Clark"
>> 7.) list the answers above that exceed a 28.41MHz resonant
>> monopole in performance.
>> ONE correct answer (without citation) is sufficient to indicate
>> a mastery of the topic.
>
>7) None of the above.
>
>(I'm guessing.)
>
>

Hi Jeff,

Aren't Facts kewel?

One fact that stares us straight in the face is that the biggest and
best of the eh/cfa/fractal belief circle cannot answer a single,
common question about a fractal antenna!

As you were guessing, you do not qualify; however, I will allow you to
go to the standby list. The classification of standby means that you
may only occupy the debate floor if and only if only one other
prospective participant passes the qualification trial.

If two, or more, manage to pass -
well heck, we know that ain't gonna happen! You alone have shown
mastery into the intracies of the fractal: it's not much more than
guessing.

Jeff, you is da winna! (sorry about the rï¿½sumï¿½ stain)

73's
Richard Clark, KB7QHC

2321. Re: FRACTAL ANTENNA DEBATE STATUS

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-04 19:15:59 UTC
From: "W.G Ewald" <wgewald@att.net>
Message-ID: <fgvqkuc1tqjdv2n8021ej3ujd25gfdeb8s@4ax.com>
Source record: 137464

On Sun, 4 Aug 2002 01:52:39 +0200, Gilbert Mouget <nospam@thank.you>
wrote:

>In article <20020803074745.00688.00000754@mb-df.aol.com>,
> dated 03 Aug 2002 11:47:45 GMT,
> Doktor Fractenna, <fractenna@aol.com> says...
>
>
>
>> 4) IF fractal antennas have no value, and the hundreds of publications which
>> report research investigations are incorrect, then the antenna community
>> ethically requires.....
>
>YOU must prove that your fractacal antennas have any value,
>not the other way round.
>
>You pretend to be a Doktor, you should be ashamed to ignore
>such basics rules.

Also he wouldn't about ethics anyway.

2322. Re: FRACTAL ANTENNA DEBATE STATUS

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-04 19:17:36 UTC
From: "W.G Ewald" <wgewald@att.net>
Message-ID: <livqkugpr2ud3fe7nha7lfqhndqhe26ftv@4ax.com>
Source record: 137463

On 04 Aug 2002 00:26:55 GMT, fractenna@aol.com (Fractenna) wrote:

>>YOU must prove that your fractacal antennas have any value,
>>not the other way round.
>>
>
>Done. That's what the 'science project' stage of 1988-1999 was all about:-)
>
>>You pretend to be a Doktor, you should be ashamed to ignore
>>such basics rule
>
>Nothing pretend about it. And I have nothing to be ashamed of.
>
>73,
>Chip N1IR

Resolved: Nathan Cohen is hopelessly obtuse.

2323. Antenna Suggestions For <30 MHz, Listening Only - For Attic ?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-04 19:17:53 UTC
From: Robert Rose <rgsrose@tiac.net>
Message-ID: <aijupd$8k$1@slb3.atl.mindspring.net>
Source record: 137466

Hi,

Am using a random wire presently, for listening only, below 30 MHz.
Runs around my attic, and then down to my receiver.

It works, but not what I would hope for.

Would anyone care to suggest an antenna I could purchase, and still mount in the attic, of
"reasonable size," for 100 KHz to 30 MHz ?

Would want an Omni directional one, and hopefully for not more than $100, or so.

Thanks,
Bob

2324. Re: FRACTAL ANTENNA DEBATE STATUS

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-04 19:18:54 UTC
From: "W.G Ewald" <wgewald@att.net>
Message-ID: <0mvqku0qrplo1s2u7p4g7b409cdchuo7c3@4ax.com>
Source record: 137465

On 3 Aug 2002 21:09:40 -0700, nm5k@wt.net (Mark Keith) wrote:

>fractenna@aol.com (Fractenna) wrote in message
>> I must report that Steve Best has not responded to my offer to debate, at least
>> to my knowledge. I look forward to his response.
>
>Why must you report this? Is there any good reason? Like we really
>care...
>But anyway, I suspect he's probably busy. A $1000 check might boost
>his energy level a bit...He may be fed up with your previous "offers".
>I also suspect he enjoys watching you squirm in anticipation of said
>public debate, which probably will never happen. I suspect it would be
>something like appearing on the Art Bell show. :/ MK

I'm sure Cohen wouldn't know the rules of a formal debate.

2325. Re: Coaxial Nut Filter

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-04 19:24:07 UTC
From: "W.G Ewald" <wgewald@att.net>
Message-ID: <htvqkugh91v6ef87m8hg0gtmhtj6fo39b1@4ax.com>
Source record: 137467

On 04 Aug 2002 11:27:45 GMT, fractenna@aol.com (Fractenna) wrote:

>>On Sat, 03 Aug 2002 18:45:20 GMT, "CW" <clinton.magers@attbi.com>
>>wrote:
>>
>>Chirp said he doesn't want to hear any more about this. I said the
>>thread was closed. Nevertheless, Clinton won't go away (nothing new
>>here) and makes the following bewildering statement:
>>
>>>|Apparently, you were they guy they were thinking of went they started
>>>|putting warning labels on gun barrels.
>>
>>I happen to own guns, and I don't recall seeing one with a warning
>>label on the barrel. But standby let me check the closest one....
>>
>>Nope. I just pulled my Ruger P95 out of my pocket, field stripped it
>>and the only thing it says on the barrel is "9mm X 19".
>>
>>What this has to do with anything previous discussed is way beyond me.
>>I would ask you to clarify, but I doubt you can, so don't bother. You
>>obviously have the ability to read things that aren't there and your
>>post is proof positive.
>>
>>When I was the responsible engineer for the Phoenix Missile
>>transmitter, I specified coaxial lines that *were* machined out of
>>solid silver, (I wanted to use gold but the program wouldn't go for
>>it.) Also, it isn't unusual when trying to reject a carrier in a lab
>>setup (say the input of a spectrum analyzer where insertion loss is a
>>non-issue) to purposely undercouple a cavity to increase the Q. So
>>each of my examples is "real-world", and since I can't read minds like
>>you can, could have been what Chirp was looking for.
>>
>>But thanks for the reminder... I need to get out to the firing range
>>soon and keep in practice. There are a lot of nut cases out there.
>>
>>
>
>
>Sir--
>
>As someone who has just retired from academe, I realize that one has to focus.
>
>Why don't you fire up the rig and enjoy yourself? That is a great focus.
>

> These odd posts don't reflect well on you, and focusing on me only brings the
>reader to wondering about you.
>
>73,
>Chip N1IR

Cohen's history of odd posts could match that of Archimedes Plutonium.

2326. Who is Nathan Cohen?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-04 19:25:37 UTC
From: "W.G Ewald" <wgewald@att.net>
Message-ID: <120rkuciojnfqa218itala4i8lu8kkanc3@4ax.com>
Source record: 137468

On 04 Aug 2002 11:39:47 GMT, fractenna@aol.com (Fractenna) wrote:

>Just so everyone knows.
>
>I would appreciate any other cases of libel and harassment from WG Ewald, of
>Apex, NC being brought to my attention.
>
>With Best wishes,
>
>Nathan Cohen

http://opsyhopsy.com/MiscJunk/who_is_nc.htm

2327. Re: Home Use of J-Pole

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-04 20:14:30 UTC
From: jeff <wd4nmq@earthlink.net>
Message-ID: <3D4D8BBF.5040206@earthlink.net>
Source record: 137369

Roy Lewallen wrote:
> Noah, it is said, had difficulty getting the serpents to mate during his
> epic voyage. After trying everything he could think of, he finally got a
> Devine Inspiration: Slice a log in half, and place the snakes on it.
> Sure enough, it did the trick.
>
> "But tell me, why did that work?" asked Noah.
>
> "Because," came the reply from On High, "even adders can multiply with a
> log table."
>
> Sorry, I realize that a good part of the audience won't know what a log
> table is -- it's one of those things only we OFs know. Like what it
> means to "wind a watch".
>
> Roy Lewallen, W7EL
>

Brrrrrrr, DING, poor attempt at a rim shot....

> Richard Harrison wrote:
>
>> . . .
>> Why the complication? So we can add and subtract instead of multiplying
>> and dividing. Also, so we can multiply and divide by exponents instead
>> of raising to powers and exttracting roots. It really is simpler.
>> . . .
>
>

--
Jeff, wd4nmq
wd4nmq@earthlink.net
http://home.earthlink.net/~wd4nmq
iLink client node #10438, iLink sysop link node #14746

2328. Re: Best Allround Antenna ?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-04 20:43:31 UTC
From: aunwin@fgi.net
Message-ID: <c4becf19.0208041243.c1f301c@posting.google.com>
Source record: 137370

"Reg Edwards" <g4fgq.regp@btinternet.com> wrote in message
news:<aia1cb$4b7$1@helle.btinternet.com>...
> Art, I'm sorry I didn't make my point clear.
>
> The G5RV (God bless his soul) is about the worst of the sizeable so-called
> multiband antennas. Remove the coax and change the feeder to 600-ohm and you
> will be going places. Have you stopped using my programs ?
> ---
> ========================
> Regards from Reg G4FGQ
> Free Radio Design Software
> Go to http://www.g4fgq.com
> ========================

No need to be sorry Reg, it is taken as a sign of weakness over here.
I remember sending you an E mail when you first appeared on this group
to let you know what can happen to new boys. Again I was wrong, I wish
I can handle things as well as you have done.
I looked at your page a few years back when I was getting pummelled
on this net prior to it becoming Google. As always unless I spend a
lot of time
studying things I get all washed up. I believe it was the 'all zipped
up'
comment that got to me and I could not down load and at the same time
I left the the newsgroup.
As you can see I am back banging away rather hopelessly on that same
old antenna again in the futile hope that a 'guru' or 'name' will come
along and give it a go so that I can lift my head up high again. But
it is not looking good
so far because as it looks so simple it cannot possibly work.
To say that it works at my place and I knew one other ham built it an
in array form is not good enough since hams have become so leary of
the new and
proclaimed gain figures e.t.c.
I'll never let the subject go Reg and will fight to the end since I
know it works as I say but, apparently my engineering basics
explanations do not cut the mustard.
Cheers and beers, take care of your self
Art

2329. Re: Antenna Suggestions For <30 MHz, Listening Only - For Attic ?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-04 20:46:21 UTC
From: 'Doc <w5lz@icok.net>
Message-ID: <3D4D9294.F38A6F67@icok.net>
Source record: 137371

Bob,
Actually, you're probably using about as
'good' an antenna as any, for a 'wide band'
antenna and for receiving only, and given that
it has to be in your attic. Of course, if you
could get it higher (and outside) it would 'do'
better. If you're interested in particular
bands, you can cut the antenna for those bands,
which should help a bit. Very few commercially
made antennas are really worth putting in an
attic, unless you have a very good sized attic.
Good luck...
'Doc

2330. Re: Computing power from SWR

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-04 20:51:10 UTC
From: Owen Duffy <owen@oda.com.au>
Message-ID: <3D4D93BE.FD0927FF@oda.com.au>
Source record: 137372

CAM wrote:

> According to the Wirebook III, 100ft of RG8x on 80m has a loss of about
> 0.6dB/100ft on 80m when the SWR is 1:1. According to the ARRL Handbook
> graph, a 12:1 SWR causes an additional loss of about 1.4dB for a total
> of 2dB loss. I got into this discussion late so I may be missing something.

Are you reading the graph correctly? The graph in my copy of the
handbook indicates that the VSWR is measured at the load.

The VSWR indicated at the tuner end of the coax is 12, my reckoning is
that with 0.55dB loss, the VSWR at the antenna end of the coax is 50.

I calculated additional line loss due to VSWR at 5.6dB.

Owen

2331. Re: Antenna basics

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-04 20:54:46 UTC
From: nm5k@wt.net
Message-ID: <25eb70d7.0208041254.10352ed3@posting.google.com>
Source record: 137373

"David D." <daviddiamond@comcast.net> wrote in message
news:<aihoh0$14aouo$1@ID-128035.news.dfncis.de>...
> What is a good starter resource for antenna theory for someone starting from
> scratch, with no prior background?
>
> - David

For a ham, I'd say the single best resource would be a copy of the
ARRL antenna handbook. And that cover many construction points also.
The small orange Bill Orr antenna handbook is a good one if you want
to see a lot of different antenna projects in one small book. Many
easy to build. The large ARRL book covers more theory though. MK

2332. Re: Fractalantenna NOT going out of business

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-04 20:57:35 UTC
From: 'Doc <w5lz@icok.net>
Message-ID: <3D4D9534.FD6068D5@icok.net>
Source record: 137374

Oh boy! Here goes another round of frivolous
law suit threats. Do your own 'leg work' Frac'.
'Doc

2333. Delta Loop for 160m

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-04 21:02:57 UTC
From: G4VGO <rmread@attglobal.net>
Message-ID: <3d4d997c_3@news2.prserv.net>
Source record: 137375

I read ON4UN's book concerning full wave 160 metre loops. Has anyone had experience actually using one? I am about to begin a project that will hopefully end up with a 160m full sized delta loop up about 20 metres at the base, with the apex around 180 metres.

For vertical take-off where would the best feed point be?

Thanks

Bob G4VGO

http://www.qsl.net/g4vgo

2334. Re: 160m antenna??

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-04 21:03:29 UTC
From: nm5k@wt.net
Message-ID: <25eb70d7.0208041303.46159a86@posting.google.com>
Source record: 137376

Mustache Boy <technomoose@starband.net> wrote in message
news:<boopkukd9qrdqnepljmo7e38ojm4n6d7e1@4ax.com>...
> You might consider using a "shortened" dipole for 160 meters - that
> is, a dipole with loading coils installed in the horizontal radiators.
> In some cases these can actually be shorter than your 80 meter dipole,
> if space is a problem.
>
> Another possiblity is a 160/80 trap dipole.
>
> But there's really no good substitute for getting the physical length
> as close as possible to the required electrical length.

You can also bend the the legs of the antenna to make a "Z" shape with
little adverse effects. Certainly better than using inductive loading.
I compared them. In his case, it depends to a large degree what
distance he wants to work. Close in within about 400-500 miles, a
dipole, even loaded, will outdo the T vertical on the high angle
stuff. "Usually"! But it's quite possible the 22 ft tall 80m T
vertical could win to longer haul stuff if the ground conditions were
good enough to avoid excess loss. It should also have a greater
groundwave signal than the dipole if local stuff is what he would want
to work. MK

2335. Re: Back to Basics, etc

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-04 21:07:48 UTC
From: richardharrison@webtv.net
Message-ID: <648-3D4D97A4-236@storefull-2398.public.lawson.webtv.net>
Source record: 137379

Bill, N3WK wrote:
"The transmit antenna contributes gain and the receive antenna
contributes gain."

Bill is on target. When using those logarithmic decibels to do a
microwave path analysis, we add all the dB gains (both antennas) and
subtract all the dB losses to the +dBm from the transmitter to arrive at
the -dBm received carrier power to the receiver.

Best regards, Richard Harrison, KB5WZI

2336. Re: Computing power from SWR

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-04 21:08:53 UTC
From: Owen Duffy <owen@oda.com.au>
Message-ID: <3D4D97E5.1A6B0B07@oda.com.au>
Source record: 137377

Ken wrote:
>
> On Sun, 04 Aug 2002 07:51:00 +1000, Owen Duffy <owen@oda.com.au>
> wrote:
> >If your VSWR is 12 and you are using 100ft of RG-8/X at 3.6MHz, you are
> >loosing 75% of the power in transmission line losses. Your 450W PEP is
> >now 113W PEP at the antenna terminals.
>
> Well, I used the RG-8/X because I was told it was more than adequate
> for a 100 ft. run on HF. I do not understand why folks think it is OK
> if it so lossy on 80M.

It IS more than adequate for 100ft on 3.6MHz if the VSWR is less than 3. Total line loss (matched line loss + additional loss due to operation at VSWR>1 is less than 1dB - not good, but adequate).

> I have two options. I left slack in the RG-8/X because I might yet
> relocate my shack. I could trim it to around 75 ft. Any reason to
> think this will greatly improve the situation?
>
> Because most of the feedline run from my current shack location is in
> my attic, I could switch to 75 ft. of ladder line all the way from my
> tuner (MFJ-986) -- which accommodates ladder line and has a built-in
> 4:1 balun -- to the antenna's terminals. Will this solve my problem?

Sounds like searching for yet another work around.

You reported measured VSWR of 12 at the tuner end of 100ft of RG-8/X on 3.6MHz. If the measurement is correct, and the cable is not faulty (ie, it conforms to spec), and your measurement of the cable length is correct, we can calculate that the VSWR at the antenna end of the coax is 50.

Is the antenna supposed to have VSWR of 50 (measured at the antenna terminals)? If not, fix the antenna. (I cannot believe that anyone would sell an antenna for HF intended for coax connection operating with VSWR=50.)

> Are there any drawbacks?
>

Owen

2337. Re: Computing power from SWR

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-04 21:08:55 UTC
From: CAM <w5dxp@hotmail.com>
Message-ID: <3D4D97E7.6A9AD88E@hotmail.com>
Source record: 137378

Owen Duffy wrote:
>
> CAM wrote:
> > According to the Wirebook III, 100ft of RG8x on 80m has a loss of about
> > 0.6dB/100ft on 80m when the SWR is 1:1. According to the ARRL Handbook
> > graph, a 12:1 SWR causes an additional loss of about 1.4dB for a total
> > of 2dB loss. I got into this discussion late so I may be missing something.
>
> Are you reading the graph correctly? The graph in my copy of the
> handbook indicates that the VSWR is measured at the load.
>
> The VSWR indicated at the tuner end of the coax is 12, my reckoning is
> that with 0.55dB loss, the VSWR at the antenna end of the coax is 50.
>
> I calculated additional line loss due to VSWR at 5.6dB.

Like I said, I came into the discussion late. I assumed the 12:1 SWR
was at the load. Sorry.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
------== Over 80,000 Newsgroups - 16 Different Servers! =-----

2338. GPS antenna design questions

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-04 21:21:56 UTC
From: "Alexander S. Wood" <alec_wood@dont.spam.me.ntlworld.com>
Message-ID: <UWg39.2635$tm4.22365@newsfep3-gui.server.ntli.net>
Source record: 137380

What are the general requirements? I've tried crossed dipoles without much success. The only commercial antennas available here in the UK (that I have seen) cost in the region of £50 (about $75), I am sure I must be able to do one cheaper, and hopefully learn something while doing it.

Has anyone got any good reccommendations for what will be a vehicle mounted antenna. It could be active or passive. The coax run to the receiver will be about 4m if externally mounted. I can't mount it behind the windscreen since mine is heated and thus full of wires.

The application is APRS using a Motorola GPS Rx board and a custom PIC based decoder/TNC controller.

Thanks in advance

Alec Wood M1BNK
Teesside UK

2339. Re: STOP EVERYTHING

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-04 21:28:51 UTC
From: richardharrison@webtv.net
Message-ID: <652-3D4D9C93-4@storefull-2398.public.lawson.webtv.net>
Source record: 137382

Dennis Ferguson wrote:
"Now suppose I instead consider two parallel 1/4-Lambda monopoles on a perfect ground plane----."

Gain is identical for a dipole and for a monopole with its image. The radiated field intensity, volts per meter, is directly proportional to current in the antenna. The impedance of the monopole is half that of the dipole. When you radiate the same power, there is more current in the monopole.

Best regards, Richard Harrison, KB5WZI

2340. Re: Antenna basics

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-04 21:41:11 UTC
From: w9gb <gregory.beat@attbi.com>
Message-ID: <Xbh39.49654$Ru5.19024@rwcrnsc52.ops.asp.att.net>
Source record: 137381

Web based:

Antenna Elmer
http://www.qsl.net/w4sat/antenna.htm

L.B. Cebik, W4RNL
http://www.cebik.com/

w9gb

"David D." <daviddiamond@comcast.net> wrote in message
news:aihoh0$14aouo$1@ID-128035.news.dfncis.de...
> What is a good starter resource for antenna theory for someone starting
from
> scratch, with no prior background?
>
> - David
>
>
>
>

2341. Re: Thrust bearing

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-04 21:46:05 UTC
From: n7ws_at_yahoo.com
Message-ID: <3d4da041.21790008@news.triconet.org>
Source record: 137383

On Sun, 04 Aug 2002 18:32:04 GMT, "wa2elz"
<wa2elz@nospamworldnet.att.net> wrote:

|This is a multi-part message in MIME format.

Why? Please turn off the html.

|So far I have found 3 sources of thrust bearings:
|
|1. Glen Martin TB-25 approx $90=20
|2. RadioShack 940-0014 $80
|3. Yeasu GS-065 (not sure of manufacture) $50
|
|
|I need a thrust bearing for a 2 inch mast. Any one have any other =
|sources ?

Rohn.

2342. Re: Who is Nathan Cohen?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-04 22:05:02 UTC
From: SideBand <abNO8SPAMlr@csotbs.org>
Message-ID: <3D4DA50E.2030701@csotbs.org>
Source record: 137384

I wonder.. Has he ever sued?

73 de AB8LR, Chris

W.G Ewald wrote:

> On 04 Aug 2002 11:39:47 GMT, fractenna@aol.com (Fractenna) wrote:
>
>
>>Just so everyone knows.
>>
>>I would appreciate any other cases of libel and harassment from WG Ewald, of
>>Apex, NC being brought to my attention.
>>
>>With Best wishes,
>>
>>Nathan Cohen
>>
>
> http://opsyhopsy.com/MiscJunk/who_is_nc.htm
>
>

--
73 de AB8LR, Chris

http://csotbs.shopiwon.com/ for great deals on computer products.

2343. Re: GPS antenna design questions

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-04 22:12:47 UTC
From: Crazy George <munschNO@attglobal.net.SPAM>
Message-ID: <3d4dad9c_2@news1.prserv.net>
Source record: 137385

```
Check the TAPR web site.
```

--
Crazy George
Remove NO and SPAM from return address
Alexander S. Wood <alec_wood@dont.spam.me.ntlworld.com> wrote in message
news:UWg39.2635$tm4.22365@newsfep3-gui.server.ntli.net...
> What are the general requirements? I've tried crossed dipoles without much
> success. The only commercial antennas available here in the UK (that I
have
> seen) cost in the region of £50 (about $75), I am sure I must be able to
do
> one cheaper, and hopefully learn something while doing it.
>
> Has anyone got any good reccommendations for what will be a vehicle
mounted
> antenna. It could be active or passive. The coax run to the receiver will
be
> about 4m if externally mounted. I can't mount it behind the windscreen
since
> mine is heated and thus full of wires.
>
> The application is APRS using a Motorola GPS Rx board and a custom PIC
based
> decoder/TNC controller.
>
> Thanks in advance
>
> Alec Wood M1BNK
> Teesside UK
>
>

2344. Re: How to remove HF QRM from aerial power lines ?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-04 22:17:26 UTC
From: Crazy George <munschNO@attglobal.net.SPAM>
Message-ID: <3d4dad9d_2@news1.prserv.net>
Source record: 137386

Look here for Power Line Noise Mitigation information:

http://www.arrl.org/tis/info/HTML/power_line_handbook/
--
Crazy George
Remove NO and SPAM from return address
Thierry <lombryt@hotmail.com> wrote in message
news:db35a0c.0208040349.bcc55d3@posting.google.com...
> Hi,
>
> In a site near mine a friend has is radio shack located very near
> 12/20 KV aerial power line. His antenna, a Levy, is placed 3 m high
> and for one 2m from the line and the other about 6m aways from the
> lines.
>
> We observe a heavy QRM on the HF bands, at level S4-6 which does not
> allow any QSO. The Levy placed over 6m away does not capture this QRM.
>
> Is there a solution to remove this QRM, excepting to move the aerial
> away from the power line ?
> I think about chocke and other solenoids ? Do you know such anti RFI
> devices ? Some brands/models ? Are there efficient ? Is a big gun like
> IC-775DSP able to reject such heavy QRM thanks to is excellent N.B.
> able to suppress pulsed noises?
>
> Thanks
> Thierry, ONL5183

2345. Re: Who is Nathan Cohen?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-04 22:29:56 UTC
From: "W.G Ewald" <wgewald@att.net>
Message-ID: <urarkuogb6er6a7fmo7q64gvo79ba9ep2c@4ax.com>
Source record: 137387

On Sun, 04 Aug 2002 20:57:35 GMT, 'Doc <w5lz@icok.net> wrote:

>
>
> Oh boy! Here goes another round of frivolous
>law suit threats. Do your own 'leg work' Frac'.
> 'Doc

Exactly.

2346. Re: Who is Nathan Cohen?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-04 22:35:08 UTC
From: "W.G Ewald" <wgewald@att.net>
Message-ID: <0varku06ig8rkgofftn5gu8m7mafsmv5nb@4ax.com>
Source record: 137388

On Sun, 04 Aug 2002 18:05:02 -0400, SideBand <abNO8SPAMlr@csotbs.org>
wrote:

>I wonder.. Has he ever sued?
>
>73 de AB8LR, Chris
>
>W.G Ewald wrote:
>
>> On 04 Aug 2002 11:39:47 GMT, fractenna@aol.com (Fractenna) wrote:
>>
>>
>>>Just so everyone knows.
>>>
>>>I would appreciate any other cases of libel and harassment from WG Ewald, of
>>>Apex, NC being brought to my attention.
>>>
>>>With Best wishes,
>>>
>>>Nathan Cohen
>>>
>>
>> http://opsyhopsy.com/MiscJunk/who_is_nc.htm

Do you really think his message implies a lawsuit? In any case, Cohen
has made hundreds (at least) of similar threats on usenet.

2347. Re: FRACTAL ANTENNA DEBATE STATUS

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-04 23:28:37 UTC
From: Fred Hambrecht <w4jle@charter.net>
Message-ID: <ukre58r6k4okf9@corp.supernews.com>
Source record: 137389

Once again, the manure wagon is under way...

Nobody gives a crap about your inflated claims. The fractal antenna has NOTHING special going for it. Given the same amount of wire, there are any number of configurations that will produce equal or greater results in the same given physical area.

You want him to debate you, Steve is smart enough to know that you simply want him to prove a negative while you wallow in bafflegab.

As I said, once again the manure wagon is under way...

"Fractenna" <fractenna@aol.com> wrote in message news:20020803074745.00688.00000754@mb-df.aol.com...
> Five weeks ago, I requested that Steve Best, VE9SRB, engage in a scholarly
> public debate on the subject of fractal antennas.
>
> The motivations for said debate are:
>
> 1) fractal antennas are rapidly becoming a major research interest of the
> professional and academic antenna community;
>
> 2) Steve Best has made a distinct point, in the last three years, to become an
> assiduous investigator into fractal antennas, indeed it has apparently become a
> dominant topic of his research interests, with well over a dozen public talks
> and publications;
>
> 3) through his work, Steve Best has posited himself as the key, and I believe
> the only published, criticiser of fractal antenna work, what some would discuss
> as an alleged 'debunker' .
>
> 4) IF fractal antennas have no value, and the hundreds of publications which
> report research investigations are incorrect, then the antenna community
> ethically requires a clear and timely presentation of the lack of such merits,
> in a way that settles the issue, and removes the facts from their mere
> interpretation (or misinterpretation). In other words, paradigm shifts should
> be resolve one way or the other. Historically, public, scholarly debates

have
> accomplished such objectives;
>
> 5) Steve and I are friends and colleagues and it may be assumed that our
> motivations are purely scientific;
>
> 6) as founder of the field of fractal element antennas, and as the
principle
> researcher and publisher of aspects of the paradigm, I am a logical choice
to
> discuss the scientific aspects of fractal antennas and, indeed, Steve's
> periodical citing and public talks confirm this.
>
> I must report that Steve Best has not responded to my offer to debate, at
least
> to my knowledge. I look forward to his response.
>
> Cordially,
>
> Nathan 'Chip' Cohen N1IR

2348. Re: WTB or TRADE for a 6m Halo

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-04 23:37:22 UTC
From: ocibma@aol.com
Message-ID: <20020804193722.22098.00001637@mb-dd.aol.com>
Source record: 137390

ok let the dikering begin have a 6 mtr haloa litle dirty and a block holding one of the elements is cracked. small block can be replaced with a nilon or teflon block. can take pics if you like what do we have to trade abe wb2pqr brooklyn ny 73

2349. Re: Cushcraft going out of business?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-04 23:42:34 UTC
From: Fred Hambrecht <w4jle@charter.net>
Message-ID: <ukrevd65dmi6b5@corp.supernews.com>
Source record: 137391

Frackky is the only guy I know that would rather climb a cactus naked and lie, than stand on the ground and tell the truth...once again my personal opinion of fraudtenna.

"W.G Ewald" <wgewald@att.net> wrote in message news:amnnkukp0o9gnn9n669es3h5jf307gs50e@4ax.com...
> On Sat, 03 Aug 2002 13:12:16 GMT, "VE9SRB" <srbest@att.net> wrote:
>
> >
> >"Fractenna" <fractenna@aol.com> wrote in message >
> >> You might try Steve Best, VE9SRB, who has helped other folks on this forum
> >in
> >> the past on this issue.
> >>
> >> I suspect he is on here, or maybe a friendly call to him would do it.
> >>
> >
> >
> >Steve Best, VE9SRB, is not associated with Cushcraft Corporation.
> >
> >Steve
> >
>
> Well, as usual, Cohen has bad information.
>
> I believe he only tells the truth by accident.
>
>
>

2350. Re: A TUTORIAL

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-04 23:55:46 UTC
From: n7ws_at_yahoo.com
Message-ID: <3d4dbc6f.29005919@news.triconet.org>
Source record: 137392

On 4 Aug 2002 11:30:50 -0700, nm5k@wt.net (Mark Keith) wrote:

|http://web.wt.net/~nm5k/loopole.jpg
|
| That is the basic picture taken in the modeling program. To match on
|20m took 5 pf. 17m, 44 pf. 15m, 30 pf, 12m, 18 pf, 10m, 12 pf. As you
|can see I prefer literal cap values...:) The antenna works, but no
|different than any other 20m dipole. You are just using a different
|version of an autotuner. The antenna would act the same with one of
|those fancy SGC autotuners. Or as far as I can tell anyway. BTW, it's
|really not that much work for me to do this. I'm fairly fast...The
|first test probably didn't take me over an hour total time. This one,
|less. MK

I think I probably speak for more than myself when I ask if you can
post an Eznec, AO, NEC or Multinec file for your model.

2351. Re: Cushcraft going out of business?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-05 00:21:59 UTC
From: n7ws_at_yahoo.com
Message-ID: <3d4dbf82.29792386@news.triconet.org>
Source record: 137393

On Sun, 4 Aug 2002 19:42:34 -0400, "Fred Hambrecht"
<w4jle@charter.net> wrote:

|Frackky is the only guy I know that would rather climb a cactus naked and
|lie,

Ouch! I live in a cactus patch

http://users.triconet.org/wesandlinda/

and I don't even want to think about that.

2352. Re: A TUTORIAL

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-05 00:23:15 UTC
From: aunwin@fgi.net
Message-ID: <c4becf19.0208041623.388b41c5@posting.google.com>
Source record: 137394

nm5k@wt.net (Mark Keith) wrote in message
news:<25eb70d7.0208041030.1d69e4f0@posting.google.com>...
> aunwin@fgi.net (Art Unwin KB9MZ) wrote in message
> >
> > Richard, if it is the feed method that radiates gives a problem then
> > choose your own method of feed . My method of feed does radiate of
> > course, but it is of
> > no real consequence to me.
> >
> > loop
> > 50 " -50 "
> > xxxxx cap xxxxxxxxx
> > x x
> > x x
> > ZZZZZZZZZZZZZZZZZZZZZZZZZZZZZZZZZZZZZZZZZZZZZZZZZZZZZZZZZZZZZZZZZZZZ
> > 200 20 metre dipole
> > -200"
> >
> >
> > Regards
> > Art Unwin KB9MZ
>
> Ok, I remade the antenna to match this picture. 20m dipole, and a loop
> with those dimensions. The "4th side" of the loop nearest the dipole,
> is made from the dipole itself. An adustable matching device.
> Actually, almost seems to be an adjustable hairpin match it would
> seem. The antenna worked no problem on all bands 20-10. I adjusted the
> cap for each band to get a match under 2:1. As I earlier expected, the
> antenna acts the same as a dipole fed with an autotuner.
> It has the same pattern, and gains as any other 20m dipole fed on all
> bands with an autotuner or low loss ladder line. Just to make sure,
> does this picture equal what you describe?
>
> http://web.wt.net/~nm5k/loopole.jpg
>
> That is the basic picture taken in the modeling program. To match on
> 20m took 5 pf. 17m, 44 pf. 15m, 30 pf, 12m, 18 pf, 10m, 12 pf. As you
> can see I prefer literal cap values...:) The antenna works, but no
> different than any other 20m dipole. You are just using a different
> version of an autotuner. The antenna would act the same with one of
> those fancy SGC autotuners. Or as far as I can tell anyway. BTW, it's
> really not that much work for me to do this. I'm fairly fast...The
> first test probably didn't take me over an hour total time. This one,
> less. MK

O.K,the drawing is good, the capacitance values appear O.K. except the highest capacitance should be at the other end of the frequency range which I must assume you got it backwards when typing your post. The capacitance values will increase uniformly from one end of the range to the other with max value at the 14 M hz range as with any normal loop antenna.
(your values do not !)
Now I can only assume that you only plotted the current curve which cannot be improved upon when using dipoles of 1/2 wave length where current is at the zero
point at the ends of the structure (Max voltage)i.e 20 M

Now stay with me for the moment.
If you apply a 10 Mhz signal to a dipole cut for 20 you will still get max voltage points at the ends but each side will be out of phase with each other even tho voltage is a max at the physical ends. Thus for max gain with the given physical length we have we also have to change the phase on one side to match the other to get maximum collinear gain.
The other resonant circuit (the loop) does this for you
So unlike say the trapped dipole we use the whole original physical length given
rather than shortening the physical element to suit and with out the use of the feed line or stub.
So forget the feed matching so that a constant feed impedance can be obtained
thru out the range chosen and concentrate on checking whether you actually
have those capacitances backwards and run gain figures for other frequences
to plot gains with frequency, after which you can optimise all dimensions and
cap values to obtain constant impedances when used with a 4: 1 balun i.e 200 ohms.
On the subject of the loop and the dipole using the same member. The whole idea of getting maximume coupling is to make it one and the same. Less efficient
coupling by leaving a gap between the two circuits is fine but adds to complexity to the physical building of the antenna. All is then finished except to place the capacitor where there is less electrical stress is applied upon it.
Now it is exciting for me to see you follow this thru. E mail me at any time
as my server is taking forever to update the postings.

P.S.
Let us stick for the moment with the loop/dipole combination name to reduce confusion in the group when other names are used.

Regards
Art

2353. Re: Antenna basics

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-05 00:43:47 UTC
From: "David D." <daviddiamond@comcast.net>
Message-ID: <aikhjm$14mcr8$1@ID-128035.news.dfncis.de>
Source record: 137396

Thanks all, for your suggestions.

- David

2354. Re: Cushcraft going out of business?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-05 01:09:10 UTC
From: fractenna@aol.com
Message-ID: <20020804210910.08554.00001293@mb-fx.aol.com>
Source record: 137397

>Ouch! I live in a cactus patch
>

Some of my best shots are out past the Speedway, at Tanque Verde, Wes.
Beautiful spot.

Shame the desert didn't bloom this year.

I was out at Sedona,then up to Page and into Utah last month; closing the
Cococino Forest scared off the tourists.(I get to your area about 3-5 times a
year, depending on the year.)

Oh well, maybe my next biz trip will take me past Red Rock Canyon--when they
finally reopen it.

Nice car BTW.

73,
Chip N1IR

2355. Cleaning oxidized antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-05 01:36:37 UTC
From: Larry Shilkoff <shilkoff@nospam.ix.netcom.com>
Message-ID: <FEk39.13912$nc.1050860@newsread1.prod.itd.earthlink.net>
Source record: 137398

I have a Cushcraft A3 yagi that was used at my previous home for a number of years. I'm planning on putting it back up, but I'm concerned about the apparent oxidation on the aluminum tubing. Is there a recommended method of cleaning the aluminum?

Thanks

Larry

2356. Re: STOP EVERYTHING

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-05 01:38:35 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <3D4DD71B.6070602@eznec.com>
Source record: 137399

The field strength from a monopole over an infinite ground plane will be sqrt(2) times the field strength from a dipole in free space, given the same input power. This is because the power from the monopole is concentrated in a half-space with half the volume of the dipole's environment. Consequently, the gain of a monopole over a ground plane is 3 dB greater than the gain of a dipole in free space, with both of course being compared to the same reference field strength. This isn't because of any fundamental difference in antennas, but rather the difference in environments -- a dipole over an infinite ground plane has considerably more gain than a dipole in free space. And a 1/4 wavelength ground plane antenna with horizontal radials has very nearly the same gain as a half wavelength vertical dipole.

Roy Lewallen, W7EL

Richard Harrison wrote:
> Dennis Ferguson wrote:
> "Now suppose I instead consider two parallel 1/4-Lambda monopoles on a
> perfect ground plane----."
>
> Gain is identical for a dipole and for a monopole with its image. The
> radiated field intensity, volts per meter, is directly proportional to
> current in the antenna. The impedance of the monopole is half that of
> the dipole. When you radiate the same power, there is more current in
> the monopole.
>
> Best regards, Richard Harrison, KB5WZI
>

2357. Re: GPS antenna design questions

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-05 01:40:19 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <3D4DD783.1050501@eznec.com>
Source record: 137400

Patch and quadrifilar helix antennas are commonly used for GPS. I
suggest posting your question on sci.geo.satellite-nav.

Roy Lewallen, W7EL

Alexander S. Wood wrote:
> What are the general requirements? I've tried crossed dipoles without much
> success. The only commercial antennas available here in the UK (that I have
> seen) cost in the region of ï¿½50 (about $75), I am sure I must be able to do
> one cheaper, and hopefully learn something while doing it.
>
> Has anyone got any good reccommendations for what will be a vehicle mounted
> antenna. It could be active or passive. The coax run to the receiver will be
> about 4m if externally mounted. I can't mount it behind the windscreen since
> mine is heated and thus full of wires.
>
> The application is APRS using a Motorola GPS Rx board and a custom PIC based
> decoder/TNC controller.
>
> Thanks in advance
>
> Alec Wood M1BNK
> Teesside UK
>
>

2358. Re: Best Allround Antenna ?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-05 02:15:30 UTC
From: 'Doc <w5lz@icok.net>
Message-ID: <3D4DDFB8.49A6F11D@icok.net>
Source record: 137401

Art,
Saying your sorry is a sign of weakness? Just
where do you live, I wonder? It certainly isn't
taken that way here, it's called manners, or being
polite.
Do you think that since one of the 'gurus', or
'big names' in antennas, hasn't picked up on your
antenna idea, that maybe you should take another crack
at it?
'Doc

2359. Re: Cleaning oxidized antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-05 02:17:25 UTC
From: "J. Harvey" <JM002.Harvey_ANTI*SPAM_@Sympatico.ca>
Message-ID: <Qel39.322$2x5.180089@news20.bellglobal.com>
Source record: 137403

"Larry Shilkoff"
> ...cleaning the aluminum?

Depending on how bad, sand paper or steel wool (if required) and then switch to CometT (or equivalent) cleanser. Rinse very well when you're done to ensure that no residue remains.

2360. Re: Cleaning oxidized antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-05 02:18:51 UTC
From: 'Doc <w5lz@icok.net>
Message-ID: <3D4DE080.5ACA9848@icok.net>
Source record: 137402

Larry,
Some fine steel-wool and elbow grease applied
at the joints of the tubing works fine. Also, you
might want to use some anti-oxidizing compound on
the joins when rebuilding the antenna. It doesn't
bother anything if the rest of the antenna isn't
nice and shiny, but clean the joints.
'Doc

2361. RE: cleaning aluminum antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-05 02:28:13 UTC
From: k9sqg@aol.com
Message-ID: <20020804222813.03441.00001813@mb-bk.aol.com>
Source record: 137404

The original message was received at Sun, 4 Aug 2002 22:11:00 -0400 (EDT)
from ngpost-m1.news.aol.com [172.20.16.80]

----- The following addresses had permanent fatal errors -----
<shilkoff@nospam.ix.netcom.com>

----- Transcript of session follows -----
550 <shilkoff@nospam.ix.netcom.com>... Host unknown (Name server:
nospam.ix.netcom.com: host not found)

Final-Recipient: RFC822; shilkoff@nospam.ix.netcom.com
Action: failed
Status: 5.1.2
Remote-MTA: DNS; nospam.ix.netcom.com
Last-Attempt-Date: Sun, 4 Aug 2002 22:11:02 -0400 (EDT)

Return-Path: k9sqg@aol.com
Received: from ngpost-m1.news.aol.com (ngpost-m1.news.aol.com [172.20.16.80])
by imo-m05.mx.aol.com (8.8.8/8.8.8/AOL-5.0.0)
with ESMTP id WAA29703 for <shilkoff@nospam.ix.netcom.com>;
Sun, 4 Aug 2002 22:11:00 -0400 (EDT)
From: k9sqg@aol.com (K9SQG)
To: shilkoff@nospam.ix.netcom.com
Newsgroups: rec.radio.amateur.antenna
Date: 05 Aug 2002 02:09:54 GMT
References: <FEk39.13912$nc.1050860@newsread1.prod.itd.earthlink.net>
Organization: AOL http://www.aol.com
Subject: Re: Cleaning oxidized antenna
Message-ID: <20020804220954.03447.00001688@mb-bk.aol.com>

Larry,

Depends on what you want to do. I assume you only want to clean the parts that
make electrical contact, not the entire length of tubing. First, use a wire
brush to brush off the big stuff. Then, use a fine grit emery cloth NOT
sandpaper. One sheet of emery cloth goes farther than four sheets of
sandpaper. Wipe off all residue before assembling. When assembling, use one
of the commercially available "lubricants" that minimize aluminum oxidation.

You could also try using a product called Naval Jelly, but it isn't as common
as it used to be in stores.

73s,

Evan

2362. Re: Horizon antenna noise temperature ?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-05 02:42:50 UTC
From: "J. McLaughlin" <JCM@Power-Net.Net>
Message-ID: <ukrpgof6121t44@corp.supernews.com>
Source record: 137405

I did not notice this question at the time it was posted.
Years ago, W8PIL and I (then W8TBZ) wrote a paper on the ultimate limiting factor for vhf/uhf communications using antennas pointing at the horizon. It was published in QST about June 1961. I think that I still have printed copies of the paper. As I recall, the assumption was that a narrow beamwidth was to be used and that the noise limit was cosmic in origin. The paper is still the standard for what is possible. Today, the amount of man-made noise, which looks very random, from devices and transmitter spurs forms the noise limit. Over a period of several decades, a 150 MHz point-to-point circuit went from being NF limited to being almost unusable because of man-made noise. Both ends of the circuit were rural.

If one is far enough away from people, and one is using a high gain beam, the noise received depends on where the beam is pointed and the time.
73 Mac N8TT
--
J. Mc Laughlin - Michigan USA
Home: JCM@Power-Net.Net
Office: JCM@McLMcL.Com
"wa2elz" <wa2elz@nospamworldnet.att.net> wrote in message
news:lXi08.268179$WW.13468569@bgtnsc05-news.ops.worldnet.att.net...
> Any one have a good estimate for a yagi antenna noise temperature, in
> degrees Kelvin, pointed at the horizon at a receiving frequency of
600mhz ?
> My guess is between 100 to 300 degrees Kelvin, any better guesses ?
>
>

2363. Re: Thrust bearing

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-05 02:57:00 UTC
From: W5LL <mattpatt@1starnet.com>
Message-ID: <0QI39.105962$cm.3575786@bin3.nnrp.aus1.giganews.com>
Source record: 137406

www.texastowers.com

"wa2elz" <wa2elz@nospamworldnet.att.net> wrote in message
news:Eqe39.18724$pg2.1504729@bgtnsc05-news.ops.worldnet.att.net...
So far I have found 3 sources of thrust bearings:

1. Glen Martin TB-25 approx $90
2. RadioShack 940-0014 $80
3. Yeasu GS-065 (not sure of manufacture) $50

I need a thrust bearing for a 2 inch mast. Any one have any other sources ?

Any help is greatly appreciated.

2364. Re: GPS antenna design questions

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-05 03:12:36 UTC
From: Dick Carroll <dixie@townsqr.com>
Message-ID: <3D4DECF6.51D29362@townsqr.com>
Source record: 137407

There was a construction article for a GPS patch antenna in QST a few years ago, made from aluminum sheet. Simple cheap and straightforward. I don't have the specifics on which issue but maybe someone with a full set of QST at hand can help.

Dick

Roy Lewallen wrote:

> Patch and quadrifilar helix antennas are commonly used for GPS. I
> suggest posting your question on sci.geo.satellite-nav.
>
> Roy Lewallen, W7EL
>
> Alexander S. Wood wrote:
> > What are the general requirements? I've tried crossed dipoles without much
> > success. The only commercial antennas available here in the UK (that I have
> > seen) cost in the region of ï¿½50 (about $75), I am sure I must be able to do
> > one cheaper, and hopefully learn something while doing it.
> >
> > Has anyone got any good reccommendations for what will be a vehicle mounted
> > antenna. It could be active or passive. The coax run to the receiver will be
> > about 4m if externally mounted. I can't mount it behind the windscreen since
> > mine is heated and thus full of wires.
> >
> > The application is APRS using a Motorola GPS Rx board and a custom PIC based
> > decoder/TNC controller.
> >
> > Thanks in advance
> >
> > Alec Wood M1BNK
> > Teesside UK
> >
> >

2365. Re: Delta Loop for 160m

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-05 03:23:30 UTC
From: Eskay <Nospamve3jua@rac.ca>
Message-ID: <3D4DEFB2.AA0E7ACF@rac.ca>
Source record: 137395

Somewhere in the book it tells you:::On the side 1/4 wave down from the
top...
73 de VE3JUA...

G4VGO wrote:

> I read ON4UN's book concerning full wave 160 metre loops. Has anyone had
> experience actually using one? I am about to begin a project that will
> hopefully end up with a 160m full sized delta loop up about 20 metres at the
> base, with the apex around 180 metres.
>
> For vertical take-off where would the best feed point be?
>
> Thanks
>
> Bob G4VGO
>
> http://www.qsl.net/g4vgo

2366. Re: Thrust bearing

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-05 03:44:21 UTC
From: wa2elz <wa2elz@nospamworldnet.att.net>
Message-ID: <pwm39.19538$pg2.1564442@bgtnsc05-news.ops.worldnet.att.net>
Source record: 137408

Thanks for your help. Sorry about the HMTL, I use Rich Text format often on another forum to keep the paragraph format from being messed up. Helps make your post easier to read when tables of data are written. I'll try an remember to turn Rich Text off when not needed.

<n7ws_at_yahoo.com (Wes)> wrote in message
news:3d4da041.21790008@news.triconet.org...
> On Sun, 04 Aug 2002 18:32:04 GMT, "wa2elz"
> <wa2elz@nospamworldnet.att.net> wrote:
>
> |This is a multi-part message in MIME format.
>
> Why? Please turn off the html.
>
> |So far I have found 3 sources of thrust bearings:
> |
> |1. Glen Martin TB-25 approx $90=20
> |2. RadioShack 940-0014 $80
> |3. Yeasu GS-065 (not sure of manufacture) $50
> |
> |
> |I need a thrust bearing for a 2 inch mast. Any one have any other =
> |sources ?
>
> Rohn.

2367. Re: Thrust bearing

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-05 04:05:59 UTC
From: kelly@dvol.com
Message-ID: <d22b54c3.0208042005.70561d63@posting.google.com>
Source record: 137409

"wa2elz" <wa2elz@nospamworldnet.att.net> wrote in message
news:<Eqe39.18724$pg2.1504729@bgtnsc05-news.ops.worldnet.att.net>...
> So far I have found 3 sources of thrust bearings:
>
> 1. Glen Martin TB-25 approx $90
> 2. RadioShack 940-0014 $80
> 3. Yeasu GS-065 (not sure of manufacture) $50
>
>
> I need a thrust bearing for a 2 inch mast. Any one have any other
> sources ?
>
> Any help is greatly appreciated.
>
>
2.000 inche diameter tubing or 2 inch diameter pipe? Or is it 1 1/2
inch pipe which is close to 2.0 inches in diameter? Big differences in
size when it gets down to dealing with mechanical fits.
>
>
Dial up: http://www.mcmaster.com/
>
>
Run a search on "thrust bearings".
>
>
w3rv

2368. Re: STOP EVERYTHING

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-05 04:15:17 UTC
From: richardharrison@webtv.net
Message-ID: <651-3D4DFBD5-11@storefull-2398.public.lawson.webtv.net>
Source record: 137410

Roy Lewallen wrote:
"And a 1/4 wavelength ground plane antenna with horizontal radials has very nearly the same gain as a half wavelength vertical dipole."

I wrote:
"Gain is identical for a dipole and for a monopole with its image."

I tried to be succinct.

Roy also wrote:
"The field strength from a monopole over an infinite ground plane will be sqrt (2) times the field strength from a dipole in free space, given the same input power."

That`s logical since the effective power is doubled.

Anytime radiation is restricted to half a sphere instead of a whole sphere, for a given amount of power, the power concentration is doubled in the hemisphere. That`s effectively double the power, or a gain of 3 db. This benefit is not confined to a single antenna type. This can accrue to various types of antennas, depending on their placements.

I did not propose placing one type of antenna in one environment and the other type of antenna being compared in a different environment.

Best regards, Richard Harrison, KB5WZI

2369. Re: STOP EVERYTHING

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-05 05:23:59 UTC
From: richardharrison@webtv.net
Message-ID: <649-3D4E0BEF-116@storefull-2398.public.lawson.webtv.net>
Source record: 137411

Reg, G4FGQ wrote:
"A few days ago somebody asked how to calculate field strength from receiver input volts using a 1/4-wave vertical."

This isn`t the answer, but some might think this is related. Others would argue endlessly that it is not. B. Whitfield Griffith has related current into a 1/2-wave dipole with the field strength perpendicular to the dipole at a point one mile distant. I`ll try to give the gist of what he said.

One mile distance is often the standard used for field strength comparisons of antennas. It is several wavelengths distance in the AM broadcast band so that measurements are out of the induction fields of an antenna system.

The field produced by an antenna at a point in space can be calculated by integrating the current samples in an infinite number of infinitely small elements over the entire antenna and using this to determine the field. Almost the same determination can made by using antenna samples of practical size and simple arithmetic.

A half-wave dipole with one amp flowing at its center produces 37.42 mv/m at 1 mile, at a point perpendicular to the wire. Griffith used the simple arithmetic process for this result and presents it on page 327 of "Radio-Electronic Transmission Fundamentals". Field intensity is directly proportional to current in the antenna.

The field intensity produced by an antenna element, say 1-degree long can be doubled by the same current in an element 2 degrees in length.

We have the mv/m at one mile from a 1/2-wave dipole antenna in space. One mile is more than a wavelength so we don`t need to consider frequency. The induction fields are not a factor. The overall and incremental antenna lengths are expressed in terms of wavelength.

At two miles, the mv/m should measure about 19.

At 10 miles, the mv/m should measure about 3.7.

Down here on earth, loss will reduce measured field strength, and the incident and reflected signals may combine to produce more signal or less signal depending on the measuring point at one mile.

Best regards, Richard Harrison, KB5WZI

2370. Re: Back to Basics, etc

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-05 06:12:47 UTC
From: richardharrison@webtv.net
Message-ID: <25208-3D4E175F-208@storefull-2393.public.lawson.webtv.net>
Source record: 137413

Reg, G4FG wrote:
"The foregoing is beautifully simple and exact, easily understood by anyone who can do arithmetic."

A formula for radio signal attenuation due to expansion in free space has proved simple and effective. It may not be exact but gives answers agreeing closely enough with published graphs and tables.

I recently found it in print. It appears in Peter N. Saveskie`s "Radio Propagation Handbook" which is on ARRL`s bibliography list. I worked with Pete several years in Portugal. On page 326 Pete says:
"The loss between two isotropic antennae separated by one wavelength is 22.0 dB, thereafter increasing by 6.0 dB for each doubling of the inter-antenna distance."

Best regards, Richard Harrison, KB5WZI

2371. Re: Cleaning oxidized antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-05 06:24:38 UTC
From: n7ws_at_yahoo.com
Message-ID: <3d4e1341.51234977@news.triconet.org>
Source record: 137412

On Mon, 05 Aug 2002 01:36:37 GMT, "Larry Shilkoff"
<shilkoff@nospam.ix.netcom.com> wrote:

|I have a Cushcraft A3 yagi that was used at my previous home for a number of
|years. I'm planning on putting it back up, but I'm concerned about the
|apparent oxidation on the aluminum tubing. Is there a recommended method of
|cleaning the aluminum?

I've mentioned this before here (I think). If you want to get it
really clean, inside and out (inside counts too you know) here's how I
did it.

I nailed together four 2 X 4's set on edge to make a form about a foot
wide and a bit longer than the longest piece of tubing. I lined this
with some heavy plastic sheet, like the black stuff used in
landscaping work, to make a liquid proof trough. Do this somewhere
out in the yard away from kids, dogs, and any plantings you want to
protect.

Fill this with water (hot if you have it) to about an inch from the
top and stir in a can of household lye. Old clothes, safety glasses
and gloves are recommended. Also keep a garden hose handy, you'll
need it for the next part anyway.

Drop in a few pieces of your tubing and let it fizz for a while.
Remove a piece and give it a quick rinse with the hose. Then take a
wet rag and wipe off the black smut that formed. If you have a nice
clean matt finish then you're done. If not, put it back for a few
more minutes and try again. Purists will do a dip in a weak acid
solution (vinegar) to neutralize the lye, but a good flushing with
clean water will do just fine.

In my case I used the material from a TH6DXX to build a 20 meter
3-element monobander. I cleaned everything, boom, element clamps,
elements, etc. I went through about 3 cans of lye over a two day
period but it beat the "elbow grease" method.

I was able to dispose of the liquid by dumping it on the ground. If
this isn't an option at your place then you have several gallons of
good drain cleaner.

I also strongly recommend that you use all stainless hardware and
no-ox on all of the interfaces. The larger ACE hardware stores have a
good selection of stainless stuff. I bought 1/4 bolts and
self-locking nuts by the boxfull at reasonable cost. Be sure to lube
the threads on all stainless fasteners to avoid galling.

73,

Wes

2372. Re: GPS antenna design questions

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-05 07:37:31 UTC
From: samsvl@nlr.nl
Message-ID: <Xns926161E9F7D36samsvlnlrnl@137.17.96.14>
Source record: 137414

"Alexander S. Wood" <alec_wood@dont.spam.me.ntlworld.com> wrote in
news:UWg39.2635$tm4.22365@newsfep3-gui.server.ntli.net:

> What are the general requirements? I've tried crossed dipoles without
> much success. The only commercial antennas available here in the UK
> (that I have seen) cost in the region of £50 (about $75), I am sure I
> must be able to do one cheaper, and hopefully learn something while
> doing it.
>
> Has anyone got any good reccommendations for what will be a vehicle
> mounted antenna. It could be active or passive. The coax run to the
> receiver will be about 4m if externally mounted. I can't mount it
> behind the windscreen since mine is heated and thus full of wires.
>
> The application is APRS using a Motorola GPS Rx board and a custom PIC
> based decoder/TNC controller.
>
> Thanks in advance
>
> Alec Wood M1BNK
> Teesside UK
>
GPS patch antennas are readily available from any GPS store.
For DIY see http://www.helenav.nl/antlinks.htm

Sam

2373. Re: Thrust bearing

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-05 11:11:40 UTC
From: David Robbins <k1ttt@arrl.net>
Message-ID: <ailmh302am6@enews2.newsguy.com>
Source record: 137415

rohn tb-3
"wa2elz" <wa2elz@nospamworldnet.att.net> wrote in message
news:Eqe39.18724$pg2.1504729@bgtnsc05-news.ops.worldnet.att.net...
So far I have found 3 sources of thrust bearings:

1. Glen Martin TB-25 approx $90
2. RadioShack 940-0014 $80
3. Yeasu GS-065 (not sure of manufacture) $50

I need a thrust bearing for a 2 inch mast. Any one have any other sources ?

Any help is greatly appreciated.

2374. Re: GPS antenna design questions

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-05 11:41:18 UTC
From: w9gb <gregory.beat@attbi.com>
Message-ID: <yvt39.257612$Wt3.256046@rwcrnsc53>
Source record: 137416

Not to discourage your construction, but surplus commercial GPS antennas are
easily obtained for ?15 - 20

Weathproof SYMMETRICOM
http://cgi.ebay.com/ws/eBayISAPI.dll?ViewItem&item=1370329382

Motorola "Hockey-Puck" with outdoor mounting
http://cgi.ebay.com/ws/eBayISAPI.dll?ViewItem&item=1370409440

Trimble "hockey puck"
http://cgi.ebay.com/ws/eBayISAPI.dll?ViewItem&item=1370789590

Search for "antenna" under this category
Consumer Electronics:Gadgets & Other Electronics:GPS

w9gb

"Alexander S. Wood" <alec_wood@dont.spam.me.ntlworld.com> wrote in message
news:UWg39.2635$tm4.22365@newsfep3-gui.server.ntli.net...
> What are the general requirements? I've tried crossed dipoles without much
> success. The only commercial antennas available here in the UK (that I
have
> seen) cost in the region of ?50 (about $75), I am sure I must be able to
do
> one cheaper, and hopefully learn something while doing it.
>
> Has anyone got any good reccommendations for what will be a vehicle
mounted
> antenna. It could be active or passive. The coax run to the receiver will
be
> about 4m if externally mounted. I can't mount it behind the windscreen
since
> mine is heated and thus full of wires.
>
> The application is APRS using a Motorola GPS Rx board and a custom PIC
based
> decoder/TNC controller.
>
> Thanks in advance
>
> Alec Wood M1BNK
> Teesside UK
>
>

2375. Re: Computing power from SWR

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-05 11:44:52 UTC
From: cprstn54zz@att.net
Message-ID: <3d4e625f.194190281@news-server.optonline.net>
Source record: 137417

On Mon, 05 Aug 2002 07:08:53 +1000, Owen Duffy <owen@oda.com.au>
wrote:
>Is the antenna supposed to have VSWR of 50 (measured at the antenna
>terminals)? If not, fix the antenna. (I cannot believe that anyone would
>sell an antenna for HF intended for coax connection operating with
>VSWR=50.)

Well, as it turns out, the antenna indeed resonates on 80M -- narrowly
at 3.899 MHz where SWR=1.5. At the bottom of the band -- where I want
to be -- SWR is 12. So, it looks like I will be lengthening the 80M
section of the antenna and going to ladder line.

I expected some compromises with a shortened dipole. However, it
would appear that the manufacturer's express assertion that this
antenna with a coax feedline will give good performance across all HF
bands if a wide-range tuner is used is not accurate. It does look,
however, that with some fiddling and ladder line, it can do the job.
Had I known that from the outset, I still would have bought this
antenna, but would have saved hours of testing and work.

Ken KC2JDY

Ken
(to reply via email
remove "zz" from address)

2376. Re: Delta Loop for 160m

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-05 14:02:41 UTC
From: richardharrison@webtv.net
Message-ID: <18348-3D4E8581-7@storefull-2397.public.lawson.webtv.net>
Source record: 137319

VE3JUA wrote:
"Somewhere in the book it tells you (For vertical take-off, where would the best feed point be?)."

See Fig 10-16 on page 10-10 of ON4UN`s excellent book. Vertical polarization gives lower radiation angle but gain is greater with horizontal polarization. You might install the loop with insulators for both polarization feedpoints and place a short across the unused feedpoint to try both.

Also look at Fig 10-14. Earth conductivity affects vertical polarization performance more than it affects horizontal polarization performance.

Fig 10-8 shows feedpoints for the desired polarizations.

Best regards, Richard Harrison, KB5WZI

2377. Switching to ladder line -- questions

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-05 14:10:18 UTC
From: cprstn54zz@att.net
Message-ID: <3d4e82b1.202465609@news-server.optonline.net>
Source record: 137418

I am switching from coax feedline to ladder line because my dipole is not resonant where I sometimes need to be and the attendant very high SWR is causing large losses in the coax. So I don't wind up running a feedline for the third time, I would appreciate a little guidance. I have read that which there is to read about it in the ARRL Antenna book, plus a little more.

1) Will the ladder line radiate at the non-resonant frequencies? Will twisting help?

2) The ladder line will run parallel and 1 ft away from a grounded horizontal galvanized A/C duct for 40 ft. Is this a problem? Will twisting help? Would 2 ft away make things much better?

3) I hope to install a simple DPDT switch in my shack so I can disconnect my radio from both leads and ground both leads. Any surprises lurking here? Any recommendations as to source?

5) I hope to go to 600 watts at some point. Is The Wireman's #552, 16 ga., ladder line the right choice? See: http://www.thewireman.com/balance.html

5) I need to be able to take apart the ladder line at a spot 12 ft. from the feedpoint in my attic. Can I use automobile-type, crimp-on, spade connectors? Or should I use a terminal block with screw posts? Or should I just solder it and forget about convenience? Is copper -on-steel easily solderable?

Ken KC2JDY
(eager to at long last get going on HF)

Ken
(to reply via email
remove "zz" from address)

2378. General Rules for Debate

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-05 15:11:32 UTC
From: K4WGE <k4wge@msn.com>
Message-ID: <459a742fcc83756b5c39309f14a1a19e.8246@mygate.mailgate.org>
Source record: 137320

http://www.triviumpursuit.com/speech_debate/what_is_debate.htm

The following rules are taken from Competitive Debate Rules and Techniques by George McCoy Musgrave (1957)... :

"Debate, like many competitive activities, has rules and customs with which participants and judges should be thoroughly familiar. Until 1945, the rules were largely unwritten; they passed by word of mouth from debater to debater and from school to school. It is not surprising, then, to find some disagreement as to what they actually are.

In the last few years considerable progress has been made in the development of standards and procedures generally acceptable on a national basis. Widespread intersectional competition and national debate publications have accelerated this trend...

The Teams

The rules governing participants are these:
Rule 1. There are two teams. Each team consists of two or three speakers.
When the debate is arranged, agreement is reached as to whether two- or three-man teams will be employed. Two-man teams now predominate...

The Speeches

Rule 2a. The speeches and speaking time are divided equally between the two teams.
The tournament rules or debate contract specifies the amount of time allocated to each speech. The total speaking time generally runs about one hour including questioning periods.
Rule 2b. Each team has two or three constructive speeches.
It is customary for each member of the team to be allowed one constructive speech. Thus, if two-man teams are employed, there are two constructive speeches per team. If three-man teams are employed, there are three constructive speeches per team.
Rule 2c. Each team has from one to three rebuttal speeches.
In standard debate, it is customary for each participant to speak in rebuttal. ... The number of rebuttal speeches is, of course, specified in the pre-debate correspondence or tournament rules.
Rule 2d. The affirmative gives the first constructive speech, and the constructive speeches alternate: affirmative, negative, affirmative, negative.
Rule 2e. The negative gives the first rebuttal speech, and the rebuttals alternate; negative, affirmative, negative, affirmative.
Thus, the affirmative has both the first and last speeches of the

debate. This arrangement is designed to compensate for the affirmative's burden of proof, explained later.
Rule 2f. In Oregon type debate, each team has one or more questioning periods, in addition to the constructive speeches and rebuttals.
There are several versions of cross-examination debate. The arrangement to be used is agreed upon when the debate is being planned.

The Topic

When the topic is worded, whether by the national committed or by the local debaters, the following rule is applied:
Rule 3a. When worded as a proposition of policy, the topic requires the affirmative to support some specified action by some particular individual or group.
The proposition of policy takes the form, "Resolved, that the United States should grant statehood to Hawaii." Other wordings are possible and have been used in the past, but they have proved less satisfactory. The national high school and the national college topics have been phrased in this manner for so many years that other wordings are now generally considered improper except for international debate. The material in this book is based on the presumption that the topic is worded as a proposition of policy.
Of course, there are other requirements for a good topic. It should be interesting, clear, have one central idea, and not be one-sided. But even if these requirements are not met, it can still be debated; such requirements must be considered matters of good technique rather than rules.
Occasionally a contest hinges on the definition of a word or phrase in the topic. The rule is this:
Rule 3b. The affirmative has the right to make any reasonable definition of each of the terms of the proposition.
A "reasonable" definition generally means the definition intended when the proposition was phrased, or the technical definition of the term as used by professionals in that field. If the affirmative's definition is not reasonable, the negative should challenge it at the earliest opportunity.
Rule 3c. If the negative challenges the reasonableness of a definition by the affirmative, the judge must accept the definition of the team that shows better grounds for its interpretation of the term.
The judge is not expected to exercise his own taste in the matter, but to listen to the evidence and logic of the teams and to support the definition shown to be more reasonable.
Rule 3d. Once the negative has accepted the affirmative's definitions, it may not later object to them, even though it later develops that they are unreasonable. Failure of the negative to object to the affirmative's definitions in the first constructive speech following the definitions is equivalent to acceptance of them by the negative.
If the negative wishes to quarrel with the affirmative's interpretation of the topic, it must do so at once. Otherwise the debate might literally be half over before the teams have decided what they are arguing about. If the negative, through oversight, accepts or fails to

object to an unreasonable definition by the affirmative, it should not later be heard objecting that the definition was unreasonable.
"Trick" definitions are not encouraged. Unusual definitions are sometimes employed successfully by getting the negative to agree that they are reasonable before it realizes that they are not, but since strategic cases are always possible without resorting to such definitions, it is better to avoid them. They lead only to bickering and quibbling.
One practice, which has much to commend it, is for the two teams to agree on the definitions of any controversial terms in their pre-debate correspondence. These definitions are then included in the debate contract or tournament rules, and are announced by the chairman at the start of the contest.
Of course, all this does not mean that either team is required to define formally any term of the proposition. High school debaters do seem to prefer formal definitions, picking out the terms one by one ("By federal government, we mean..."). College debaters, on the other hand, often prefer to define the entire proposition by explaining the plan they are supporting. Either method is, of course, appropriate in either high school or college work.
The old argument about the meaning of the word "should" in the proposition still arises. Here is the generally accepted definition:
Rule 3e. The phrase "should adopt" or its equivalent means that the affirmative must show that the plan, if adopted, would be desirable. It does now in any way obligate the affirmative to show that the necessary approvals could be obtained.
For example, the constitutionality of the proposal is irrelevant; it must be presumed that the Constitution could be so amended if necessary. Similarly, the claim that too many voters or too many members of Congress are opposed to the bill for it to pass is irrelevant; the only question to be settled is whether or not the plan would be desirable if adopted.
On the other hand, the negative may choose to claim that the plan is not practicable that if it were put into effect it would not work, either immediately or at some future date. The plan certainly wouldn't be desirable if it didn't work, so this is a legitimate negative case which the affirmative must meet.
Rule 3f. The phrase "should adopt" or its equivalent obligates the affirmative to recommend that action be taken in the reasonably near future.
Ordinarily, no time limit is specified in the topic. Nevertheless, one is implied. The affirmative may allow a reasonable amount of time for working out the details and establishing the administrative functions, but delay until conditions have changed in some significant respect, or until (say) Great Britain tries the plan first, is not permissible.
If no such requirement as this existed, the affirmative might recommend that action be taken twenty years from now, when the plan could be adopted under highly favorable circumstances. The negative's position could be identical, and no debate would ensure. therefore, the affirmative must support reasonably prompt action.

Positions of the Teams

Sometimes the right of a team to recommend certain action is challenged. The limitations are not severe, but they should be clearly understood.
Rule 4a. The affirmative must advocate everything required by the topic itself.
If the affirmative fails to meet all of the requirements of the proposition, it fails in its burden of proof and consequently must lose the debate.
Rule 4b. The affirmative may work out the details of its plan as it sees fit. It may take on the burden of proving anything else it desires.
Of course, the more the affirmative advocates, the more it must prove, so the usual technique is to recommend as little as possible. However, if the affirmative does wish to recommend and support more than is required of it by the topic, the negative has no right to object. The affirmative is assuming the burden of proof for the entire enlarged plan, and if it fails to meet this responsibility, the negative wins.
Rule 4c. The negative may offer any counterplan that would be in order in a legislative assembly discussing the proposition.
The ideal counterplan is one that offers some change in principle from the affirmative proposal, and gives sufficient grounds for refecting the affirmative proposal. The counterplan actually offered, however, may be something less than ideal, and therefore it is important that each participant clearly understand what is permissible and what is not.
A counterplan which closely parallels the affirmative recommendation, differing only in minor respects, is adequate only if the negative shows that the difference between the two is so important that the affirmative plan should be rejected in favor of the negative proposal.
A counterplan based on surprise may, if successful, catch the affirmative unprepared. In the moment of anguish that comes when the affirmative realizes that it has no answer, there may be charges that the negative proposal is out of order. Actually, surprise in itself is perfectly legitimate. No proposal is ever out of order simply because it was not anticipated by the opposition.
Facetious and irrelevant counterplans are clearly out of order. Such plans would be useless in any event because they would not give logical grounds for rejecting the resolution.
Following legislative practice, disputed matter is admitted if there is doubt as to its admissibility.
Rule 4d. The affirmative must explain, upon demand by the negative, the major features and policies under which the proposed plan is to operate. If the negative recommends a counterplan, it has the same duty.
Neither team may leave its plan so vague as to prevent a reasonable attack by the opposition on grounds of practicability. For instance, when advocating a federal union of the nations of Europe, the affirmative, upon demand, must explain the basis for the selection of representatives from member countries that is, population, area, natural resources, literate population, or other method.
On the other hand, there is no obligation to explain minor details. The affirmative does not have to know how many representatives Luxembourg will have, so long as it explains the basis of Luxembourg's

representation. If the negative can show that the decision of the affirmative about an apparently minor detail of the plan is vitally important, then the affirmative must explain how that part of its plan will work; but if the negative attack is of the "hit-and-run" variety, the affirmative is under no obligation to answer each of these minor objections.

Sometimes an affirmative team decides to leave as much as possible to a commission or legislative body to decide so that the negative will have limited grounds on which to attack. This is permissible with regard to minor details, but if the negative demands an explanation of the major features of the plan, the affirmative is obligated to provide it.

Once a team has made known its position on major or minor issues, or even on small details, it is governed by the following rule:

Rule 4e. No revision of position of a team is permitted during the debate.

This rule is designed to prevent teams from wriggling out of contradictions between speakers by simply saying that they had revised their attitude in the meantime, Furthermore, it simplifies the proceedings and enables everyone concerned to follow the debate more easily; one can readily visualize the difficulty in pinning anyone down if speakers were permitted to shift their position whenever they chose.

When a team shifts ground on some issue, the judge should consider the point won by the opposing team. The only exception would be made when the revision is relatively minor and when, except for the shift of ground, the team making the point has a clearcut superiority on that particular issue.

Proof

A great deal has been written and said about the burden of proof, and certain misconceptions have arisen about the duty of the affirmative. The rule is simple:

Rule 5a. He who asserts must prove.

This principle applies equally to the two teams. Of course, the affirmative must show that its plan is desirable, which means that it must show that some benefits will result; otherwise it has failed to give reason for adopting the plan, and has lost the debate. The commonly heard statement that "the affirmative has the burden of proof" means that and nothing more.

On the other hand, if the negative wants the judge and audience to accept the idea that there are certain defects which outweigh the plan's good points, then it must assume the burden of proving that such disadvantages actually will result.

If the negative introduces a counterplan, it has the burden of showing how it is better than the affirmative's proposal; the affirmative then has the duty of establishing any alleged objections to the counterplan. In every instance, he who asserts must prove.

Rule 5b. In order to establish an assertion, the team must support it with enough evidence and logic to convince an intelligent but previously uninformed person that it is more reasonable to believe the assertion than to disbelieve it.

The amount of proof required in debating is generally less than that required in law. In law, the jury must be convinced beyond a reasonable doubt that the defendant is guilty in order to convict him; in debating, an assertion is established if it is supported by the weight of evidence and logic, even though there still may be room for doubt.

One further distinction is this: In law the jury may disbelieve evidence, even though its accuracy is not disputed. In debating, the judge is measuring the relative skill of the two teams, not deciding the "bedrock merits" of the matter in question. Therefore he is required to accept as valid all arguments backed with reasonable proof (as defined above) until overthrown by the opposing team.

A debate coach once remarked, "The implications here are pretty strong. Does this mean that the judge cannot penalize a team which uses a bare-faced lie as proof? Why not manufacture your evidence?" His point is well taken. Manufactured evidence is so rare in debate as to be almost non-existent, but conceivably it might happen some time. In that event, the following rule would cover the situation:

Rule 5c. Facts, presented in a debate as such, must be accurate.

If the judge is certain that the evidence is deliberately falsified, he is justified in giving the decision to the other team on this point alone. More often, it is simply a matter of interpretation of evidence, and if some error in logic is present, it is up to the other team to find it and point it out.

Rule 5d. Any restatement or quotation of an opponent's argument must be accurate.

A word-for-word quotation, in context, is ideal. This is ordinarily possible when the quotation is short or when one of the members of the team knows shorthand. Under most circumstances, however, the debater finds it necessary to paraphrase his opponent's remarks; for this purpose he needs careful notes and an understanding of his opponent's intent.

Misquotation, whether deliberate or not, unfairly places the other team in a false position and should be studiously avoided.

Rule 5e. Visual aids are permissible in debate. Once introduced, they become available for the opponents' use if desired.

On international questions, one team may desire to point out certain areas on a map. If this be done, the map may also be used by the opposing team. Consequently, it should be left in plain view of the audience, not rolled up and tucked under a table after the first speaker is through with it.

Rule 5f. One-sided visual aids must not be exhibited while an opponent is speaking, unless the opponent specifically requests that this be done.

Some teams prepare an outline of their case on a large poster, and exhibit this poster during the first constructive speech. If this be done, the poster should be removed at the end of the speech so that it does not distract from the attention given the next speaker.

If the next speaker feels that the constructive speech could be refuted more effectively with the poster in front of the audience, he may ask that it be put up again, in which case his request is, of course,

granted.
Preferably, visual aids should be introduced in the constructive speeches, rather than held until the rebuttals.

Refutation and Rebuttal
The rebuttal period is a time for refutation and summary; in fact, such emphasis has been placed on summary that some writers now refer to the "rebuttal-summary" period. Sometime one team believes that it has completely refuted the other team's arguments before the final speech starts, and then it may be devoted entirely to summary.
In all fairness to the opposing team, the constructive arguments of a team should be established in the constructive speeches, to allow time for the opposition to answer. Consequently, the following rule is well established:
Rule 8a. No new constructive arguments may be introduced in the rebuttal period.
A constructive argument is generally an alleged advantage or disadvantage in one of the proposed plans. All such arguments must be brought out in the constructive speeches.
Constructive arguments introduced in the rebuttal must be disregarded by the judge, with only one exception:
Rule 8b. New constructive arguments may be introduced in the rebuttal period if the rebuttal is the first opportunity to answer a direct question and if these new arguments answer the question.
The long-standing policy against new constructive arguments in the rebuttal period exists to protect teams from the last-minute introduction of new arguments by their opponents. If a team lets down the bars by an indiscreet question, it no longer deserves this protection; accordingly, the opposition may, if it desires, take advantage of the situation by introducing new constructive arguments in rebuttal. Such instances are rare because most teams find it desirable to introduce their constructive arguments early enough in the debate to support them with adequate evidence.
Rule 8c. Refutation may take place in any part of the debate and is not limited to the rebuttal period.
The above rule is so well understood that its mention would be unnecessary were it not that sometimes young debaters claim otherwise. "Refutation" includes the introduction of new evidence, when used to counter a point raised by the opposition.
Rule 8d. Either team, when advocating a plan of action, must explain that plan early enough in the debate so that the opposing team has a constructive speech in which to reply.
Advantages and disadvantages in a proposed plan of action are generally considered new constructive arguments; and new constructive arguments are not permitted in rebuttal (Rule 8a). Therefore, each team must give the other an opportunity to bring out new arguments of this kind before the rebuttals begin.
From the standpoint of the affirmative team, the rule is not particularly important. The affirmative can delay the explanation of its plan until the second constructive speech if it chooses, since the

negative still has a constructive speech in which to bring out the defects of the plan before the rebuttals.
From the standpoint of the negative team, however, the rule is significant. Where there are only two constructive speeches per team, the negative must propose any counterplan in its first constructive speech. If the negative waits until the second constructive speech to introduce the counterplan, the affirmative is forced to ignore it or present new constructive arguments in rebuttal.
If the affirmative is on its toes when the negative violates this principle, it can refuse to discuss the matter, pointing out that the negative left it no constructive time in which to bring out the disadvantages. The judge then considers the counterplan irrelevant, out of the debate, and does not consider it in his decision. This, in effect, penalizes the negative.
If, on the other hand, the affirmative chooses to meet the counterplan in the short time remaining, it does so knowing full well that it will be working under a handicap. Therefore, if the affirmative elects this course it is not entitled to any special sympathy; the judge simply reaches his decision on the basis of the arguments presented.
The last affirmative rebuttal presents special problems of its own, since it is the last speech of the debate and the negative has no opportunity for reply. One such problem is covered by this principle:
Rule 8e. The affirmative must, if possible, reply to the major negative arguments before the last rebuttal.
Suppose this rule were not followed. Suppose, for instance, that the affirmative had opportunity to answer some important negative argument earlier in the debate, but failed to do so until the last speech. The negative, having no speech in which to reply, is unfairly handicapped. If the negative rebuttalist anticipates this problem, he can make the affirmative look very bad by pointing out, as he summarizes, that the affirmative had opportunity to answer this argument earlier, and they did not do so, so any new defense dragged out at the last minute is under suspicion.
Suppose, however, that the negative does not anticipate the problem, and the affirmative does step out of bounds in that final speech. Suppose, for example, that the final speech contains a serious misquotation, or inaccurate facts that seem rather important, or new constructive arguments. What protection does the negative have? What can it do?
There are two methods for preventing unfairness of this kind. Either (1) the judge must be required to recognize and discard such material from the last rebuttal, or (2) some method must be developed to permit the negative to call the attention of the judge and audience to the situation. Since the negative team can recognize inaccurate quotations or facts more easily than the judge, the following rule seems to provide the preferable solution:
Rule 8f. If the negative believes that the affirmative is making unfair use of the last rebuttal, it may ask for the floor to point out the situation. The affirmative may then defend the statements in question or correct them and apologize.
If the judge determines that the negative charges are true, he penalizes

the affirmative by throwing out the arguments in question. If he determines that the negative charges are unjustified, no action is necessary. It seems preferable for the judge to state, before the affirmative speaker resumes his remarks, whether the arguments are to be thrown out or not, for only in this way will the affirmative rebuttalist know whether to continue in the same vein.
The judge makes no distinction between the last rebuttal and any other speech unless the negative points out some unfairness.
The time consumed in appeals and their settlement is not counted.

Judging

One basic principle underlies debate judging:
Rule 9a. The team doing the better debating is the winner.
Conceivably, more than one process might be employed to determine which team does the better debating. Indeed, since the beginning of intercollegiate debating a number of such methods have been proposed and utilized. Probably the most universally acceptable criterion would be this:
Rule 9b. The team doing what the proposition requires is the winner.
Debate topics are worded so that one team must succeed and one team must fail in meeting the requirements of the proposition. The successful team, having done the better debating, is declared victorious.
When the topic is expressed in the usual form as a proposition of policy, the judge's criterion for determining the winning team may be expressed in this form:
Rule 9c. The decision is given to the affirmative if it succeeds in showing that the proposed plan should be adopted. The decision is given to the negative if the affirmative fails to show that the proposal should be adopted.
The judge must remain strictly neutral and impartial with regard to the subject matter for debate. He cannot aid one team or the other by injecting his own personal opinions into the decision. This principle is applied in several ways:
Rule 9d. The judge must base his decision entirely on the material presented, without regard for other material which he may happen to possess.
Arguments or evidence which occur to the judge, but which are not employed in the debate, have no place in the decision. However, if the judge happens to possess some significant facts not employed in the debate, it would be helpful for him to mention them after his decision, as a suggestion for future use.
Rule 9e. The judge is required to accept as true all arguments backed by reasonable proof (as defined above) until such arguments are overthrown by the opposing team.
The judge has no right to consider an argument weak unless the opposing team shows that it is, or unless the team making the argument badly asserts it and fails to support it with adequate evidence or reasoning.
Rule 9f. The judge must not accept ideas which are not backed by reasonable proof.
Unsupported assertions and purely emotional appeals must not be

considered. The use of emotion is legitimate in driving home a point, and is to be encouraged in many instances, but the point must also be supported by evidence or logic if it is to be considered.
Impartiality also applies to the judgment of the debate techniques employed. Harlan puts it this way:
"The danger of using coaches for judges is that they have their own ideas about how best to prove each side, and, regardless of how good your proof might be, if you do not prove it as they would, there will be a tendency to discount your arguments."
Perhaps this does not apply to the majority of coaches who serve as judges. But in those instances where the coach-judge does swerve from impartiality, the criticism is valid. Each team has the right to make use of whatever arguments it desires, and the judge may not penalize a team for failing to make use of an argument or type of case he considers good. The entire decision must be based on what the teams accomplish, not on what the judge personally believes a good debate case on that subject to be.

Violations

Rules of debate exist to define the procedure and the playing field. They are similar to rules of football in that violation means a penalty of some sort but not necessarily loss of the game. Of course, in a tight situation the penalty could, in either game, mean the difference between victory and defeat.
Rules of debate are designed so that the teams suffer the natural consequences of their actions. There is no parallel in debate to football's five-yard penalty, but there is a close parallel to an out-of-bounds run in football: If the runner goes out of bounds, the play is stopped at that point; any gain made off the playing field is disallowed. In debate, any gain made outside of the established procedure is disallowed.
Suppose, for example, that a team brings up new constructive arguments in rebuttal. Since there is a rule against it, the judge would be required to disregard such arguments. This means that the offending team has wasted some of its time, which is the natural penalty one would expect. No additional penalty is placed on top of this natural one.
Again, suppose that a team makes assertions without proof. Since there is a rule which says that he who asserts must prove, the judge will decline to accept unsupported assertions. This is the natural penalty for violation of the rule. No additional penalty is inflicted.
This may be summarized as follows:
Rule 10. Any gains made outside of the established procedure are disallowed.

--
Posted via Mailgate.ORG Server - http://www.Mailgate.ORG

2379. Re: Cleaning oxidized antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-05 15:40:09 UTC
From: dan <danlx@execpc.com>
Message-ID: <3d4e9de0$0$1422$272ea4a1@news.execpc.com>
Source record: 137323

Wes, I have a few questions for you. Every time I have put together
old antennas, I just clean the pieces that join together, use anti-ox
and leave it at that. Now for the questions, why go to the trouble of
using caustic (remember Murphy's law?) materials to clean off the
whole antenna? Does this cleaning make it operate any better? Does
the oxidation of the surface of the aluminum, as long as it is not on
the joining surfaces cause some problem I am not aware of? Just
curious.
Thanks Dan
N9JBF

On Mon, 05 Aug 2002 06:24:38 GMT, n7ws_at_yahoo.com (Wes) wrote:

>On Mon, 05 Aug 2002 01:36:37 GMT, "Larry Shilkoff"
><shilkoff@nospam.ix.netcom.com> wrote:
>
>|I have a Cushcraft A3 yagi that was used at my previous home for a number of
>|years. I'm planning on putting it back up, but I'm concerned about the
>|apparent oxidation on the aluminum tubing. Is there a recommended method of
>|cleaning the aluminum?
>
>I've mentioned this before here (I think). If you want to get it
>really clean, inside and out (inside counts too you know) here's how I
>did it.
>
>I nailed together four 2 X 4's set on edge to make a form about a foot
>wide and a bit longer than the longest piece of tubing. I lined this
>with some heavy plastic sheet, like the black stuff used in
>landscaping work, to make a liquid proof trough. Do this somewhere
>out in the yard away from kids, dogs, and any plantings you want to
>protect.
>
>Fill this with water (hot if you have it) to about an inch from the
>top and stir in a can of household lye. Old clothes, safety glasses
>and gloves are recommended. Also keep a garden hose handy, you'll
>need it for the next part anyway.
>
>Drop in a few pieces of your tubing and let it fizz for a while.
>Remove a piece and give it a quick rinse with the hose. Then take a
>wet rag and wipe off the black smut that formed. If you have a nice
>clean matt finish then you're done. If not, put it back for a few
>more minutes and try again. Purists will do a dip in a weak acid
>solution (vinegar) to neutralize the lye, but a good flushing with
>clean water will do just fine.
>

>In my case I used the material from a TH6DXX to build a 20 meter
>3-element monobander. I cleaned everything, boom, element clamps,
>elements, etc. I went through about 3 cans of lye over a two day
>period but it beat the "elbow grease" method.
>
>I was able to dispose of the liquid by dumping it on the ground. If
>this isn't an option at your place then you have several gallons of
>good drain cleaner.
>
>I also strongly recommend that you use all stainless hardware and
>no-ox on all of the interfaces. The larger ACE hardware stores have a
>good selection of stainless stuff. I bought 1/4 bolts and
>self-locking nuts by the boxfull at reasonable cost. Be sure to lube
>the threads on all stainless fasteners to avoid galling.
>
>73,
>
>Wes

2380. Re: Switching to ladder line -- questions

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-05 15:46:12 UTC
From: CAM <w5dxp@hotmail.com>
Message-ID: <3D4E9DC4.EEA0B6F3@hotmail.com>
Source record: 137322

Ken wrote:
> 2) The ladder line will run parallel and 1 ft away from a grounded
> horizontal galvanized A/C duct for 40 ft. Is this a problem? Will
> twisting help? Would 2 ft away make things much better?

One foot clearance is plenty.

> 3) I hope to install a simple DPDT switch in my shack so I can
> disconnect my radio from both leads and ground both leads. Any
> surprises lurking here? Any recommendations as to source?

Make it a heavy duty knife switch.

> 5) I hope to go to 600 watts at some point. Is The Wireman's #552, 16
> ga., ladder line the right choice?

That will work fine but why not go with the larger 554?

> 5) I need to be able to take apart the ladder line at a spot 12 ft.
> from the feedpoint in my attic. Can I use automobile-type, crimp-on,
> spade connectors?

I use banana plugs and sockets in a piece of plexiglass mounted in
my hamshack window. When the wind blows during a thunderstorm, it
automatically unplugs.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

2381. Re: Switching to ladder line -- questions

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-05 16:01:46 UTC
From: SeeSignature@below.com
Message-ID: <3d4e9eb6.177767315@news.ga.comcast.giganews.com>
Source record: 137321

Back when I had Ladder Line coming into the shack and running through a big Nye Viking antenna tuner, I had intolerable EMI pickup from the computer and monitor in the shack here. Getting rid of the tuner and LL and replacing it with quality Coax made the interference go away. I probably still have a bit, but I don't notice it anymore.

If I were you, I would not let that LL come anywhere near the shack.

I have coax going outside to a choke balun where it couples to a carefully predetermined length of LL in the method suggested by wbdxp at

http://www.qsl.net/w5dxp/notuner.htm

Jerry W4UK

On Mon, 05 Aug 2002 14:10:18 GMT, cprstn54zz@att.net (Ken) wrote:

>I am switching from coax feedline to ladder line because my dipole is
>not resonant where I sometimes need to be and the attendant very high
>SWR is causing large losses in the coax. So I don't wind up running a
>feedline for the third time, I would appreciate a little guidance. I
>have read that which there is to read about it in the ARRL Antenna
>book, plus a little more.
>
>1) Will the ladder line radiate at the non-resonant frequencies? Will
>twisting help?
>
>2) The ladder line will run parallel and 1 ft away from a grounded
>horizontal galvanized A/C duct for 40 ft. Is this a problem? Will
>twisting help? Would 2 ft away make things much better?
>
>3) I hope to install a simple DPDT switch in my shack so I can
>disconnect my radio from both leads and ground both leads. Any
>surprises lurking here? Any recommendations as to source?
>
>5) I hope to go to 600 watts at some point. Is The Wireman's #552, 16
>ga., ladder line the right choice? See:
>http://www.thewireman.com/balance.html
>
>5) I need to be able to take apart the ladder line at a spot 12 ft.
>from the feedpoint in my attic. Can I use automobile-type, crimp-on,
>spade connectors? Or should I use a terminal block with screw posts?
>Or should I just solder it and forget about convenience? Is copper
>-on-steel easily solderable?
>

>Ken KC2JDY

--
To reply, remove space in je flanders@comcast.net

2382. Re: A TUTORIAL

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-05 16:13:46 UTC
From: nm5k@wt.net
Message-ID: <25eb70d7.0208050813.41e5ed45@posting.google.com>
Source record: 137324

aunwin@fgi.net (Art Unwin KB9MZ) wrote in message
news:<c4becf19.0208041623.388b41c5@posting.google.com>...
> nm5k@wt.net (Mark Keith) wrote in message
news:<25eb70d7.0208041030.1d69e4f0@posting.google.com>...
> > aunwin@fgi.net (Art Unwin KB9MZ) wrote in message
> > >
> > > Richard, if it is the feed method that radiates gives a problem then
> > > choose your own method of feed . My method of feed does radiate of
> > > course, but it is of
> > > no real consequence to me.
> > >
> > > loop
> > > 50 " -50 "
> > > xxxxx cap xxxxxxxxx
> > > x x
> > > x x
> > > ZZZZZZZZZZZZZZZZZZZZZZZZZZZZZZZZZZZZZZZZZZZZZZZZZZZZZZZZZZZZZZZZZZZZ
> > > 200 20 metre dipole
> > > -200"
> > >
> > >
> > > Regards
> > > Art Unwin KB9MZ
> >
> > Ok, I remade the antenna to match this picture. 20m dipole, and a loop
> > with those dimensions. The "4th side" of the loop nearest the dipole,
> > is made from the dipole itself. An adustable matching device.
> > Actually, almost seems to be an adjustable hairpin match it would
> > seem. The antenna worked no problem on all bands 20-10. I adjusted the
> > cap for each band to get a match under 2:1. As I earlier expected, the
> > antenna acts the same as a dipole fed with an autotuner.
> > It has the same pattern, and gains as any other 20m dipole fed on all
> > bands with an autotuner or low loss ladder line. Just to make sure,
> > does this picture equal what you describe?
> >
> > http://web.wt.net/~nm5k/loopole.jpg
> >
> > That is the basic picture taken in the modeling program. To match on
> > 20m took 5 pf. 17m, 44 pf. 15m, 30 pf, 12m, 18 pf, 10m, 12 pf. As you
> > can see I prefer literal cap values...:) The antenna works, but no
> > different than any other 20m dipole. You are just using a different
> > version of an autotuner. The antenna would act the same with one of
> > those fancy SGC autotuners. Or as far as I can tell anyway. BTW, it's
> > really not that much work for me to do this. I'm fairly fast...The

> > first test probably didn't take me over an hour total time. This one,
> > less. MK
>
> O.K,the drawing is good, the capacitance values appear O.K. except the
> highest capacitance should be at the other end of the frequency range
> which I must assume you got it backwards when typing your post. The
> capacitance values will increase uniformly from one end of the range
> to the other with max value at the 14 M hz range as with any normal
> loop antenna.

You would think so, but I couldn't get it to tune using my normal
"guestimated" cap value. The 17m tuned with 44 pf. 15m needed 30 pf.
So you would think on 20m, you would need appx 55-65 pf, maybe more???
or so. But I could only get a good match on 20m using 5 pf. They are
not backwards. As you can see, from 17m on up, they seem normal.
> (your values do not !)
> Now I can only assume that you only plotted the current curve which
> cannot be improved upon when using dipoles of 1/2 wave length where
> current is at the zero
> point at the ends of the structure (Max voltage)i.e 20 M
>

> Now stay with me for the moment.
> If you apply a 10 Mhz signal to a dipole cut for 20 you will still get
> max voltage points at the ends but each side will be out of phase with
> each other even tho voltage is a max at the physical ends. Thus for
> max gain with the given physical length we have we also have to change
> the phase on one side to match the other to get maximum collinear
> gain.
> The other resonant circuit (the loop) does this for you

But I don't really consider it another resonant circuit. Or element
anyway...I consider it an impedance matching device same as any other
gamma, delta, etc, match. To me, the whole system, loop matcher and
dipole, are one resonant circuit when tuned to match your 50 ohm coax.
As far as "collinear gain" , don't you need two elements?
I consider the dipole as one element. I consider the loop as a
matching device.
Sure, you can use L/C phasing to change direction, but I don't see how
you can do it with what you have. You are only feeding one element,
unless you split the elements?. If I'm missing something here, maybe
brighter bulbs will comment...

> So unlike say the trapped dipole we use the whole original physical
> length given
> rather than shortening the physical element to suit and with out the
> use of the feed line or stub.

But doesn't that rule out a "dipole like" pattern on all bands? I must
add though, that with only 20-10 meter use, the range is not large
enough to cause weird lobes on 10m. They just tighten up a bit.

> So forget the feed matching so that a constant feed impedance can be
> obtained
> thru out the range chosen

Huh???? You've lost me here...I don't see how I can do that even
without matching.

and concentrate on checking whether you
> actually
> have those capacitances backwards

Nope. They were not backwards. I modeled and saved each band tested as
a seperate antenna.

and run gain figures for other
> frequences
> to plot gains with frequency,

I've already done that. The gains were the same as any other 20m
dipole almost to a Tee from 20-10m.

after which you can optimise all
> dimensions and
> cap values to obtain constant impedances when used with a 4: 1 balun
> i.e 200 ohms.

You've lost me on this part. You don't need another balun. You have a
"gamma?" type matching device already. Unless maybe you want to
further reduce feedline currents...

> On the subject of the loop and the dipole using the same member. The
> whole idea of getting maximume coupling is to make it one and the
> same. Less efficient
> coupling by leaving a gap between the two circuits is fine but adds to
> complexity to the physical building of the antenna. All is then
> finished except to place the capacitor where there is less electrical
> stress is applied upon it.

But in the antenna I'm modeling, there is no coupling from element to
element per say. I'm using an adjustable matching device. This 2nd
antenna is a whole different animal than the first I made. The first I
made that you didn't like, was two elements. A dipole and a loop. I
consider this one, one element. I think we have a difference of
opinion there. MK

2383. Re: A TUTORIAL

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-05 16:24:59 UTC
From: nm5k@wt.net
Message-ID: <25eb70d7.0208050824.139bcc92@posting.google.com>
Source record: 137325

n7ws_at_yahoo.com (Wes) wrote in message news
>
> I think I probably speak for more than myself when I ask if you can
> post an Eznec, AO, NEC or Multinec file for your model.

I used MMANA which is from Japan. Same guy that makes MMSSTV. It was
the only freeware program I had that had the segment power to model
this accurately. "I'm cheap, and haven't bought any pay programs yet".
I don't have any of the above except for the eznec demo.
Well, let me take that back.. I might have NEC, but I haven't used it
much...
MMANA does generate a text file with the wires, sources,etc, etc, that
could be manually copied over to another program. I think it uses the
same basic engine as say elnec. Thats why I say eznec probably has an
advantage being it uses a better engine. "I think anyway, if I
remember right..". I'll zip up those text files for the antenna, and
each band, and post them on my server later..I'll post you a link
after I do. MK

2384. Re: Switching to ladder line -- questions

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-05 16:30:38 UTC
From: 'Doc <w5lz@icok.net>
Message-ID: <3D4EA820.5387DD2B@icok.net>
Source record: 137326

Ken,
See if this helps;
1. Twisting the ladder line doesn't do much about the
feed line radiating. It does help keep the ladder line
from flopping in the wind (really).
2. With 450 ohm ladder line about 4 - 6" of clearance is
enough. A foot would be nice, and two feet would be even
nicer. Twisting the ladder line does little good.
3. A 'simple' DPDT switch isn't exactly the 'best' thing
to use. The contacts in the switch are not very far apart
so it wouldn't provide a 'lot' of isolation. If you can
find an old knife-switch (big one), or an old fuse box
with a knife switch, either would provide 'better' isolation.
4. Using 16 ga. ladder line should hold you to ~well~ over
legal limit.
5. Either will work. Another alternative is to use a 'Twist-
Lock', male and female 120 volt AC connectors. The 'Twist-
Lock' is to keep it from pulling loose. You have to be a bit
'creative' in how you get the ladder line into the connectors,
but it's no big deal, really.

Good luck, I think you'll like using the ladder line...
'Doc

2385. Re: Switching to ladder line -- questions

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-05 16:34:00 UTC
From: 'Doc <w5lz@icok.net>
Message-ID: <3D4EA8ED.917BCCB9@icok.net>
Source record: 137327

Jerry,
Probably your problem was the "big Nye Viking antenna tuner".
They are known for being 'not the best' tuners around.
'Doc

2386. Re: A TUTORIAL

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-05 17:53:29 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <gretku4h0oabj0ino41q3f55qps319v1ug@4ax.com>
Source record: 137328

On 5 Aug 2002 09:13:46 -0700, nm5k@wt.net (Mark Keith) wrote:

> >and run gain figures for other
>> frequences
>> to plot gains with frequency,
>
>I've already done that. The gains were the same as any other 20m
>dipole almost to a Tee from 20-10m.

Hi Mark,

Again, another fine body of work accomplished once you got the rest of the details (only took 74 postings). And a new answer to my question: is there more than a dB's difference? - No

73's
Richard Clark, KB7QHC

2387. Re: Cleaning oxidized antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-05 18:06:29 UTC
From: Dennis Kaylor <k4oxg@tampabay.rr.com>
Message-ID: <F8z39.98268$s8.1850395@twister.tampabay.rr.com>
Source record: 137330

what works for me larry is WD-40 and steel wool or scotchbright pad
spray the element down with WD40 then go after it with the steel wool with
in a few strokes the alumium will be nice and clean then just wipe off the
WD40
"Larry Shilkoff" <shilkoff@nospam.ix.netcom.com> wrote in message
news:FEk39.13912$nc.1050860@newsread1.prod.itd.earthlink.net...
> I have a Cushcraft A3 yagi that was used at my previous home for a number
of
> years. I'm planning on putting it back up, but I'm concerned about the
> apparent oxidation on the aluminum tubing. Is there a recommended method
of
> cleaning the aluminum?
>
> Thanks
>
> Larry
>
>
>
>

2388. ant tuning question

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-05 18:13:54 UTC
From: rb <rbigg@seii.net>
Message-ID: <aimeij$8kp$1@news.chatlink.com>
Source record: 137329

I asked this question on this list several years ago, intending to "do something" with it. However, other things interevened, and here I am several years later thinking "well, by golly, I guess now is a good time to get around to fixing my problem". Anyway, I have completely forgotten the answers to the quiz, so will try it again:

1. I have a 140' dipole

2. fed with ladderline

3. down to a 1:4 balun outside my window

4. Typical T match with roller coil as ant tuner (it's rated for 160m)

Background: the best I can do on antenna loading on 160m is with the coil all the way in (max L). Because of the length, the feedline Z presented to the tuner is reactive on 160m.

Assumption: feedline Z at tuner is too reactive on 160m for tuner because of flatop length

Solutions:

a. I can add ladderline to the feedline

b. I can add wire to the ends of my antenna (drooping downward, up to 20')

c. I can go to a 1:1 balun

Will going to a 1:1 balun help any in this situation?

Can adding feedline help?

Is adding wire to ant length likely to help?

73 de Ron, K5BDJ

2389. Re: "W5QJR antenna"

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-05 18:17:03 UTC
From: N4LQ <N4LQ@igLou.com>
Message-ID: <3d4d6f8d_1@news.iglou.com>
Source record: 137457

Not enought info here. What's at the "feedpoint"? Is this the standard coax inverted L?

--
Steve Ellington N4LQ.
"Fredrik Olofsson" <574olofsson@telia.com> wrote in message news:TZ_29.2151$HY3.671211@newsc.telia.net...
> http://www.antennex.com/preview/New/w5qjr2.htm
>
> What is the verdict?
>
>
>
>

2390. Re: Best Allround Antenna ?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-05 18:19:23 UTC
From: aunwin@fgi.net
Message-ID: <c4becf19.0208051019.87da3d@posting.google.com>
Source record: 137331

'Doc <w5lz@icok.net> wrote in message news:<3D4DDFB8.49A6F11D@icok.net>...
> Art,
> Saying your sorry is a sign of weakness? Just
> where do you live, I wonder?

I live in Bllominton Illinois

It certainly isn't
> taken that way here, it's called manners, or being
> polite.
Wou are quite correct and that is the way in most place.
I was seething at the time with another poster who had taken that
stance
on the thread.
It was in no way meant meant to be adressed to the whole group.
At that time I was certain that my past work was complete and correct
but when I was in the military you don't get along when marching and
leading with the left foot where other are leading with the right.If
you want to get along sometimes you have to grit and bear it or have
all the
xxxx kicked out of you.

> Do you think that since one of the 'gurus', or
> 'big names' in antennas, hasn't picked up on your
> antenna idea, that maybe you should take another crack
> at it?
> 'Doc

Doc, I would put the whole computor program with values on this thread
but that would invite dismissal of what I have done by interjecting
programming skills. I made that mistake years ago so I am not anxious
to repeat it. What I have put out is from memory. The basic dimentions
are near enough
as is the capacitor values tho I admit I may have got the cpacitor
'ramp' direction backwards.
There is no doubt in my mind that the idea of merging two resonant
circuits
so that radiation at all frequencies uses ALL the physical length
required
and is always zero current at each end.
At present I have another wrinkle in that I have a virus in the
computor and until I find out how to shift the program to another
computor with out loosing the key. My disc at the present suggest that
there is no key on it !!!! What a mess I am in.
I have made many of these style antenna and also used them in arrays

and verticals e.t.c. as somebody else did in this town. A entrepreneur came to me with all finance required to start a company (He was a radio ham) after talking with me and the other ham on and off the air.
So there it is. I really can't see what the problem is on this thread. I have a loop that I have squashed down to an oblong shape and have retained the capacitor figures required for a loop with the range of 10-20 mHz.
This is clearly enunciated in the ARRL book as is the description of the basics as to what is happening. In that case the energy in the random radiator was that picked up by, in my case a dipole, and reradiating that frequency i.e. 20 meters.
The introduction of a loop antenna was able to change or remove a portion of that dipole such that it radiated at a frequency different to the 20 meter frequency that was origianly places upon it. Varying the capacitor on the squashed loop does just that, supplying me with varying frequencies that I would like to have(mixing produces F1 + F2= F3, F1 -F2 =F4) This to my mind is so basic .
I have placed it next to a 20 meter dipole, so close for best coupling that they have became one and then checked it out on the air to determine pattern changes and it did what I said, radiated the frequency aplied by the transmitter.
I may not have the best method of feed so let us get away from the feeding method or the impedance at the feed line. Frankly there are so few dimensions that could vary for optimisation that I am astonished again as I was years ago when I threw out every thing in disgust.
Its always possible that the antenna was affected by stray capacitance, the pig pen a mile away as many "new antennas turn out when newby clams are examined.
All I am asking for is my theoretical approach correct and if so what sort of
radiation patterns can it produces when optimised for a range. I can talk until
until I am blue in the face but until a 'name' or antenna guru comes along and looks at what I say by working at the basics I am not going to be able to convince anybody.

I am beginning to question my sanity but I am hanging in there, how long I can maintain this I don't know.
Regards
Art Unwin KB9MZ
Maybe I should leave for a couple of days to renew my self

2391. Re: Cleaning oxidized antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-05 18:28:58 UTC
From: n7ws_at_yahoo.com
Message-ID: <3d4ec1c6.16611308@news.triconet.org>
Source record: 137332

On Mon, 05 Aug 2002 10:40:09 -0500, dan <danlx@execpc.com> wrote:

|Wes, I have a few questions for you. Every time I have put together
|old antennas, I just clean the pieces that join together, use anti-ox
|and leave it at that. Now for the questions, why go to the trouble of
|using caustic (remember Murphy's law?) materials to clean off the
|whole antenna? Does this cleaning make it operate any better? Does
|the oxidation of the surface of the aluminum, as long as it is not on
|the joining surfaces cause some problem I am not aware of? Just
|curious.

I guess it depends on the condition of the material when you start and how much of a perfectionist you are. In this case, the "trouble" was less with my method than the armstrong method.

BTW, aluminum regardless of cleaning method oxidizes immediately upon contact with air which is why it doesn't solder or weld without special fluxes and/or inert gas shielding.

2392. Re: Antenna basics

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-05 18:37:38 UTC
From: Reg Edwards <g4fgq.regp@btinternet.com>
Message-ID: <aimglh$c1c$1@helle.btinternet.com>
Source record: 137333

David, you did say 'theory.'

Visit your local library. Go to the technical/engineering section. Browse around the shelves or catalogue. Have a chat with the librarian. Choose an elementary book on radio engineering or, if you can find one, radio antennas. If it's a thick book go straight to the chapter on antennas. Sit down, make yourself comfortable, read, and enjoy.

Articles in amateur radio publications are nearly all about antenna construction.

Reg

==========
"David D." <daviddiamond@comcast.net> wrote in message
news:aikhjm$14mcr8$1@ID-128035.news.dfncis.de...
> Thanks all, for your suggestions.
>
> - David
>
>
>
>

2393. hamstick questions...

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-05 19:05:12 UTC
From: Andreas Hofmann <andreash23@hotmail.com>
Message-ID: <3d4ecc63$1@news.microsoft.com>
Source record: 137334

I am thinking about getting one or a few hamsticks for mobile operations. Interesting to me sounds to operate during my commute times around 8am and 7pm PST. I like DX, so I would prefer an HF band that is closest to the MUFs. I was thinking that 20m would give me the best possibilities. Any thoughts?

Any thoughts on magnet mounts, are they safe?

Thanks
KU7T, Andreas

2394. Re: Cleaning oxidized antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-05 20:03:41 UTC
From: John Passaneau <jxp16@psu.edu>
Message-ID: <aimlnp$1i80@r02n01.cac.psu.edu>
Source record: 137335

Hi All:

I remember from the "old days" there was a finish for aluminum called the
Drano finish.

It was done by soaking the metal part in hot water with Drano which is
mostly lye. After the lye treatment you could color the aluminum by putting
a dye like food coloring in boiling water and dropping in the part. which
forced the dye into the surface.

What it was a crude anodizing process. It creates a thick layer of aluminum
oxide on the surface
that is porous and the dye could be forced into.

Cleaning aluminum with lye should work and if you would like a sky blue
antenna it should be possible.

--
John Passaneau
Penn State University, State College Pa.
W3JXP
w3jxp@arrl.net

<n7ws_at_yahoo.com (Wes)> wrote in message
news:3d4ec1c6.16611308@news.triconet.org...
> On Mon, 05 Aug 2002 10:40:09 -0500, dan <danlx@execpc.com> wrote:
>
> |Wes, I have a few questions for you. Every time I have put together
> |old antennas, I just clean the pieces that join together, use anti-ox
> |and leave it at that. Now for the questions, why go to the trouble of
> |using caustic (remember Murphy's law?) materials to clean off the
> |whole antenna? Does this cleaning make it operate any better? Does
> |the oxidation of the surface of the aluminum, as long as it is not on
> |the joining surfaces cause some problem I am not aware of? Just
> |curious.
>
> I guess it depends on the condition of the material when you start and
> how much of a perfectionist you are. In this case, the "trouble" was
> less with my method than the armstrong method.
>
> BTW, aluminum regardless of cleaning method oxidizes immediately upon
> contact with air which is why it doesn't solder or weld without
> special fluxes and/or inert gas shielding.
>

2395. Antennas from lengths of coax?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-05 20:17:46 UTC
From: fazamy@aol.com
Message-ID: <20020805161746.04644.00001850@mb-bh.aol.com>
Source record: 137336

Can any types of antennas be constructed from lengths of coax?
Explain!

Thanks,
Evan
KB2AMY

2396. Re: hamstick questions...

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-05 20:20:28 UTC
From: Floyd Sense <sentek@sprintmail.com>
Message-ID: <g6B39.15646$nc.1202257@newsread1.prod.itd.earthlink.net>
Source record: 137337

Here on the east coast, 17 meters is my preferred mobile band during the early morning and early evening hours. Pretty easy to work DX on SSB with good signal reports using my 17 meter hamstick. I use the magnet mount with three large magnets, sold by Lakeview for the Hamsticks. It hasn't budged a bit since installed on the top of my minivan. I also keep a 20 meter Hamstick in the van, and I use the Lakeview quick-release connectors so that I can change antennas in about 15 seconds.
--
K8AC
Floyd Sense in Angier, NC
"Andreas Hofmann" <andreash23@hotmail.com> wrote in message
news:3d4ecc63$1@news.microsoft.com...
> I am thinking about getting one or a few hamsticks for mobile operations.
> Interesting to me sounds to operate during my commute times around 8am and
> 7pm PST. I like DX, so I would prefer an HF band that is closest to the
> MUFs. I was thinking that 20m would give me the best possibilities. Any
> thoughts?
>
> Any thoughts on magnet mounts, are they safe?
>
> Thanks
> KU7T, Andreas
>
>
>

2397. Ground static discharge Question

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-05 20:30:17 UTC
From: Johnny <nospam@nospam.invalid>
Message-ID: <3d4edd14$0$62795$4d5ecec7@reader.city-net.com>
Source record: 137339

This might be off-topic, but I'm going to put up a TV Antenna, and I have a question about the grounding. I plan to ground the pole itself to the main house electrical ground (outside). For this purpose I will use a 6 gauge wire. The RCA cable will go from the Antennna to a static-discharge-device. A 10 gauge wire will come off the static-discharge-unit. Do I have to run a separate wire all the way to the main ground for the static-discharge or can I just merge this wire with the main antenna pole ground?

If I do connect the static-discharge wire to the the main 6 gauge wire, does anyone have some weather proofing suggestions?

Thanks for your suggestions.

2398. Re: Best Allround Antenna ?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-05 20:31:23 UTC
From: aunwin@fgi.net
Message-ID: <c4becf19.0208051231.51df1f0a@posting.google.com>
Source record: 137338

'Doc <w5lz@icok.net> wrote in message news:<3D4DDFB8.49A6F11D@icok.net>...
> Art,

> Do you think that since one of the 'gurus', or
> 'big names' in antennas, hasn't picked up on your
> antenna idea, that maybe you should take another crack
> at it?
> 'Doc
On second thoughts doc you are probably right.
I'll take some more time to think it thru, get the program sorted out
and take my risks again with what may be faulty programming regardless
of the fact that it works in practice.
Thanks for every thing. Of course I will be back,
unfortuately for some.
Art

2399. Re: Delta Loop for 160m

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-05 20:51:42 UTC
From: G4VGO <rmread@attglobal.net>
Message-ID: <3d4ee85d_2@news2.prserv.net>
Source record: 137340

Thanks to those on the NG and those who replied direct.....got the info now and the antenna will go up this weekend.

Results on the site below. A kite lifted experiment that may or may not stay up!

73

Bob G4VGO

http://www.qsl.net/g4vgo

2400. Re: Cleaning oxidized antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-05 20:59:36 UTC
From: nm5k@wt.net
Message-ID: <25eb70d7.0208051259.6d2e84cb@posting.google.com>
Source record: 137341

"Larry Shilkoff" <shilkoff@nospam.ix.netcom.com> wrote in message
news:<FEk39.13912$nc.1050860@newsread1.prod.itd.earthlink.net>...
> I have a Cushcraft A3 yagi that was used at my previous home for a number of
> years. I'm planning on putting it back up, but I'm concerned about the
> apparent oxidation on the aluminum tubing. Is there a recommended method of
> cleaning the aluminum?
>
> Thanks
>
> Larry

I use those green scotch pads that have no steel in them. You really
don't want to use steel wool on aluminum tubing as the small particles
imbed in the aluminum and then can later cause problems. "Rust", etc.
MK

2401. Re: Computing power from SWR

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-05 21:19:58 UTC
From: Owen Duffy <owen@oda.com.au>
Message-ID: <3D4EEBFE.6E480AF2@oda.com.au>
Source record: 137342

Ken wrote:
>
> On Mon, 05 Aug 2002 07:08:53 +1000, Owen Duffy <owen@oda.com.au>
> wrote:
> >Is the antenna supposed to have VSWR of 50 (measured at the antenna
> >terminals)? If not, fix the antenna. (I cannot believe that anyone would
> >sell an antenna for HF intended for coax connection operating with
> >VSWR=50.)
>
> Well, as it turns out, the antenna indeed resonates on 80M -- narrowly
> at 3.899 MHz where SWR=1.5. At the bottom of the band -- where I want
> to be -- SWR is 12. So, it looks like I will be lengthening the 80M
> section of the antenna and going to ladder line.
>

Good, you are fixing the real problem... it is a bit off frequency from the sound of it, probably influenced by your particular installation. Not at all to say it is your "fault", but the antenna sounds like it is loaded, so will be narrower than a full length dipole, and is influenced by proximity of objects (ground itself, support structures, feedline, metal in buildings etc).

> I expected some compromises with a shortened dipole. However, it
> would appear that the manufacturer's express assertion that this
> antenna with a coax feedline will give good performance across all HF
> bands if a wide-range tuner is used is not accurate. It does look,

Been a learning experience, hasn't it!

> however, that with some fiddling and ladder line, it can do the job.
> Had I known that from the outset, I still would have bought this
> antenna, but would have saved hours of testing and work.

If you have got the VSWR down to 1.5 (I assume on the tuner end of the cable at 80m, the VSWR at the antenna is 1.6, total cable loss is 0.6db, the tuner will be operating fairly efficiently (indeed you might not need it). You haven't told us what the antenna bandwidth is, but we might well expect <50KHz for VSWR<2.

If the desire to use ladder line is to operate over a wider bandwidth, why not just use a non resonant dipole. There is nothing magic about the gain of a resonant antenna (whether or not loaded), just convenient feedpoint impedance in certain lengths. Don't overlook the advantages of coax, convenient to route through a building, relatively unaffected by rain / dew / mist / snow / ice.

Anyway, "hours of testing and work" equates to valuable learning. With experience, you will solve these problems more quickly.

You have learn't something you can't learn from a book. Nevertheless, you might get interested and go back and read some texts on transmission lines to better understand what you were measuring, and how to use those measurements to guide you to the next steps.

Owen

2402. Re: Antennas from lengths of coax?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-05 21:21:05 UTC
From: 'Doc <w5lz@icok.net>
Message-ID: <3D4EEC35.ECD7B664@icok.net>
Source record: 137343

Evan,
Yes it can. Because it is a conductor.
'Doc

2403. Re: hamstick questions...

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-05 21:25:40 UTC
From: 'Doc <w5lz@icok.net>
Message-ID: <3D4EED47.A21B8DFE@icok.net>
Source record: 137344

Andreas,
I think 20 meters might be a good choice. Are
mag-mounts safe? That just depends on the size of
the antenna, the strength of the magnet(s), if you
ever 'hit' anything with the antenna, and how fast
you drive. So the 'best' answer is, probably.
'Doc

2404. Re: Cleaning oxidized antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-05 21:37:53 UTC
From: "W.G Ewald" <wgewald@att.net>
Message-ID: <v6stkucdq6t1auhq4stn8e5qtmben9k9tc@4ax.com>
Source record: 137345

On Sun, 4 Aug 2002 22:17:25 -0400, "J. Harvey"
<JM002.Harvey_ANTI*SPAM_@Sympatico.ca> wrote:

>"Larry Shilkoff"
>> ...cleaning the aluminum?
>
>Depending on how bad, sand paper or steel wool (if required)

Size 0000?

> and then switch
>to CometT (or equivalent) cleanser. Rinse very well when you're done to
>ensure that no residue remains.
>
>

2405. Re: Cleaning oxidized antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-05 21:42:13 UTC
From: dan <danlx@execpc.com>
Message-ID: <3d4ef2bc$0$1424$272ea4a1@news.execpc.com>
Source record: 137347

On Mon, 05 Aug 2002 18:28:58 GMT, n7ws_at_yahoo.com (Wes) wrote:

>On Mon, 05 Aug 2002 10:40:09 -0500, dan <danlx@execpc.com> wrote:
>
>|Wes, I have a few questions for you. Every time I have put together
>|old antennas, I just clean the pieces that join together, use anti-ox
>|and leave it at that. Now for the questions, why go to the trouble of
>|using caustic (remember Murphy's law?) materials to clean off the
>|whole antenna? Does this cleaning make it operate any better? Does
>|the oxidation of the surface of the aluminum, as long as it is not on
>|the joining surfaces cause some problem I am not aware of? Just
>|curious.
>
>I guess it depends on the condition of the material when you start and
>how much of a perfectionist you are. In this case, the "trouble" was
>less with my method than the armstrong method.
>
>BTW, aluminum regardless of cleaning method oxidizes immediately upon
>contact with air which is why it doesn't solder or weld without
>special fluxes and/or inert gas shielding.
OK,
I guess I am not that much of a perfectionist, but don't tell my wife.
It'll shatter her image of me;<} I always wondered why the
manufacturers don't anodize antenna material. I work with anodized
architectural aluminum and it takes a long, long time for the local
conditions (southeastern WI) to corrode it. Usually it is a
dissimilar metals condition that corrodes it long before the
atmosphere can.
Thanks
N9JBF
Dan

I've rambled enough, back to the rocking chair. ZZZZZZZZZ
Remove left x for a direct reply.

2406. Re: Cleaning oxidized antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-05 21:47:41 UTC
From: ":-) Bill" <therealexray@netscape.net>
Message-ID: <3D4EF27D.D7554024@netscape.net>
Source record: 137346

"W.G Ewald" wrote:
>
> On Sun, 4 Aug 2002 22:17:25 -0400, "J. Harvey"
> <JM002.Harvey_ANTI*SPAM_@Sympatico.ca> wrote:
>
> >"Larry Shilkoff"
> >> ...cleaning the aluminum?
> > >
> > >Depending on how bad, sand paper or steel wool (if required)
> >
> > Size 0000?
> >
> > > and then switch
> > >to CometT (or equivalent) cleanser. Rinse very well when you're done to
> > >ensure that no residue remains.
> > >
> > >

0000 will make long work of scrubbing antenna. Something more coarse
would be better IMHO.
-Bill

2407. Re: hamstick questions...

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-05 21:53:50 UTC
From: dan <danlx@execpc.com>
Message-ID: <3d4ef576$0$1424$272ea4a1@news.execpc.com>
Source record: 137349

On Mon, 5 Aug 2002 12:05:12 -0700, "Andreas Hofmann"
<andreash23@hotmail.com> wrote:

>I am thinking about getting one or a few hamsticks for mobile operations.
>Interesting to me sounds to operate during my commute times around 8am and
>7pm PST. I like DX, so I would prefer an HF band that is closest to the
>MUFs. I was thinking that 20m would give me the best possibilities. Any
>thoughts?
>
>Any thoughts on magnet mounts, are they safe?
>
>Thanks
>KU7T, Andreas
>
Hi Andreas,
I use them for 10,15 and 20 with three large magnets on a mount. They
work ok at those freqs and the big magnets hold on the freeway at 100
MPH, without a cross wind :<} Small trees are ok but drive thrus and
large trees are a no no. For those freqs they are a cheap
alternative,

I want to get a screwdriver and unless cost is a primary concern I
suggest you look at the screwdriver antennas that are out there. Do a
search on google of this group, there have been many discussions that
have included several of the makers and guys that have designed tuning
set ups that are IMHO pretty slick . Hope this helps.

BTW, if you get Hamsticks be careful cutting the stingers to length
:<{ the first time. Try to pick some up used, there are enough out
there.
Dan

I've rambled enough, back to the rocking chair. ZZZZZZZZZ
Remove left x for a direct reply.

2408. Re: Cleaning oxidized antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-05 22:00:03 UTC
From: ":-) Bill" <therealexray@netscape.net>
Message-ID: <3D4EF563.93006A13@netscape.net>
Source record: 137348

dan wrote:
>

> >BTW, aluminum regardless of cleaning method oxidizes immediately upon
> >contact with air which is why it doesn't solder or weld without
> >special fluxes and/or inert gas shielding.
> OK,
> I guess I am not that much of a perfectionist, but don't tell my wife.
> It'll shatter her image of me;<} I always wondered why the
> manufacturers don't anodize antenna material. I work with anodized
> architectural aluminum and it takes a long, long time for the local
> conditions (southeastern WI) to corrode it. Usually it is a
> dissimilar metals condition that corrodes it long before the
> atmosphere can.
> Thanks
> N9JBF
> Dan

There's certainly better alloys these days. I work in cable tv and the hardline and connectors used 20 years ago corroded many times faster than they do today. With todays products, corrosion of the aluminum itself is almost non-existent in comparison.
-BM

2409. Re: ant tuning question

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-05 22:16:53 UTC
From: CAM <w5dxp@hotmail.com>
Message-ID: <3D4EF955.C89D9989@hotmail.com>
Source record: 137350

rb wrote:
> I asked this question on this list several years ago, intending to "do
> something" with it. However, other things interevened, and here I am
> several years later thinking "well, by golly, I guess now is a good time to
> get around to fixing my problem". Anyway, I have completely forgotten the
> answers to the quiz, so will try it again:
>
> 1. I have a 140' dipole
>
> 2. fed with ladderline
>
> 3. down to a 1:4 balun outside my window
>
> 4. Typical T match with roller coil as ant tuner (it's rated for 160m)
>
> Background: the best I can do on antenna loading on 160m is with the coil
> all the way in (max L). Because of the length, the feedline Z presented to
> the tuner is reactive on 160m.

Your 160m problems are virtually insolvable. Your feedpoint impedance on 160m
is about 10.7-j936 ohms yielding an SWR of more than 200:1 on 450 ohm ladder-
line. If your ladder-line length is around 83 feet, the impedance looking
into the transmission line is around 2 ohms. A 4:1 balun will attempt to
take that value down to 1/2 ohm. :-(A tuner trying to match 1/2 ohm
is extremely lossy.

IMO, the best thing you could do is short the ladder-line conductors at
the tuner and feed the antenna Marconi style against ground. Or you could
add some loading coils to your dipole.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

2410. Re: hamstick questions...

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-05 22:27:40 UTC
From: CAM <w5dxp@hotmail.com>
Message-ID: <3D4EFBDC.E7915A92@hotmail.com>
Source record: 137351

Andreas Hofmann wrote:
> I am thinking about getting one or a few hamsticks for mobile operations.
> Interesting to me sounds to operate during my commute times around 8am and
> 7pm PST. I like DX, so I would prefer an HF band that is closest to the
> MUFs. I was thinking that 20m would give me the best possibilities. Any
> thoughts?

20m-10m Hamsticks perform pretty well, i.e. their efficiency is
usually acceptable. 20m is often open when 17m is not. The MUF
seems to hover between 20m and 17m quite often. (or should I say
MUW for Maximum Useable Wavelength :-)

> Any thoughts on magnet mounts, are they safe?

The three or four magnet mounts work well with 20m-10m Hamsticks.
I use one when my screwdriver is off my pickup. The problem with
mag mounts on the lower frequency bands is that they don't offer
enough capacitance to ground.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

2411. Re: Antennas from lengths of coax?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-05 22:42:44 UTC
From: "Alexander S. Wood" <alec_wood@dont.spam.me.ntlworld.com>
Message-ID: <FjD39.1825$J47.24099@newsfep3-gui.server.ntli.net>
Source record: 137352

Simplest one I can think of is a dipole. Strip the outer to leave only the inner conductor forming one half of the dipole, a choke "balun" is placed an equal distance down the intact part of the coax to form the other half of the dipole. This antenna can be quite effective used as a sloper or even just in a field day "damn I forgot the antenna" moment.

There was I believe a commercial 10/11m fibreglass antenna available some years ago using this very design. A nine-foot fibreglass tube with a piece of coax running up it and a large ferrite at the bottom. On top of that was a nine-foot whip, et voila, a vertical dipole.

Alec Wood M1BNK
Teesside UK

"FAZAMY" <fazamy@aol.com> wrote in message
news:20020805161746.04644.00001850@mb-bh.aol.com...
> Can any types of antennas be constructed from lengths of coax?
> Explain!
>
> Thanks,
> Evan
> KB2AMY

2412. Re: hamstick questions...

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-05 22:52:34 UTC
From: CAM <w5dxp@hotmail.com>
Message-ID: <3D4F01B2.983D9E2A@hotmail.com>
Source record: 137353

dan wrote:
.> BTW, if you get Hamsticks be careful cutting the stingers to length
> :<{ the first time. Try to pick some up used, there are enough out
> there.

One way to increase the performance of a Hamstick is to install a
base section under the antenna and use the next higher frequency
Hamstick. For instance, install a three foot section under a 17m
Hamstick and use it on 20m.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

2413. Re: Cleaning oxidized antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-05 22:58:00 UTC
From: George Tyrebyter <GeoTyrebyter@netscape.net>
Message-ID: <3D4F02F8.ED240D8@netscape.net>
Source record: 137354

dan wrote:
>
> .... I always wondered why the
> manufacturers don't anodize antenna material.

The anodized layer is a good insulator.

--
George Tyrebyter

2414. Re: Antennas from lengths of coax?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-05 23:11:17 UTC
From: Reg Edwards <g4fgq.regp@btinternet.com>
Message-ID: <ain0mk$8s0$1@helle.btinternet.com>
Source record: 137355

"FAZAMY" wrote
> Can any types of antennas be constructed from lengths of coax?
> Explain!
==========

An explanation is hardly necessary. The outer coaxial conductor radiates by virtue of the current flowing on it and the voltage along its length, and the inner conductor does nothing except that it may form part of some impedance matching arrangement which can be accomplished in a less weighty and considerably more efficient manner by some other means.

On the other hand they do provide topics suitable for space-filling articles in amateur radio publications.

Reg, G4FGQ.

2415. Copied from another newsgroup.

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-05 23:11:24 UTC
From: Reg Edwards <g4fgq.regp@btinternet.com>
Message-ID: <ain0mr$8s0$3@helle.btinternet.com>
Source record: 137356

> for those who might be interested, the subject of path loass and
> direct-path communications is covered in the EXCELLENT publication
> (from the RSGB!!) THE VHF/UHF MANUAL.
> in my edition look at chapter TEN pages 10.4 10.5 and 10.6
> who DO give refs & acks up the front of the book :-)
==========

Although many years ago I was accustomed to reading ARRL and RSGB publications picked up at main-line railway station book stalls just to read on long rail journeys, eg., Kings Cross to Inverness, I am of the opinion that the RSGB has always presented the better quality elementary theoretical accompanyments to their construction articles.

Sadly, these days neither sort of publications are available from British railway station bookstalls.

On the other hand, American comics depicting Bill Holman's Smokey Stover, 'all that is foo is titters', Marzipan the Magician, Little Annie Oakly?, etc., may have been of lower quality print but were always more witty. I learned to read very early in life from American comics. Perhaps it explains my peculiar sense of humor (as a concession - the Yankee spelling).

Reg G4FGQ
With exhibitionist tendencies.

2416. Re: hamstick questions...

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-05 23:56:51 UTC
From: Andreas Hofmann <andreash23@hotmail.com>
Message-ID: <3d4f10f5$1@news.microsoft.com>
Source record: 137358

Do you have a link or doc with more information on this? I got another email with a similar suggestion; seems like quite a few of OMs are doing this...

Thanks
KU7T,
Andreas

"CAM" <w5dxp@hotmail.com> wrote in message
news:3D4F01B2.983D9E2A@hotmail.com...
> dan wrote:
> .> BTW, if you get Hamsticks be careful cutting the stingers to length
> > :<{ the first time. Try to pick some up used, there are enough out
> > there.
>
> One way to increase the performance of a Hamstick is to install a
> base section under the antenna and use the next higher frequency
> Hamstick. For instance, install a three foot section under a 17m
> Hamstick and use it on 20m.
> --
> cheers, CAM http://www.qsl.net/w5dxp
>
>
> -----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
> http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
> ------== Over 80,000 Newsgroups - 16 Different Servers! =-----

2417. Re: SWR - Why isn't the energy re-absorbed at the TX?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-05 23:56:59 UTC
From: N0SA <n0sa@earthlink.net>
Message-ID: <fhE39.15648$cl.1203140@newsread2.prod.itd.earthlink.net>
Source record: 137357

Check out Maxwells book "Reflections II". It has an indepth explaination
about it.
Larry N0SA

2418. Comet GP-15

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-05 23:59:30 UTC
From: Darrin <darrin99@nj.rr.com>
Message-ID: <e64uku8als6af6ggf06omfdj8e9dik985v@4ax.com>
Source record: 137359

Anyone have any comments on the GP-15? I just put one up on the chimney and it seems to work very well on 2M, 440, and 6M FM. Haven't heard a thing on 6M SSB though. Could just be the band though. Without a tuner, the bandwidth seems very narrow on 6M too.

2419. Design and tesing of fractal antenna systems

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-06 00:20:57 UTC
From: Lee AB7ON <revcon@xprt.net>
Message-ID: <ain4p9$tl2$1@news.netmar.com>
Source record: 137362

Hello eveyone!

I'm looking for assistance in the design and testing of
fractal antennas for 75 meters. Anyone with application experience and/or
working knowledge of fractals and advanced mathematics is invited to contact
me. I am interested in prototype buildup and testing of models using the Koch
Triadic/Quadratic form or Sierpinski models.

Lee/AB7ON

----- Posted via NewsOne.Net: Free (anonymous) Usenet News via the Web -----
http://newsone.net/ -- Free reading and anonymous posting to 60,000+ groups
NewsOne.Net prohibits users from posting spam. If this or other posts
made through NewsOne.Net violate posting guidelines, email abuse@newsone.net

2420. Re: Comet GP-15

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-06 00:25:38 UTC
From: Larry Saletzki <wa9vrh@ocslink.com>
Message-ID: <3d4f1206_2@corp.newsgroups.com>
Source record: 137361

HI Darrin, I used one with the triplexer for a couple of years on packet. I had a 6m, 2m and uhf connection going all at once. Baffled the heck out of me that all three could be transmitting at once. It worked very well. One negative is that it will not hold up very well to a direct lightening bolt!! But then again I guess we wouldn't either! I have another that I will be putting up later this year. 73's Larry WA9VRH

"Darrin" <darrin99@nj.rr.com> wrote in message news:e64uku8als6af6ggf06omfdj8e9dik985v@4ax.com...
> Anyone have any comments on the GP-15? I just put one up on the
> chimney and it seems to work very well on 2M, 440, and 6M FM. Haven't
> heard a thing on 6M SSB though. Could just be the band though. Without
> a tuner, the bandwidth seems very narrow on 6M too.

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
------== Over 80,000 Newsgroups - 16 Different Servers! =-----

2421. Re: SWR - Why isn't the energy re-absorbed at the TX?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-06 01:06:50 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <3D4F212A.9040405@eznec.com>
Source record: 137360

I'll paraphrase what Walt Maxwell, W2DU says in his book _Reflections_:

The reflected power doesn't encounter a passive load equal to the source's impedance (which would result in absorption and dissipation of the reverse power). What it encounters is an active source feeding power outward toward the load. The interference between this outward going wave (actually, outward travelling V and I waves) and the returning reverse power results in a total re-reflection of the reverse power back toward the load.

For more detail, I highly recommend _Reflections_.

Roy Lewallen, W7EL

richardelord@dial.pipex.com wrote:
> I have never understood why the reflected energy from a mismatched
> feeder/antenna isn't re-aborbed at the TX, particularly if an ATU
> ensures a 1:1 match from the TX output into the feeder.
>
> Surely this energy must double the potential across the PA circuit
> with a severe mismatch. Maybe with a heavy duty valved linear this
> is not important, but what if a delicate edge of the seat designed
> solid state job?
>
> Anybody undestand this?
>

2422. Re: Cleaning oxidized antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-06 01:13:49 UTC
From: dan <danlx@execpc.com>
Message-ID: <3d4f2456$0$1424$272ea4a1@news.execpc.com>
Source record: 137365

On Mon, 05 Aug 2002 16:58:00 -0600, George Tyrebyter
<GeoTyrebyter@netscape.net> wrote:

>dan wrote:
>>
>> .... I always wondered why the
>> manufacturers don't anodize antenna material.
>
>The anodized layer is a good insulator.
I did not know that.

Dan

I've rambled enough, back to the rocking chair. ZZZZZZZZZ
Remove left x for a direct reply.

2423. Choke needed on Cushcraft A3?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-06 01:21:45 UTC
From: Greg Dukes <ka5get@charter.net>
Message-ID: <uku92itgre3jb0@corp.supernews.com>
Source record: 137363

Hello and thanks for the help.
I'm putting up a Cushcraft A3. This is an older model. The instructions say a coiled feed line choke made of 8 turns on a 6 inch form of RG-8 coax is needed at the feedpoint.
Is this needed or can I run my coax straight to the feedpoint without the feed line choke or a balun? If it is needed why?
If it is needed can I make a feed line choke of 8 turns on a 4 inch form instead of a 6 inch form and it still work?
Any other info ,suggestions or help will be greatly appreicated.

Greg Dukes/KA5GET

2424. Re: ant tuning question

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-06 01:24:10 UTC
From: K4IA <K4ia@novacoxmail.com>
Message-ID: <_yF39.334437$DB.9657154@news1.east.cox.net>
Source record: 137364

Ditto CAM's comment on the mismatch. Get rid of the 4:1 balun and go with a big 1:1 current balun. Centaur makes a good one. The 4:1 voltage balun is making your situation worse, not better, and it is very lossy at this kind of mismatch, probably over-heating too.

I use a 102 foot center-fed L with the top half horizotal at 60 feet high and the other half vertical. Feed with ladder line to a 1:1 balun to a short piece of coax to the shack. Tunes up on 160-10 with my Ameritron AT-30 tuner.

Changing the length of the feedline might help if it was 1/4 wave. It would act like a transformer but I will leave it to others in the group to explain how that works and if it might be of value to you. I am still trying to figure that out.

--
Radio K4IA
Craig "Buck"
Fredericksburg, Virginia USA

FISTS 6702 CC 788 Diamond 64
K1# 470 K2# 2460

"rb" <rbigg@seii.net> wrote in message
news:aimeij$8kp$1@news.chatlink.com...
>
> 1. I have a 140' dipole
>
> 2. fed with ladderline
>
> 3. down to a 1:4 balun outside my window
>
> 4. Typical T match with roller coil as ant tuner (it's rated for 160m)
>
> Background: the best I can do on antenna loading on 160m is with the coil
> all the way in (max L). Because of the length, the feedline Z presented
to
> the tuner is reactive on 160m.
>
> Assumption: feedline Z at tuner is too reactive on 160m for tuner
because
> of flatop length
>
> Solutions:
>
> a. I can add ladderline to the feedline

>
> b. I can add wire to the ends of my antenna (drooping downward, up to
20')
>
> c. I can go to a 1:1 balun
>
> Will going to a 1:1 balun help any in this situation?
>
> Can adding feedline help?
>
> Is adding wire to ant length likely to help?
>
> 73 de Ron, K5BDJ
>
>
>
>

2425. Re: SWR - Why isn't the energy re-absorbed at the TX?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-06 01:27:33 UTC
From: richardharrison@webtv.net
Message-ID: <648-3D4F2605-447@storefull-2398.public.lawson.webtv.net>
Source record: 137368

richardeford wrote:
"I have never understood why the reflected energy from a mismatched feeder / antenna isn`t re-absorbed at the TX, particularly if an atu ensures a 1:1 match from the TX output into the feeder."

There is a contradiction in the sentence above. A match between the TX output into the feeder is given and a mismatch between the feeder and the antenna is proposed.

This is possible in a lossy system but hardly the case in a near lossless system. There may be mismatches between antenna and/or transmitter and the surge impedances of the feedlines but a match from the TX output into the feeder is specified.

If the TX is matched to the feeder it is not because a 50-ohm transmitter is connected to 50-ohm coax. It is because the transmitter coax has the 1:1 SWR. I am assuming the "ATU" is remote and connected to the transmitter by coax. But the TX final amplifier would see no reflected signal were the "ATU" internal to the transmitter. When there is no SWR, there is no reflected energy to be "re-absorbed" at the TX.

Current flows from the transmitter into the output line becaust the transmitter voltage is higher than the output line voltage.

Best regards, Richard Harrison, KB5WZI

2426. Re: Switching to ladder line -- questions

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-06 01:33:36 UTC
From: Gary McAdams <g.m.mcadams@worldnet.att.net>
Message-ID: <QHF39.20965$pg2.1674004@bgtnsc05-news.ops.worldnet.att.net>
Source record: 137366

'Doc <w5lz@icok.net

SEZ:

> Probably your problem was the "big Nye Viking antenna tuner".
> They are known for being 'not the best' tuners around.
> 'Doc

Well Doc gotta disagree with that conclusion...

I've been using one of those "big Nye Viking antenna tuner" 's
with ladder line for over two years without suffering RFI in the shack.
I do use a piece of good coax to a balun in the basement and
ladder line to the feed point. Works well with no RFI to home equipment
at the 100 watt level and only a small amount, mostly to the VCR
and answering machine at the kilowatt level.

So tell me, where does this conclusion about the Nye-Viking
series of tuners come from? I asked the same question
many months ago on this very same newgroup with out a
single answer.

So what makes the N-V MBV-A a bad tuner?
is it:
A. Cost?
B. Inefficiency?
C. Other?

Really, I'm curious. The ARRL tests a couple of years ago
showed it to have some loss on 10 and 160, but overall
it came out OK compared to tuners in the same price
class. To be sure,it is expensive if new, but I got mine
at a nice used price.

Please educate me.

Thanks! Gary WG7X

2427. Re: SWR - Why isn't the energy re-absorbed at the TX?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-06 01:43:29 UTC
From: VE9SRB <srbest@att.net>
Message-ID: <5RF39.20985$pg2.1673536@bgtnsc05-news.ops.worldnet.att.net>
Source record: 137367

"Roy Lewallen" <w7el@eznec.com> wrote in message
news:3D4F212A.9040405@eznec.com...
> I'll paraphrase what Walt Maxwell, W2DU says in his book _Reflections_:
>
> The reflected power doesn't encounter a passive load equal to the
> source's impedance (which would result in absorption and dissipation of
> the reverse power). What it encounters is an active source feeding power
> outward toward the load. The interference between this outward going
> wave (actually, outward travelling V and I waves) and the returning
> reverse power results in a total re-reflection of the reverse power back
> toward the load.
>

Roy:

To understand and analyze the interaction between source feeding power and reflected power, you must use forward and reflected voltages and currents. An analysis with source and reflected voltages and currents illustrates what really happens. Total "power re-reflection" can only occur if a totally reflecting load is encountered. The reflected power arriving at the source almost never sees a load with an infinite SWR. As a result, a total re-reflection of power simply does not occur. A simple circuit analysis provides evidence of this. Wattmeter readings do not.

Steve VE9SRB

2428. Progam TwinTrap and related patents.

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-06 02:48:40 UTC
From: Reg Edwards <g4fgq.regp@btinternet.com>
Message-ID: <ainde7atd1@venus.btinternet.com>
Source record: 137271

Wolfgang, OE1MWW, took the trouble to search around and advise me of two patents covering coils which resonated with their own turn-to-turn self-capacitance. Thank you Wolfgang. There are probably others.

> http://www.via.at/voxcom/04334228.pdf

Hiromi Matsumoto, Feb 2 1971. Tuned transformers. Coils wound on small ferrite bobbins. Extra turns wound between main coil turns but not participating in inductance - one end disconnected. Not directly related to antenna traps.

> http://www.via.at/voxcom/03560895.pdf

Robert H. Johns, Specifically for antenna traps. One layer of coil wound on top of the other rather than alongside.

Both patents are concerned with eliminating the tuning capacitor and minimising production costs.

Neither patent attempts to calculate inductance and, most important, to calculate equivalent lumped capacitance from coil dimensions. The manufacturer, in effect, is told to start winding and stop when the resonant frequency is reached. No attempt is made to predict the number of turns needed from dimensions.

Way back in the 1950's when I was designing wideband transmission measuring and other equipment to use coils which resonated with their own self-capacitance was one of a dozens of little designer tricks needed to make the equipment work. It was done without thinking about it. There was no time to think about patents. It never occurred to me. Or to the boss.

Why anyone should go to the trouble and great expense of patenting something which is shoved infront of everybody's eyes several times per week is beyond my imagination.

All my little program does is allow the number of turns to be approximately predicted before starting to wind the trap. Which is useful even if it's only 10 or 20 turns.

==========
Regards from Reg G4FGQ
Free Radio Design Software
Go to http://www.g4fgq.com
==========

2429. Re: SWR - Why isn't the energy re-absorbed at the TX?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-06 02:48:41 UTC
From: Reg Edwards <g4fgq.regp@btinternet.com>
Message-ID: <ainde8atd2@venus.btinternet.com>
Source record: 137272

Here we go again !

Roy, when you get round to re-writing the ARRL handbook may I suggest you
omit all reference to the conventional SWR and reflected power meter. It
should save a lot of paper.

--
========================
Regards from Reg G4FGQ
Free Radio Design Software
Go to http://www.g4fgq.com
========================
"Roy Lewallen" <w7el@eznec.com> wrote in message
news:3D4F212A.9040405@eznec.com...
> I'll paraphrase what Walt Maxwell, W2DU says in his book _Reflections_:
>
> The reflected power doesn't encounter a passive load equal to the
> source's impedance (which would result in absorption and dissipation of
> the reverse power). What it encounters is an active source feeding power
> outward toward the load. The interference between this outward going
> wave (actually, outward travelling V and I waves) and the returning
> reverse power results in a total re-reflection of the reverse power back
> toward the load.
>
> For more detail, I highly recommend _Reflections_.
>
> Roy Lewallen, W7EL
>
> richardelord@dial.pipex.com wrote:
> > I have never understood why the reflected energy from a mismatched
> > feeder/antenna isn't re-aborbed at the TX, particularly if an ATU
> > ensures a 1:1 match from the TX output into the feeder.
> >
> > Surely this energy must double the potential across the PA circuit
> > with a severe mismatch. Maybe with a heavy duty valved linear this
> > is not important, but what if a delicate edge of the seat designed
> > solid state job?
> >
> > Anybody undestand this?
> >
>

2430. FS: Cushcraft ATB-34 YAGI

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-06 02:49:22 UTC
From: k1hjc@arrl.net
Message-ID: <12908d3f.0208051849.53e7a07@posting.google.com>
Source record: 137273

Cushcraft ATB-34 4-element yagi (10-15-20Mtrs.). Needs
hardware (U-bolts and element clamps). $75.00 / BO. Manual
included. Pickup only in Candia, New Hampshire.
E-mail me at K1HJC@arrl.net

2431. Re: Cleaning oxidized antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-06 02:49:44 UTC
From: Tom Brown N4TAB <tab@signalgrp.com>
Message-ID: <78eukusvfd1o97beshov7vqqlfknll18cf@4ax.com>
Source record: 137270

"Alodine" and "Irridite" are similar chromate processes that, when
applied to aluminum, result in a passivated, but conductive surface.
The latter was (maybe still?) used extensively by DB Products on
their aluminum antennas intended for hostile environments and the
former is commonly used to passivate cavities and RF components.
Neither process produces a "hard" surface, but both are suitable for
antenna protection. There is, of course, a cost consideration.

73,

Tom N4TAB

~~~~~~

On Mon, 05 Aug 2002 20:13:49 -0500, dan <danlx@execpc.com> wrote:

>On Mon, 05 Aug 2002 16:58:00 -0600, George Tyrebyter
><GeoTyrebyter@netscape.net> wrote:
>
>>dan wrote:
>>>
>>> .... I always wondered why the
>>> manufacturers don't anodize antenna material.
>>
>>The anodized layer is a good insulator.
>I did not know that.
>
>Dan
>
>I've rambled enough, back to the rocking chair. ZZZZZZZZZ
>Remove left x for a direct reply.
~~~~~~

2432. Re: Delta Loop for 160m

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-06 02:51:15 UTC
From: Scott Barber <sbarber5@rochester.rr.com>
Message-ID: <DQG39.87469$A35.16751235@twister.nyroc.rr.com>
Source record: 137274

Hello Bob;

One more reply--

The RSGB book "HF Antenna Collection" has a chapter called 'Modelling and Testing' page 148, shows exactly what you are asking about. Figure 10 is your configuration, and the corner feed will give an excellent vertically polarized pattern at about a 25 degree takeoff angle. Good DX!

73's Scott Barber AB2IH

"G4VGO" <rmread@attglobal.net> wrote in message news:3d4ee85d_2@news2.prserv.net...
>
> Thanks to those on the NG and those who replied direct.....got the info now
> and the antenna will go up this weekend.
>
> Results on the site below. A kite lifted experiment that may or may not
> stay up!
>
> 73
>
> Bob G4VGO
>
> http://www.qsl.net/g4vgo
>
>
>
>

2433. FS: GEM QUAD PARTS

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-06 02:52:55 UTC
From: k1hjc@arrl.net
Message-ID: <12908d3f.0208051852.7bebb1fc@posting.google.com>
Source record: 137275

GEM QUAD spreaders, spider, tie rods, stainless steel clamps,
tension tubes, toroid balun and manual. Just add tie wraps and
wire to have 2-element 3 band (10-15-20) quad. $150.00 / BO.
Pickup only in Candia, New Hampshire.
E-mail me at K1HJC@ARRL.NET

2434. Re: Cleaning oxidized antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-06 03:23:34 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <3D4F4136.5090708@eznec.com>
Source record: 137269

Yes, anodizing puts a thick film of aluminum oxide on the surface. Aluminum oxide (alumina) is an excellent insulator -- in fact, it's used as a substrate for hybrid circuits and microstrip structures well into the microwave region. It's a hard, brittle ceramic among whose other common uses is sandpaper grit.

Aluminum oxide naturally forms on the surface of aluminum very quickly when it's exposed to air. It's this very thin and non-porous coating that protects it and prevents the chemically very active aluminum from corroding. The oxide is very thin because as soon as a very thin layer is formed, no more air can get to the underlying aluminum, so the oxide stops growing. Any kind of scratching or rubbing of the surface breaks this layer, which is why you can make electrical contact with the aluminum despite the insulating oxide on the surface.

With anodizing, you can make the oxide coating thick enough that it won't readily break, so you don't easily make contact with the underlying metal.

Roy Lewallen, W7EL

dan wrote:
> On Mon, 05 Aug 2002 16:58:00 -0600, George Tyrebyter
> <GeoTyrebyter@netscape.net> wrote:
>
>
>>dan wrote:
>>
>>>.... I always wondered why the
>>>manufacturers don't anodize antenna material.
>>
>>The anodized layer is a good insulator.
>
> I did not know that.
>
> Dan
>
> I've rambled enough, back to the rocking chair. ZZZZZZZZZ
> Remove left x for a direct reply.

2435. Feeding an Inv-L at the bottom?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-10 02:46:23 UTC
From: StarGazer <pti@capnet.com>
Message-ID: <3D547E7F.B2F2D5A6@capnet.com>
Source record: 137276

If one feeds an inv-L at the bottom how come the radial lengths
don't have to be the same length as the L part?
Like a dipole should be?

I picture it as a dipole with the ground being the other half of the
dipole. How does the ground know what its electrical length has
to be?

If I want to put radials under my lawn what it the best way
to cut a sliver into it for the radial?

2436. Re: A TUTORIAL

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-10 03:12:19 UTC
From: aunwin@fgi.net
Message-ID: <c4becf19.0208091912.45ac3710@posting.google.com>
Source record: 137277

nm5k@wt.net (Mark Keith) wrote in message
news:<25eb70d7.0208091444.67808561@posting.google.com>...
> aunwin@fgi.net (Art Unwin KB9MZ) wrote in message
news:<c4becf19.0208090845.7c87e24a@posting.google.com>...
> > I thought it would be of interest to see how many of the antenna
> > interested people would declare their thoughts on the antenna BEFORE
> > examination by an independent person.
>
> Which antenna? The ZZ1 on your webpage ?
> > You all have the BASIC facts now, in that I am using two resonant
> > frequencies.
>
> Nope, I still disagree with this statement. With the antenna ZZ1, and
> also the one I modeled, which seems almost exactly the same as far as
> I can tell, you only have one element, which is tuned by a matching
> device. And thus, only one resonant frequency the way I see it.
>
> > The method of frequency change is provided by a standard loop radiator
> > with the same operating principles as generally used by the amateur
> > fraternity..
>
> But, it's not a radiator. It's a loop matching device. Take a 1/2 wave
> vertical
> which is fed at the base with a single turn loop and a cap. The exact
> same thing as what you are doing pretty much. The loop adds very
> little to the radiation of the antenna. You still end up with a 1/2
> wave vertical, with the normal expected pattern and gain of a 1/2 wave
> vertical. IE: normal gain fiqures, and maximum current at the center
> of the antenna. The only thing the loop does is form a part of an
> impedance matching circuit. The normal cap used for such an antenna
> using a appx 9 inch loop is usually about 50 pf for 10m. I make those
> from coax.
>
> > A drawing has been provided with 'starter' dimensions with which any
> > computor will supply you with actual figures to obtain the goal, that
> > is if you do not wish to build on ACADEMIC known basics what is
> > provided by the merging of two resonant antennas.
>
> Again, I don't agree you are merging two resonant antennas.
>
> >
> >
> > So where do you guys really stand prior to outcome of the independent
> > review ? .

> > (high number of postings show interest)
>
> I still consider it a 20m dipole, with an adjustable matching circuit.
> The gains on any band from 20-10 meters should be the same as any
> other 20m dipole fed in a non lossy manner. IE: ladder line, or manual
> or auto tuner at the feedpoint. Your's is a manual tuner at the
> feedpoint.
> >
> > 1. It can't work considering the basic principles provided.
> > 2 It can work considering the basics principles provided.
> > 3 I don't understand any of the basics that you are trying / none of
> > your writing makes any sense on your postings .(suspected best
> > safe favorite)
> > or
> > 4.Waiting till after the results come in, for safety.
>
> My view is it works, but not in the way you are thinking it does. IE:
> steerable pattern by changing the value of the cap, if thats the
> intent. I think it could be quite a viable antenna, but it's still
> going to need to be turned. IE: rotor..
> >
> > The above is meant mainly for the knowledgable in the group and not
> > those asking for honest advice.
>
> I'm just average in that dept...Many here could eat me for lunch as
> far as the math involved.
> >
> > Heh, the results could be a lot of fun. A great way to show Art that
> > he is
> > ' full of it' in a polite fashion. But then if 'Art is right' it may
> > not be advisable to put your vote on the 'Full of it column.....hum m
> > m m...
>
> I have no emotional interests in it at all as it refers to you. I just
> tell it like I see it. MK

Good for you Mark! You have done a lot of good work on it' and you got
so close.
So we put you down for " it won't work as stated,"Your opinion is as
good as any and you are not beating around the bush or hedging
Have a great week end
Art

2437. Re: 40 meter 2 element on a 4 el 4 band spider type quad

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-10 03:22:25 UTC
From: w9gb <gregory.beat@attbi.com>
Message-ID: <RF%49.58553$sA3.14830@rwcrnsc52.ops.asp.att.net>
Source record: 137278

Mark -

I am not aware of anyone who has tried a 40 meter quad in the configuration you are describing (except for possibly a few governments or commercial SW stations). 30 meters has been performed by Titanex (German engineering) with their TQ 6 2 element Quad. They provide 160, 80 and 40 from a dipole for their TQ 6-9
http://www.titanex.de/frames/quads.html

When you get to these wavelengths, the physical size becomes difficult to handle.
Like the Titanex TY 4030 Beam antenna
http://www.titanex.de/frames/beams.html

Rhombic or phased vertical arrays are more common in the 160, 80 and 40 meter bands, with phasing of the elements replacing the large mechanical rotating systems.
http://www.arraysolutions.com/

For example the set of Titanex V40 antennas
http://www.titanex.de/frames/verticals.html

with an Array Systems phasing array (This one is a three element, although 2 and 4 are also available)
http://www.arraysolutions.com/Products/trianglearray.htm#triangle%20top%20of%20page

and the W8AV Triangle plots
http://www.arraysolutions.com/Products/triangleplots.htm

Greg
w9gb

"Mark Hall" <mark.hall34@verizon.net> wrote in message
news:3D51E634.1535CB11@verizon.net...
> Anybody have any success adding a 2 element 40 or 30 meter quad onto a 4
> element 20//15/12/10 spider type quad with a 28' boom? I was thinking
> even if the 40/30 elements hang real low (way more diamond shape than
> square), it might be very worthwhile. A friend of mine has a 2 El 40
> yagi that makes an unbelieveable difference for 40 DX. A 40M quad
> configuration would be even better. Any ideas on stabilizing the low
> ends of the diamond shape elements during rotation would be appreciated.
>
> '73 KI4Z
>

2438. Re: RG58 Coax question.

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-10 03:55:15 UTC
From: Damon Wascom <kc5cqw@excite.com>
Message-ID: <ul93l6739rg3d7@corp.supernews.com>
Source record: 137279

Take jims advice! K.I.S.S. is the only way to go! While your at it, clean
and put anti-corosion stuff on the conectors then use some silly-cone RTV or
something the like to give a little WX protection.
Do try and support the ant. side of the coax as a strain relef so it won't
pull on the solder joints and other inner workings of the 259.
"Jim Weir" <jim@rst-engr.com> wrote in message
news:s1h5lu4eg5192qh5b3bk23i5s4if1km6ak@4ax.com...
>
> 1. Get rid of the PL259 connectors. They leak like a sieve.
>
> 2. If the coax has been inside the mast with PL259s on the ends for any
length
> of time, throw it away and get new coax. Believe it or not, the stuff off
the
> roll in the back room of McShack isn't too bad. Be sure you use the solid
> center conductor, as it has less loss than the stranded. You aren't
flexing the
> coax enough to warrant stranded.
>
> 3. Use a good BNC connector top and bottom. Properly assembled, they are
> darned near waterproof and certainly weatherproof.
>
> 4. Forget the advice about N connectors and RG-8. You aren't trying to
do
> moonbounce with this sucker. Talking to the bridge commander from point
blank
> range is the usual format, and if you can't do that with 25 watts and a
length
> of limp spaghetti for an antenna, something is wrong.
>
> Jim
>
>
>
>
> Terry <tsanford@nf.sympatico.ca>
> shared these priceless pearls of wisdom:
>
> ->Hope this question not too far OT for this group but am
> ->estimating there is a lot of expertise here?
> ->Approx. 30 feet RG58 installed inside aluminum sail boat mast.
> ->Terminated top and bottom with PL259s to connect a bottom loaded
> ->marine VHF whip on top of mast. RG58 looks to be of 'reasonable
> ->quality' in good condx.

>
> Jim Weir, VP Eng. RST Eng. WX6RST
> A&P, CFI, and other good alphabet soup

2439. Re: SWR - Why isn't the energy re-absorbed at the TX?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-10 04:03:10 UTC
From: richardharrison@webtv.net
Message-ID: <23933-3D54907E-116@storefull-2396.public.lawson.webtv.net>
Source record: 137283

Richard Lord, GW3NCT wrote:
"---if energy is reflected back down the line, where does it go?"

Mostly, it bounces at the transmitter output or tuner output and joins new energy emerging from the transmitter for another go at the load.

The ATU loss is low and gives a match to the transmitter. Absence of SWR between transmitter and ATU is evidence of zero reflected energy as that is what makes standing waves. The reflection is at the load and travels the load feeder.

I am sorry my loss statement was unclear. In a lossless system with a conjugate match, you can slice it anywhere and looking in either direction you see the conjugate of the opposite direction. Loss tends to spoil this tidy arrangement.

Richard Lord wrote: "---if an atu ensures a 1:1 match from the TX output into the feeder."

As previously stated, "a 1:1 match from the TX---." guarantees no reflected power to the TX. The energy bounces are remote from the TX.

Richard Lord wrote: "But I am proposing that there IS reflected energy caused by the feedline/antenna mismatch.

The ATU simply bounces reflected energy back to the load. Some say an extremely high impedance is presented at the ATU output to the antenna circuit. Unless the impedance were not bidirectional, that high impedance would keep energy in the transmitter as well as preventing its return. Another explanation is part of the answer. The reflection is smaller than the wave which produces it. Flow is from higher to lower. To turn a reflection around, or any wave for that matter, it is necessary to invert the phase of either the voltage or current, but not both. To make a reflection into a re-reflection a circuit must perform this phase reversal. The ATU must handle that.

Best regards, Richard Harrison, KB5WZI

2440. Re: A closer look

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-10 04:04:29 UTC
From: CAM <w5dxp@hotmail.com>
Message-ID: <3D5490CD.45524E49@hotmail.com>
Source record: 137281

Bill Klocko wrote:
>
> CAM <w5dxp@hotmail.com> wrote:
> > The forward power on the 150 ohm twinlead is 75 watts.
>
> Let's just say that you don't know that there is 75w of forward power.

I'm reading 75w forward power on my Bird wattmeter.

> Nothing wrong per se for this simple example, but it may be difficult
> to keep things straight for a more complicated one with
> re-reflections, etc.

That's why I'm taking it nice and slow.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
------== Over 80,000 Newsgroups - 16 Different Servers! =-----

2441. Re: Feeding an Inv-L at the bottom?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-10 04:06:17 UTC
From: Fred Hambrecht <w4jle@charter.net>
Message-ID: <ul949ui2bq135e@corp.supernews.com>
Source record: 137280

Don't bother to cut slits for the radials. Cut pieces of coat hanger into 6" pieces. Bend then in half. Next lay out the radial and use the bent pieces to stake the wire down. Kind of like stapling the wire to the ground. This will keep them out of the lawn mower and within a month you won't be able to find them as the grass covers them.

"StarGazer" <pti@capnet.com> wrote in message
news:3D547E7F.B2F2D5A6@capnet.com...
> If one feeds an inv-L at the bottom how come the radial lengths
> don't have to be the same length as the L part?
> Like a dipole should be?
>
> I picture it as a dipole with the ground being the other half of the
> dipole. How does the ground know what its electrical length has
> to be?
>
> If I want to put radials under my lawn what it the best way
> to cut a sliver into it for the radial?
>
>

2442. Re: Antenna length versus feedline length

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-10 04:07:22 UTC
From: CAM <w5dxp@hotmail.com>
Message-ID: <3D54917A.17EDED52@hotmail.com>
Source record: 137282

richardelord@dial.pipex.com wrote:
> Will adding length to the antenna (for example a centre fed dipole)
> have the same effect impedance wise as adding the same length to the
> feedline?

Nope, not the same length. There's a graph on my web page that shows
the relationship between a dipole and its matching section. Look up
the All-HF-Band Antenna and scroll down to the graph.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

2443. Re: SWR - Why isn't the energy re-absorbed at the TX?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-10 04:22:55 UTC
From: tmgroatatpeakpeakdotcom
Message-ID: <3d5490bf.50841780@news.peakpeak.com>
Source record: 137284

On Tue, 6 Aug 2002 21:20:57 -0400, "Peter O. Brackett"
<ab4bc@ix.netcom.com> wrote:
>What a lot of fuzzy thinking this fiction of refelected power has brought
>forth. It's absurd, just playing with mathematics for no good reason. But
>oh no... just ask the High Priests of Reflected Power, they will convince
>you that you must be a "true believer" and in order to reach the Nirvanna of
>Electrodynamics you must bow down to their inflated obfuscations and
>confusing rhetoric.
>
>Give me a break! Reflected power is an artificial quantity used during
>intermediate calculations to evaluate other real quantities of interest.
>There simply is no such power.
>
>The forward and reflected transverse waves on a transmission line are just,
>in mathematical terms, simple linear combinations of the transverse voltage
>V and current I.

For the typical narrow bandwidth (CW, SSB, RTTY, etc.) signals you can
use either reflected power or the impedance at the operating frequency
with equal accuracy.

But for wide band signals, such as FSTV, the line is not electrically
short for the _modulation_ frequencies, and reflected power does
matter. This happens when the reflections are significant compatred to
the period of the modulation waveform.

Using FSTV as a specific example, reflected power that is
subsequenctly re-reflected to the antenna causes time-delayed echoes,
manifested as a loss of video resolution or as ghost images, depending
on the length of the transmission line. A 200nsec long transmission
line produces a 400nsec delayed echo, which is enough to produce
noticeable loss of sharpness when the reflections are strong.

If you have ever used a TDR, then you can see that reflected signals
really DO exist. But for most amateur communications, they can be
handled adequately with a simpler frequency-domain model. FSTV and
other wide-band modes are the exception where the more complicated
time-domain model may be needed.

--KR0U

-- Tim Groat

To reply by e-mail, change the quoted words to
the corresponding punctuation marks.

2444. Re: SWR - Why isn't the energy re-absorbed at the TX?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-10 04:25:36 UTC
From: CAM <w5dxp@hotmail.com>
Message-ID: <3D5495C0.828497BB@hotmail.com>
Source record: 137285

Richard Lord wrote:
> My question was on the assumption that if energy is reflected
> back down the line, where does it go? Is it absorbed by the ATU? is
> it relfected by the ATU? Does it pass thru the ATU into the PA
> circuit of the TX?

If the antenna tuner is properly tuned, it furnishes a Z0-match that re-routes all the reflected power (minus some tuner losses) back toward the antenna. Neglecting losses, the equation for a matched system on the antenna side of the tuner is:

forward power equals generated power plus reflected power

where, because of the match, all the generated power is delivered to the antenna.

> But I am proposing that there IS reflected energy caused by the
> feedline/antenna mismatch. Where does this reflected energy go when
> it reaches the ATU?

Most is re-routed back toward the antenna through a combination of re-reflection and destructive/constructive interference.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

2445. Re: SWR - Why isn't the energy re-absorbed at the TX?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-10 04:37:09 UTC
From: richardharrison@webtv.net
Message-ID: <23933-3D549875-121@storefull-2396.public.lawson.webtv.net>
Source record: 137288

Richard Lord, GW3NCT wrote:
"---military TX are designed to be able to withstand double the normal output voltage."

Double the normal output voltage is what you get at the open-circuit end of a transmission line. There is another problem which requires wider spaces and better insulation aloft. Breakdown voltage of the atmosphere is reduced by lower pressure at high altitudes.

Best regards, Richard Harrison, KB5WZI

2446. Re: Bad SWR reading with a UVS-300 Workman antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-10 04:38:34 UTC
From: Michael Grenier <mwgrenier@yahoo.com>
Message-ID: <3D5498CA.8050603@yahoo.com>
Source record: 137286

Perhaps this is a Opek UVS-300 antenna? Its a 3 section vertical that
is around 17 feet high. See http://www.comdac.com/opek/uvs.jpg

I've owned a couple of them but I will not make that mistake again.
I bought the second one because the dealer sold it to me below cost
(< $50) on the hope that I could fix the problem below. My readings
were worse.

A couple things to look for - look at the coil at the bottom of the antenna.
The solder connections are normally terrible and you'll likely
find some broken connections. I fixed a number of problems and got
great SWR on 440 band (and 220) but could never get the 2 meter stuff
very good.

-Mike KC0IOC kc0ioc@arrl.net

Jean-Jacques Simard wrote:
> I have just bought a 3-section vertical Workman UVS-300 antenna which is
> connected to my Icom IC-2100H 2-meter base station transceiver.
>
> The SWR readings are the following : At 5 watts, At 10 watts, At 55
> watts
>
> 144 MHz : 1.3, 1.3 1.5
>
> 145 MHz : 1.7 1.8 2.0
>
> 146 MHz : 2.1 2.3 2.7
>
> 147 MHz : 2.0 2.3 2.5
>
> 148 MHz : 2.0 2.1 2.5
>
> I have properly followed the instructions for mounting the antenna. And the
> SWRs have been made with a reliable cross-needle meter. What can be done to
> get things better ? Somebody told me that the upper radiator element could
> be slightly shortened to get better SWR. What is your opinion about that ?
>
> In the package, there's a paper telling that the SWR should be less than
> 1.5. Could anyone give me some explanation or advice ?
>
> Thank you for caring about my request.
>
> Jean-Jacques Simard (E-mail address : jjsimard@destination.ca)
>

> VA2EMC
>
>
>
>
>

2447. Re: SWR - Why isn't the energy re-absorbed at the TX?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-10 04:38:37 UTC
From: CAM <w5dxp@hotmail.com>
Message-ID: <3D5498CD.F043C4D8@hotmail.com>
Source record: 137287

Richard Lord wrote:
> OK. I don't know what a "Z0-match" is, but I suspect it causes the
> energy to be reflected (or re-directed, whichever is the correct term)
> back up the feedline. "A destructive interference process"
> Interesting. I have read the section on transmission lines and
> antennas (several times) in the ARRL Handbook, the RSGB Handbook and
> an old (1938) Handbook for Wireless Telegraphy, no of them mention
> these terms. I have a lot to learn.

Destructive/constructive interference is what happens with no-glare
picture glass. It is also what happens to make an antenna have gain
in certain directions and lack gain in other directions. It is also
what happens at the input of an antenna tuner in addition to the
actual re-reflection taking place. Both these processes are involved
in the re-directing of reflected power back toward the antenna. We have
a thread going now titled, "A Closer Look", which is in the process of
discussing these same concepts.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

2448. Re: A closer look

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-10 05:10:14 UTC
From: CAM <w5dxp@hotmail.com>
Message-ID: <3D54A036.43551C26@hotmail.com>
Source record: 137291

CAM wrote:
>
> Bill Klocko wrote:
> >
> > CAM <w5dxp@hotmail.com> wrote:
> > > The forward power on the 150 ohm twinlead is 75 watts.
> >
> > Let's just say that you don't know that there is 75w of forward power.
>
> I'm reading 75w forward power on my Bird wattmeter.

This is, of course, assuming I have a 150 ohm slug for my Bird.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

2449. Re: A closer look

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-10 05:10:54 UTC
From: "George, W5YR" <w5yr@att.net>
Message-ID: <3D54A05B.82E42B20@att.net>
Source record: 137289

I have used it for many years - it is the best nuts and bolts t-lines book
that I have.

73/72/oo, George W5YR - the Yellow Rose of Texas
Fairview, TX 30 mi NE of Dallas in Collin county EM13qe
Amateur Radio W5YR, in the 56th year and it just keeps getting better!
QRP-L 1373 NETXQRP 6 SOC 262 COG 8 FPQRP 404 TEN-X 11771 I-LINK 11735
Icom IC-756PRO #02121 Kachina 505 DSP #91900556 Icom IC-765 #02437

CAM wrote:
>
> Reg Edwards wrote:
> >
> > > Not trying to prove anything, Reg, just trying to learn and understand.
> >
> > ==========
> >
> > It may be difficult to obtain but I can recommend an excellent book. Try to
> > beg, borrow or steal it.
> >
> > "Theory and problems of TRANSMISSION LINES" by Robert A.Chipman.
> >
> > Schaum's Outline Series, McGraw-Hill Book Company, 1968.
> >
> > SWR and Reflected Power meters are not mentioned once in 236 pages. This
> > removes 95% of the confusion
>
> Thanks Reg, Texas A&M probably has that book.
> --
> cheers, CAM, W5DXP

2450. Re: SWR - Why isn't the energy re-absorbed at the TX?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-10 05:13:03 UTC
From: CAM <w5dxp@hotmail.com>
Message-ID: <3D54A0DF.EDDA8FCD@hotmail.com>
Source record: 137292

Tim Groat wrote:
> Using FSTV as a specific example, reflected power that is
> subsequenctly re-reflected to the antenna causes time-delayed echoes,
> manifested as a loss of video resolution or as ghost images, depending
> on the length of the transmission line. A 200nsec long transmission
> line produces a 400nsec delayed echo, which is enough to produce
> noticeable loss of sharpness when the reflections are strong.

Which is proof that reflections exist. Heck, if reflections didn't
exist, we wouldn't be able to see ourselves in a mirror.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

2451. Re: A closer look

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-10 05:13:32 UTC
From: "George, W5YR" <w5yr@att.net>
Message-ID: <3D54A0FA.B58768D6@att.net>
Source record: 137290

Unless you are playing games, Cecil, I see a length of 150-ohm line terminated in its Zo, so no reflections from the actual end load. But the coax sees a 3:1 SWR due to the mismatch at its termination: 150 +j0 ohms.

The mystery evidently is where does the power in the reflected wave come from and go to if it is present in the coax and not in the 150-ohm line - right?

I am probably missing the point, but what you have described is what I would expect.

The net delivered power to the final load is 75 watts via the lossless twinlead. You didn't specify, but I assume that the entire system is lossless. Thus, the source is required to deliver only 75 watts to the system.

There is a Zo match at the twinlead termination, hence no reflections. But the Zo mismatch at the coax termination results in a 3:1 SWR in the coax with the forward power in the coax (100 watts) less the reflected power (25) watts equaling the 75 watts passed on to the load by the twinlead. The 3:1 SWR demands forward and reflected powers in the coax section in the ratio measured.

The source is required to deliver only 75 watts to the system, which it does. It also would be required to dissipate the 25 watts of reflected power in the coax section - **unless** - the source is not matched to the 50 ohm coax and hence there is a plane of reflection at the junction of the source output and the coax input.

In that event, the mismatch would generate a re-reflection required to maintain the 100 watts forward power and 25 watts reflected power in the coax.

I vote for a mismatched source providing a reflection to account for the "circulating power" in the coax section. Depending upon the nature of the mismatch, the forward voltage and currents are combined at the source output with the reflected voltage and current in such a way as to produce a significant degree of re-reflection, if not total.

If the system is indeed lossless, only 75 watts is coming out of a lossless system to a real dissipative load, so Conservation of Energy requires only that the source deliver a net 75 watts to the system. Manifestations of forward and reflected power in the various line sections all add up, assuming your arithmetic and measurements are correct, to account for all power in the system.

An alternative view that appears to violate the C.of E. is that the source
is actually producing 100 watts of power, of which 75 watts is being
ultimately delivered to the load while the remaining 25 watts is being
circulated up and down the coax in the guise of reflected power - which
some folks will argue strenuously does not exist in the first place. <:}

But since that 25 watts is doing no work or being dissipated, then it
cannot really be coming from the source. Thus the source is required to
deliver only the 75 watts in the system that is being dissipated in a real
load. And the coax section enjoys an apparent 100 watts in the forward wave
and 25 watts in the reflected wave - exactly what happens in any coax
section with a 3:1 SWR occasioned by its termination.

An interesting thought experiment, Cecil.

Now that I have probably made a fool of myself, what didn't you tell us
that answers your question? <:}

73/72/oo, George W5YR - the Yellow Rose of Texas
Fairview, TX 30 mi NE of Dallas in Collin county EM13qe
Amateur Radio W5YR, in the 56th year and it just keeps getting better!
QRP-L 1373 NETXQRP 6 SOC 262 COG 8 FPQRP 404 TEN-X 11771 I-LINK 11735
Icom IC-756PRO #02121 Kachina 505 DSP #91900556 Icom IC-765 #02437

CAM wrote:
>
> I'm still trying to get a reasonable explanation for what happens in
> a transmission line. Starting from a very simple example, would some
> of you gurus please tell me where I am going wrong?
>
> 100w SigGen-----50 ohm coax----+----1/2WL 150 ohm twinlead----150 ohm load
>
> The Signal Generator dissipates any reflected power reaching it. On the 50
> ohm coax, there is 100w of forward power and 25w of reflected power. The
> forward voltage is 70.7 volts and the forward current is 1.414 amps.
>
> 70.7v * 1.414a = 100w. 70.7v/1.414a = 50 ohms.
>
> The reflected power is 25 watts, the reflected voltage is 35.36 volts, and
> the reflected current is 0.707 amps.
>
> 35.36v * 0.707a = 25 watts. 35.36v/0.707a = 50 ohms.
>
> The forward power on the 150 ohm twinlead is 75 watts. The forward voltage on
> the twinlead is 106.07v and the forward current on the twinlead is 0.707 amps.
>
> 106.07v * 0.707a = 75 watts. 106.07v/0.707a = 150 ohms.
>
> There is no reflected power on the twinlead.
>
> Is there anything wrong with the above statements?

2452. Re: A closer look

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-10 05:24:02 UTC
From: CAM <w5dxp@hotmail.com>
Message-ID: <3D54A372.B7341C4F@hotmail.com>
Source record: 137293

"George, W5YR" wrote:
>
> Unless you are playing games, Cecil, I see a length of 150-ohm line
> terminated in its Zo, so no reflections from the actual end load. But the
> coax sees a 3:1 SWR due to the mismatch at its termination: 150 +j0 ohms.
>
> The mystery evidently is where does the power in the reflected wave come
> from and go to if it is present in the coax and not in the 150-ohm line -
> right?

There's no mystery so far. I started out with a simple example upon which
I think we can all agree. The Signal Generator has a built in resistor
which is absorbing all 25w of the reflected power.

> I am probably missing the point, but what you have described is what I
> would expect.

Good, that's what I intended.

> The source is required to deliver only 75 watts to the system, which it
> does. It also would be required to dissipate the 25 watts of reflected
> power in the coax section - **unless** - the source is not matched to the
> 50 ohm coax and hence there is a plane of reflection at the junction of the
> source output and the coax input.

Actually, the source is required to deliver the entire 100 watts of forward
power as the reflected power is being dissipated in a resistor.

> I vote for a mismatched source providing a reflection to account for the
> "circulating power" in the coax section.

Nope, it's not a ham transmitter. It is a signal generator designed to
dissipate all the reflected power. There is no re-reflection from the
source. This is to keep from muddying the waters.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

2453. Need info on KLM 2M-14C

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-10 06:47:53 UTC
From: n7twb@arrl.net
Message-ID: <46e37444.0208092247.25924ced@posting.google.com>
Source record: 137294

I recently acquired a KLM 2M-14C satellite antenna and would
like to check out the wiring & refurb it before installation.
If anyone can supply a copy of the manual please contact me via
email. Thanks!

Bruce N7TWB Phoenix, AZ

2454. Re: Inverted L??

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-10 07:07:39 UTC
From: captbrian <captbrian@ukonline.co.uk>
Message-ID: <3d54bbc6$0$12848$afc38c87@news.ukonline.co.uk>
Source record: 137295

Go up 30 / over 55 / down 24 back 55 at 6ft high then down 6 feet to form a loop . Feed at the start and finish points with some 450 ladder line as convenient . Stand the antenna tuner on a piece of insulation. Put a choke balun between ant. tuner and rig . Ignore earth. You'll be agreeably surprised on all bands

G3GVB

Reg Edwards <g4fgq.regp@btinternet.com> wrote in message news:aj0fom$57a$1@venus.btinternet.com...
> > I only have 55' between trees.
> > Is going up one tree vertically 30'.... 55' over to another tree...
> > then vertically down the second tree for... what ... 30 ' acceptable
> > for inv L.
>
> ============================
> Dear StarGazer,
>
> Re-name it "Inverted-U" or "Dog's Hind Leg".
>
> You will find it a very good radiator from 160m to 10m. Taking one band with
> another consider it to be omni-directional. Slope the vertical sections to
> keep them away from the tree trunks. The higher the horizontal section the
> better. Feed it from one end via a tuner. Use insulated wire if the antenna
> is very near to leaves. Exact overall length is very non-critical. (Could
> you make use of the house chimney to increase overall length and average
> height.?) Don't bring the far end down to less than 6-feet above ground.
> If you do then ground it (ie., make it a loop) - this may change its minor
> directional properties on some bands but will reduce radiating efficiency
> somewhat on all bands.
>
> Forget all about the magic 120 radials - a very modest ground system such as
> 6 or 8 shallow-buried radials, 25 to 35 feet long in good garden soil, or
> twice as many radials in poor soil will do nicely. Try and test 2 radials
> for starters. You will learn more about ground systems from this simple
> procedure than reading thick books on the subject. ;o)
>
> Spread them uniformly around a semicircle in the general direction of the
> antenna. Radials can be allowed to bend and go round corners. They don't
> have to be all the same length. But 2 radials close together are only 1
> radial. Then add the incoming main water pipe plus the domestic plumbing +

> the central heating system. If you are fortunate enough to have an
outdoors
> swimming pool, toss in an aluminium sheet on the far end of one of the
> radials.
>
> If you think you need more wire in the ground then use more radials rather
> than longer radials. Stop burying wire when received signal strengths from
> known, stable, relatively nearby stations on 160m stop increasing. Try
> disconnecting a few radials while watching the S-meter.
>
> Don't bother with ground rods - they are not worth the trouble and hard
> labour, each being equivalent to a radial of the same length. (Unless the
> top soil is VERY dry and the water table can be reached with a rod.)
>
> If you are interested in numbers and designing your own tuner for your
> particular antenna then download in a few seconds program ENDFEED from
> website below. Run immediately. Program estimates antenna performance
> including effects of the ground in comparison with a 1/4-wave vertical.
> --
> ========================
> Regards from Reg G4FGQ
> Free Radio Design Software
> Go to http://www.g4fgq.com
> ========================
>
>

2455. Re: phased multiband verticals question

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-10 07:10:46 UTC
From: captbrian <captbrian@ukonline.co.uk>
Message-ID: <3d54bc4c$0$12840$afc38c87@news.ukonline.co.uk>
Source record: 137296

Divorce her. Not the right stuff. Radio is important

G3GVB

Andy Bullington <abullington@attbi.com> wrote in message
news:8fZ49.56243$sA3.15033@rwcrnsc52.ops.asp.att.net...
> I'm a new ham (May 1) and have not yet gotten my wife to see the beauty of
> the stacked yagi array+ 90foot steel tower. I'm using an
> 80 meter loop that works extremely well to the Europe and the mideast
> but because of the way I was forced to instal it (read jury rig) not so
hot
> to South America and Africa. My wife has signed off on the idea of
verticals
> at the end of our lot and since we live on an island only 1/4 mile from
the
> ocean I hit on the idea of two verticals and some sort of switchable
phasing
> system. I was thinking about using 2 identical non trap type 6-40 meter
> multibands. Has anybody tried this and is there a
> preferred brand? I was leaning towards Cushcraft. Thanks in advance.
> Andy W1AWB
>
>

2456. Cushcraft AR-6

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-10 07:34:06 UTC
From: "Michael R. McCarrey" <wa7qzr@Don'tBotherImSickOfSPAM.net>
Message-ID: <Ol359.74953$D36.72353@rwcrnsc53>
Source record: 137297

Hello;

Does anyone happen to know what the diameter of the tuning ring on an
AR-6 might be? Cushcraft "Technical Support" doesn't :-)

Please reply here.

Thanks,

Mike

2457. Re: 160M loaded dipole

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-10 08:39:54 UTC
From: "Michael R. McCarrey" <wa7qzr.take-out-the-junk@NOSPAMattbi.com>
Message-ID: <uj459.51481$7n5.9167@sccrnsc01>
Source record: 137298

On Tue, 06 Aug 2002 20:17:26 -0700, Heinrich wrote:

> Hi, I want to build a loaded dipole for 160M. I used to have some
> software that would calculate the size of the inductor, giving diameters
> and number of turns, depending on where in the legs you wanted to put
> the inductor. can someone point me at this piece of software?
>
> My problem is that I have room only for an antenna of about 130 feet
> overall. I would like to put the inductors about 2/3 of the way along
> the legs and centre feed it. So basicaly an 80M dipole with loading in
> both legs.
>
> Thanks for any help offered.
>
> Cheers
> Heinrich (VK7EP)

Heinrich,

Loaded dipoles can be troublsome (at least, they have been for me). Have you considered a folded dipole? At around 90' with low SWR from 1.8-30 mHz, that might be a better choice. I use mine for all my HF MARS work. Beats everything else I've tried. Needs to be fed in the center of the lower section with good 50-Ohm coax (RG-8/U or better), through a 4:1 balun (I used an old W2AU balun), and a high-wattage, non-inductive 600-Ohm termination in the center of the upper section (keep the conductors about 18" apart with PVC spreaders) and the feedline perpendicular to the antenna as much as possible and you should be in like Flint :-) I hang mine like an inverted-V (30-degrees) for a higher radiation angle than a flat-top. It's a reasonable compromise for local and DX contacts.

73

Mike

2458. Antenna matching 0.150-4MHz

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-10 08:58:35 UTC
From: Ash <ash@gravitywell.org>
Message-ID: <3D54D5C5.5CBE52FD@gravitywell.org>
Source record: 137299

Hey,
found this _old_ radio: http://www.gravitywell.org/station/gamlingen/oldie.htm
Its a swedish military unit (if you have any info about this radio please tell me :),
I'm going to renovate it and would eventually need a load for matching the output,
is there something simple (that wideband) to construct since I dont want to spend
too much money on it. I want to simulate an antenna as close as possible,
and no - I dont have the space to hang out a 2km-wave antenna :)
I'm normally a dx-er so I dont know that much about transmitting - especially
not on HF , I'm a microwave guy...

//Greg

2459. 603 beam and tower 4sale

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-10 11:42:47 UTC
From: Jeff <j.dauphinais@worldnet.att.net>
Message-ID: <X_659.5757$Ke2.478020@bgtnsc04-news.ops.worldnet.att.net>
Source record: 137300
Cross-posted to: rec.radio.amateur.digital.misc,rec.ham-radio.swap,rec.radio.amateur.antenna,rec.radio.amateur.dx

I have for sale 1 full size "HY-Gain" beam 10 meters. fully assembled for your inspection. 13' Boom and longest element is 22' $100.00 I also have a steel tower totaling 25'. this is in 3 sections 1 10 foot st8 and 1 5foot st8 and 1 10 foot top section. I don't not have a rotator. $50.00. pickup only from Nashua,NewHampshire. I am selling these because they are to big for my new QTH. This beam has spent a large portion of its life in storage. 73's Jeff AA1GR

2460. Antenna For Picking Up Marine Broadcasts Around 2 MHz: Suggestions, Pleae?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-10 11:45:53 UTC
From: Robert Rose <rgsrose@tiac.net>
Message-ID: <aj2uhs$7hb$1@slb1.atl.mindspring.net>
Source record: 137302

Hello:

Am very interested in picking up some of the Marine broadcasts around 2 MHz
(e.g., the distress freq. at 2182, 2670, etc.)

Presently, have a very simple random-wire receive only antenna running
around 3 sides of my attic, then down to my receiver.

All I seem to pick up around 2 MHz is noise; higher freq's work reasonably
well.
Radio probably not a factor, as it's a new JRC NRD 545.

So, my guess is that my random wire is probably a miserable match for these
marine freq's.

Also, there is a strong possibility that a major part of my problem is that
I'm 25 miles or so from the water.
(I'm in a town due West by that distance from Boston harbor).
The marine transmissions are mainly, I'm told, SSB, so I "think" I should be
able to pick them up ?

Should I use a different antenna for these freq's? A simple vertical whip
type? Other?
If so, any suggestions would be most appreciated. (it has to fit reasonably
in my attic).

I'm really new at this, so please don't hesitate to make the suggestions,
and your thoughts on this, as detailed as
you can-really appreciate the help.

Much thanks,
Bob

2461. Re: phased multiband verticals question

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-10 11:47:41 UTC
From: Andy Bullington <a7bull@hotmail.com>
Message-ID: <x3759.62293$sA3.15590@rwcrnsc52.ops.asp.att.net>
Source record: 137301

Hmmmm...problem there is its her house and its on the easternmost edge of
the easternmost peice of land in the US and about 300 yards from the
ocean...overall not a bad spot to radio from.....I think I'll be patient
with her.
W1AWB
"captbrian" <captbrian@ukonline.co.uk> wrote in message
news:3d54bc4c$0$12840$afc38c87@news.ukonline.co.uk...
> Divorce her. Not the right stuff. Radio is important
>
> G3GVB
>
> Andy Bullington <abullington@attbi.com> wrote in message
> news:8fZ49.56243$sA3.15033@rwcrnsc52.ops.asp.att.net...
> > I'm a new ham (May 1) and have not yet gotten my wife to see the beauty
of
> > the stacked yagi array+ 90foot steel tower. I'm using an
> > 80 meter loop that works extremely well to the Europe and the mideast
> > but because of the way I was forced to instal it (read jury rig) not so
> hot
> > to South America and Africa. My wife has signed off on the idea of
> verticals
> > at the end of our lot and since we live on an island only 1/4 mile from
> the
> > ocean I hit on the idea of two verticals and some sort of switchable
> phasing
> > system. I was thinking about using 2 identical non trap type 6-40 meter
> > multibands. Has anybody tried this and is there a
> > preferred brand? I was leaning towards Cushcraft. Thanks in advance.
> > Andy W1AWB
> >
> >
>
>

2462. What Modes Used For 30 MHz to 1.5 GHz ?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-10 11:50:29 UTC
From: Robert Rose <rgsrose@tiac.net>
Message-ID: <aj2uqg$q5b$1@slb1.atl.mindspring.net>
Source record: 137303

Hello:

Could someone please outline for me what modes are used primarily in the range of 30 MHz to around 1.5 GHz?

I know the aviation bands are AM, but is SSB used for a lot of the others: like the Utilility bands, any Marine bands, etc.?

Thanks,
Bob

2463. Re: phased multiband verticals question

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-10 11:57:43 UTC
From: Andy Bullington <a7bull@hotmail.com>
Message-ID: <Xc759.76965$D36.72262@rwcrnsc53>
Source record: 137304

Thanks to everyone who replied. I have some good information to sift through.
Andy W1AWB

2464. Re: What Modes Used For 30 MHz to 1.5 GHz ?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-10 12:23:42 UTC
From: 'Doc <w5lz@icok.net>
Message-ID: <3D5505AE.207C819D@icok.net>
Source record: 137305

Robert,
Almost every mode you can imagine except LSB.
'Doc

2465. Re: Antenna For Picking Up Marine Broadcasts Around 2 MHz: Suggestions, Pleae?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-10 12:33:32 UTC
From: 'Doc <w5lz@icok.net>
Message-ID: <3D5507F6.58A0CA40@icok.net>
Source record: 137306

Robert,
If you could extend your random wire so that it's
around 200 feet, or longer, it would probably help.
What would help even more is to get it as high as you
can get it. I would think most marine siganls are
vertically polarized, so a vertical may help (of course
if you could make it 120 feet tall, it'd be even nicer
but I wouldn't expect you could do that).
Depending on what you're listening for, there may
not be a lot of activity, not like it used to be.
'Doc

2466. Re: Antenna For Picking Up Marine Broadcasts Around 2 MHz: Suggestions, Pleae?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-10 12:42:08 UTC
From: Steve Bossert <kc2gog@amsat.org>
Message-ID: <fT759.120777$D8.4015008@news4.srv.hcvlny.cv.net>
Source record: 137307

how is 80m and 160m reception?

if you can pick up some comms on those bands you should be able to pick up
2Mhz marine channells. i dont think that theier is much activity on though

their are other marine bands to listen to also
try www.dxworld.com/utemarks.html for some sites that should list them

i live on long island and find i dont miss much because all i here is noise
on 2mhz most of the time (2.182Mhz)

VHF Marine and coast guard HF channels (5696 and 8983 plus weather on 6501)
all come through reasonably well, even on my handheld with a rubber duck

++++++++++++++++++++++++++++++++++

"'Doc" <w5lz@icok.net> wrote in message news:3D5507F6.58A0CA40@icok.net...
>
>
> Robert,
> If you could extend your random wire so that it's
> around 200 feet, or longer, it would probably help.
> What would help even more is to get it as high as you
> can get it. I would think most marine siganls are
> vertically polarized, so a vertical may help (of course
> if you could make it 120 feet tall, it'd be even nicer
> but I wouldn't expect you could do that).
> Depending on what you're listening for, there may
> not be a lot of activity, not like it used to be.
> 'Doc

2467. Re: What Modes Used For 30 MHz to 1.5 GHz ?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-10 13:17:42 UTC
From: "J. Harvey" <JM002.Harvey_ANTI*SPAM_@Sympatico.ca>
Message-ID: <sn859.11485$HH2.1986597@news20.bellglobal.com>
Source record: 137308

"Robert Rose"
> ...modes are used primarily in the
> range of 30 MHz to around 1.5 GHz?
> ...is SSB used for a lot of the others:

The most common modulation mode (from a bandwidth point of view) in that range is good old AM. It is used for the video part of non-digital TV (vestigial sideband actually), aircraft, and some military comms. TV audio and FM radio is wideband FM. Most common from a 'number of users' point of view would be narrow band FM (or equivalent phase modulation) used by mobile communications such as taxi, police, fire, boats, some military comms, etc. (some of these will be scambled these days, some will be 'trunked', and the military likes to frequency hop). The first 'cell phones' were nice clear FM, but they have now mainly switching to 'digital modes' and analog cell phones have been given a death sentence by the FCC (*). Digital modes are the fastest growing (digital TV, new cell phones).

Other than Amateurs, there's not very much SSB in that range.

(*) NEWS: "Non-digital wireless service to be phased out."
www.cnn.com/2002/TECH/ptech/08/09/analog.cellular.ap/index.html

2468. Re: 160M loaded dipole

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-10 13:34:17 UTC
From: CAM <w5dxp@hotmail.com>
Message-ID: <3D551659.4C666275@hotmail.com>
Source record: 137309

"Michael R. McCarrey" wrote:
> Loaded dipoles can be troublsome (at least, they have been for me). Have
> you considered a folded dipole? At around 90' with low SWR from 1.8-30
> mHz, that might be a better choice. I use mine for all my HF MARS work.
> Beats everything else I've tried. Needs to be fed in the center of the
> lower section with good 50-Ohm coax (RG-8/U or better), through a 4:1
> balun (I used an old W2AU balun), and a high-wattage, non-inductive
> 600-Ohm termination in the center of the upper section (keep the
> conductors about 18" apart with PVC spreaders) and the feedline
> perpendicular to the antenna as much as possible and you should be in like
> Flint :-) I hang mine like an inverted-V (30-degrees) for a higher
> radiation angle than a flat-top. It's a reasonable compromise for local
> and DX contacts.

Mike, I just modeled that antenna on 1.9 MHz. The maximum gain is -26dBi
compared to about 6 dBi for a 1/2WL dipole and the SWR on the coax at the
antenna is 16:1 giving additional losses. 33dB down from a 1/2WL dipole
is not an antenna that I would recommend for 160m operation.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
------== Over 80,000 Newsgroups - 16 Different Servers! =-----

2469. Re: Inverted L??

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-10 13:54:02 UTC
From: ardujenski@aol.com
Message-ID: <20020810095402.12230.00002622@mb-fj.aol.com>
Source record: 137310

I have used Reg's advice and his ENDFEED program recently and have been amazed at how effective a 11m by 11m Inverted-L (with only 12-- 5m radials and 300 ohm feed) is on 160-10m. On less than 50 watts on 160m I have worked Japan a few times and half my contacts are east of the Mississippi river. Additionally the Inverted-L gives you both a relatively low angle and a high angle lobe which acts like having two antennas and which ever dominates helps secure the contact. I have built one for portable use (6m by 6m) that does a great job 80-10m. ---Alan KB7MBI

2470. Re: Feeding an Inv-L at the bottom?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-10 14:16:17 UTC
From: "W.G Ewald" <wgewald@att.net>
Message-ID: <058aluk0c8joeo64l5brrsso6rlq6rnif6@4ax.com>
Source record: 137311

On Sat, 10 Aug 2002 00:06:17 -0400, "Fred Hambrecht"
<w4jle@charter.net> wrote:

>Don't bother to cut slits for the radials. Cut pieces of coat hanger into 6"
>pieces. Bend then in half. Next lay out the radial and use the bent pieces
>to stake the wire down. Kind of like stapling the wire to the ground. This
>will keep them out of the lawn mower and within a month you won't be able to
>find them as the grass covers them.

Terrific idea! And that would solve the problem of the
accumulating, if not self-reproducing coat-hangers.

2471. Re: photonic band gap structures

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-10 14:21:42 UTC
From: aunwin@fgi.net
Message-ID: <c4becf19.0208100621.1026b7a9@posting.google.com>
Source record: 137312

Richard Clark <kb7qhc@attbi.com> wrote in message
news:<0i18lusm3t8o21nq5nfitmbb46t010cbut@4ax.com>...
> On Thu, 8 Aug 2002 21:56:48 -0400, "J. Harvey"
> <JM002.Harvey_ANTI*SPAM_@Sympatico.ca> wrote:
>
> >"Peter"
> >> ...final year...project at university...
> >> ...photonic band gap structure...
> >> ...application to antennas...
> >
> >[Heck, I'll dive in... I'm not shy.]
> >
> >"Photonic band gap structure" ? You'll have to help us with that one.
> >
> >Most of those words apply to Light Emitting Diodes (LEDs). I've seen some
> >silly cars driven by the 'backwards baseball hat' type of young men - cars
> >with multiple 'antennas' festooned with cute little blinking LEDs... But
> >somehow I don't think that's what you referring to.
> >
> >Please illuminate us.
> >
> >
>
> Hi Jeff,
>
> One application is a honeycomb like structure that acts like a diode
> to light (a one way passage).

Strange and elusive of depth

> I only vaguely recall this topic.

I am not sure of what I am saying.

> It seems to me to be a situation of where materials science is working at
> the ï¿½M-mM scale.

Meaning what ? Its not an LED cluster or it is an LED cluster.

I'm fairly close to the Nanotechnology research

Whow... impressive credentials to justify 'comments' on the thread

> and it was discussed in passing.

So Dick you are only a interdepartmental mail boy.

Dick,
You accuse me of bum fluff
What do you think the man in college thought of your
enlightning comments ?

Art

>
> 73's
> Richard Clark, KB7QHC

2472. Re: A closer look

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-10 14:24:58 UTC
From: CAM <w5dxp@hotmail.com>
Message-ID: <3D55223A.4AD31BBC@hotmail.com>
Source record: 137313

'Doc wrote:
>
> CAM, Sounds reasonable so far... 'Doc

People are complaining that I didn't state the boundary conditions. Here are the assumptions: The signal generator outputs a constant 100 watts into 50 ohm coax and has the necessary circuitry built-in to route the reflected power to a resistor and dissipate all of the reflected power.

Assume there are no re-reflections from the source.

Assume there is no common-mode voltage/current.

Assume a lossless system except for the load and the resistor in the signal generator. The resistor in the signal generator and the load resistor(s) are being monitored to detect where the power goes.

V+ will represent forward voltage and V- will represent reflected voltage.
I+ will represent forward current and I- will represent reflected current.

Now we take the next step. o---150 ohm resistor
|
100w SigGen---50 ohm coax---+---1/2WL 150 ohm twinlead---o

o---50 ohm resistor

We can now switch loads from 150 ohms to 50 ohms. With the 150 ohm load switched in, there are three components, V+/I+ on the coax, V-/I- on the coax, and V+/I+ on the twinlead. V- and I- on the twinlead are zero.

Component #1: V+ on the coax is 70.7v, I+ on the coax is 1.414a
The impedance relationship is 70.7v/1.414a = 50 ohms
The power relationship is 70.7v * 1.414a = 100 watts

Component #2: V- on the coax is 35.36v, I+ on the coax is 0.707a
The impedance relationship is 35.36v/0.707a = 50 ohms
The power relationship is 35.36v * 0.707a = 25 watts

Component #3: V+ on the twinlead is 106.7v, I+ on the twinlead is 0.707a
The impedance relationship is 106.7v/0.707a = 150 ohms
The power relationship is 106.7v * 0.707a = 75 watts

Switch in the 50 ohm load.

Note that component #3 is exactly the same as one of the quantities that Steve adds to get a forward power of 133.33 watts on the twinlead after we switch in the 50 ohm load. The other quantity that Steve adds is 8.33 watts of re-reflected power. We will label that quantity Component #4.

********** Steve's treatment follows: **********

Component #4: Steve's re-reflected power of 8.33 watts.
Voltage is 35.35v, Current is 0.236a
The impedance relationship is 35.35v/0.236a = 150 ohms
The power relationship is 35.35v * 0.236a = 8.33 watts

Adding the voltages in Component #3 and Component #4
106.7v + 35.35v = 141.4v which is V+ on the twinlead with a 50 ohm load.

Adding the currents in Component #3 and Component #4
0.707a + 0.236a = 0.943a which is I+ on the twinlead with a 50 ohm load.

Component #5: ("supersum" of Component #3 and Component #4)
V+ on the twinlead is 141.4v, I+ on the twinlead is 0.943a
The impedance relationship is 141.4v/0.943a = 150 ohms
The power relationship is 141.4v * 0.943a = 133.33 watts

****

With the switch in the 150 ohm load position, the resistor in the signal generator is dissipating 25 watts and 75 watts is being dissipated in the 150 ohm load resistor. (Both are warm but the 150 ohm resistor load is warmer.)

With the switch in the 50 ohm load position, the resistor in the signal generator is dissipating zero watts and 100 watts is being dissipated in the 50 ohm load resistor. (The generator resistor is cold. The 50 ohm load resistor is warmer than the 150 ohm load resistor was before switching.)

It's pretty obvious that the same 25 watts that is dissipated in the generator resistor during 150 ohm load operation somehow makes it's way to the load after the 50 ohm load is switched in. How did that power get from the generator resistor to the load resistor with only the components listed above?
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

2473. Re: A closer look

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-10 14:28:57 UTC
From: CAM <w5dxp@hotmail.com>
Message-ID: <3D552329.EDF0A0CE@hotmail.com>
Source record: 137314

CAM wrote:
> Component #2: V- on the coax is 35.36v, I+ on the coax is 0.707a

Sorry for the typo. "I+" above should have been "I-".
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
------== Over 80,000 Newsgroups - 16 Different Servers! =-----

2474. Re: What Modes Used For 30 MHz to 1.5 GHz ?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-10 15:00:13 UTC
From: vhfradiobuff@aol.comspamsux
Message-ID: <20020810110013.09934.00002968@mb-cn.aol.com>
Source record: 137315

I'll just add to the replies you've already received since AM and FM have been discussed. USB is used from 144.000 - 144.300 and 50.000 - 50.300. There are some beacons in there and some CW stuff. I am not real familiar with the USB activity on 220mhz, 430mhz, 900mhz or above. You might want to check with the US Government Printing Office. I once obtained a wall poster of all frequency allocations.. quite large and it didn't cost a dime...
=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-
73! de Andy KC2SSB (ex: KF4KHC/HL9HCT)
Beachwood, NJ USA! Grid FM29vw
http://vhfradiobuff.tripod.com

2475. EVERY THING IS NOW KNOWN ON ANTENNAS.

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-10 15:17:39 UTC
From: Aunwin@fgi.net
Message-ID: <89059b39.0208100717.23c90756@posting.google.com>
Source record: 137316

Over lunch in Washington with a couple of hams, one of which was a dear friend
N3CBW and another quite famous ham who gives propagation forcasts for a magazine, talked about antennas and my close friend related that I had just
demonstrated a new multiband antenna in his basement and a tired comment was made that such an antenna was badly needed in ham radio and then left the subject as if such a thing was impossible.(probably heard it to many times before)
In a later conversation with Mr Hately of E/H antenna fame he told me that he was not allowed to present a paper at a professional convention.
So he aproached a professor of a major university to review his work and got the retort that 'Antennas are the most widely discussed and investigated subject in the world and there is nothing 'new' to be found'.
Later I had a conversation with a professor in Illinois who is widely known for devising the log periodic antenna and he was my age and his discovery ws not that old.
So this begs the question. Can we safely rely on the present day books as being totally inclusive of the science such that if we memorise them we have every thing covered? Not knocking the excellent publications provided by the ARRL which I use all the time, I am looking at the prevailing attitudes on the subject.!
Years ago the U.S. government proposed closing the Patent office as every thing
that could be invented has now been noted!!
Can we really say that about antennas and thus clamp a heavy hand on experimentation and the future of the hobby?
Can we safely poo hoo any new future antenna break thru
with a possible impact of the Yagi on the hobby because it is not in the final book on antennas? Is this why there is hostility to those who continue to experiment with the 'new' such as Hately,Fractenna and commercial manufacturers
who try to push further the envelope of knowledge?
Po hooing makes an excellent discussion for a group on 80 metres as all can join in on the laughter, but does it help the hobby that has given all of us so much joy, that we hope we can pass on to future generations?
Think about the aproach we are taking by boo hoo ing new ideas and the lofty aproach that one must present it to experts for aproval before any discussion becomes worthwhile. We are just falling over each other to persuade possible new hams and the old to pursue the hobby of computors to the exclusion of amateur radio and stodgy thoughts as my

son did after getting his general license.

Think about it, comments are very welcome as I consider antennas to be part of the glue that holds us to this hobby. Even as important as SWR meters.

2476. Re: Antenna length versus feedline length

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-10 15:34:31 UTC
From: k1bqt@aol.com
Message-ID: <20020810113431.20517.00002311@mb-mn.aol.com>
Source record: 137317

Cecil--

Perhaps a microprocessor-controlled servo-driven length of adjustable open-wire line (ala Steppir) would get that SWR down even lower? :)

Rick K1BQT

2477. Re: A closer look

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-10 15:47:50 UTC
From: 'Doc <w5lz@icok.net>
Message-ID: <3D553587.25BC47E0@icok.net>
Source record: 137318

I think you lost me somewhere. Who is Steve,
and where did the re-reflected power come from?
My NG reader sometimes 'misses' a post now and
then. Did I miss a post(s) from Steve?
'Doc

2478. Re: EVERY THING IS NOW KNOWN ON ANTENNAS.

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-10 15:59:46 UTC
From: 'Doc <w5lz@icok.net>
Message-ID: <3D553853.F5E201B8@icok.net>
Source record: 137219

Art,
The 'po hoo'ers perform as much service to the hobby
as the people who experiment with 'new' antenna designs.
How can you possibly 'prove' a new antenna idea by only
having positive, or supportive comments? You also need
the people who try to disprove it.
'Doc

2479. Re: Cushcraft AR-6

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-10 16:08:35 UTC
From: nm5k@wt.net
Message-ID: <25eb70d7.0208100808.12c719fd@posting.google.com>
Source record: 137220

"Michael R. McCarrey" <wa7qzr@Don'tBotherImSickOfSPAM.net> wrote in message news:<Ol359.74953$D36.72353@rwcrnsc53>...
> Hello;
>
> Does anyone happen to know what the diameter of the tuning ring on an
> AR-6 might be? Cushcraft "Technical Support" doesn't :-)
>
> Please reply here.
>
> Thanks,
>
> Mike

I have the manuals for both antennas."AR-10 and AR-6". I thought they gave the dimensions for the loops but I guess they don't. It's not really critical. Appx 9 inches dia will work for 10m. I would think the 6m version is appx 4-5 inches dia. It's not critical as you tap the middle area of the coil. If your dia varies a bit from theirs, it will just tap at a slightly different place.
I've made homebrew versions of both those antennas. MK

2480. Re: 160M loaded dipole

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-10 16:14:36 UTC
From: "Michael R. McCarrey" <wa7qzr.take-out-the-junk@NOSPAMattbi.com>
Message-ID: <MZa59.51664$UU1.8728@sccrnsc03>
Source record: 137221

On Sat, 10 Aug 2002 06:34:17 -0700, CAM wrote:

> "Michael R. McCarrey" wrote:
>> Loaded dipoles can be troublsome (at least, they have been for me).
>> Have you considered a folded dipole? At around 90' with low SWR from
>> 1.8-30 mHz, that might be a better choice. I use mine for all my HF
>> MARS work. Beats everything else I've tried. Needs to be fed in the
>> center of the lower section with good 50-Ohm coax (RG-8/U or better),
>> through a 4:1 balun (I used an old W2AU balun), and a high-wattage,
>> non-inductive 600-Ohm termination in the center of the upper section
>> (keep the conductors about 18" apart with PVC spreaders) and the
>> feedline perpendicular to the antenna as much as possible and you
>> should be in like Flint :-) I hang mine like an inverted-V (30-degrees)
>> for a higher radiation angle than a flat-top. It's a reasonable
>> compromise for local and DX contacts.
>
> Mike, I just modeled that antenna on 1.9 MHz. The maximum gain is -26dBi
> compared to about 6 dBi for a 1/2WL dipole and the SWR on the coax at
> the antenna is 16:1 giving additional losses. 33dB down from a 1/2WL
> dipole is not an antenna that I would recommend for 160m operation.

Hello CAM;

I've read a lot of material on the 'net written by people using antenna "modeling" software to tweak their designs before actually hanging them. While it sounds interesting, I've ever done it. I suppose if I had with this one, I might have never bothered erecting it, as your figures sound absolutly awful. I don't know what to say other than, with the exception of a couple of bands (7.4 mHz and 11.9 mHz - MARS bands - which require that I use my transmatch), the antenna as I described above works well, with an average indicated SWR at or below 1.5:1, drawing a minimum of 1.5 amps, up to nearly three. On the bands I mentioned above, the indicated SWR peaks about 2.5:1, but I believe that's caused by some of the junk (and there's a lot of that), which is in close proximity to the antenna.

My particular antenna is based on the design of the B&W BWD-1.8-30. Their's was too costly (way too costly), so I duplicated it as best I could. They claim a SWR of 2:1 at 1.8 mHz with the highest excursion above that frequency being 1.5:1 around maybe 25-25 mHz, by their chart. I've never been able to get figures like that without the transmatch switched in.

Anyhow, I wouldn't have suggested it to Heinrich as an alternative to the loaded dipole idea (I've never been able to get those things to work satisfactorily), unless I had wire hanging off the tower that was actually working. There could be many reasons my antenna works as well as it does.

With the exception of the balun, it's all homebrew, including the termination (B&W calls that a "balancing network"). Just a big old 600-Ohm dummy load in reality. Who knows? Antennas are queer birds. I know folks who can't get commercially-made antennas to work, but give them a spool of wire, a roll of ladder-line, a tape measure and a noise bridge, and they will do things that will simply amaze you. In my case, I think maybe I'm just working on dumb luck <grin>.

73

Mike - WA7QZR

2481. Re: Feeding an Inv-L at the bottom?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-10 16:16:11 UTC
From: nm5k@wt.net
Message-ID: <25eb70d7.0208100816.61561fb3@posting.google.com>
Source record: 137222

StarGazer <pti@capnet.com> wrote in message news:<3D547E7F.B2F2D5A6@capnet.com>...
> If one feeds an inv-L at the bottom how come the radial lengths
> don't have to be the same length as the L part?
> Like a dipole should be?
>
> I picture it as a dipole with the ground being the other half of the
> dipole. How does the ground know what its electrical length has
> to be?

When you lay radials out on the ground, the ground detunes them. So
cutting them to exact lengths is generally a waste of time. Now, if
the radials were elevated off the ground, then yes, they need to be
resonant to work well.
>
> If I want to put radials under my lawn what it the best way
> to cut a sliver into it for the radial?

Freds "wire staple" method is a good one. Like him, I wouldn't bother
cutting slits. It's more work than it looks. MK

2482. Re: Inverted L??

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-10 16:20:56 UTC
From: StarGazer <pti@capnet.com>
Message-ID: <3D553D68.A028011F@capnet.com>
Source record: 137223

That last back at 55 would be impossible. Want to still use my
backyard.

captbrian wrote:

> Go up 30 / over 55 / down 24 back 55 at 6ft high then down 6 feet to form a
> loop . Feed at the start and finish points with some 450 ladder line as
> convenient . Stand the antenna tuner on a piece of insulation. Put a choke
> balun between ant. tuner and rig . Ignore earth. You'll be agreeably
> surprised on all bands
>
> G3GVB
>
> Reg Edwards <g4fgq.regp@btinternet.com> wrote in message
> news:aj0fom$57a$1@venus.btinternet.com...
> > > I only have 55' between trees.
> > > Is going up one tree vertically 30'.... 55' over to another tree...
> > > then vertically down the second tree for... what ... 30 ' acceptable
> > > for inv L.
> >
> > ============================
> > Dear StarGazer,
> >
> > Re-name it "Inverted-U" or "Dog's Hind Leg".
> >
> > You will find it a very good radiator from 160m to 10m. Taking one band
> with
> > another consider it to be omni-directional. Slope the vertical sections
> to
> > keep them away from the tree trunks. The higher the horizontal section the
> > better. Feed it from one end via a tuner. Use insulated wire if the
> antenna
> > is very near to leaves. Exact overall length is very non-critical. (Could
> > you make use of the house chimney to increase overall length and average
> > height.?) Don't bring the far end down to less than 6-feet above ground.
> > If you do then ground it (ie., make it a loop) - this may change its minor
> > directional properties on some bands but will reduce radiating efficiency
> > somewhat on all bands.
> >
> > Forget all about the magic 120 radials - a very modest ground system such
> as
> > 6 or 8 shallow-buried radials, 25 to 35 feet long in good garden soil, or
> > twice as many radials in poor soil will do nicely. Try and test 2 radials
> > for starters. You will learn more about ground systems from this simple
> > procedure than reading thick books on the subject. ;o)

> >
> > Spread them uniformly around a semicircle in the general direction of the
> > antenna. Radials can be allowed to bend and go round corners. They don't
> > have to be all the same length. But 2 radials close together are only 1
> > radial. Then add the incoming main water pipe plus the domestic plumbing +
> > the central heating system. If you are fortunate enough to have an
> outdoors
> > swimming pool, toss in an aluminium sheet on the far end of one of the
> > radials.
> >
> > If you think you need more wire in the ground then use more radials rather
> > than longer radials. Stop burying wire when received signal strengths from
> > known, stable, relatively nearby stations on 160m stop increasing. Try
> > disconnecting a few radials while watching the S-meter.
> >
> > Don't bother with ground rods - they are not worth the trouble and hard
> > labour, each being equivalent to a radial of the same length. (Unless the
> > top soil is VERY dry and the water table can be reached with a rod.)
> >
> > If you are interested in numbers and designing your own tuner for your
> > particular antenna then download in a few seconds program ENDFEED from
> > website below. Run immediately. Program estimates antenna performance
> > including effects of the ground in comparison with a 1/4-wave vertical.
> > --
> > ========================
> > Regards from Reg G4FGQ
> > Free Radio Design Software
> > Go to http://www.g4fgq.com
> > ========================
> >
> >

2483. Re: Inverted L??

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-10 16:24:44 UTC
From: StarGazer <pti@capnet.com>
Message-ID: <3D553E4C.78CFAE0E@capnet.com>
Source record: 137226

Does it self resonate anywhere?

Where do you feed it? Bottom or middle of L?

Can't use open wire at bottom can you?

ARDUJENSKI wrote:

> I have used Reg's advice and his ENDFEED program recently and have been amazed
> at how effective a 11m by 11m Inverted-L (with only 12-- 5m radials and 300 ohm
> feed) is on 160-10m. On less than 50 watts on 160m I have worked Japan a few
> times and half my contacts are east of the Mississippi river. Additionally the
> Inverted-L gives you both a relatively low angle and a high angle lobe which
> acts like having two antennas and which ever dominates helps secure the
> contact. I have built one for portable use (6m by 6m) that does a great job
> 80-10m. ---Alan KB7MBI

2484. Re: Cushcraft AR-6

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-10 16:37:10 UTC
From: "Michael R. McCarrey" <wa7qzr.take-out-the-junk@NOSPAMattbi.com>
Message-ID: <Wib59.51812$UU1.9899@sccrnsc03>
Source record: 137224

On Sat, 10 Aug 2002 09:08:35 -0700, Mark Keith wrote:

> "Michael R. McCarrey" <wa7qzr@Don'tBotherImSickOfSPAM.net> wrote in
> message news:<Ol359.74953$D36.72353@rwcrnsc53>...
>> Hello;
>>
>> Does anyone happen to know what the diameter of the tuning ring on an
>> AR-6 might be? Cushcraft "Technical Support" doesn't :-)
>>
>> Please reply here.
>>
>> Thanks,
>>
>> Mike
>
> I have the manuals for both antennas."AR-10 and AR-6". I thought they
> gave the dimensions for the loops but I guess they don't. It's not
> really critical. Appx 9 inches dia will work for 10m. I would think the
> 6m version is appx 4-5 inches dia. It's not critical as you tap the
> middle area of the coil. If your dia varies a bit from theirs, it will
> just tap at a slightly different place. I've made homebrew versions of
> both those antennas. MK

Hi Mark,

This antenna began it's life as a CB antenna (AR-11, I think). A previous owner shortened the base section, trying for 29.6 mHz., I assume.

When I got hold of it, I "reconstructed" it according to the AR-6 dimensions, including the coax capacitor. As you mentioned, the Cushcraft manuals don't include the ring dimensions. I constructed three different rings: 8", 6", and 4". No matter which one I use, I end up with resonance between 52-54 mHz (I'm trying for 50.25 mHz center), with an XC of over 150-Ohms. The lowest SWR obtainable is always above 2:1, with the tuning arm set right at the radiator end of the ring.

I've been using RG-8/U coax to feed it, but I'm beginning to think it's perhaps decomposed somewhere along the run. I guess it's time to drag out the Cantenna. It's a shame when you can't trust new coax to really be "new".

Anyhow, thanks for the feedback. I wanted to make sure I was close to the right ring size before I tossed the feedline.

73

Mike

2485. Re: EVERY THING IS NOW KNOWN ON ANTENNAS.

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-10 16:44:48 UTC
From: whagen6@cs.com
Message-ID: <20020810124448.09817.00002762@mb-cf.news.cs.com>
Source record: 137225

If a new antenna design is truly something that has not been developed before, is new technology, an improvement of science, then it will survive the peer review process and can be published in respected journals.

2486. Re: EVERY THING IS NOW KNOWN ON ANTENNAS.

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-10 16:59:38 UTC
From: CAM <w5dxp@hotmail.com>
Message-ID: <3D55467A.260215A4@hotmail.com>
Source record: 137227

Art Unwin KB9MZ wrote:
> Think about it, comments are very welcome as I consider antennas to
> be part of the glue that holds us to this hobby. Even as important as
> SWR meters.

Art, for something revolutionary to happen, the existing laws of physics would have to be found wanting. The existing laws of physics are found wanting quite often, e.g. Einstein improved over Newton and apparently quantum physics is improving over Einstein. What is needed for a revolution in antennas is someone improving the existing accepted EM physics theories and implementing those improvements in reality.

Until someone can demonstrate that the accepted physics governing EM antennas is inadequate, most of us will continue to be skeptical of claims that lie outside that body of physics. Any new antenna that lies inside the present body of physics is not revolutionary and is merely evolutionary, by definition. There are, no doubt, some evolutionary antennas yet to be developed but they probably won't be a big deal.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
------== Over 80,000 Newsgroups - 16 Different Servers! =-----

2487. Re: photonic band gap structures

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-10 17:07:25 UTC
From: "W.G Ewald" <wgewald@att.net>
Message-ID: <06ialus4g7j3blkmr51fk6iqnuuds0c6jv@4ax.com>
Source record: 137228

On 10 Aug 2002 07:21:42 -0700, aunwin@fgi.net (Art Unwin KB9MZ) wrote:

>> One application is a honeycomb like structure that acts like a diode
>> to light (a one way passage).
>
>Strange and elusive of depth

It describes the compound eyes of insects. I don't know if such
eyes can perceive depth.

2488. Re: EVERY THING IS NOW KNOWN ON ANTENNAS.

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-10 17:09:57 UTC
From: "W.G Ewald" <wgewald@att.net>
Message-ID: <jaialukio43pp4d5gen98mim1o5t3sor5l@4ax.com>
Source record: 137229

On 10 Aug 2002 08:17:39 -0700, Aunwin@fgi.net (Art Unwin KB9MZ) wrote:

>In a later conversation with Mr Hately of E/H antenna fame he told me
>that he was not allowed to present a paper at a professional
>convention.
>So he aproached a professor of a major university to review his work
>and got the retort that 'Antennas are the most widely discussed and
>investigated subject in the world and there is nothing 'new' to be
>found'.

What department was this professor in?

2489. Re: photonic band gap structures

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-10 17:10:01 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <udhaluoug82eav3sbhg7l4mrpv01si16nh@4ax.com>
Source record: 137230

On 10 Aug 2002 07:21:42 -0700, aunwin@fgi.net (Art Unwin KB9MZ) wrote:

>> One application is a honeycomb like structure that acts like a diode
>> to light (a one way passage).
snip
>> It seems to me to be a situation of where materials science is working at
>> the ï¿½M-mM scale.
>
>Meaning what ? Its not an LED cluster or it is an LED cluster.
>

Hi Art,

There is no mention of an LED. The diode is in the
constructive/destructive interference of the structure, built at
wavelength scales of the light transiting it, preventing light's
propagation in one direction.

Actually, describing as honeycomb goes a little beyond that, it is
like a stack of honeycombs (the general bulk of the structure).

Hi Peter,

reference "Photonic Crystals: Semiconductors of Light," Eli
Yablonovitch. This is in the Dec 2001 issue of Scientific American
which contains the graphics necessary to illustrate the wave mechanics
if you are interested.

73's
Richard Clark, KB7QHC

2490. Re: Antenna length versus feedline length

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-10 17:10:24 UTC
From: CAM <w5dxp@hotmail.com>
Message-ID: <3D554900.8E1F4215@hotmail.com>
Source record: 137232

Rick Littlefield wrote:
>
> Cecil--
>
> Perhaps a microprocessor-controlled servo-driven length of adjustable open-wire
> line (ala Steppir) would get that SWR down even lower? :)

Perhaps, but I am a EE and mechanical contraptions of mine never work.

I did develop a Rube Goldberg screwdriver tuning method. It consisted of
two telescoping AM automotive antennas mounted parallel side by side.
The ends were shorted together by a metal shorting block and connected
to a threaded shaft turned by a screwdriver motor. With this setup I
could continuously vary the length of that section of my transmission
line from two feet to six feet. That's about the time I came up with my
binary knife switch/relay switching method and realized that the
screwdriver motor part was redundant and too complicated.

I needed to vary the length of my ladder-line from zero to 25 feet.
If I had six of the above devices in series, I could do it all with
AM automotive antennas. How would that be for an antenna tuner?

Seriously, if anyone can think of a better way to vary the length
of the ladder-line other than knife switches or relays, I would
appreciate the input. Don't bother suggesting conductive bungie
cords - that's already been suggested.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

2491. Re: Inverted L??

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-10 17:11:29 UTC
From: ardujenski@aol.com
Message-ID: <20020810131129.10016.00003319@mb-cj.aol.com>
Source record: 137231

>
>Does it self resonate anywhere?
>
>Where do you feed it? Bottom or middle of L?
>
>Can't use open wire at bottom can you?

Most multiband INVERTED-L antennas will be bottom fed. Although there are some advantaged to corner feeding it it is not a true Marconi and also is limited on the bands it can be used on, much like a doublet. Try to load up a 10m by 10m doublet on 160m. With an Inverted-L, like any antenna for multiband usage, resonance is not a factor. You use an ATU to match. Depending upon the bands you plan to use it on and the final dimensions you may be able to use an appropriate balun at the base of the inverted-L and run low loss coax back to the shack. My goal is to get a remote ATU and install it at the base of an Inverrted-L. I am by no means an antenna expert but a mere dabbler in the field...Alan KB7MBI

2492. Re: Antenna length versus feedline length

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-10 17:15:43 UTC
From: CAM <w5dxp@hotmail.com>
Message-ID: <3D554A3F.D8C9492A@hotmail.com>
Source record: 137233

"GW3NCT"@@ wrote:
> Thanks for the info. I found your page very helpful. But what if my
> linear can self-tune?

I don't know what you mean by self-tune. Do you mean auto-tuner built in?
Or do you mean that it has been designed to handle a high SWR? My SGC-500
amp spec says it will handle an SWR of 6:1. Unfortunately, a lot of power
can be lost if the amp eats the reflected power with an SWR of 6:1. Also
unfortunately, SWRs get a lot higher than 6:1 quite often.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

2493. Re: Feeding an Inv-L at the bottom?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-10 17:16:00 UTC
From: "Ian White, G3SEK" <G3SEK@ifwtech.co.uk>
Message-ID: <af0M46HQpUV9EA3m@ifwtech.co.uk>
Source record: 137238

Mark Keith wrote:
>> If I want to put radials under my lawn what it the best way
>> to cut a sliver into it for the radial?
>
>Freds "wire staple" method is a good one. Like him, I wouldn't bother
>cutting slits. It's more work than it looks.

Certainly is!

It helps to choose a time of year when the ground is soft and the grass is growing. If you really scalp the lawn with the mower before pegging down the radials, the radials are easier to lay and the grass will come back very quickly.

If the ground is a bit rough, leave a bit of slack in the wire as you staple it down. That will make it easier to stamp down any loops after few days (when your back is feeling better) and maybe pin them down with extra staples.

--
73 from Ian G3SEK 'In Practice' columnist for RadCom (RSGB)
Editor, 'The VHF/UHF DX Book'
http://www.ifwtech.co.uk/g3sek

2494. G5RV in a V pattern? Possible?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-10 17:19:56 UTC
From: Tom <auctionid4me@yahoo.co.uk>
Message-ID: <1Xb59.2315$wp2.142804@newsfep1-win.server.ntli.net>
Source record: 137234

I have no interest in the experimentation with antenna, however
due to a home move and limited space I am curious to know the
following:

Is it possible to a G5RV in a V pattern, about 20' above the ground.
legs and the end.

The 2 legs being about 20' apart.

Ie.

```
\ 20' apart /
\ /
\ /
\ /
\ /
\ /
\ /
\ /
\/
Feeder Point
```

2495. Re: Antenna length versus feedline length

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-10 17:24:12 UTC
From: 'Doc <w5lz@icok.net>
Message-ID: <3D554C1D.95BE7638@icok.net>
Source record: 137235

CAM,
Have you tried winding it on a reel?
'Doc

2496. Re: A closer look

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-10 17:26:31 UTC
From: CAM <w5dxp@hotmail.com>
Message-ID: <3D554CC7.F2B6763B@hotmail.com>
Source record: 137236

'Doc wrote:
>
> I think you lost me somewhere. Who is Steve,
> and where did the re-reflected power come from?
> My NG reader sometimes 'misses' a post now and
> then. Did I miss a post(s) from Steve?

The argument has been happening under the title, "SWR, why isn't the energy re-absorbed at the TX". Steve is VE9SRB who contributed to that thread and earlier threads on the subject.

However, ignore Steve's arguments. With the example presented where, with a 150 ohm load, 75 watts reaches the load and 25w is dissipated in the signal generator, and switching to a 50 ohm load causes that 25 watts to be dissipated in the 50 ohm load instead of the signal generator, doesn't it stand to reason that the 25 watts was transported to the 50 ohm load by a combination of voltage and current in the 150 ohm environment?
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
------== Over 80,000 Newsgroups - 16 Different Servers! =-----

2497. RFI problem witho Security System

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-10 17:29:59 UTC
From: Terry Sellick <tsellic@attglobal.net>
Message-ID: <3d5551f9_4@news1.prserv.net>
Source record: 137237

Hi all,

I am looking for some help in solving an RFI problem.

I have an ADT security system that sounds the alarm when I tune
up on 20m. It has 2 digital control stations. The alarm indicates
a "tamper alarm" on the control station closest to my GAP Challenger
antenna. I have disconnected the coax at the antenna, and connected
it to a dummy load at the antenna location. I can tune up without
causing any alarm. So it's the antenna radiation being picked up
in the house by one of the long security sensor cables, not a coax
problem, and not RF getting into the 110vac. The cables are 4
conductor unshielded.

ADT has been NO help in solving this. I have tried placing toroids
on both control panel cables, the security system power connection,
the security telephone connection, and all cables entering the security
panel box. I have grounded the security system box, and pcb to
the electrical ground which has an outside ground rod. I have
done all this one at a time to see if anything makes a difference. So far
no luck.

I don't know a lot about the control panels except that they feed back
digital signals to a security system box in the basement. Somehow,
RF is affecting the digital signal.

Has anyone solved this problem before? Any suggestions? My next plan
of attack is to get an RF Field Strength meter, and see if that will help
narrow down the location of the problem.

Thanks
Terry

2498. Re: SWR - Why isn't the energy re-absorbed at the TX?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-10 17:39:52 UTC
From: richardharrison@webtv.net
Message-ID: <23934-3D554FE8-49@storefull-2396.public.lawson.webtv.net>
Source record: 137239

Richard Lord, GW3NCT wrote:
"Of course if you are fortunate enough to have a really tall mast
(breakdown voltage of the atmosphere is reduced)."

You don`t need a tall mast, just a high altitude QTH. LaPaz, Bolivia is around 15,000 ft, and it`s down in a valley. I`ve worked with radios on the Altiplano above LaPaz.

A radio broadcast station high in the Andes near Quito, Ecuador was one of the first to use a quad loop antenna because of all the problems they had with corona from the tips of their dipole elements at high altitude.

Best regards, Richard Harrison, KB5WZI

2499. Re: Antenna length versus feedline length

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-10 17:42:55 UTC
From: CAM <w5dxp@hotmail.com>
Message-ID: <3D55509F.F0264036@hotmail.com>
Source record: 137240

'Doc wrote:
> CAM, Have you tried winding it on a reel?

I have conceptually tried it. Didn't come up with anything useful.
The wire on the reel would need to be shorted so the insulation
would have to be eliminated along with the spacers made out of
insulation. What I need to do is tuck those reels into a different
dimension from the ones the feedline is in.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

2500. Re: RFI problem witho Security System

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-10 17:47:15 UTC
From: CAM <w5dxp@hotmail.com>
Message-ID: <3D5551A3.321E8E71@hotmail.com>
Source record: 137241

Terry Sellick wrote:
> I have tried placing toroids
> on both control panel cables, the security system power connection,
> the security telephone connection, and all cables entering the security
> panel box.

What kind of material in your toroids? How many turns? Ten turns
on an 'F' material toroid works wonders for me.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

2501. Re: Antenna matching 0.150-4MHz

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-10 18:17:44 UTC
From: aunwin@fgi.net
Message-ID: <c4becf19.0208101017.5db1e20b@posting.google.com>
Source record: 137242

Ash <ash@gravitywell.org> wrote in message news:<3D54D5C5.5CBE52FD@gravitywell.org>...
> Hey,
> found this _old_ radio: http://www.gravitywell.org/station/gamlingen/oldie.htm
> Its a swedish military unit (if you have any info about this radio please tell me :),
> I'm going to renovate it and would eventually need a load for matching the output,
> is there something simple (that wideband) to construct since I dont want to spend
> too much money on it. I want to simulate an antenna as close as possible,
> and no - I dont have the space to hang out a 2km-wave antenna :)
> I'm normally a dx-er so I dont know that much about transmitting - especially
> not on HF , I'm a microwave guy...
>
> //Greg

There is I believe, a rec radio group that that discuss old military
radios.
There is also a large store on the west coast that deals extensively
in military radios and parts. On the antenna question since you are
using it as a receiver I
would match the radio to the impedance supplied to it by a random long
wire
Low parts number circuits are readily made to put it front of the
first R.F. amplifier.I renewed a HRO 50-T1 and was relly surprised how
component values had wandered which require replacement of all
capacitors and resisters, especialy the capacitors in the tuning
circuit that control temperature drift. In your case I would also
remove the 6146 output tubes and isolate the HV line.
Story.
My last purchase of a radio to mess with was at an auction that
described it as a radio transmitter, removed after a trial run tests
of a nuclear submarine
for minor adjustments. As it was listed as weighing 200# it came to
mind that here was a 'state of the art' radio with circuits similar to
those suggested by Wes Hayward and others. The bidding was spirited
which reinforced my thoughts and I purchased it for $1000 I believe.
My wife and I used the opportunity to take a leisurely 3 day drive in
an old 300D to get to the east coast to where it sat.
On arrival to pick it up I became a 'basket case'. First the
tranceiver was a
valve/tube job (protection against nuclear damage as shown with solid
state
devices.) The other shock was instead of weighing 200# it was 2000#
shaped like a steel cupboard. I did get it home but my wife was close
to losing it because of my driving speed. It still stands in one of my
garages after getting massive help from some who could not disappear

quick enough. Undoubtedly on my demise it will finish up in the junk yard and good luck to those who have to get it there.
I have a hernia now but I am not sure that the events can be coupled.
I don't mess with radios anymore. As an aside, the treasured HRO 50 fell off a
truck while in the process of moving house.
Good luck with the project
Art KB9MZ

2502. antennas and more....

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-10 18:32:35 UTC
From: George Kinzer <horseflygk@worldnet.att.net>
Message-ID: <7%c59.6106$Ke2.517022@bgtnsc04-news.ops.worldnet.att.net>
Source record: 137243

ive just completed a very nice, easy to follow cd with plans to build 11 meter (CB) antennas, or use formulas for other bands, with MORE info on tune-ups, convertions, mic wiring,
you name it...this thing is loaded with useful info on doing your own repairs and modifications. Explains how toos, and pdf file on home-kits and MORE...pictures are high quality, formulas, and do-nots that will get you up and sounding great...want to install your own talk-back, echo board, want to make your own swing-kit? well theres More, More, More (title of my cd) anyone interested, email me. Many hours and weekends compiling all this info in an easy to read format...Ive decided NOT to copyright this, as friends and 'Masters' have help write this/ you'll be amazed at how much you'll learn..
.'Golden Screwdriver' is a drop in the bucket.... email me at horseflygk@att.net I'm 10-7, later

--
If first you don't suceed, do the same thing again...see what happens

2503. Re: G5RV in a V pattern? Possible?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-10 18:38:43 UTC
From: CJ <fantastic@sex.edu>
Message-ID: <ulandmcnb0mp48@corp.supernews.com>
Source record: 137244

Hello Tom,
Of course it is "possible". If random length wire antennas are useful than most any "configuration" will radiate and basically "get you on the air" even if the swr is 3:1 you'll do fine.

There is IMHO way too much "antenna analysis" and "religious philosophy" about Ham Radio antennas and which ones are better than others. While there are measurable differences between antenna types and overall designs I have done well with a W9INN 5-band (80,40,20,15,10) resonant dipole at 54 ft above ground. Last DXCC check shows me at 311 countries..all on a simple dipole.

Also IMHO (and not to toot my own horn) what - is - important (and totally free to everyone that pursues it) is "operator skill" especially in DX plie-ups. Many times those ops with 200 ft towers and "legal limit power" (or more!) and stacked mono-banders have to wait till I get done with my DX qso (on a dipole!) before they can call. Also being at 5412 ft above sea level helps too!!!
--
73 / DX de AB7SL - Charles
AB7SL - Ham Radio Pages
Prescott, Arizona - USA
www.ab7sl.com

"Tom" <auctionid4me@yahoo.co.uk> wrote in message
news:1Xb59.2315$wp2.142804@newsfep1-win.server.ntli.net...
> I have no interest in the experimentation with antenna, however
> due to a home move and limited space I am curious to know the
> following:
>
> Is it possible to a G5RV in a V pattern, about 20' above the ground.
> legs and the end.
>
> The 2 legs being about 20' apart.
>
> Ie.
>
>
> \ 20' apart /
> \ /
> \ /
> \ /
> \ /
> \ /
> \ /

```
> \ /
> \/
> Feeder Point
>
>
```

2504. Homebrew mobile antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-10 18:57:48 UTC
From: Denis O' Flynn <denisf@eircom.net>
Message-ID: <_ee59.8055$zX3.11251@news.indigo.ie>
Source record: 137251

Anyone got any ideas for a homebrew mobile antenna. I plan to use the
Icom -706 MKII rig and would like to use down to 80m.

Many thanks in anticipation
de
Denis EI6HB
email ei6hb@eircom.net

2505. Re: EVERY THING IS NOW KNOWN ON ANTENNAS.

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-10 19:06:46 UTC
From: richardharrison@webtv.net
Message-ID: <8055-3D556446-198@storefull-2398.public.lawson.webtv.net>
Source record: 137245

Art Unwin wrote:
"---a tired comment was made that such an antenna (a new multiband antenna) was badly needed in ham radio and then left the subject as if such a thing was impossible---."

If antenna development had kept pace with electronics during the past 50 years, a near d-c to daylight radiator would fit in the palm of your hand, have continuously selectable directivity from a 2-degree spot to isotropic, have 95% efficiency, accept a kilowatt continuous power without degradation, and present a flat 50-ohm resistance to the source over the entire spectrum. It would readily radiate, of course.

Antenna performance is far short of ideal, so don`t close the patent office just yet.

Best regards, Richard Harrison, KB5WZI

2506. Re: G5RV in a V pattern? Possible?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-10 19:25:59 UTC
From: n7ws_at_yahoo.com
Message-ID: <3d5562e2.14512917@news.triconet.org>
Source record: 137247

On Sat, 10 Aug 2002 11:38:43 -0700, "CJ" <fantastic@sex.edu> wrote:

Chuckie Boy is fantasizing again.

| There is IMHO way too much "antenna analysis" and "religious
|philosophy" about Ham Radio antennas and which ones are better than
|others.

Since this an amateur radio discussion group about antennas, what the
hell do you expect here? If it's too much for you, leave.

|While there are measurable differences between antenna types
|and overall designs

Why I didn't know that, thanks for pointing it out.

|I have done well with a W9INN 5-band
|(80,40,20,15,10) resonant dipole at 54 ft above ground.

Here we go again with the shilling for a so-so commercial product.

| Also IMHO (and not to toot my own horn)

Then whose horn are you tooting, Chuckie? Uh oh I forgot, W9INN's.

|what - is - important (and
|totally free to everyone that pursues it) is "operator skill" especially
|in DX plie-ups. Many times those ops with 200 ft towers and "legal
|limit power" (or more!) and stacked mono-banders have to wait till I get
|done with my DX qso (on a dipole!) before they can call.

Right, they're two hours away from the band opening at their location.
BTW, if you quit relying on that DXcluster crutch, you could find the
DX first and work them before the pileup starts.

| Also being at
|5412 ft above sea level helps too!!!

You make a lot of absurd statements, but this one is tops. I guess
you must do a lot better than those guys down on the beach who just
have all of that nasty old sea water for a horizon.

BTW, is that 5412 feet elevation at ground level or at the antenna
height? We need to be precise, as I'm sure it makes a difference.

Thanks for the nice usenet post.

2507. Re: Antenna length versus feedline length

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-10 19:26:22 UTC
From: 'Doc <w5lz@icok.net>
Message-ID: <3D5568BE.DD75600E@icok.net>
Source record: 137246

CAM,
Why not use 'real live' open wire line? shouldn't
be too difficult to do ('course, I'm not making the
reel either).
'Doc

2508. Re: Antenna matching 0.150-4MHz

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-10 19:28:57 UTC
From: richardharrison@webtv.net
Message-ID: <8055-3D556979-199@storefull-2398.public.lawson.webtv.net>
Source record: 137250

Art Unwin wrote:
"First the transciever was a valve/tube job (protection against nuclear damage as shown with solid state devices.)---"

Which sub shakedowen cruise was this used on? The Nautilus shakedown?

What about the sailors aboard if solid-state can`t stand the radation?

Glad I`m not in the navy anymore.

Best regards, Richard Harrison, KB5WZI

2509. Re: RFI problem witho Security System

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-10 19:29:28 UTC
From: 'Doc <w5lz@icok.net>
Message-ID: <3D556979.B64C8230@icok.net>
Source record: 137248

Terry,
Have you tried using shielded cable along
with the other things you've done? Never
messed with a security system, but shielded
cable worked wonders for my phone/computer
system.
'Doc

2510. Re: G5RV in a V pattern? Possible?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-10 19:38:55 UTC
From: 'Doc <w5lz@icok.net>
Message-ID: <3D556BAF.5F30BE8D@icok.net>
Source record: 137249

Tom,
It will work, just not very well. The 'legs'
of the antenna are too close together. The
input impedance is going to be some rediculous
value that a tuner may not even be able to handle.
Not knowing what the area you have to play with
looks like, I can't even guess at a good alternative.
Sorry 'bout that...
'Doc

2511. Re: 160M loaded dipole

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-10 19:59:02 UTC
From: richardharrison@webtv.net
Message-ID: <8055-3D557086-203@storefull-2398.public.lawson.webtv.net>
Source record: 137253

Heinrich wrote:
"---I only have room for an antenna of about 130 feet overall."

A 130 ft folded dipole is 1/2-wave of wire and resonates at 160m.
Response is less than 1 db poorer than a full size 1/2-wave dipole.
Problem with the 1/4-wave folded dipole is that its drivepoint impedance
is about 6000 ohms. Don`t use coax to feed this, Use the highest
impedance balanced line you can afford, 600-ohm, 450-ohm, or 300-ohm.
Bandwidth is only 5%, so you need a tuner to cover twice that bandwidth
at 160m. Don`t use that loading resistor opposite the feedline. It`s a
loser.

Best regards, Richard Harrison, KB5WZI

2512. Re: SWR - Why isn't the energy re-absorbed at the TX?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-10 20:06:34 UTC
From: VE9SRB <srbest@att.net>
Message-ID: <ene59.6216$Ke2.525893@bgtnsc04-news.ops.worldnet.att.net>
Source record: 137252

"CAM" <w5dxp@hotmail.com> wrote in message
news:3D508DE2.251E89DA@hotmail.com...
> VE9SRB wrote:
> > Going back to my simple statements - what is the total forward power
> > resulting from the vector addition of two forward voltages - one being
61.24
> > V @ 0 degs and the other being 20.41 V at 0 degs? This simple question
can
> > be answered without discussing the law of conservation of energy,
impedance
> > matching or destructive/constructive interference.
>
> The point is that your simple addition violates the conservation of energy
> principle. You cannot add a voltage wave delivering 75 joules/sec to a
voltage
> wave delivering 8.33 joules/sec and achieve a voltage wave delivering
133.33
> joules/sec. Summing only those two voltage waves, you can only achieve a
voltage
> wave delivering the sum of the energy in those two waves, i.e. 83.33
joules/sec.

The law of conservation of energy requires that the total power dissipated in the entire system be equal to the total power delivered to the system AND that the power flowing into a node or junction be equal to the power flowing out of the junction + the power dissipated at (in) the junction. These are the issues to consider relative to the conservation of energy.

The addition of forward voltages and the fact the resulting total forward power exceeds the added power in the two individual voltages when considered independently in the line does not violate the law of conservation of energy.

You are incorrectly trying to interweave two concepts.

Steve

2513. Re: A closer look

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-10 20:15:36 UTC
From: klocko@toad.net
Message-ID: <224d9cd4.0208101215.48bde34@posting.google.com>
Source record: 137254

CAM <w5dxp@hotmail.com> wrote in message news:<3D55223A.4AD31BBC@hotmail.com>...
> V+ will represent forward voltage and V- will represent reflected voltage.
> I+ will represent forward current and I- will represent reflected current.
>
> Now we take the next step. o---150 ohm resistor
> |
> 100w SigGen---50 ohm coax---+---1/2WL 150 ohm twinlead---o
>
> o---50 ohm resistor
>
> We can now switch loads from 150 ohms to 50 ohms. With the 150 ohm load
> switched in, there are three components, V+/I+ on the coax, V-/I- on
> the coax, and V+/I+ on the twinlead. V- and I- on the twinlead are zero.
>
> Component #1: V+ on the coax is 70.7v, I+ on the coax is 1.414a
> The impedance relationship is 70.7v/1.414a = 50 ohms
> The power relationship is 70.7v * 1.414a = 100 watts
>
> Component #2: V- on the coax is 35.36v, I+ on the coax is 0.707a
> The impedance relationship is 35.36v/0.707a = 50 ohms
> The power relationship is 35.36v * 0.707a = 25 watts
>
> Component #3: V+ on the twinlead is 106.7v, I+ on the twinlead is 0.707a
> The impedance relationship is 106.7v/0.707a = 150 ohms
> The power relationship is 106.7v * 0.707a = 75 watts
>
> Switch in the 50 ohm load.
>
> Note that component #3 is exactly the same as one of the quantities that
> Steve adds to get a forward power of 133.33 watts on the twinlead after
> we switch in the 50 ohm load. The other quantity that Steve adds is 8.33
> watts of re-reflected power. We will label that quantity Component #4.
>
> ********** Steve's treatment follows: **********
>
> Component #4: Steve's re-reflected power of 8.33 watts.
> Voltage is 35.35v, Current is 0.236a
> The impedance relationship is 35.35v/0.236a = 150 ohms
> The power relationship is 35.35v * 0.236a = 8.33 watts
>
> Adding the voltages in Component #3 and Component #4
> 106.7v + 35.35v = 141.4v which is V+ on the twinlead with a 50 ohm load.
>
> Adding the currents in Component #3 and Component #4

> 0.707a + 0.236a = 0.943a which is I+ on the twinlead with a 50 ohm load.
>
> Component #5: ("supersum" of Component #3 and Component #4)
> V+ on the twinlead is 141.4v, I+ on the twinlead is 0.943a
> The impedance relationship is 141.4v/0.943a = 150 ohms
> The power relationship is 141.4v * 0.943a = 133.33 watts
>
> **

Let's get a couple more components.

Component #6: reflected from the right-hand junction (computed from
component 5 and reflection coefficients at the junction)
V- on the twinlead is 70.7v, I- on the twinlead is 0.472a
The impedance relationship is 70.7v/0.472 = 150 ohms
The power relationship is 70.7v*0.472 = 33.33 watts

Component #7: transmitted on to the load (computed from component 5
and transmission coefficients at the right-hand junction)
V+ on the coax is 70.7v, I+ on the coax is 1.414a
The impedance relationship is 70.7v/1.414 = 50 ohms
The power relationship is 70.7v*1.414 = 100.0 watts

Now components #6 and #7 make sense and agree with your results. Note
that component #7 exists because the right-hand junction is not an
open-circuit or a short-circuit, i.e., it doesn't cause a complete
reflection of the V and I waves. Since that's true for the right-hand
junction, it's also true for the left-hand junction. Let's do one more
component:

Component #8: transmitted on to the source (computed from component 6
and transmission coefficients at the left-hand junction)
V- on the coax is 35.35v, I- on the coax is 0.707a
The impedance relationship is 35.35/0.707 = 50 ohms
The power relationship is 35.35*0.707 = 25.0 watts

If you agree that part of component #5 is transmitted on toward the
load, then you should have no disagreement that part of component #6
is transmitted on toward the source.

Now in general each reflection or transmission coefficient is a
complex quantity and has a phase associated with it. For the simple
example, the V reflection coefficient is either 0.5 (0 degrees) or
-0.5 (180 degrees). If you assign 0 degrees phase to both V and I of
component 1 and then track the phases all the way through, I think you
will find that V- for component #8 is 180 degrees out of phase with V-
for component #2. Likewise, I- for component #8 is 180 degrees out of
phase with I- for component #2. The V- waves cancel and the I- waves
cancel.

> With the switch in the 150 ohm load position, the resistor in the signal
> generator is dissipating 25 watts and 75 watts is being dissipated in the
> 150 ohm load resistor. (Both are warm but the 150 ohm resistor load is

> warmer.)
>
> With the switch in the 50 ohm load position, the resistor in the signal
> generator is dissipating zero watts and 100 watts is being dissipated in
> the 50 ohm load resistor. (The generator resistor is cold. The 50 ohm load
> resistor is warmer than the 150 ohm load resistor was before switching.)
>
> It's pretty obvious that the same 25 watts that is dissipated in the
> generator resistor during 150 ohm load operation somehow makes it's way
> to the load after the 50 ohm load is switched in. How did that power
> get from the generator resistor to the load resistor with only the
> components listed above?

I didn't slog through all the math to verify my suspicion that the source-traveling waves are actually 180 degrees out of phase with each other, but it's a safe bet that they are. You've already told me that the generator resistor is cold. 73,

Bill N3WK

2514. Re: EVERY THING IS NOW KNOWN ON ANTENNAS.

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-10 20:16:01 UTC
From: "Ian White, G3SEK" <G3SEK@ifwtech.co.uk>
Message-ID: <qOwQ8XPBSXV9EAgu@ifwtech.co.uk>
Source record: 137255

CAM wrote:
>The existing laws of physics are found wanting quite often, e.g.
>Einstein improved over Newton and apparently quantum physics is
>improving over Einstein. What is needed for a revolution in antennas is
>someone improving the existing accepted EM physics theories and
>implementing those improvements in reality.
>
You have to be quite careful what you mean by "improving over".

For a huge range of everyday situations, Einstein's equations simplify down to good old Newtonian mechanics, because the relativistic terms for those situations are negligible. The "improvements" that Einstein made were to identify the limits where Newtonian mechanics start to become inaccurate, and explain those using his new theory. But inside those limits, Einstein actually *confirmed* Newton's laws of motion.

Much the same relationship holds between Maxwell's equations, which are deeply rooted in classical physics, and more modern approaches such as quantum electrodynamics. The modern approaches actually *confirm* where Maxwell's equations still hold good - and that certainly includes radio antennas.

That's probably what Art's professors meant by "Everything is now known about antennas." That's a fair viewpoint, because Maxwell had the basic science all nailed down before radio and antennas were even invented!

Antenna engineering is all about finding new ways of using the existing basic science.

>Until someone can demonstrate that the accepted physics governing EM
>antennas is inadequate, most of us will continue to be skeptical of
>claims that lie outside that body of physics.

That skepticism is very well justified, given the millions of antennas that do work according to accepted physics.

It's worth noting that even the CFA is not claiming to be totally new science - it's only claiming to be a new way of interpreting Maxwell's equations, and building a device to use this new interpretation. The counter-argument is that it isn't a valid interpretation, and therefore the CFA can't work; and the more reliable measurements confirm that indeed it doesn't.

>Any new antenna that lies inside the present body of physics is not
>revolutionary and is merely evolutionary, by definition. There are, no
>doubt, some evolutionary antennas yet to be developed but they probably
>won't be a big deal.

Well, no big deal if you're determined not to be impressed. Fortunately there are still plenty of clever things to be done. Come on, surprise us... just don't pretend it's new physics.

--
73 from Ian G3SEK 'In Practice' columnist for RadCom (RSGB)
Editor, 'The VHF/UHF DX Book'
http://www.ifwtech.co.uk/g3sek

2515. Re: Feeding an Inv-L at the bottom?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-10 20:37:28 UTC
From: n2ey@aol.com
Message-ID: <20020810163728.02372.00000351@mb-fm.aol.com>
Source record: 137256

In article <3D547E7F.B2F2D5A6@capnet.com>, StarGazer <pti@capnet.com> writes:

>If one feeds an inv-L at the bottom how come the radial lengths
>don't have to be the same length as the L part?
>Like a dipole should be?

Because the radials are not the only thin involved.

>I picture it as a dipole with the ground being the other half of the
>dipole.

That picture is misleading. It's only accurate when the ground is not a significant part of the antenna system, as in the classic 'ground plane' antenna.

Think of "the ground" as being a lossy reflector that is very, very large compared to a wavelength. The purpose of the radials is to make a better (lower loss) 'connection' to the ground than can be had with a simple ground rod.

The questions of how many radials, how long, etc., have been argued for a very long time. For most amateur applications, the answers are 'as many as you can put down' and "as long as you can get them,

>How does the ground know what its electrical length has
>to be?

Makes no difference. It's just a very big conducting sheet.

73 de Jim, N2EY

2516. Re: Homebrew mobile antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-10 20:46:17 UTC
From: jgboyles@aol.com
Message-ID: <20020810164617.11422.00003003@mb-fk.aol.com>
Source record: 137257

>Anyone got any ideas for a homebrew mobile antenna. I plan to use the
>Icom -706 MKII rig and would like to use down to 80m.

Hi Denis, A homebrew multiband mobile antenna is difficult, or it was for me. The "screwdriver" style antenna is by far the easiest in terms of changing bands. If I were buying a mobile antenna, a screwdriver would be my choice. I haven't homebrewed one so I can't comment on the difficulity. I haven't seen any DIY plans either. Also, base loading, especially on 80 and 40 is not the best method.
What I did, since I wanted to homebrew the "best", as far as efficiency, was build a "bugcatcher" style.
It is center loaded, with interchangable loading coils for each band, and matching networks at the base for each band. I also use a capacity hat at the very top that I change for each band. The antenna is 8' long, uses 1" fibreglass tubing for the bottom, and 1/4" rod for the top. The homebrew loading coils plug in with banana plugs and jacks. Hope you get the idea. I you would like more details, let me know.
73 Gary N4AST

2517. Kolster Radio and 'Copper Kettle'

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-10 20:47:22 UTC
From: fractenna@aol.com
Message-ID: <20020810164722.00635.00002601@mb-df.aol.com>
Source record: 137258

Looking for some of the older OM's who might remember the Kolster 'copper kettle' from the 1920's. Was located in the Palo Alto area.

It was a steerable dish. Bit ahead of its time.

Please drop me an e-mail.

73,
Chip N1IR

2518. Re: G5RV in a V pattern? Possible?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-10 22:44:25 UTC
From: Tom <auctionid4me@yahoo.co.uk>
Message-ID: <dHg59.3568$wp2.200018@newsfep1-win.server.ntli.net>
Source record: 137259

Thanks Doc

Tom

"'Doc" <w5lz@icok.net> wrote in message news:3D556BAF.5F30BE8D@icok.net...
>
>
> Tom,
> It will work, just not very well. The 'legs'
> of the antenna are too close together. The
> input impedance is going to be some rediculous
> value that a tuner may not even be able to handle.
> Not knowing what the area you have to play with
> looks like, I can't even guess at a good alternative.
> Sorry 'bout that...
> 'Doc

2519. Re: G5RV in a V pattern? Possible?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-10 23:00:01 UTC
From: Bob Miller <bamiller@texas.net>
Message-ID: <JZpVPb=oepKZT9J42fgC0Aix383F@4ax.com>
Source record: 137260

"Tom" <auctionid4me@yahoo.co.uk> wrote:

>I have no interest in the experimentation with antenna, however
>due to a home move and limited space I am curious to know the
>following:
>
>Is it possible to a G5RV in a V pattern, about 20' above the ground.
>legs and the end.
>
>The 2 legs being about 20' apart.

I tried a 75-meter dipole at about the same height you're planning, with the legs highly V-ed, about 20 or so feet apart. Didn't work worth squat, even with a heavy duty tuner. I doubt the g5rv would fare much better.

Bob
k5qwg

>
>Ie.
>
>
> \ 20' apart /
> \ /
> \ /
> \ /
> \ /
> \ /
> \ /
> \ /
> \/
> Feeder Point
>

2520. EZNEC

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-10 23:07:58 UTC
From: KAZeringue <kazeringue@aol.com>
Message-ID: <3D559F73.3030202@aol.com>
Source record: 137261

Can anyone speak about the accuracy of an Eznec(v3.0.42) model of an antenna over "real" ground?

I have a wire 2 element yagi for 20 meters, where the driven element is at 30 feet, and the reflector at only 23 feet. Are the Eznec plots over "real, high accuracy ground" for a model of this going to be as accurate as if both elements are at the same height? (Assume the other dimensions of the yagi do not change, only the rotation or "tilt" of the boom)

Is such a model a good approximation for the same yagi over sloped ground? (I would guess no, because I would speculate that the sloped ground would screw around with the ground reflection angles...plus what else?)

Thanks,
Keith, W4KAZ

2521. Re: antennas and more....SPAM

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-10 23:23:16 UTC
From: 'Doc <w5lz@icok.net>
Message-ID: <3D55A043.9667E652@icok.net>
Source record: 137262

Come on George, do you really think this is the
place to peddle your CB 'Tips'? And you can't
'copyright' it cuz you can't copyright other people's
'stuff'...
'Doc

2522. Re: EVERY THING IS NOW KNOWN ON ANTENNAS.

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-10 23:45:33 UTC
From: "J. Harvey" <JM002.Harvey_ANTI*SPAM_@Sympatico.ca>
Message-ID: <AAh59.6050$Tv.1023227@news20.bellglobal.com>
Source record: 137263

"Art Unwin KB9MZ" quoted some dumb bunny...
> "...there is nothing 'new' to be found."

Yeah right...

Switch mode antennas

A radiator interspersed with numerous optically-controlled switches. The switches are something like (?) especially-designed ultrahigh speed FET switches where the gate is fed by a thin strand of 'fiber optic' fiber carrying pulses of light that control the on/off state of each switch. The antenna element would have many such switches and many fibers running down to the control system. The control system would have to be predictive (obviously). Trivial.

The basic idea is that the electrical length of the antenna element could be dynamically controlled.

By using "switch mode power supply" and "power factor correction" techniques, even the input impedance could be controlled. That's a neat trick !

When using a long element and a very short burst of very high frequency RF (so that the wavelength is much shorter than the element), the pulse of RF could even be trapped and its reflections controlled until it had finished radiating. Not much good for most applications, but who knows ? Maybe Ultra Wideband (UWB) radar ?

Yes, I know that the processing and control would have to be very fast - much faster than the RF itself. What are the chances that technology in that realm would advance ? ;-)

A good name for this technology might be the "Joint Tactical Antenna Project".

:-)

2523. Re: Antenna length versus feedline length

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-10 23:51:17 UTC
From: CAM <w5dxp@hotmail.com>
Message-ID: <3D55A6F5.13A0ED1D@hotmail.com>
Source record: 137264

'Doc wrote:
>
> CAM,
> Why not use 'real live' open wire line? shouldn't
> be too difficult to do ('course, I'm not making the
> reel either).
> 'Doc

How do you keep the spacing between wires when the wind blows?
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

2524. Re: SWR - Why isn't the energy re-absorbed at the TX?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-11 00:13:05 UTC
From: CAM <w5dxp@hotmail.com>
Message-ID: <3D55AC11.9D8D30A3@hotmail.com>
Source record: 137265

VE9SRB wrote:
> The addition of forward voltages and the fact the resulting total forward
> power exceeds the added power in the two individual voltages when considered
> independently in the line does not violate the law of conservation of
> energy.

Why not, Steve? Assume you have two 200 watt signals of 100 volts at
2 amps each. You say you can add them to get 400 volts at 4 amps. Why
is that not a violation of the conservation of energy principle?

In your example, you are adding 106.07v at 0.707a (75w) to 35.35v at
0.236a (8.33w) to get 141.4v at 0.943a (133.33w). Why is that not
the same thing as above?

> You are incorrectly trying to interweave two concepts.

Nope, I'm not. The concept is a common one among the engineers who manage
the longest transmission lines in the world. The following configurations
use a signal generator with built in circuitry that dissipates all of the
reflected power so there is zero power re-reflected from the source. The
lines are lossless and there are no common mode components. Please answer
the following question.

Configuration #1

100w source---50 ohm line---+---1/2WL 150 ohm line---150 ohm load

The source is dissipating 25 watts of reflected power. The 150 ohm load
is dissipating 75 watts of power. The forward voltage on the 150 ohm line
is 106.7 volts and the forward current current is 0.707a (75w).

Configuration #2

100w source---50 ohm line---+---1/2WL 150 ohm line---50 ohm load

The source is dissipating zero watts of reflected power. The 50 ohm
load is dissipating 100 watts of power. According to you, only 8.33w
have been added to the 75w in Configuration #1 to increase the forward
voltage on the 150 ohm line to 141.4v and the current to 0.943a.

The question is: How does the 25 watts being dissipated in Configuration
#1 make it to the load in Configuration #2 without becoming part of the
forward voltage and forward current on the 150 ohm line?
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!

------== Over 80,000 Newsgroups - 16 Different Servers! =-----

2525. Re: Antenna length versus feedline length

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-11 00:20:05 UTC
From: "J. Harvey" <JM002.Harvey_ANTI*SPAM_@Sympatico.ca>
Message-ID: <W4i59.6061$Tv.1031497@news20.bellglobal.com>
Source record: 137266

"CAM"
> Seriously, if anyone can think of a better way
> to vary the length of the ladder-line other than
> knife switches or relays, I would appreciate
> the input.

String your adjustable length of 'open wire' between two fixed structures - pull it tight so that it won't move in the wind. Build a boogie contraption that will roll back and forth along the wires and provide contact with the individual wires. A jumper of appropriate twin lead connects from the boogie to your shack. The boogie is pulled back and forth with rope and pulleys. A motor and computer control is a trivial addition.

There will be a difference in the operation since you will have an unterminated end on your adjustable length section. I suspect that it would still work.

--

If I were you, I would use big nasty relays with husky silver contacts. I think that they are called 'contactors' in the electrical trade. The ones that I have seen look like they would be perfectly suitable to switching high power in the HF range.

2526. Re: EVERY THING IS NOW KNOWN ON ANTENNAS.

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-11 00:59:28 UTC
From: aunwin@fgi.net
Message-ID: <c4becf19.0208101659.627dc6a1@posting.google.com>
Source record: 137267

CAM <w5dxp@hotmail.com> wrote in message news:<3D55467A.260215A4@hotmail.com>...
> Art Unwin KB9MZ wrote:
> > Think about it, comments are very welcome as I consider antennas to
> > be part of the glue that holds us to this hobby. Even as important as
> > SWR meters.
>
> Art, for something revolutionary to happen, the existing laws of physics
> would have to be found wanting. The existing laws of physics are found
> wanting quite often, e.g. Einstein improved over Newton and apparently
> quantum physics is improving over Einstein. What is needed for a
> revolution in antennas is someone improving the existing accepted
> EM physics theories and implementing those improvements in reality.
>
> Until someone can demonstrate that the accepted physics governing EM
> antennas is inadequate, most of us will continue to be skeptical of
> claims that lie outside that body of physics. Any new antenna that lies
> inside the present body of physics is not revolutionary and is merely
> evolutionary, by definition. There are, no doubt, some evolutionary
> antennas yet to be developed but they probably won't be a big deal.

Cecil, I understand where you are coming from but to have a reflex
action
that any idea will not work is not good for the hobby. 73 magazine was
tremendously succesful when it printed different antenna designs some
of which may had dubious claims but it would appear that many hams are
still interested in those who try to find the perfect antenna. In my
case I and my family in the U.K. and aussie land helped me to the tune
of several thousand dollars in my endeaver.
After I obtained a patent I went to my peers which was this thread to
discuss it.
As you know I was poo hoo'd a few years ago same as I am being now.
Some say building a good product and every one will come running.
If you have the money to go all the way over a length of time you will
surely be attacked by those on this group who I consider experts.
Fractenna was blasted
because his was a 'new' idea yet all forgot what possible advantages
it presented.But this thread did attempt to supply reasons based on
known theory
to debunk statements made by some. Same with Hately and others, an
endless stream of reasons backed by solid physics why it couln't work.
In my case no one has debunked the basic theory. None have shown that
in the physics world it cannot meet claims. Even in the poll none of
the known experts
has entered an opinion. Is it because they don't know and cannot

refute my claims or frightened to give what eventualy may be proved incorrect.
Nobody has denounced me as a fraud or guilty of ignoring the laws of physics.
Who among you can clearly describe what happens when two resonant members
are placed close to each other with clarity and based on the laws of physics?
Ofcourse I am possesive of the antenna despite the statement of one person
that I must prove all to him. This is an antenna discussion group populated
by many clever people who give much of them selves to the hobby and to which I came to discuss that what I had worked on for several years.
All I asked for was for an explanation of why the antenna could give me so many advantages over the norm but all minds are closed. Even yourself stated that 'anything new will not amount to much'.
Fortunately two experts have come forward with no pre-ordained ideas to examine the basics of the antenna which I will share with all regardless whether they are positive or negative. I also know that no one MUST supply an answer, but if they chose to do so I would expect an answer that matches known physics. If an expert voted negatively or positively I would have a link as to why.Is it good for me, no.
Is it good for ham radio, No. Is expementation to be squashed because all is known..No. Should we strike at the messenger because of what he holds in his hands?Apparently yes.Who is the first person who will come forward to refute that two resonant circuits when placed close to each other cannot produce
a quarsi collinear radiation pattern based on solid physics? Am I as a member of the ham fraternity not worthy to present such a question. Am I as a ham allowed to refute statements in the handbook that bases collinear gain on the clearance
between dipoles instead of the distance between current maxima or must I be a name to make such challenges? Am I going to be trashed based on opinion that has no basis in physics. So again I say why are we all so antagonistic and opinionated before the fact when seeing results of experiments, I challenged all
to examine what I offered with the hope that I would be corrected in my
thoughts based on physics, so why are all, experts or otherwise, refraining to supply facts that refute what I claim? Most have done so in the past on other
innovators yet somehow all are timid on the subject of two resonant circuits
co joined.
Why don't you Cecil, who is knowledgable in the antenna arts, start the ball rolling as to what happens or can happen when the two circuits are co-joined with respect to radiation ?
Please, Pretty please.... If you do, then maybe other knowlegable people will comment if only to refute what you have said which they

often do.
Let's face it, I obtained a patent,I and others have reproduced what I claimed.
The University of Illinois confirmed my results. I placed an explanation on the web via a page, I have stated links in antenna books that seemingly confirm the
physics aspect.So I have done as much as I can do prior to presenting it here. What else can I do to offer for debate on this thread populated by many antenna experts. How many hoops do I have to jump thru or how many thousands of dollars more do I have to spend to get the attention of my peers?

Warmest regards
Art Unwin KB9MZ

I suspect sporadic fighting will now occur.
Yes the sporatics are at it again, beware Punchinello

2527. Re: A closer look

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-11 01:04:18 UTC
From: CAM <w5dxp@hotmail.com>
Message-ID: <3D55B812.1112286D@hotmail.com>
Source record: 137268

Bill Klocko wrote:
>
> CAM <w5dxp@hotmail.com> wrote in message news:<3D55223A.4AD31BBC@hotmail.com>...
> > V+ will represent forward voltage and V- will represent reflected voltage.
> > I+ will represent forward current and I- will represent reflected current.
> >
> > Now we take the next step. o---150 ohm resistor
> > |
> > 100w SigGen---50 ohm coax---+---1/2WL 150 ohm twinlead---o
> >
> > o---50 ohm resistor
> >
> > We can now switch loads from 150 ohms to 50 ohms. With the 150 ohm load
> > switched in, there are three components, V+/I+ on the coax, V-/I- on
> > the coax, and V+/I+ on the twinlead. V- and I- on the twinlead are zero.
> >
> > Component #1: V+ on the coax is 70.7v, I+ on the coax is 1.414a
> > The impedance relationship is 70.7v/1.414a = 50 ohms
> > The power relationship is 70.7v * 1.414a = 100 watts
> >
> > Component #2: V- on the coax is 35.36v, I+ on the coax is 0.707a
> > The impedance relationship is 35.36v/0.707a = 50 ohms
> > The power relationship is 35.36v * 0.707a = 25 watts
> >
> > Component #3: V+ on the twinlead is 106.7v, I+ on the twinlead is 0.707a
> > The impedance relationship is 106.7v/0.707a = 150 ohms
> > The power relationship is 106.7v * 0.707a = 75 watts
> >
> > Switch in the 50 ohm load.
> >
> > Note that component #3 is exactly the same as one of the quantities that
> > Steve adds to get a forward power of 133.33 watts on the twinlead after
> > we switch in the 50 ohm load. The other quantity that Steve adds is 8.33
> > watts of re-reflected power. We will label that quantity Component #4.
> >
> > ********** Steve's treatment follows: **********
> >
> > Component #4: Steve's re-reflected power of 8.33 watts.
> > Voltage is 35.35v, Current is 0.236a
> > The impedance relationship is 35.35v/0.236a = 150 ohms
> > The power relationship is 35.35v * 0.236a = 8.33 watts
> >
> > Adding the voltages in Component #3 and Component #4
> > 106.7v + 35.35v = 141.4v which is V+ on the twinlead with a 50 ohm load.

> >
> > Adding the currents in Component #3 and Component #4
> > 0.707a + 0.236a = 0.943a which is I+ on the twinlead with a 50 ohm load.
> >
> > Component #5: ("supersum" of Component #3 and Component #4)
> > V+ on the twinlead is 141.4v, I+ on the twinlead is 0.943a
> > The impedance relationship is 141.4v/0.943a = 150 ohms
> > The power relationship is 141.4v * 0.943a = 133.33 watts
> >
> > **
>
> Let's get a couple more components.

Thank you, Bill, for being willing to discuss the components.

> Component #6: reflected from the right-hand junction (computed from
> component 5 and reflection coefficients at the junction)
> V- on the twinlead is 70.7v, I- on the twinlead is 0.472a
> The impedance relationship is 70.7v/0.472 = 150 ohms
> The power relationship is 70.7v*0.472 = 33.33 watts
>
> Component #7: transmitted on to the load (computed from component 5
> and transmission coefficients at the right-hand junction)
> V+ on the coax is 70.7v, I+ on the coax is 1.414a
> The impedance relationship is 70.7v/1.414 = 50 ohms
> The power relationship is 70.7v*1.414 = 100.0 watts
>
> Now components #6 and #7 make sense and agree with your results. Note
> that component #7 exists because the right-hand junction is not an
> open-circuit or a short-circuit, i.e., it doesn't cause a complete
> reflection of the V and I waves. Since that's true for the right-hand
> junction, it's also true for the left-hand junction. Let's do one more
> component:
>
> Component #8: transmitted on to the source (computed from component 6
> and transmission coefficients at the left-hand junction)
> V- on the coax is 35.35v, I- on the coax is 0.707a
> The impedance relationship is 35.35/0.707 = 50 ohms
> The power relationship is 35.35*0.707 = 25.0 watts
>
> If you agree that part of component #5 is transmitted on toward the
> load, then you should have no disagreement that part of component #6
> is transmitted on toward the source.

It tries to be transmitted on toward the source but doesn't make it
because of destructive interference which you call cancellation.

> Now in general each reflection or transmission coefficient is a
> complex quantity and has a phase associated with it. For the simple
> example, the V reflection coefficient is either 0.5 (0 degrees) or
> -0.5 (180 degrees). If you assign 0 degrees phase to both V and I of

> component 1 and then track the phases all the way through, I think you
> will find that V- for component #8 is 180 degrees out of phase with V-
> for component #2. Likewise, I- for component #8 is 180 degrees out of
> phase with I- for component #2. The V- waves cancel and the I- waves
> cancel.

Yes, yes, yes. That is exactly what I have been saying and your components agree perfectly with the phasor diagram that I published on my web page a year or so ago. Steve is not including those cancelled voltages in his voltage equation and those cancelled voltages are what furnish the energy foundation for the forward wave on the 150 ohm line.

As I said before, the complete power equation is:

75w + 8.33w + 25w + 25w = 133.3w (Steve said it was 75w + 8.33w = 133.33w)

or:

106.066v^2/150 + 35.355v^2/150 + 35.355v^2/50 + (-35.355)^2/50 = 141.4^2/150

The complete voltage equation is:

106.066v + 35.355v + 35.355v - 35.355v = 141.4v where:

106.066v^2/150 = 75w from Component #3
35.355v^2/150 = 8.33w from Component #4
35.355v^2/50 = 25w from Component #2
(-35.355^2/50) = 25w from Component #8

As you say, Component #2 and Component #8 cancel, i.e. engage in destructive interference. The constructive interference power heads back toward the load.

Thanks Bill, it seems that we are essentially in agreement. The voltage equation balances and the power equation balances.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

2528. Re: Antenna length versus feedline length

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-11 01:13:24 UTC
From: CAM <w5dxp@hotmail.com>
Message-ID: <3D55BA34.2B79592@hotmail.com>
Source record: 137169

"J. Harvey" wrote:
> There will be a difference in the operation since you will have an
> unterminated end on your adjustable length section. I suspect that it would
> still work.

That unterminated end will act as a stub and change the tuning. I don't
need another variable in the equation. It might help on some bands but
probably hurt on other bands.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

2529. Re: EVERY THING IS NOW KNOWN ON ANTENNAS.

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-11 01:29:08 UTC
From: CAM <w5dxp@hotmail.com>
Message-ID: <3D55BDE4.7E15442A@hotmail.com>
Source record: 137170

Art Unwin KB9MZ wrote:
> Why don't you Cecil, who is knowledgable in the antenna arts, start
> the ball rolling as to what happens or can happen when the two
> circuits are co-joined with respect to radiation ?

I've already done that, Art, years ago. When I was in Arizona, I
designed a quad that had only one driven element, thus solving the
multiple loop or multiple feedline problems with multi-band quads.
The driven element was a full-wave loop on 17m. I had three resonant
reflectors and the two-element quad worked well on 20m, 17m, and 15m.
It was fed with ladder-line. There's nothing new about mutual
coupling. I haven't been closely following your particular configuration
but it sounded like you had a non-resonant length driven element and
a resonant parasitic element just as I did above. Is that right?
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
------== Over 80,000 Newsgroups - 16 Different Servers! =-----

2530. Re: Antenna For Picking Up Marine Broadcasts Around 2 MHz: Suggest...

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-11 01:31:55 UTC
From: richardharrison@webtv.net
Message-ID: <12511-3D55BE8B-260@storefull-2392.public.lawson.webtv.net>
Source record: 137172

Bob wrote:
"I`m in a town due West of Boston by that distance (25 mi.) from Boston harbor."

I was going to recommend a Beverage antenna until Bob wrote that the antenna had to fit his attic.

Use a vertically polartzed loop. Stand the plane of the loop vertical and aligned with the desired direction. Wind a few turns of good size wire on a large form as required to tune the desired frequency range with whatever variable capacitor you can come up with. An extra turn can be added to the loop for coupling to your receiver.

Reg Edwards, G4FGQ has nice free programs you can download to optimize your loop.

A loop can improve signal to noise by its directionaliy and frequency selectivity. It should improve reception significantly over a random wire. You probably will want it alongside the radio for tuning convenience unless your interest is only in one channel.

Most maritime traffic has moved to 150 MHz VHF and microwave satellite channels.

Best regards, Richard Harrison, KB5WZI

2531. Re: antennas and more....SPAM

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-11 01:37:38 UTC
From: George Kinzer <horseflygk@worldnet.att.net>
Message-ID: <Cdj59.7361$Ep6.530276@bgtnsc05-news.ops.worldnet.att.net>
Source record: 137171

lets see...radio, ok...amateur,ok.....antenna,ok
yep, must be the right place...
Shall I post some PORN sites for you instead?

--
If first you don't suceed, do the same thing again...see what happens

2532. how to deal with limited antenna space?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-11 01:47:57 UTC
From: newsguy <harpoon32@yahoo.com>
Message-ID: <aj4fpn01208@enews2.newsguy.com>
Source record: 137175

Hello! I am intending to get my license, however I am worried about one thing. I live in a 'mobile home community' (trailer park, for the non-euphemistic :) I have a yard about 45 x 50 and 1 tree. I really dont think they are going to appreciate me if I erect some huge yagi thats 60' tall and almost bigger than my home, and yet I dont want to be limited to talking local, I would like a range of 1000 miles at least. Do I have any options? Will a good 'stealthy' dipole do this for me?
Thanks

2533. Re: Antenna For Picking Up Marine Broadcasts Around 2 MHz: Suggestions, Pleae?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-11 01:51:43 UTC
From: Rick Mudd <rickmudd@attbi.com>
Message-ID: <Pqj59.69607$sA3.16728@rwcrnsc52.ops.asp.att.net>
Source record: 137173

> Depending on what you're listening for, there may
> not be a lot of activity, not like it used to be.

Many...not all... of the shipping lines have totally removed HF from their ships. President lines I know has removed it all and relies now on a satellite device that feeds both voice and data. The only radio, in the traditional sense, on the ship is the VHF that they are required to have on the bridge and a loop device under decks that operates on 440 and allows the crew to communicate from anywhere on the ship. The radio room, which used to be manned, now contains a rack of network gear and no people.

Rick

2534. Re: Antenna For Picking Up Marine Broadcasts Around 2 MHz: Suggestions, Pleae?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-11 02:03:29 UTC
From: kelly@dvol.com
Message-ID: <d22b54c3.0208101803.154b6a19@posting.google.com>
Source record: 137174

"Robert Rose" <rgsrose@tiac.net> wrote in message
news:<aj2uhs$7hb$1@slb1.atl.mindspring.net>...
> Hello:
>
> Am very interested in picking up some of the Marine broadcasts around 2 MHz
> (e.g., the distress freq. at 2182, 2670, etc.)
>
> Presently, have a very simple random-wire receive only antenna running
> around 3 sides of my attic, then down to my receiver.
>
> All I seem to pick up around 2 MHz is noise; higher freq's work reasonably
> well.
> Radio probably not a factor, as it's a new JRC NRD 545.
>
>
The 545 is an outstanding commercial-grade ssb/AM rcvr so the radio
isn't the problem.
>
>
> So, my guess is that my random wire is probably a miserable match for these
> marine freq's.
>
> Also, there is a strong possibility that a major part of my problem is that
> I'm 25 miles or so from the water.
> (I'm in a town due West by that distance from Boston harbor).
> The marine transmissions are mainly, I'm told, SSB, so I "think" I should be
> able to pick them up ?
>
Yes, if there are ssb signals on the air on those freqs you should
definitely be hearing them with your attic wire antenna - and with
much lesser antennas at those distances for that matter. I suspect
that the reason you're not hearing marine ops on those freqs is
because they simply are not there. Harbor and coastal marine ops are
normally conducted in the VHF FM marine band, not on the 2-30mHz MF/HF
high-seas marine freqs. The 545 won't tune VHF freqs without it's
(overpriced!) optional VHF converter but just about any scanner will
tune those freqs. The following provides the VHF freqs.

http://www.noftc.com/Marine%20Frequencies.htm

One other factor is in play here. During the summer months the natural
noise level on 2 mHz is usually bordering on deafening which renders
that portion of the spectrum close to useless. I suggest that you tune

around 3.8 mHz LSB for 75m ham stations after sundown when the noise
level drops as a test of your "receiving station". You should hear
gobs of hams yakking if the antenna & rcvr are working OK. If you hear
the hams your antenna & radio are fine and your problem with not
hearing any 2.6 mHz marine signals is because there ain't none.
>
>
> Should I use a different antenna for these freq's? A simple vertical whip
> type? Other?
> If so, any suggestions would be most appreciated. (it has to fit reasonably
> in my attic).
>
>
Transmiting antennas are one side of the coin but for your purposes as
an SWL any "better antenna designs" won't make any noticeable
differences at all, leave it alone and start tuning. For a short list
of MF/HF marine freqs:
>
>
http://www.qsl.net/aa1ll/sommar.htm
>
>
> I'm really new at this, so please don't hesitate to make the suggestions,
> and your thoughts on this, as detailed as
> you can-really appreciate the help.
>
> Much thanks,
> Bob

Brian Kelly w3rv

2535. Re: Antenna For Picking Up Marine Broadcasts Around 2 MHz: Suggestions, Pleae?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-11 02:12:09 UTC
From: "Fulano de Tal (Bill)" <therealexray@netscape.net>
Message-ID: <3D55C7F9.5D493A7B@netscape.net>
Source record: 137176

Hi Bob, me again.

I haven't heard a marine signal on the 2 MHz band in many years...some folks say that 2182 is still active as a distress freq but I've never caught anything there.

-Bill M

2536. Re: how to deal with limited antenna space?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-11 02:27:02 UTC
From: Ralph Mowery <rmowery@dialpoint.net>
Message-ID: <aj4i9a$3uj$1@newsreader.cetlink.net>
Source record: 137177

You have all kinds of options. A vertical can be put up and that will take up very little space. It might not be the best antenna but you should be able to make many contacts with it. Even a simple wire dipole will work for lots of fun.

"newsguy" <harpoon32@yahoo.com> wrote in message news:aj4fpn01208@enews2.newsguy.com...
> Hello! I am intending to get my license, however I am worried about one
> thing. I live in a 'mobile home community' (trailer park, for the
> non-euphemistic :) I have a yard about 45 x 50 and 1 tree. I really
> dont think they are going to appreciate me if I erect some huge yagi thats
> 60' tall and almost bigger than my home, and yet I dont want to be limited
> to talking local, I would like a range of 1000 miles at least. Do I have
> any options? Will a good 'stealthy' dipole do this for me?
> Thanks
>
>
>

2537. Re: hamstick questions...

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-11 02:39:46 UTC
From: ik7565@erols.com
Message-ID: <3D55CE72.18E61E4E@erols.com>
Source record: 137178

What do you use for the 3' extension? Something commercially available
or homebrewed?

73 de Ian
N8IK

CAM wrote:
>
> Andreas Hofmann wrote:
> > Do you have a link or doc with more information on this? I got another
> > email with a similar suggestion; seems like quite a few of OMs are doing
> > this...
>
> No links I know of but it's pretty simple. One can lower the resonant
> frequency of a mobile antenna and raise the efficiency by making it longer
> especially the section under the loading coil. I use a three foot extension
> under my mobile screwdriver antenna which results in lower inductance
> required and therefore lower coil losses.
> --
> cheers, CAM http://www.qsl.net/w5dxp
>
> -----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
> http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
> ------== Over 80,000 Newsgroups - 16 Different Servers! =-----

2538. Re: EVERY THING IS NOW KNOWN ON ANTENNAS.

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-11 02:47:43 UTC
From: aunwin@fgi.net
Message-ID: <c4becf19.0208101847.4b81f15b@posting.google.com>
Source record: 137179

'Doc <w5lz@icok.net> wrote in message news:<3D553853.F5E201B8@icok.net>...
> Art,
> The 'po hoo'ers perform as much service to the hobby
> as the people who experiment with 'new' antenna designs.
> How can you possibly 'prove' a new antenna idea by only
> having positive, or supportive comments? You also need
> the people who try to disprove it.
> 'Doc

You are so right doc,Ibut is it unreasonable to ask for structured
answers?
Many will suggest that I write it up even tho i have given talks at
hamfests
including one sponsered by the arrl Looking over my recent e mail on
this discussion I came across one from a known ,kind and polite
gentleman with tremendous credentials in the field. He suggested that
the next hoop I should jump thru was to attend a community college and
take classes in effective communication and then consider writing it
up.....seems reasonable.
In my working career with G.E. a senior vice president suggested to
the manager
of the plant that I worked ,that I would be more effective to GE if my
talents
was used as a technical writer instead of a senior engineer. At that
time a 100 engineers were laid off and I was one of the remaining five
so I can assume his statement was not based on lack of engineering
talent (just a statement, I am not blowing my horn)
The ravages of time and illnesses together with a wonky keyboard
changes all as we get older, as all can see. But even if I take the
given advice the odds are the ARRL will refuse it according to the
many complaints I've heard. Heck I can't even get it past this group
and since I am getting out of my sixties I will probably be dead
before I could even see the light at the end of the tunnel! So give me
a break guys,s some invested good money based on my thought
and I need to explain to them why I was wrong. Also why I refused a
entreprenuers offer to totally finance it because I wanted to be sure
that my claims were solid and ethical where many manufacturers were
otherwise.
This is not about money now, it is about reaching finality in what I
still believe is a very viable antenna of which I have made many. So
cut me some slack guys, look at what I have shown you, the patents,
the clear descriptions in the Arrl book for associated resonant
antennas that I alluded to e.t.c.Plus
a good look at the associated physics on which you base your

conclusions so that we all can debate the plusses and negs or where the experts say that I have wandered from theories accepted in academia. Yes, I am being personal with this antenna but I want to share it with all because I firmly believe in it. Please don't give me another hoop to jump thru.
Best regards
Art Un win KB9MZ

2539. Re: EVERY THING IS NOW KNOWN ON ANTENNAS.

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-11 02:49:51 UTC
From: richardharrison@webtv.net
Message-ID: <23814-3D55D0CF-220@storefull-2391.public.lawson.webtv.net>
Source record: 137181

Art, KB9MZ wrote:
"Who among you can clearly describe what happens when two resonant members are placed close to each other with clarity and based on the laws of physics?"

That is the proponent`s job, Art.

The dipole and loop are coupled, Art has implied. The loop is the feed mechanism we have been told. If so, the dipole and loop have a mutual impedance. This can be determined as a voltage to current ratio (Ohm`s law) by measuring the current in one member caused by voltage across the other member, or vice versa.

This is textbook stuff. you can determine a coefficient of coupling, etc. but if you have an antenna, measurement takes the place of prediction. See if you have a double humped response and whether it comes from stagger tuning, overcoupling, or both.

It is, unfortunately perhaps, up to the proponent of a novelty to make the case for it, unless the world knows it is desperate for the novelty and makes a grab for it as a drowning man might grasp for a straw.

Best regards, Richard Harrison, KB5WZI

2540. Re: hamstick questions...

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-11 03:11:09 UTC
From: CAM <w5dxp@hotmail.com>
Message-ID: <3D55D5CD.FBA0203A@hotmail.com>
Source record: 137180

ik7565@erols.com wrote:
> What do you use for the 3' extension? Something commercially available
> or homebrewed?

I have two kinds. Some from Hustler and some from the Texas
Bugcatcher guy. http://www.texasbugcatcher.com
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
------== Over 80,000 Newsgroups - 16 Different Servers! =-----

2541. Re: Switching to ladder line -- questions

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-11 03:16:13 UTC
From: Mike Coslo <mcoslo@adelphia.net>
Message-ID: <3D56012F.1090901@adelphia.net>
Source record: 137182

SeeSignature@below.com wrote:

> Back when I had Ladder Line coming into the shack and running through
> a big Nye Viking antenna tuner, I had intolerable EMI pickup from the
> computer and monitor in the shack here. Getting rid of the tuner and
> LL and replacing it with quality Coax made the interference go away. I
> probably still have a bit, but I don't notice it anymore.
>
> If I were you, I would not let that LL come anywhere near the shack.

I wonder what the difference between your setup and mine is? My ladder
line is just about three feet from my computer, and don't have a problem.

- Mike KB3EIA -

2542. Re: EZNEC

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-11 03:18:55 UTC
From: Reg Edwards <g4fgq.regp@btinternet.com>
Message-ID: <aj4l2u$4lh$1@helle.btinternet.com>
Source record: 137183

Eznec is much more than accurate enough for all purposes it is used for.

Regarding the influence of the ground there is not much point in having a program more accurate than you know the resistivity, permittivity and depth of the soil in your back yard at 60 Hz, which is probably worse than plus or minus 50%.

And what the ground might be at 14 MHz is anybody's guess !

Radio amateurs and professionals suffer from delusions of accuracy.

Reg, G4FGQ

==========

"KAZeringue" wrote -
> Can anyone speak about the accuracy of an Eznec(v3.0.42) model of an
> antenna over "real" ground?
>
> I have a wire 2 element yagi for 20 meters, where the driven element is
> at 30 feet, and the reflector at only 23 feet. Are the Eznec plots over
> "real, high accuracy ground" for a model of this going to be as accurate
> as if both elements are at the same height? (Assume the other
> dimensions of the yagi do not change, only the rotation or "tilt" of the
> boom)
>
> Is such a model a good approximation for the same yagi over sloped
> ground? (I would guess no, because I would speculate that the sloped
> ground would screw around with the ground reflection angles...plus what
> else?)
>
> Thanks,
> Keith, W4KAZ
>

2543. Re: Yagi Elements - place above or below boom?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-11 03:26:00 UTC
From: "Fulano de Tal (Bill)" <therealexray@netscape.net>
Message-ID: <3D55D948.E6F1DD67@netscape.net>
Source record: 137184

Craig wrote:
>
> Should the bolt head be uppermost, or the nut?

One rule of thumb is to always put nuts on the bottom. In this fashion, presumably if the nut were to vibrate loose and drop off at least the bolt would still be in place and this might save something from falling.
-BM

2544. Re: EVERY THING IS NOW KNOWN ON ANTENNAS.

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-11 03:38:51 UTC
From: Leland Cox <lcox107@comcast.net>
Message-ID: <3D55DDD8.9030204@comcast.net>
Source record: 137185

I recently compared an Old ARRL Antenna manual to a current handbook. The antenna theory was well thought out long ago and the laws of physics hasn't changed

Hams and others have developed a bunch of ideas to shorten or make antennas multiband. But there hasn't been a breakthrough in antennas in years. This has not kept up with radios and computer technology at all.

Maybe we already know everything or just do not have enough people working on the problem!
Les, AA4F

>

2545. Re: A closer look

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-11 03:46:58 UTC
From: "George, W5YR" <w5yr@att.net>
Message-ID: <3D55DE30.6C2FE1B0@att.net>
Source record: 137186

As I intimated in my opening sentence, you were playing games, Cecil. Next time how about being honest enough to at least describe *all* of the system before inviting people to speculate and try to "help" you understand what is happening in the system you describe, at least in small part . . .

Your second sentence is the most critical element and yet you omitted it completely.

Shame! You won't get me to play games with you again! <:{

73/72/oo, George W5YR - the Yellow Rose of Texas
Fairview, TX 30 mi NE of Dallas in Collin county EM13qe
Amateur Radio W5YR, in the 56th year and it just keeps getting better!
QRP-L 1373 NETXQRP 6 SOC 262 COG 8 FPQRP 404 TEN-X 11771 I-LINK 11735
Icom IC-756PRO #02121 Kachina 505 DSP #91900556 Icom IC-765 #02437

CAM wrote:
>
> 'Doc wrote:
> >
> > CAM, Sounds reasonable so far... 'Doc
>
> People are complaining that I didn't state the boundary conditions. Here are
> the assumptions: The signal generator outputs a constant 100 watts into 50
> ohm coax and has the necessary circuitry built-in to route the reflected
> power to a resistor and dissipate all of the reflected power.

2546. Re: Antenna matching 0.150-4MHz

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-11 03:51:05 UTC
From: aunwin@fgi.net
Message-ID: <c4becf19.0208101951.3fff1406@posting.google.com>
Source record: 137187

richardharrison@webtv.net (Richard Harrison) wrote in message
news:<8055-3D556979-199@storefull-2398.public.lawson.webtv.net>...
> Art Unwin wrote:
> "First the transciever was a valve/tube job (protection against nuclear
> damage as shown with solid state devices.)---"
>
> Which sub shakedowen cruise was this used on? The Nautilus shakedown?
>
> What about the sailors aboard if solid-state can`t stand the radation?
>
> Glad I`m not in the navy anymore.
>
> Best regards, Richard Harrison, KB5WZI

Richard,
I have read else where that there were concerns regarding nuclear
radiation hazards with respect to solid state components. I also seem
to remember seeing something about radiation resistant components.
Either way we all know that solid state radios have their own failings
.
I would imagine the thinking was that harm provided upon solid state
components
is instantaneous and final whereas human beings tho suffering from
radiation
had the ability to get in the defensive mode long before the onset of
a terrible
death. There is the thought that a submerged submarine could provide a
modicom
of safety where an antenna is not afforded equal protection.
I still have my draft card but if called I could send a letter that
clearly demonstrates my lack of reasonable communication.
Story.
When called for duty in the U.K. I was confident that I would be
refused because of perforated ear drums.
This was not so and by the time I got back to the office there was a
large
cartoon showing a skinny man (me)who was dressed down to nothing and a
nearby
physician with that 'y' shaped thing around his neck, was smoking a
cigarete,
blowing smoke into one of my ears and observing the high velocity
smoke being emitted from my other ear. I didn't see the funny side at
the time. My success was that the City of Nottingham was never invaded
during my service years which I atributed to be because every bone in

my body was seen to be an instrument of death by the enemy.
Regards
Art Unwin KB9MZ

2547. Re: Antenna length versus feedline length

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-11 03:57:31 UTC
From: "J. Harvey" <JM002.Harvey_ANTI*SPAM_@Sympatico.ca>
Message-ID: <igl59.12032$HH2.2180383@news20.bellglobal.com>
Source record: 137188

"CAM"
> That unterminated end will act as a stub and
> change the tuning. I don't need another variable
> in the equation. It might help on some bands but
> probably hurt on other bands.

With a bogie rolling back and forth on the wires, there is *literally only one variable* (as explored linearly by the 'back and forth' rope and pulleys).

The real question is: does the stub that varies oppositely to the line length preclude finding a match ? Worst case, if the stub length is being nasty and translating the far end open circuit into a dead sort a quarter lambda up the line in an annoying sort of way, then you simply 'turn the tables' by shorting out the far end (with a husky relay) and get an open circuit a quarter lambda upstream (ta da !).

The advantage to the proposed system is that you wouldn't have to worry about rolling up the unwanted line length (complicated mechanism) or finding a way to make it disappear from the circuit (many switches, relays or jumper plugs). It is also infintely variable - in one dimension.

The practical difficulty might be maintaining a good contact between the bogie and the wires. There is a half dozen ways to deal with that issue.

2548. Re: EVERY THING IS NOW KNOWN ON ANTENNAS.

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-11 04:23:13 UTC
From: "George, W5YR" <w5yr@att.net>
Message-ID: <3D55E6AE.FEBBB9AD@att.net>
Source record: 137189

Art, with all respect, why must you depend upon and regard this group of *amateur* radio operators as the prevailing body that must pass judgement on your antenna for it to have any merit or value?

You claim a new invention, have a patent (I think you said) but evidently you are now just sitting around and writing complaints to the newsgroup because no one is jumping up and down with enthusiasm.

I guess I am most disturbed by your continued pleas for someone (an "authority") to explain to you and the world what you have and how it works. I may be wrong but it seems to me that you should be teaching *us* about your ideas and explaining to us how your antenna works and what is can do, etc.

I think it is more than unfair to the list for you to expect us to justify your concepts and authenticate your methods. That is *your* responsibility, not ours.

Why are you not disclosing this in the professional journals under peer-review? Why are you not pursuing the manufacture and sale of this antenna? Why is the approval of this particular group so important that its absence or at least deferral stands in your way of progressing in your own business?

I mean no disrespect but I just cannot equate your enthusiasm for your invention with your reluctance to do anything about it except complain to the members of this newsgroup about their attitudes and lack of support.

A major stumbling block, to be very frank, is that after having read all your postings, I still cannot begin to imagine what you are talking about, and I do have some background and education in the business. So, I am unable to comment one way or the other on what you are presenting as I simply cannot understand what you are trying to describe. I suspect many others share that position.

Finally, gaining the support of this group may work wonders for your self-confidence and morale, but as far as helping to further your professional image or serving as a lever for venture capital to manufacture these antennas, I am afraid that you are looking in the wrong direction.

Get some professional help to write a definitive analysis and description of your antenna. Get it informally peer-reviewed to catch the easy stuff. Then submit it to the appropriate professional journal(s) and let the scientific community do its thing. If validation is forthcoming, you are there. If not, at least you will have solid critiques to guide you in the sequel.

Then, come tell us what a wonderful antenna you have, how it works, and how much one will cost! <:}

All the best, Art. No one means you any ill will - we just can't follow what you are saying or why you are so dependent upon us.

73/72/oo, George W5YR - the Yellow Rose of Texas
Fairview, TX 30 mi NE of Dallas in Collin county EM13qe
Amateur Radio W5YR, in the 56th year and it just keeps getting better!
QRP-L 1373 NETXQRP 6 SOC 262 COG 8 FPQRP 404 TEN-X 11771 I-LINK 11735
Icom IC-756PRO #02121 Kachina 505 DSP #91900556 Icom IC-765 #02437

Art Unwin KB9MZ wrote:

> In my case no one has debunked the basic theory. None have shown that
> in the physics world it cannot meet claims. Even in the poll none of
> the known experts
> has entered an opinion. Is it because they don't know and cannot
> refute my claims or frightened to give what eventualy may be proved
> incorrect.
> Nobody has denounced me as a fraud or guilty of ignoring the laws of
> physics.
> Who among you can clearly describe what happens when two resonant
> members
> are placed close to each other with clarity and based on the laws of
> physics?
> Ofcourse I am possesive of the antenna despite the statement of one
> person
> that I must prove all to him.

This is an antenna discussion group
> populated
> by many clever people who give much of them selves to the hobby and to
> which I came to discuss that what I had worked on for several years.
> All I asked for was for an explanation of why the antenna could give
> me so many advantages over the norm but all minds are closed. Even
> yourself stated that 'anything new will not amount to much'.
> Fortunately two experts have come forward with no pre-ordained ideas
> to examine the basics of the antenna which I will share with all
> regardless whether they are positive or negative. I also know that no
> one MUST supply an answer, but if they chose to do so I would expect
> an answer that matches known physics. If an expert voted negatively or
> positively I would have a link as to why.Is it good for me, no.
> Is it good for ham radio, No. Is expementation to be squashed because
> all is known..No. Should we strike at the messenger because of what he
> holds in his hands?Apparently yes.Who is the first person who will
> come forward to refute that two resonant circuits when placed close to
> each other cannot produce
> a quarsi collinear radiation pattern based on solid physics? Am I as a
> member of the ham fraternity not worthy to present such a question. Am
> I as a ham allowed to refute statements in the handbook that bases
> collinear gain on the clearance
> between dipoles instead of the distance between current maxima or must

> I be a name to make such challenges? Am I going to be trashed based on
> opinion that has no basis in physics. So again I say why are we all so
> antagonistic and opinionated before the fact when seeing results of
> experiments, I challenged all
> to examine what I offered with the hope that I would be corrected in
> my
> thoughts based on physics, so why are all, experts or otherwise,
> refraining to supply facts that refute what I claim? Most have done so
> in the past on other
> innovators yet somehow all are timid on the subject of two resonant
> circuits
> co joined.
> Why don't you Cecil, who is knowledgable in the antenna arts, start
> the ball rolling as to what happens or can happen when the two
> circuits are co-joined with respect to radiation ?
> Please, Pretty please.... If you do, then maybe other knowlegable
> people will comment if only to refute what you have said which they
> often do.
> Let's face it, I obtained a patent,I and others have reproduced what I
> claimed.
> The University of Illinois confirmed my results. I placed an
> explanation on the web via a page, I have stated links in antenna
> books that seemingly confirm the
> physics aspect.So I have done as much as I can do prior to presenting
> it here. What else can I do to offer for debate on this thread
> populated by many antenna experts. How many hoops do I have to jump
> thru or how many thousands of dollars more do I have to spend to get
> the attention of my peers?
>
> Warmest regards
> Art Unwin KB9MZ
>
> I suspect sporadic fighting will now occur.
> Yes the sporatics are at it again, beware Punchinello

2549. Re: A closer look

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-11 04:23:27 UTC
From: CAM <w5dxp@hotmail.com>
Message-ID: <3D55E6BF.42915A8A@hotmail.com>
Source record: 137190

"George, W5YR" wrote:
> As I intimated in my opening sentence, you were playing games, Cecil. Next
> time how about being honest enough to at least describe *all* of the system
> before inviting people to speculate and try to "help" you understand what
> is happening in the system you describe, at least in small part . . .
>
> Your second sentence is the most critical element and yet you omitted it
> completely.
>
> Shame! You won't get me to play games with you again! <:{

Doc, most hams, savvy about antennas, know that a signal generator has
built-in circuitry that can be switched in to absorb the reflected energy.
That's why I fed the system with a signal generator instead of a ham
transmitter. I certainly wasn't playing games. I just assumed too much
which is a common failing of mine.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
------== Over 80,000 Newsgroups - 16 Different Servers! =-----

2550. Re: G5RV in a V pattern? Possible?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-11 04:31:23 UTC
From: "George, W5YR" <w5yr@att.net>
Message-ID: <3D55E89A.547A0477@att.net>
Source record: 137191

The problem here is not getting power into the antenna - that can be done.
Antenna driving-point impedance is of importance but is not the problem
with this proposal.

The problem is that the radiation from one leg will be largely cancelled by
the radiation from the other leg. Spread them out as far as possible and
see what happens . . .

73/72/oo, George W5YR - the Yellow Rose of Texas
Fairview, TX 30 mi NE of Dallas in Collin county EM13qe
Amateur Radio W5YR, in the 56th year and it just keeps getting better!
QRP-L 1373 NETXQRP 6 SOC 262 COG 8 FPQRP 404 TEN-X 11771 I-LINK 11735
Icom IC-756PRO #02121 Kachina 505 DSP #91900556 Icom IC-765 #02437

Bob Miller wrote:
>
> "Tom" <auctionid4me@yahoo.co.uk> wrote:
>
> >I have no interest in the experimentation with antenna, however
> >due to a home move and limited space I am curious to know the
> >following:
> >
> >Is it possible to a G5RV in a V pattern, about 20' above the ground.
> >legs and the end.
> >
> >The 2 legs being about 20' apart.
>
> I tried a 75-meter dipole at about the same height you're planning, with the
> legs highly V-ed, about 20 or so feet apart. Didn't work worth squat, even with
> a heavy duty tuner. I doubt the g5rv would fare much better.

2551. Re: Antenna length versus feedline length

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-11 04:34:57 UTC
From: CAM <w5dxp@hotmail.com>
Message-ID: <3D55E971.22DB35B7@hotmail.com>
Source record: 137192

"J. Harvey" wrote:
> The real question is: does the stub that varies oppositely to the line
> length preclude finding a match ?

Probably depends upon what one defines as a "match". I depend upon the current maximum point having a virtual impedance between 25 + j0 ohms and 100 + j0 ohms. If the stub changes the SWR on the 450 ohm ladder-line to less than 4.5:1 or greater than 18:1, then the current maximum virtual impedance will fall outside those values. However, it would be an interesting experiment.

A subset of that experiment might be a resonant 1/2WL dipole on 75m fed with 1/2WL of ladder-line. Then short out part of the line to achieve a match for the one wavelength dipole fed with 3/4WL of ladder-line on 40m.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

2552. Re: SWR - Why isn't the energy re-absorbed at the TX?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-11 04:58:42 UTC
From: "George, W5YR" <w5yr@att.net>
Message-ID: <3D55EF00.A4BB1011@att.net>
Source record: 137193

Almost but not quite . . . Richard and I would differ on only one point: at which plane does the actual re-reflection take place - at the tuner output or the tuner input.

The reflected wave *does* pass through the tuner all the way to the input port where it meets the forward wave coming from the source. If the tuner is properly adjusted - and for the purists is lossless - then the phase of the voltage and current components of the reflected wave will be such that their combination with the incoming forward wave will result in total re-reflection of the reflected wave back through the tuner,etc. This behavior is verified by the zero reflected power condition in the transmission line from the source to the tuner, as Richard states. Note that the reflected wave must pass through the tuner in order for its transfer function to effect the required phase changes. For it to occur at the tuner output, the tuner itself would have to present an effective Zo of 50 ohms so as to terminate the coax to the source. This is neither feasible nor necessary.

This is the explanation given by Walter Maxwell in "Reflections" and confirmed by Warren Bruene in his January 1995 CQ article "Reflected Power Stays in the Coax." As much as those two gentlement have disagreed about conjugate matching, that is at least one point on which they agree according to their publications.

It is a common misconception that the conjugate-match impedance situation at the output terminals of the tuner - where the feedline to the antenna is connected - is responsible for re-directing the reflected wave. If you will think about it, however, the cancellation of reactances at that plane is precisely what is required for the reflected wave to pass unattenuated into the tuner and cause currents and voltages in its lumped circuit components. And for the forward wave to pass unattenuated to the antenna.
Richard says the same thing with better words, perhaps.

The tuner merely provides a convenient way for adjusting the length of the line such that the impedance at the tuner input has been made resistive at the usual value of 50 ohms and that the reactance present in the line input impedance has been cancelled. Remember that there is always a length of line that will present a purely real impedance at its input but that the value is seldom what is required. Similarly, the line length that provides the required real component is always accompanied by an undesired reactive component.

The tuner kills two birds with one or two twists of the knobs: extend the line length to provide the desired real component and present a conjugate of the reactive component. That is the tuner function in transforming the line input impedance to the real load required by the source. Its other

function, accomplished transparently in the course of accomplishing the impedance transformation, is to effect the proper phase alterations in the reflected wave voltage and current such that the waves combine at the match point plane - the tuner input - and produce in total re-reflection.

To summarize, the input plane of the tuner constitutes the "match point" where the incoming forward wave from the source and the phase-shifted and reactance-cancelled reflected wave meet, combine and join to emerge at the tuner output as the forward wave. It is in this manner that the forward power can exceed the amount of power delivered to the tuner/antenna system and utlimately delivered to the antenna (load).

73/72/oo, George W5YR - the Yellow Rose of Texas
Fairview, TX 30 mi NE of Dallas in Collin county EM13qe
Amateur Radio W5YR, in the 56th year and it just keeps getting better!
QRP-L 1373 NETXQRP 6 SOC 262 COG 8 FPQRP 404 TEN-X 11771 I-LINK 11735
Icom IC-756PRO #02121 Kachina 505 DSP #91900556 Icom IC-765 #02437

"GW3NCT"@@ wrote:
>
> On Fri, 9 Aug 2002 23:03:10 -0500 (CDT), richardharrison@webtv.net
> (Richard Harrison) wrote:
>
> >:Richard Lord, GW3NCT wrote:
> >:"---if energy is reflected back down the line, where does it go?"
> >:
> >:Mostly, it bounces at the transmitter output or tuner output and joins
> >:new energy emerging from the transmitter for another go at the load.
> >:
> >:The ATU loss is low and gives a match to the transmitter. Absence of SWR
> >:between transmitter and ATU is evidence of zero reflected energy as that
> >:is what makes standing waves. The reflection is at the load and travels
> >:the load feeder.
> >:
> >:I am sorry my loss statement was unclear. In a lossless system with a
> >:conjugate match, you can slice it anywhere and looking in either
> >:direction you see the conjugate of the opposite direction. Loss tends to
> >:spoil this tidy arrangement.
> >:
> >:Richard Lord wrote: "---if an atu ensures a 1:1 match from the TX output
> >:into the feeder."
> >:
> >:As previously stated, "a 1:1 match from the TX---." guarantees no
> >:reflected power to the TX. The energy bounces are remote from the TX.
> >:
> >:Richard Lord wrote: "But I am proposing that there IS reflected energy
> >:caused by the feedline/antenna mismatch.
> >:
> >:The ATU simply bounces reflected energy back to the load. Some say an
> >:extremely high impedance is presented at the ATU output to the antenna
> >:circuit. Unless the impedance were not bidirectional, that high

> >:impedance would keep energy in the transmitter as well as preventing its
> >:return. Another explanation is part of the answer. The reflection is
> >:smaller than the wave which produces it. Flow is from higher to lower.
> >:To turn a reflection around, or any wave for that matter, it is
> >:necessary to invert the phase of either the voltage or current, but not
> >:both. To make a reflection into a re-reflection a circuit must perform
> >:this phase reversal. The ATU must handle that.
> >:
> >:Best regards, Richard Harrison, KB5WZI
>
> Richard
>
> Thanks. I believe I now understand.
>
> I will take on trust whatever mechanism exists at the output of the
> ATU which re-reflects the energy back up the feedline. Whatever it
> is, it means the ATU does not absorb this energy (apart from any
> losses, of course) as I^2R losses. Neither does it pass thru the ATU
> into the TX. Good, I am satisfied.
>
> Thanks to all who helped me.
>
> Richard
> GW3NCT

2553. Re: SWR - Why isn't the energy re-absorbed at the TX?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-11 04:58:48 UTC
From: "George, W5YR" <w5yr@att.net>
Message-ID: <3D55EF06.8C03FC5A@att.net>
Source record: 137194

Almost but not quite . . . Richard and I would differ on only one point: at which plane does the actual re-reflection take place - at the tuner output or the tuner input.

The reflected wave *does* pass through the tuner all the way to the input port where it meets the forward wave coming from the source. If the tuner is properly adjusted - and for the purists is lossless - then the phase of the voltage and current components of the reflected wave will be such that their combination with the incoming forward wave will result in total re-reflection of the reflected wave back through the tuner,etc. This behavior is verified by the zero reflected power condition in the transmission line from the source to the tuner, as Richard states. Note that the reflected wave must pass through the tuner in order for its transfer function to effect the required phase changes. For it to occur at the tuner output, the tuner itself would have to present an effective Zo of 50 ohms so as to terminate the coax to the source. This is neither feasible nor necessary.

This is the explanation given by Walter Maxwell in "Reflections" and confirmed by Warren Bruene in his January 1995 CQ article "Reflected Power Stays in the Coax." As much as those two gentlement have disagreed about conjugate matching, that is at least one point on which they agree according to their publications.

It is a common misconception that the conjugate-match impedance situation at the output terminals of the tuner - where the feedline to the antenna is connected - is responsible for re-directing the reflected wave. If you will think about it, however, the cancellation of reactances at that plane is precisely what is required for the reflected wave to pass unattenuated into the tuner and cause currents and voltages in its lumped circuit components. And for the forward wave to pass unattenuated to the antenna.
Richard says the same thing with better words, perhaps.

The tuner merely provides a convenient way for adjusting the length of the line such that the impedance at the tuner input has been made resistive at the usual value of 50 ohms and that the reactance present in the line input impedance has been cancelled. Remember that there is always a length of line that will present a purely real impedance at its input but that the value is seldom what is required. Similarly, the line length that provides the required real component is always accompanied by an undesired reactive component.

The tuner kills two birds with one or two twists of the knobs: extend the line length to provide the desired real component and present a conjugate of the reactive component. That is the tuner function in transforming the line input impedance to the real load required by the source. Its other

function, accomplished transparently in the course of accomplishing the impedance transformation, is to effect the proper phase alterations in the reflected wave voltage and current such that the waves combine at the match point plane - the tuner input - and produce in total re-reflection.

To summarize, the input plane of the tuner constitutes the "match point" where the incoming forward wave from the source and the phase-shifted and reactance-cancelled reflected wave meet, combine and join to emerge at the tuner output as the forward wave. It is in this manner that the forward power can exceed the amount of power delivered to the tuner/antenna system and utlimately delivered to the antenna (load).

73/72/oo, George W5YR - the Yellow Rose of Texas
Fairview, TX 30 mi NE of Dallas in Collin county EM13qe
Amateur Radio W5YR, in the 56th year and it just keeps getting better!
QRP-L 1373 NETXQRP 6 SOC 262 COG 8 FPQRP 404 TEN-X 11771 I-LINK 11735
Icom IC-756PRO #02121 Kachina 505 DSP #91900556 Icom IC-765 #02437

"GW3NCT"@@ wrote:
>
> On Fri, 9 Aug 2002 23:03:10 -0500 (CDT), richardharrison@webtv.net
> (Richard Harrison) wrote:
>
> >:Richard Lord, GW3NCT wrote:
> >:"---if energy is reflected back down the line, where does it go?"
> >:
> >:Mostly, it bounces at the transmitter output or tuner output and joins
> >:new energy emerging from the transmitter for another go at the load.
> >:
> >:The ATU loss is low and gives a match to the transmitter. Absence of SWR
> >:between transmitter and ATU is evidence of zero reflected energy as that
> >:is what makes standing waves. The reflection is at the load and travels
> >:the load feeder.
> >:
> >:I am sorry my loss statement was unclear. In a lossless system with a
> >:conjugate match, you can slice it anywhere and looking in either
> >:direction you see the conjugate of the opposite direction. Loss tends to
> >:spoil this tidy arrangement.
> >:
> >:Richard Lord wrote: "---if an atu ensures a 1:1 match from the TX output
> >:into the feeder."
> >:
> >:As previously stated, "a 1:1 match from the TX---." guarantees no
> >:reflected power to the TX. The energy bounces are remote from the TX.
> >:
> >:Richard Lord wrote: "But I am proposing that there IS reflected energy
> >:caused by the feedline/antenna mismatch.
> >:
> >:The ATU simply bounces reflected energy back to the load. Some say an
> >:extremely high impedance is presented at the ATU output to the antenna
> >:circuit. Unless the impedance were not bidirectional, that high

> >:impedance would keep energy in the transmitter as well as preventing its
> >:return. Another explanation is part of the answer. The reflection is
> >:smaller than the wave which produces it. Flow is from higher to lower.
> >:To turn a reflection around, or any wave for that matter, it is
> >:necessary to invert the phase of either the voltage or current, but not
> >:both. To make a reflection into a re-reflection a circuit must perform
> >:this phase reversal. The ATU must handle that.
> >:
> >:Best regards, Richard Harrison, KB5WZI
>
> Richard
>
> Thanks. I believe I now understand.
>
> I will take on trust whatever mechanism exists at the output of the
> ATU which re-reflects the energy back up the feedline. Whatever it
> is, it means the ATU does not absorb this energy (apart from any
> losses, of course) as I^2R losses. Neither does it pass thru the ATU
> into the TX. Good, I am satisfied.
>
> Thanks to all who helped me.
>
> Richard
> GW3NCT

2554. Re: SWR - Why isn't the energy re-absorbed at the TX?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-11 04:59:07 UTC
From: "George, W5YR" <w5yr@att.net>
Message-ID: <3D55EF19.AC7101DA@att.net>
Source record: 137195

Almost but not quite . . . Richard and I would differ on only one point: at which plane does the actual re-reflection take place - at the tuner output or the tuner input.

The reflected wave *does* pass through the tuner all the way to the input port where it meets the forward wave coming from the source. If the tuner is properly adjusted - and for the purists is lossless - then the phase of the voltage and current components of the reflected wave will be such that their combination with the incoming forward wave will result in total re-reflection of the reflected wave back through the tuner,etc. This behavior is verified by the zero reflected power condition in the transmission line from the source to the tuner, as Richard states. Note that the reflected wave must pass through the tuner in order for its transfer function to effect the required phase changes. For it to occur at the tuner output, the tuner itself would have to present an effective Zo of 50 ohms so as to terminate the coax to the source. This is neither feasible nor necessary.

This is the explanation given by Walter Maxwell in "Reflections" and confirmed by Warren Bruene in his January 1995 CQ article "Reflected Power Stays in the Coax." As much as those two gentlement have disagreed about conjugate matching, that is at least one point on which they agree according to their publications.

It is a common misconception that the conjugate-match impedance situation at the output terminals of the tuner - where the feedline to the antenna is connected - is responsible for re-directing the reflected wave. If you will think about it, however, the cancellation of reactances at that plane is precisely what is required for the reflected wave to pass unattenuated into the tuner and cause currents and voltages in its lumped circuit components. And for the forward wave to pass unattenuated to the antenna.
Richard says the same thing with better words, perhaps.

The tuner merely provides a convenient way for adjusting the length of the line such that the impedance at the tuner input has been made resistive at the usual value of 50 ohms and that the reactance present in the line input impedance has been cancelled. Remember that there is always a length of line that will present a purely real impedance at its input but that the value is seldom what is required. Similarly, the line length that provides the required real component is always accompanied by an undesired reactive component.

The tuner kills two birds with one or two twists of the knobs: extend the line length to provide the desired real component and present a conjugate of the reactive component. That is the tuner function in transforming the line input impedance to the real load required by the source. Its other

function, accomplished transparently in the course of accomplishing the impedance transformation, is to effect the proper phase alterations in the reflected wave voltage and current such that the waves combine at the match point plane - the tuner input - and produce in total re-reflection.

To summarize, the input plane of the tuner constitutes the "match point" where the incoming forward wave from the source and the phase-shifted and reactance-cancelled reflected wave meet, combine and join to emerge at the tuner output as the forward wave. It is in this manner that the forward power can exceed the amount of power delivered to the tuner/antenna system and utlimately delivered to the antenna (load).

73/72/oo, George W5YR - the Yellow Rose of Texas
Fairview, TX 30 mi NE of Dallas in Collin county EM13qe
Amateur Radio W5YR, in the 56th year and it just keeps getting better!
QRP-L 1373 NETXQRP 6 SOC 262 COG 8 FPQRP 404 TEN-X 11771 I-LINK 11735
Icom IC-756PRO #02121 Kachina 505 DSP #91900556 Icom IC-765 #02437

"GW3NCT"@@ wrote:
>
> On Fri, 9 Aug 2002 23:03:10 -0500 (CDT), richardharrison@webtv.net
> (Richard Harrison) wrote:
>
> >:Richard Lord, GW3NCT wrote:
> >:"---if energy is reflected back down the line, where does it go?"
> >:
> >:Mostly, it bounces at the transmitter output or tuner output and joins
> >:new energy emerging from the transmitter for another go at the load.
> >:
> >:The ATU loss is low and gives a match to the transmitter. Absence of SWR
> >:between transmitter and ATU is evidence of zero reflected energy as that
> >:is what makes standing waves. The reflection is at the load and travels
> >:the load feeder.
> >:
> >:I am sorry my loss statement was unclear. In a lossless system with a
> >:conjugate match, you can slice it anywhere and looking in either
> >:direction you see the conjugate of the opposite direction. Loss tends to
> >:spoil this tidy arrangement.
> >:
> >:Richard Lord wrote: "---if an atu ensures a 1:1 match from the TX output
> >:into the feeder."
> >:
> >:As previously stated, "a 1:1 match from the TX---." guarantees no
> >:reflected power to the TX. The energy bounces are remote from the TX.
> >:
> >:Richard Lord wrote: "But I am proposing that there IS reflected energy
> >:caused by the feedline/antenna mismatch.
> >:
> >:The ATU simply bounces reflected energy back to the load. Some say an
> >:extremely high impedance is presented at the ATU output to the antenna
> >:circuit. Unless the impedance were not bidirectional, that high

> >:impedance would keep energy in the transmitter as well as preventing its
> >:return. Another explanation is part of the answer. The reflection is
> >:smaller than the wave which produces it. Flow is from higher to lower.
> >:To turn a reflection around, or any wave for that matter, it is
> >:necessary to invert the phase of either the voltage or current, but not
> >:both. To make a reflection into a re-reflection a circuit must perform
> >:this phase reversal. The ATU must handle that.
> >:
> >:Best regards, Richard Harrison, KB5WZI
>
> Richard
>
> Thanks. I believe I now understand.
>
> I will take on trust whatever mechanism exists at the output of the
> ATU which re-reflects the energy back up the feedline. Whatever it
> is, it means the ATU does not absorb this energy (apart from any
> losses, of course) as I^2R losses. Neither does it pass thru the ATU
> into the TX. Good, I am satisfied.
>
> Thanks to all who helped me.
>
> Richard
> GW3NCT

2555. Re: Everything is now known on antennas

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-11 05:55:01 UTC
From: "W.G Ewald" <wgewald@att.net>
Message-ID: <3publug6uaul5hls2famrm9fav4k7vbou7@4ax.com>
Source record: 137196

On 10 Aug 2002 17:59:28 -0700, aunwin@fgi.net (Art Unwin KB9MZ) wrote:

>Fractenna was blasted
>because his was a 'new' idea yet all forgot what possible advantages
>it presented.

Have you forgotten the bizarre behavior that Fracky displayed?

Who could forget the claimed advantages when he went on about them
endlessly?

Have you looked at Richard Clark's page, or the article in March 2002
QEX.

2556. Re: antennas and more....SPAM

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-11 06:11:22 UTC
From: 'Doc <w5lz@icok.net>
Message-ID: <3D55FFE9.FDE02D9A@icok.net>
Source record: 137197

George,
Why? Is that something you 'normally' do, post
'porn sites'? And to answer your question, no thanks.
'Doc

2557. Re: antennas and more....SPAM

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-11 06:28:10 UTC
From: George Kinzer <horseflygk@worldnet.att.net>
Message-ID: <_tn59.6811$Ke2.579909@bgtnsc04-news.ops.worldnet.att.net>
Source record: 137198

no, but doesnt appear that THEY bother you, so why should mine?

--
If first you don't suceed, do the same thing again...see what happens

2558. Re: G5RV in a V pattern? Possible?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-11 10:00:22 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <3D5635B6.2080009@eznec.com>
Source record: 137199

When two wires are fed in such a way that the fields cancel, the result isn't necessarily that the overall radiated field is less. Take for example an 8JK antenna. This consists of two parallel elements fed out of phase, and spaced much closer than a half wavelength (typically 1/8 to 1/4 wavelength). The fields from these two elements don't fully reinforce in any direction; they partially or fully cancel in all directions. Yet the antenna produces more gain than a single element.

If you put 100 watts into an antenna, 100 watts is radiated, less the power dissipated as heat. Pattern or field cancellation isn't a lossy process -- it's simply the superposition of waves in space. The 100 watts of power radiated is the power *after* fields are all added up and cancellation and reinforcement have taken place. You don't put 100 watts into an antenna and make it disappear by field cancellation. So an antenna whose fields cancel doesn't necessarily radiate any less power than one whose fields reinforce.

Here's what does happen. In a W8JK, the mutual coupling between the elements causes the element feedpoint resistance to be lower than for a single element. This results in higher current for a given power input, which in turn causes the fields to be greater. The result is that the overall radiated power is the same as it would be for a single element -- the extra field strength resulting from the heavier current just makes up for the loss of field strength due to field cancellation.

There is a practical limit to this technique, however. Heavier currents result in higher I^2*R loss in the elements. This can be reduced by increasing the conductor size, and can be made negligible for reasonable element spacings. But if spacing gets too close, the currents become high enough that significant loss occurs for any practical conductor size.

An inverted vee works the same way. One with a narrow angle radiates just as much power as one with wider spacing, less loss which occurs due to higher currents. For moderately narrow angles, the loss is usually insignificant. But with narrow angles, the feedpoint impedance is low, and it's difficult to match and feed without too much loss in the matching network or feedline. The tuning will also be narrow band. And if the wires are cut to be the proper length for a wider-angle inverted vee, a substantial amount of reactance will be present, making matching more difficult. So if a narrow-angle inverted vee works poorly, it's because not enough attention was taken to feeding and matching a low impedance antenna with low loss, not because of field cancellation. The problem truly is one of getting power to the antenna. Once there, nearly all of it will be radiated.

Roy Lewallen, W7EL

George, W5YR wrote:
> The problem here is not getting power into the antenna - that can be done.
> Antenna driving-point impedance is of importance but is not the problem
> with this proposal.
>
> The problem is that the radiation from one leg will be largely cancelled by
> the radiation from the other leg. Spread them out as far as possible and
> see what happens . . .
>
> 73/72/oo, George W5YR - the Yellow Rose of Texas
> Fairview, TX 30 mi NE of Dallas in Collin county EM13qe
> Amateur Radio W5YR, in the 56th year and it just keeps getting better!
> QRP-L 1373 NETXQRP 6 SOC 262 COG 8 FPQRP 404 TEN-X 11771 I-LINK 11735
> Icom IC-756PRO #02121 Kachina 505 DSP #91900556 Icom IC-765 #02437
>
>
>
>
> Bob Miller wrote:
>
>>"Tom" <auctionid4me@yahoo.co.uk> wrote:
>>
>>
>>>I have no interest in the experimentation with antenna, however
>>>due to a home move and limited space I am curious to know the
>>>following:
>>>
>>>Is it possible to a G5RV in a V pattern, about 20' above the ground.
>>>legs and the end.
>>>
>>>The 2 legs being about 20' apart.
>>
>>I tried a 75-meter dipole at about the same height you're planning, with the
>>legs highly V-ed, about 20 or so feet apart. Didn't work worth squat, even with
>>a heavy duty tuner. I doubt the g5rv would fare much better.
>

2559. Re: antennas and more....SPAM

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-11 10:02:19 UTC
From: 'Doc <w5lz@icok.net>
Message-ID: <3D563609.EC60A7DF@icok.net>
Source record: 137201

Why should any of the 'porn' stuff bother me? It
doesn't hold any special attraction for me, nor do I
particularly care what other people do with them. If
you have favorite 'porn' sites you wish to post, I would
suggest that you do so in an NG that caters to that. I
certainly don't think that this NG is the appropriate
place to do so.
In one of your posts you expressed a thought that you
should have been in 'marketing'. I think I agree with
you. You seem to have the ability to exaggerate, give
false impressions, and misconstrue facts that are a symptom
of the 'marketing' industry. For example, your generous
offer not to copyright uncopyrightable material. How do
I know the material is uncopyrightable? you said so your
self.
'Doc

2560. Re: EZNEC

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-11 10:10:21 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <3D56380D.6080205@eznec.com>
Source record: 137200

KAZeringue wrote:
> Can anyone speak about the accuracy of an Eznec(v3.0.42) model of an
> antenna over "real" ground?
>
> I have a wire 2 element yagi for 20 meters, where the driven element is
> at 30 feet, and the reflector at only 23 feet. Are the Eznec plots over
> "real, high accuracy ground" for a model of this going to be as accurate
> as if both elements are at the same height? (Assume the other
> dimensions of the yagi do not change, only the rotation or "tilt" of the
> boom)

Yes. You'll also find that ground characteristics won't make much difference with this antenna. That's because horizontally polarized waves are reflected very well from ground of even fairly poor quality, except at high radiation angles.

> Is such a model a good approximation for the same yagi over sloped
> ground? (I would guess no, because I would speculate that the sloped
> ground would screw around with the ground reflection angles...plus what
> else?)

No, unless you also tilt the results. To see what would happen with a tilted ground (with constant tilt extending at least several wavelengths), tilt your Yagi the other way, run the analysis, then tilt the resulting elevation plot. But you'll find that tilting the Yagi has very little effect on the elevation pattern. This is because the basic elevation pattern of a Yagi is very broad -- you can confirm this by doing an elevation plot of the Yagi in free space. Tilting the ground will change the elevation pattern; tilting the Yagi won't change it significantly. A shame, isn't it?

To see the effects of complex ground contours, I recommend TA (Terrain Analysis) by Brian Beezley, K6STI. You can contact him at k6sti@n2.net.

Roy Lewallen, W7EL

2561. Re: Antenna length versus feedline length

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-11 10:16:21 UTC
From: 'Doc <w5lz@icok.net>
Message-ID: <3D563953.D2D7BE77@icok.net>
Source record: 137202

That's what the spacers are for. The pre-ladder line
open wire feed lines used some type of spacers, usually
made from ceramic, plastic, wood, whatever. Since the
'wire' is bare copper (at least the last batch that I
saw was), making contact shouldn't be that big of a deal.
Use a reel large enough to accomodate the spacers used,
and incorporating the devices for making contact with the
wire in the feed line, doesn't seem like an impossible
project (again, I'm not the one actually making this thing).
'Doc

2562. Re: EZNEC

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-11 10:48:06 UTC
From: KAZeringue <kazeringue@aol.com>
Message-ID: <3D56438C.2060504@aol.com>
Source record: 137203

Okay thanks. That more or less confirms what I've found "using" the real antenna. I was hoping to model my whole system of antenna's to get a general idea of how several wires in the yard, at all various angles, might be effecting the patterns.

But most of them are too low to have a "pattern" anyway. Still better than the proverbial light bulb. :)

73
Keith, W4KAZ

2563. Re: Cleaning oxidized antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-11 10:54:43 UTC
From: Reg Edwards <g4fgq.regp@btinternet.com>
Message-ID: <aj5fpi$4al$1@helle.btinternet.com>
Source record: 137204

> BTW, aluminum regardless of cleaning method oxidizes immediately upon
> contact with air which is why it doesn't solder or weld without
> special fluxes and/or inert gas shielding.
>
==========

Pure aluminium is pretty useless except as an electrical conductor. Have you ever tried climbing a pure aluminium ladder ? It's quite safe because you won't get beyond the first rung.

It's always alloyed for structural purposes. The physical and chemical properties of aluminium alloys (and there many sorts) are altogether different from the pure stuff except that they are all lightweight.

2564. Re: ant tuning question

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-11 12:15:33 UTC
From: Reg Edwards <g4fgq.regp@btinternet.com>
Message-ID: <aj5kh4$7jl$1@venus.btinternet.com>
Source record: 137205

Hello Ron,

With a 1/4-wave centre-fed dipole on 160m a tuning-up problem is
guaranteed..

The only solution is to lengthen the dipole. Adding 20 feet to each end,
sideways, downwards or sloping, will make a considerable difference.

A 1-to-1 balun will be helpful on most bands. Important - keep the length
of coax between balun and tuner to an absolute minimum. Zero if possible.

If you are interested in numbers, to minimise floundering about in the dark,
download in a few seconds program DIPOLE3 from website below. No unzipping
inconvenience. Run immediately.

Enter details of your existing dipole + feedline + balun + coax to find
where the problem(s) lie. The L and C values of the L-match network you
should be using will be automatically displayed together with losses in the
various parts of the system and overall efficiency.

Then add 20 feet of wire to each end of the dipole to discover the
improvement obtainable. To see instantaneously what happens on all other
bands just change frequency. When L-match components have reasonable values
very likely you will be able to use your T-tuner. Trouble on a higher
frequency band can usually be remedied by changing ladderline line length by
a few feet.

Download program DIPOLE3.

========================
Regards from Reg G4FGQ
Free Radio Design Software
Go to http://www.g4fgq.com
========================
"rb" wrote
> I asked this question on this list several years ago, intending to "do
> something" with it. However, other things interevened, and here I am
> several years later thinking "well, by golly, I guess now is a good time
to
> get around to fixing my problem". Anyway, I have completely forgotten the
> answers to the quiz, so will try it again:
>
> 1. I have a 140' dipole
>
> 2. fed with ladderline
>

> 3. down to a 1:4 balun outside my window
>
> 4. Typical T match with roller coil as ant tuner (it's rated for 160m)
>
> Background: the best I can do on antenna loading on 160m is with the coil
> all the way in (max L). Because of the length, the feedline Z presented
to
> the tuner is reactive on 160m.
>
> Assumption: feedline Z at tuner is too reactive on 160m for tuner
because
> of flatop length
>
> Solutions:
>
> a. I can add ladderline to the feedline
>
> b. I can add wire to the ends of my antenna (drooping downward, up to
20')
>
> c. I can go to a 1:1 balun
>
> Will going to a 1:1 balun help any in this situation?
>
> Can adding feedline help?
>
> Is adding wire to ant length likely to help?
>
> 73 de Ron, K5BDJ
>
>
>
>

2565. Re: Homebrew mobile antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-11 12:22:11 UTC
From: Denis O' Flynn <denisf@eircom.net>
Message-ID: <6yt59.8179$zX3.11535@news.indigo.ie>
Source record: 137209

Hi Gary,
Yes would be interested in the details if you could
pass them on. Details of homebrew mobile antennas are rather scarce.

Mni thanks
de Denis EI6HB

"JGBOYLES" <jgboyles@aol.com> wrote in message
news:20020810164617.11422.00003003@mb-fk.aol.com...
> >Anyone got any ideas for a homebrew mobile antenna. I plan to use the
> >Icom -706 MKII rig and would like to use down to 80m.
>
> Hi Denis, A homebrew multiband mobile antenna is difficult, or it was for
me.
> The "screwdriver" style antenna is by far the easiest in terms of changing
> bands. If I were buying a mobile antenna, a screwdriver would be my
choice. I
> haven't homebrewed one so I can't comment on the difficulity. I haven't
seen
> any DIY plans either. Also, base loading, especially on 80 and 40 is not
the
> best method.
> What I did, since I wanted to homebrew the "best", as far as efficiency,
was
> build a "bugcatcher" style.
> It is center loaded, with interchangable loading coils for each band, and
> matching networks at the base for each band. I also use a capacity hat at
the
> very top that I change for each band. The antenna is 8' long, uses 1"
> fibreglass tubing for the bottom, and 1/4" rod for the top. The homebrew
> loading coils plug in with banana plugs and jacks. Hope you get the
idea. I
> you would like more details, let me know.
> 73 Gary N4AST

2566. Re: SWR - Why isn't the energy re-absorbed at the TX?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-11 12:42:36 UTC
From: CAM <w5dxp@hotmail.com>
Message-ID: <3D565BBC.AE50C56F@hotmail.com>
Source record: 137206

"George, W5YR" wrote:
> The reflected wave *does* pass through the tuner all the way to the input
> port where it meets the forward wave coming from the source. If the tuner
> is properly adjusted - and for the purists is lossless - then the phase of
> the voltage and current components of the reflected wave will be such that
> their combination with the incoming forward wave will result in total
> re-reflection of the reflected wave back through the tuner,etc.

Technically, it is not "total re-reflection", George. It is a combination of re-reflection and interference. Bill calls it cancellation. Walt calls it "a complimentary reflection that compensates and cancels". Thus, there are two phenomena involved in re-routing the reflected power back toward the load. I agree with you that the cancellation occurs at the input of the tuner.

Steve is right when he says: A total re-reflection requires a short, open, or pure reactance. None of those conditions exist at the input of the tuner.

If the reflection coefficient is 0.707, half the reflected power is re-reflected and half the reflected power is canceled in an interference pattern. That's why I have started using the term "re-routed" rather than "re-reflected". Re-reflection is only half the story.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

2567. Re: SWR - Why isn't the energy re-absorbed at the TX?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-11 12:44:15 UTC
From: richardharrison@webtv.net
Message-ID: <2882-3D565C1F-267@storefull-2394.public.lawson.webtv.net>
Source record: 137208

George, W5YR wrote:
"The reflected wave "does" pass through the tuner all the way to the input port where it meets the forward wave coming from the source."

Yes. I mis-spoke when I said the wave bounced off the tuner output or transmitter output (absent the external tuner) or something to that effect. My intended point was the flat line between transmitter and tuner proved absence of reflections on that line.

When I cut corners on verbage, I often make mistakes. But, more often I make mistakes as an expression of the wrong idea. In this case, I don`t remember what I knew and when I learned it.

Best regards, Richard Harrison, KB5WZI

2568. Re: Antenna length versus feedline length

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-11 12:47:33 UTC
From: CAM <w5dxp@hotmail.com>
Message-ID: <3D565CE5.D9E0BE1C@hotmail.com>
Source record: 137207

'Doc wrote:
> That's what the spacers are for. The pre-ladder line
> open wire feed lines used some type of spacers, usually
> made from ceramic, plastic, wood, whatever. Since the
> 'wire' is bare copper ...

I just bought some open-wire feed line but it uses insulated
wire. The spacers appear to be made out of plastic irrigation
tubing.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

2569. Antenna Farm

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-11 13:31:38 UTC
From: Steve H Gordon <af4spilot@directvinternet.com>
Message-ID: <3d56fd3a$1_2@nopics.sjc>
Source record: 137082

Looking for approved charity to donate antenna farm, including Mosely TA-33 (4EL) WARC (Triband pluse WARC bands), (2) 40M Hamsticks as rotatable diploe, Heavy Duty Rotor and controller, top section of tower.

Located in South Florida. 954-964-2139

Steve
AF4S

2570. Antenna Farm

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-11 13:31:38 UTC
From: Steve H Gordon <af4spilot@directvinternet.com>
Message-ID: <3d568173$1_1@nopics.sjc>
Source record: 137123

Looking for approved charity to donate antenna farm, including Mosely TA-33 (4EL) WARC (Triband pluse WARC bands), (2) 40M Hamsticks as rotatable diploe, Heavy Duty Rotor and controller, top section of tower.

Located in South Florida. 954-964-2139

Steve
AF4S

2571. Antenna Farm

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-11 13:31:38 UTC
From: Steve H Gordon <af4spilot@directvinternet.com>
Message-ID: <3d566ee5$1_3@nopics.sjc>
Source record: 137212

Looking for approved charity to donate antenna farm, including Mosely TA-33 (4EL) WARC (Triband pluse WARC bands), (2) 40M Hamsticks as rotatable diploe, Heavy Duty Rotor and controller, top section of tower.

Located in South Florida. 954-964-2139

Steve
AF4S

2572. Antenna Farm

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-11 13:31:38 UTC
From: Steve H Gordon <af4spilot@directvinternet.com>
Message-ID: <3d567857$1_2@nopics.sjc>
Source record: 137217

Looking for approved charity to donate antenna farm, including Mosely TA-33 (4EL) WARC (Triband pluse WARC bands), (2) 40M Hamsticks as rotatable diploe, Heavy Duty Rotor and controller, top section of tower.

Located in South Florida. 954-964-2139

Steve
AF4S

2573. Re: EZNEC

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-11 13:35:51 UTC
From: k1bqt@aol.com
Message-ID: <20020811093551.20552.00002365@mb-mn.aol.com>
Source record: 137210

>Can anyone speak about the accuracy of an Eznec(v3.0.42) model of an antenna over "real" ground?<

A couple weeks ago, I used EZNEC to model a parallel reflector at 60-feet for my 75 dipole to make up a 2-element wide-spaced yagi (over real ground). I then installed the reflector exactly as modeled. There's no way I can confirm the behaviour of the pattern other than by general impression, but EZNEC predicted the feedpoint impedance and SWR (both before and after my installation) with uncanny accuracy--giving me at least some degree of confidence that the model might be predictive of the antenna's performance other ways.

Rick K1BQT

2574. Re: A closer look

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-11 13:38:15 UTC
From: klocko@toad.net
Message-ID: <224d9cd4.0208110538.3447e335@posting.google.com>
Source record: 137211

CAM <w5dxp@hotmail.com> wrote in message news:<3D55B812.1112286D@hotmail.com>...
Bill said:
> > If you agree that part of component #5 is transmitted on toward the
> > load, then you should have no disagreement that part of component #6
> > is transmitted on toward the source.
>
> It tries to be transmitted on toward the source but doesn't make it
> because of destructive interference which you call cancellation.

Here's an expanded version of what I posted yesterday:

Reflection coefficients are computed using the usual equations
rhoV for voltage waves
rhoI for current waves

Transmission coefficients (from Kraus)
tauV for voltage waves, given by 1 + rhoV
tauI for current waves, given by 1 + rhoI

The notation "mag/phase" represents a complex value.
Multiplying by a negative number inverts the phase (0 to 180 or 180 to
0)

Component #1: assign a phase of zero to component #1.
V+ on the coax is 70.7/0 v, I+ on the coax is 1.414/0 a
(I won't repeat the impedance and power relationships.)

Component #2: at the coax-twinlead junction, rhoV is 0.5, rhoI is -0.5
V- on the coax is 35.36/0 v, I- on the coax is 0.707/180 a
Note the phase inversion on the current wave.

Component #3: at the coax-twinlead junction, tauV is 1.5, tauI is 0.5
V+ on the twinlead is 106.7/0 v, I+ on the twinlead is 0.707/0 a

Component #5: ("supersum" of Component #3 and Component #4)
the waves add in phase resulting in:
V+ on the twinlead is 141.4/0 v, I+ on the twinlead is 0.943/0 a

Component #6: at the right-hand twinlead-coax junction,
rhoV is -0.5, rhoI is 0.5
V- is 70.7/180 v, I- on the twinlead is 0.472/0 a
Note the phase inversion on the voltage wave.

Component #7: at the (left-hand) coax-twinlead junction,
tauV is 0.5, tauI is 1.5
V- on the coax is 35.36/180 v, I+ on the coax is 0.707/0 a

At this time instant, component 7 is the result of waves traveling
one-half
wavelength toward the load and then traveling another one-half
wavelength toward
the source. So the time for one full cycle has passed. Therefore, the
V and
I waves *from the source* that are currently incident on the left-hand
junction
have the same phase as those forcomponent #1, 0 degrees. These waves
are
partially reflected at the left-hand junction resulting in a component
that is
identical to component #2. For these waves,
V- on the coax is 35.36/0 v, I- on the coax is 0.707/180 a

Let's summarize and identify each one explicitly
component 7 (the result of wave components that have traveled up and
back along
the full length of the half-wave line) is waves that are traveling
toward the
source from the left-hand junction

component 2 (the result of wave components reflected from the
left-hand
junction) is waves that are traveling toward the source from the
left-hand
junction

V7- is 35.36/180 v, I7- is 0.707/0 a
V2- is 35.36/0 v, I2- is 0.707/180 a

V7- and V2- exactly cancel, no voltage waves on the coax
I7- and I2- exactly cancel, no current waves on the coax

Note that the cancellation doesn't occur just at one point, but at
every point along the coax from the left-hand junction back to the
source. This is because the waves are travelling in the same
direction.

> > Now in general each reflection or transmission coefficient is a
> > complex quantity and has a phase associated with it. For the simple
> > example, the V reflection coefficient is either 0.5 (0 degrees) or
> > -0.5 (180 degrees). If you assign 0 degrees phase to both V and I of
> > component 1 and then track the phases all the way through, I think you
> > will find that V- for component #8 is 180 degrees out of phase with V-
> > for component #2. Likewise, I- for component #8 is 180 degrees out of
> > phase with I- for component #2. The V- waves cancel and the I- waves
> > cancel.
>
> Yes, yes, yes. That is exactly what I have been saying and your components
> agree perfectly with the phasor diagram that I published on my web page a
> year or so ago. Steve is not including those cancelled voltages in his voltage
> equation and those cancelled voltages are what furnish the energy foundation

> for the forward wave on the 150 ohm line.

But if the voltages and the currents are cancelled at every point on
the coax, they cannot possibly contribute any energy anywhere. They
are annihilated and so is their energy. And the words "furnish the
energy foundation for the forward wave" don't even make sense.

> As you say, Component #2 and Component #8 cancel, i.e. engage in destructive
> interference. The constructive interference power heads back toward the load.

I didn't say anything like what appears in the second sentence. And if
there is destructive interference, there can't be constructive
interference (the addition of components) there or anywhere else. You
can't have it both ways.

> Thanks Bill, it seems that we are essentially in agreement. The voltage equation
> balances and the power equation balances.

Well, we're not essentially in agreement, but it did give me a chance
to try partial reflection/partial transmission for a new type of
problem. And it works. 73,
Bill N3WK

2575. Re: A closer look

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-11 14:03:45 UTC
From: CAM <w5dxp@hotmail.com>
Message-ID: <3D566EC1.9FF02268@hotmail.com>
Source record: 137213

Bill Klocko wrote:
> But if the voltages and the currents are cancelled at every point on
> the coax, they cannot possibly contribute any energy anywhere. They
> are annihilated and so is their energy.

Whoops Bill, you stepped in it there. Energy in a transmission line CANNOT be annihilated. That would certainly violate the conservation of energy principle. Waves can be annihilated but the energy in those waves has to go somewhere. Energy cannot disappear from the universe. The energy in the cancellation effect joins the forward energy on the twinlead. Energy is like a balloon. Make it smaller in one place and it gets larger in another place.

> > As you say, Component #2 and Component #8 cancel, i.e. engage in destructive
> > interference. The constructive interference power heads back toward the load.
>
> I didn't say anything like what appears in the second sentence. And if
> there is destructive interference, there can't be constructive
> interference (the addition of components) there or anywhere else. You
> can't have it both ways.

Antennas have it both ways, Bill. We get destructive interference in one location so we can obtain constructive interference in another location thus obtaining gain over an isotropic antenna. The conservation of energy principle says that for every destructive interference there exists an equal constructive interference. The 50 joules per second involved in the destructive interference on the coax joins the forward wave on the twinlead as constructive interference and contributes to the 133.33 joules per second in the forward wave. To summarize:

75 joules/sec is not reflected at the coax/twinlead junction and joins the forward wave joules/sec on the twinlead.

8.33 joules/sec of the reflected energy is re-reflected back toward the load and joins the forward wave joules/sec on the twinlead.

50 joules/sec is involved in destructive interference at the coax/twinlead junction. Since there is no reflected energy on the coax, the only other thing that can happen is that this 50 joules/sec joins the forward wave joules/sec on the twinlead.

Thus: 75 joules/sec + 8.33 joules/sec + 50 joules/sec = 133.33 joules/sec

Why do so many RF engineers insist on violating the conservation of energy principle when it is completely unnecessary?
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
------== Over 80,000 Newsgroups - 16 Different Servers! =-----

2576. LDF4-50 Male-Female Connectors

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-11 14:19:33 UTC
From: Mark Allen <redness@optushome.com.au>
Message-ID: <3d567270$0$31149$afc38c87@news.optusnet.com.au>
Source record: 137214

Howdy all...

Dont know if this is the right group, but I would like to ask, Has anyone seen a quantity of LDF4-50 1/2 Heliax Male or Female Connectors for sale (Besides andrews??)

Any and all help is appreciated..

Regards

Mark Allen
Brisbane Queensland Australia

2577. Re: how to deal with limited antenna space?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-11 14:29:59 UTC
From: Bob Miller <bamiller@texas.net>
Message-ID: <dnNWPabjaxWv0Fa9j5irgID4a8c3@4ax.com>
Source record: 137215

"newsguy" <harpoon32@yahoo.com> wrote:

>Hello! I am intending to get my license, however I am worried about one
>thing. I live in a 'mobile home community' (trailer park, for the
>non-euphemistic :) I have a yard about 45 x 50 and 1 tree. I really
>dont think they are going to appreciate me if I erect some huge yagi thats
>60' tall and almost bigger than my home, and yet I dont want to be limited
>to talking local, I would like a range of 1000 miles at least. Do I have
>any options? Will a good 'stealthy' dipole do this for me?
>Thanks
>
>

A vertical is one way to go. You can also do well with a stealthy dipole. A dipole for 20 meters is only 33' long, total. And that will talk all over the world. Dipoles for the higher bands are even shorter -- a 10 meter dipole is only 16'. So it may be tricky to get on 40, 80 or 160 from your lot, but the higher bands are well within possibility, especially with the tree you have to hold up one leg of a wire antenna.

Bob
k5qwg

2578. Re: Everything is now known on antennas

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-11 14:37:03 UTC
From: aunwin@fgi.net
Message-ID: <c4becf19.0208110637.ecf53d4@posting.google.com>
Source record: 137216

W.G Ewald <wgewald@att.net> wrote in message
news:<3publug6uaul5hls2famrm9fav4k7vbou7@4ax.com>...
> On 10 Aug 2002 17:59:28 -0700, aunwin@fgi.net (Art Unwin KB9MZ) wrote:
>
> >Fractenna was blasted
> >because his was a 'new' idea yet all forgot what possible advantages
> >it presented.
>
> Have you forgotten the bizarre behavior that Fracky displayed?

No of course mot, emotion was heavily displayed on both sides but he
did get discussion of his ideas and tho I did not agree with some of
his statements,
The basic idea of a fractal antenna impressed me because it worked.
Because it was not economic or failed in some areas was not primary
for me,the basic idea worked and it gave new avenues for hams to
search.
>
> Who could forget the claimed advantages when he went on about them
> endlessly?

I was looking for that that 'did' workand was interested in those
facets that explained why some didn't work. I had no interest in
taking up the opportunity to join the lemmings whose main aim was to
crusify him.
>
> Have you looked at Richard Clark's page, or the article in March 2002

No. but I know he looked at my page years ago as I did his. The work
he showed was beyond my understanding, seemingly so far more advanced
in educative value.
But I am angry at his continual lack of respect to me over the years
of which I have been unable to escape from, so I reply with the same
kind of respect.
There is no doubt that he is superior to me in interlect but I refuse
to accept
that I am a fool that does not deserve request. If he treats me ina
professional way I will do so the same way with him and put the past
behind.
Art Unwin KB9MZ....XG.
> QEX.

2579. Re: A closer look

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-11 14:42:03 UTC
From: "J. Harvey" <JM002.Harvey_ANTI*SPAM_@Sympatico.ca>
Message-ID: <4Ju59.83$In4.48459@news20.bellglobal.com>
Source record: 137218

```
Bill Klocko wrote:
> They are annihilated and so is their energy.

"CAM" replied:
> Whoops Bill, you stepped in it there.
> Energy [anywhere] CANNOT be annihilated.
> That would certainly violate the conservation of
> energy principle.
```

Other than that complicated bit around 'black holes' (more of a complication than an exception) and the other complicated bit about "E=mc&#65533;", CAM is perfectly correct w.r.t. conservation of energy. Transmission lines need to adhere to this rule; loss is okay - annihilation of energy isn't.

2580. Re: 40 meter 2 element on a 4 el 4 band spider type quad

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-11 14:49:07 UTC
From: w9gb <gregory.beat@attbi.com>
Message-ID: <DPu59.61292$UU1.11018@sccrnsc03>
Source record: 137119

Mark -

You should look at the Cubex Quad product line (Mantis Series)for some ideas.
http://www.cubex.com/
The Mantic series, 2 elements runs around $1,400

W9DX does run a 40 meter Quad antenna .. its big (photos on the Qubex web site)
http://www.cubex.com/pho.htm

http://www.antennex.com/Sshack/quads/quad2.htm

73 de w9gb

"Mark Hall" <mark.hall34@verizon.net> wrote in message
news:3D51E634.1535CB11@verizon.net...
> Anybody have any success adding a 2 element 40 or 30 meter quad onto a 4
> element 20//15/12/10 spider type quad with a 28' boom? I was thinking
> even if the 40/30 elements hang real low (way more diamond shape than
> square), it might be very worthwhile. A friend of mine has a 2 El 40
> yagi that makes an unbelieveable difference for 40 DX. A 40M quad
> configuration would be even better. Any ideas on stabilizing the low
> ends of the diamond shape elements during rotation would be appreciated.
>
> '73 KI4Z
>

2581. Re: Homebrew mobile antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-11 14:58:32 UTC
From: Dan <kc5gxl32@ih2000.net>
Message-ID: <ulcusoenuvkf87@corp.supernews.com>
Source record: 137120

Hello Gary;

I, too, would be more than interested in getting more details on your homebrewed "Bugcatcher" style ant.

73, de Dan aka KC5GXL

PS...remove '32' from my email address for real addy

Denis O' Flynn" <denisf@eircom.net> wrote in news:6yt59.8179$zX3.11535@news.indigo.ie:

> Hi Gary,
> Yes would be interested in the details if you could
> pass them on. Details of homebrew mobile antennas are rather scarce.
>
> Mni thanks
> de Denis EI6HB
>
>
>> What I did, since I wanted to homebrew the "best", as far as
>> efficiency,
> was
>> build a "bugcatcher" style.
>> If
>> you would like more details, let me know.
>> 73 Gary N4AST
>
>
>

2582. Re: A closer look

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-11 14:58:53 UTC
From: CAM <w5dxp@hotmail.com>
Message-ID: <3D567BAD.288CBE60@hotmail.com>
Source record: 137121

"J. Harvey" wrote:
>
> Bill Klocko wrote:
> > They are annihilated and so is their energy.
>
> "CAM" replied:
> > Whoops Bill, you stepped in it there.
> > Energy [anywhere] CANNOT be annihilated.
> > That would certainly violate the conservation of
> > energy principle.
>
> Other than that complicated bit around 'black holes' (more of a complication
> than an exception) and the other complicated bit about "E=mc¿½", CAM is
> perfectly correct w.r.t. conservation of energy. Transmission lines need to
> adhere to this rule; loss is okay - annihilation of energy isn't.

That complication around black holes is why I added "in a transmission line". :-)
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

2583. Re: SWR - Why isn't the energy re-absorbed at the TX?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-11 15:21:41 UTC
From: VE9SRB <srbest@att.net>
Message-ID: <9iv59.8023$Ep6.595502@bgtnsc05-news.ops.worldnet.att.net>
Source record: 137122

"CAM" <w5dxp@hotmail.com> wrote in message
news:3D55AC11.9D8D30A3@hotmail.com...
> VE9SRB wrote:
> > The addition of forward voltages and the fact the resulting total
forward
> > power exceeds the added power in the two individual voltages when
considered
> > independently in the line does not violate the law of conservation of
> > energy.
>
> Why not, Steve? Assume you have two 200 watt signals of 100 volts at
> 2 amps each. You say you can add them to get 400 volts at 4 amps. Why
> is that not a violation of the conservation of energy principle?
>

Thats not what I said at all. 100 V forward + 100 V forward (in-phase)
results in 200 V forward not 400 V forward. So, in a 50 ohm line you would
have 200 V at 4 A. The resulting forward power would be 800 W.

> In your example, you are adding 106.07v at 0.707a (75w) to 35.35v at
> 0.236a (8.33w) to get 141.4v at 0.943a (133.33w). Why is that not
> the same thing as above?

I think you are confusing concepts, examples and situations so lets consider
it from this simple perspective.

Lets assume that we have a constant 100 V source connected to a 50 ohm load.
The resulting current in the 50 ohm load is 2 amps. The power dissipated in
the 50 ohm load is 200 W. In this situation we could say that this is a
"200 Watt power source". In reality, it is only a constant 100 V source.
Presuming that it is a "200 Watt power source" is only a result of the fact
that it is a 100 V source connected, by itself, to a 50 ohm load. The law
of conservation of energy is maintained because the source delivers 200 W
and the load dissipates 200 W.

Now lets say we have a second constant 100 V source. When we disconnect the
first 100 V source and connect this second 100 V source to the 50 ohm load,
we have the same situation as above. The second source delivers 200 W of
power and the load dissipates 200 W of power. Again, we could call this
second source a "200 Watt source". But again, this is only a result of the
load it is connected to.

Now lets connect both of these constant 100 V sources in series to the load
at the same time. Are we now connecting two "200 W sources" and would we
expect the total power dissipated in the 50 ohm load to be 400 W (200W +
200W)? No, not at all. The fact that 200 W of power is delivered to the

load when each source is connected individually to the load is irrelevant. All that matters now is what happens when these two constant 100 V sources are connected to the 50 ohm load at the same time.

When both of these sources are connected to the 50 ohm load at the same time, the total voltage in the load becomes 200 V (100 V + 100V) and the total current becomes 4 A. The total power dissipated in the load becomes 800 W, not 400 W. We could now think of this situation as an 800 W source delivering 800 W of power to a 50 ohm load. The law of conservation of energy is maintained because the "new source" delivers 800 W of power and the 50 ohm load dissipates 800 W of power.

Using direct power addition to determine the total power delivery when adding multiple voltage sources to the same load does not work. You cannot think of this situation as adding two 200 W power sources together to get 400 W. The law of conservation of energy is not violated because total power is conserved - the source delivers the same amount of power that the load dissipates.

In the transmission line situation, consider the following forward voltage additions and the resulting total forward power in each case. Lets assume that we have two 100 V forward voltages in a 50 ohm line that combine to result in a total forward voltage. Individually, each of these forward voltages is equivalent to 200 W of forward power, regardless of their individual phase. When combined however, the resulting forward power can range from 0 W to 800 W as a function of how the individual voltages add as vectors. At no time is the law of conservation of energy violated.
Examples

100 V @ 0 degs + 100 V @ 180 degs = 0 V and 0 W forward

100 V @ 0 degs + 100 V @ 90 degs = 141.42 V @ 45 degs and 400 W forward

100 V @ 0 degs + 100 V @ 0 degs = 200 V @ 0 degs and 800 W forward

The specific example conditions that result in these situations are irrelevant. These relationships always hold. We do not have to consider the law of conservation of energy for these relationships to hold. Validating the law of conservation of energy in anyone of these situations is done by examining what happens in the entire system.

Steve VE9SRB

2584. Re: Everything is now known on antennas

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-11 15:35:10 UTC
From: k1bqt@aol.com
Message-ID: <20020811113510.20552.00002376@mb-mn.aol.com>
Source record: 137124

Hi Art--

>Fractenna was blasted because his was a 'new' idea yet all forgot what possible advantages it presented.<

In my view, fractenna was blasted not for "his new idea", but for his bombastic misuse of the antenna newsgroup. The fractal debate continues, albeit less dramatically these days, through the IEEE were a small community of interested researchers explore both the "possible advantages" and the inherent disadvantages of fractal radiators. Fortunately, when you play at their house, you are expected to behave yourself and keep your fingers out of your nose.

Rick K1BQT

2585. Re: EVERY THING IS NOW KNOWN ON ANTENNAS.

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-11 15:46:33 UTC
From: aunwin@fgi.net
Message-ID: <c4becf19.0208110746.3f27de1b@posting.google.com>
Source record: 137125

richardharrison@webtv.net (Richard Harrison) wrote in message
news:<23814-3D55D0CF-220@storefull-2391.public.lawson.webtv.net>...
> Art, KB9MZ wrote:
> "Who among you can clearly describe what happens when two resonant
> members are placed close to each other with clarity and based on the
> laws of physics?"
>
> That is the proponent`s job, Art.
>
> SNIP
>
> This is textbook stuff. you can determine a coefficient of coupling,
> etc. but if you have an antenna, measurement takes the place of
> prediction. See if you have a double humped response and whether it
> comes from stagger tuning, overcoupling, or both.
>
> SNIP
>
> Best regards, Richard Harrison, KB5WZI

Thank you, thank you, thank you, for getting back to basics.
I will say again, I have no money motivation in all this. I do not
believe I have broken any law of physics and I have not "invented"
anything new. It was there all the time but people have ignored it
presumably because it has been presented poorly in a too technical
way, or nobody has connected the two articles that I presented as
links with their accompanying explanations in the relevant antenna
books.

So let me cut it down to as few lines as possible
to make it easier for all to refute.

1. Accepted law. F1 +/- F2 =F3

2. Accepted fact.
A resonant loop ca be made resonate at other
frequencies by the addition of a capacitor

3. When two resonant circuits are placed close
together which is called coupling it can
change the frequency at the point of coupling.

#4. If you drive a portion of one of these two
resonant circuits with a particular frequency
it will radiate a signeal of the same frequency.

5 If the other resonant structure which is coupled
receives energy it will either null radiation
from that portion or radiate at a frequency
in accordance to law #1 shown above.

.

6. The resulting current pattern will comprise
first of a pattern expected for the injected
signal but ONLY upto the point of actual oupling.

7 The coupled portion will will have zero to little
current flowe at a different frequency and thus
will not radiate in a similar way as the uncoupled
co-joined elements

8 The final current curve for the whole structure
will comprise of TWO POINTS OF CURRENT MAXIMA
which provides for COLLINEAR GAINS collinear
gains over a dipole of it same over all
electrical length.

What laws of physics have I broken ?

Best regards to you Richard.
The question that I have raised is pointed at the
whole group and I thank you personaly for keeping
an open mind ispite of the agravations that I may
have unintentially imposed . If there is something
even tho small is proved in the above then ham radio
will benefit.
Art Unwin..... XG

The 'Un Win' antenna as opposed to 'Un Cola' or
to the 'WIN' logo that seems to be all over the place.

2586. Re: G5RV in a V pattern? Possible?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-11 16:01:01 UTC
From: "George, W5YR" <w5yr@att.net>
Message-ID: <3D568A3B.3F18C892@att.net>
Source record: 137126

Roy, unless I totally misunderstood the original posting, the antenna in question is a G5RV mounted in a horizontal V configuration, not the usual vertical-plane inverted V, with the ends of the antenna some 20 ft apart.

I was attempting to point out that having the ends of the legs too close together would result in poorer performance relative to that of a dipole than with them further apart, as in 180 degrees.

No argument that all the power reaching the antenna is radiated. But what if the two ends were placed only, say, 4 " apart and the antenna were a 1/2-wave dipole? Would the antenna not then constiute a 1/4-wave open-ended transmission line with equal and opposite currents in each leg? And would not all radiation be essentially cancelled?

What happens to the power applied in this case? The line termination is a direct short which would produce total reflection and no power would be accepted by the antenna to be radiated. Hence, no conflict with Conservation of Energy.

As the ends of the legs are moved apart, a real component in the driving point impedance is developed and power begins to be accepted and radiated - all of it, as you point out - in some field form or other.

As the spacing increases until it reaches 180 deg, the driving-point impedance becomes whatever it is for that piece of wire at that location. And the real part will accept power and it will be radiated in the manner of the dipole it has become.

Anywhere close? <:}

73/72/oo, George W5YR - the Yellow Rose of Texas
Fairview, TX 30 mi NE of Dallas in Collin county EM13qe
Amateur Radio W5YR, in the 56th year and it just keeps getting better!
QRP-L 1373 NETXQRP 6 SOC 262 COG 8 FPQRP 404 TEN-X 11771 I-LINK 11735
Icom IC-756PRO #02121 Kachina 505 DSP #91900556 Icom IC-765 #02437

Roy Lewallen wrote:
>
> When two wires are fed in such a way that the fields cancel, the result
> isn't necessarily that the overall radiated field is less. Take for
> example an 8JK antenna. This consists of two parallel elements fed out
> of phase, and spaced much closer than a half wavelength (typically 1/8
> to 1/4 wavelength). The fields from these two elements don't fully
> reinforce in any direction; they partially or fully cancel in all
> directions. Yet the antenna produces more gain than a single element.
>
> If you put 100 watts into an antenna, 100 watts is radiated, less the

> power dissipated as heat. Pattern or field cancellation isn't a lossy
> process -- it's simply the superposition of waves in space. The 100
> watts of power radiated is the power *after* fields are all added up and
> cancellation and reinforcement have taken place. You don't put 100 watts
> into an antenna and make it disappear by field cancellation. So an
> antenna whose fields cancel doesn't necessarily radiate any less power
> than one whose fields reinforce.
>
> Here's what does happen. In a W8JK, the mutual coupling between the
> elements causes the element feedpoint resistance to be lower than for a
> single element. This results in higher current for a given power input,
> which in turn causes the fields to be greater. The result is that the
> overall radiated power is the same as it would be for a single element
> -- the extra field strength resulting from the heavier current just
> makes up for the loss of field strength due to field cancellation.
>
> There is a practical limit to this technique, however. Heavier currents
> result in higher I^2*R loss in the elements. This can be reduced by
> increasing the conductor size, and can be made negligible for reasonable
> element spacings. But if spacing gets too close, the currents become
> high enough that significant loss occurs for any practical conductor size.
>
> An inverted vee works the same way. One with a narrow angle radiates
> just as much power as one with wider spacing, less loss which occurs due
> to higher currents. For moderately narrow angles, the loss is usually
> insignificant. But with narrow angles, the feedpoint impedance is low,
> and it's difficult to match and feed without too much loss in the
> matching network or feedline. The tuning will also be narrow band. And
> if the wires are cut to be the proper length for a wider-angle inverted
> vee, a substantial amount of reactance will be present, making matching
> more difficult. So if a narrow-angle inverted vee works poorly, it's
> because not enough attention was taken to feeding and matching a low
> impedance antenna with low loss, not because of field cancellation. The
> problem truly is one of getting power to the antenna. Once there, nearly
> all of it will be radiated.
>
> Roy Lewallen, W7EL
>
> George, W5YR wrote:
> > The problem here is not getting power into the antenna - that can be done.
> > Antenna driving-point impedance is of importance but is not the problem
> > with this proposal.
> >
> > The problem is that the radiation from one leg will be largely cancelled by
> > the radiation from the other leg. Spread them out as far as possible and
> > see what happens . . .

2587. Re: EVERY THING IS NOW KNOWN ON ANTENNAS.

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-11 16:30:11 UTC
From: aunwin@fgi.net
Message-ID: <c4becf19.0208110830.22cd04d6@posting.google.com>
Source record: 137127

"George, W5YR" <w5yr@att.net> wrote in message news:<3D55E6AE.FEBBB9AD@att.net>...
> Art, with all respect, why must you depend upon and regard this group of
> *amateur* radio operators as the prevailing body that must pass judgement
> on your antenna for it to have any merit or value?
>
> You claim a new invention, have a patent (I think you said) but evidently
> you are now just sitting around and writing complaints to the newsgroup
> because no one is jumping up and down with enthusiasm.
>
> I guess I am most disturbed by your continued pleas for someone (an
> "authority") to explain to you and the world what you have and how it
> works. I may be wrong but it seems to me that you should be teaching *us*
> about your ideas and explaining to us how your antenna works and what is
> can do, etc.
>
Hi George, as you probably now aware I have responded to what I
thought was
a normal E mail.
Could I bother you with a request to send the response as a posting
tyo share with others on the thread?

I am becomming more and more computor illiterate and have yet to learn
how to paste. I am also quite busy trying to determine if I can afford
to move to
Menopause Hotel, a diapidated building in Billoxi, Mississippi which
concentrates on supplying personal care to those who believe they are
losing
their sanity.
Regards
Art

2588. Need ways to hide my antenna from my neighbors.

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-11 16:47:37 UTC
From: Recordking@Hotmail.com
Message-ID: <e8d89b3f.0208110847.73139897@posting.google.com>
Source record: 137128

I have a 5/8 comet antenna I need some ways to hide my antenna out of the site of my neighbors. I also need ways to hide a antenna tower if I were to get high one. I live in a area with alot of people nearby.

2589. Cheapo 20 foot mast?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-11 17:00:55 UTC
From: Julian <Julian@velonospamdog.demon.co.uk>
Message-ID: <kNi+aZEHhpV9EwRA@velodog.demon.co.uk>
Source record: 137144

Hello

I want to set up a random wire antenna going from the wall of my house to some kind of mast, roughly 20 foot tall. Any ideas on a cheap way of constructing a mast? I could cope with pouring some concrete in a hole a setting a length of plastic tubing in it as a base, but what would be a good cheap material to act as the mast, that would take the weight of the wire?
--
Julian

2590. Re: Cushcraft AR-6

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-11 17:22:44 UTC
From: "Edward A. Feustel" <efeustel@erols.com>
Message-ID: <aj66gk$m4m$1@bob.news.rcn.net>
Source record: 137129

I have measured mine which happens to be on the
ground at the moment. The diameter seems to be between 10 and 11 inches.
It is hard to measure because of the center post.

Ed, N5EI

"Michael R. McCarrey" <wa7qzr.take-out-the-junk@NOSPAMattbi.com> wrote in
message news:Wib59.51812$UU1.9899@sccrnsc03...
> On Sat, 10 Aug 2002 09:08:35 -0700, Mark Keith wrote:
>
> > "Michael R. McCarrey" <wa7qzr@Don'tBotherImSickOfSPAM.net> wrote in
> > message news:<Ol359.74953$D36.72353@rwcrnsc53>...
> >> Hello;
> >>
> >> Does anyone happen to know what the diameter of the tuning ring on an
> >> AR-6 might be? Cushcraft "Technical Support" doesn't :-)
> >>
> >> Please reply here.
> >>
> >> Thanks,
> >>
> >> Mike
> >
> > I have the manuals for both antennas."AR-10 and AR-6". I thought they
> > gave the dimensions for the loops but I guess they don't. It's not
> > really critical. Appx 9 inches dia will work for 10m. I would think the
> > 6m version is appx 4-5 inches dia. It's not critical as you tap the
> > middle area of the coil. If your dia varies a bit from theirs, it will
> > just tap at a slightly different place. I've made homebrew versions of
> > both those antennas. MK
>
> Hi Mark,
>
> This antenna began it's life as a CB antenna (AR-11, I think). A previous
> owner shortened the base section, trying for 29.6 mHz., I assume.
>
> When I got hold of it, I "reconstructed" it according to the AR-6
> dimensions, including the coax capacitor. As you mentioned, the Cushcraft
> manuals don't include the ring dimensions. I constructed three different
> rings: 8", 6", and 4". No matter which one I use, I end up with resonance
> between 52-54 mHz (I'm trying for 50.25 mHz center), with an XC of over
> 150-Ohms. The lowest SWR obtainable is always above 2:1, with the tuning
> arm set right at the radiator end of the ring.
>
> I've been using RG-8/U coax to feed it, but I'm beginning to think it's

> perhaps decomposed somewhere along the run. I guess it's time to drag out
> the Cantenna. It's a shame when you can't trust new coax to really be
> "new".
>
> Anyhow, thanks for the feedback. I wanted to make sure I was close to the
> right ring size before I tossed the feedline.
>
> 73
>
> Mike

2591. Re: Cushcraft AR-6

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-11 17:51:22 UTC
From: nm5k@wt.net
Message-ID: <25eb70d7.0208110951.395b8c9@posting.google.com>
Source record: 137130

"Michael R. McCarrey" <wa7qzr.take-out-the-junk@NOSPAMattbi.com> wrote in message news:<Wib59.51812$UU1.9899@sccrnsc03>...
> On Sat, 10 Aug 2002 09:08:35 -0700, Mark Keith wrote:
>
> > "Michael R. McCarrey" <wa7qzr@Don'tBotherImSickOfSPAM.net> wrote in
> > message news:<Ol359.74953$D36.72353@rwcrnsc53>...
> >> Hello;
> >>
> >> Does anyone happen to know what the diameter of the tuning ring on an
> >> AR-6 might be? Cushcraft "Technical Support" doesn't :-)
> >>
> >> Please reply here.
> >>
> >> Thanks,
> >>
> >> Mike
> >
> > I have the manuals for both antennas."AR-10 and AR-6". I thought they
> > gave the dimensions for the loops but I guess they don't. It's not
> > really critical. Appx 9 inches dia will work for 10m. I would think the
> > 6m version is appx 4-5 inches dia. It's not critical as you tap the
> > middle area of the coil. If your dia varies a bit from theirs, it will
> > just tap at a slightly different place. I've made homebrew versions of
> > both those antennas. MK
>
> Hi Mark,
>
> This antenna began it's life as a CB antenna (AR-11, I think). A previous
> owner shortened the base section, trying for 29.6 mHz., I assume.
>
> When I got hold of it, I "reconstructed" it according to the AR-6
> dimensions, including the coax capacitor. As you mentioned, the Cushcraft
> manuals don't include the ring dimensions. I constructed three different
> rings: 8", 6", and 4". No matter which one I use, I end up with resonance
> between 52-54 mHz (I'm trying for 50.25 mHz center), with an XC of over
> 150-Ohms. The lowest SWR obtainable is always above 2:1, with the tuning
> arm set right at the radiator end of the ring.

You shouldn't have to be all the way towards the radiator. Mine "usually" tune about in the middle of the coil. If you don't get a good match no matter where you tap the coil, you may need the tweak the cap value or radiator length. I show the "normal" length for the C/C version as 7 inches, or 18 cm long. I'd probably set the radiator height as about 111.75 inches or so to tune 50.25 mhz. I've built one

of these antennas for 6m and had no problems tuning it. It acted the same as my 10m versions. If you are ending up tuned to 52-54 mhz, I would think your radiator is a bit short. The loop/cap is just an impedance matching device. If your antenna is short or long, the matching device is not going to be able to "pull" it into tune too much. You will have to adjust the radiator. Don't give up. It will work with a flat 1:1 swr. I just looked at mine out in the backyard. Now, mine is tuned for about the middle upper part of the band, for FM use. "about 52-52.5 mhz" My radiator is 104.5 inches. My loop is made from 3/8 inch copper tube, and is appx 6 inches dia. The tap is about 6 inches from the base, or about 1/3 the way from the base to the radiator. My cap is exactly 8 inches long of rg-58. As I remember , it had a good match. But I haven't used it in quite a while. I built a 3 el yagi since then.

> I've been using RG-8/U coax to feed it, but I'm beginning to think it's
> perhaps decomposed somewhere along the run. I guess it's time to drag out
> the Cantenna. It's a shame when you can't trust new coax to really be
> "new".

I doubt it's the coax. Bad coax gives you easier matches than good coax. Really bad coax will make anything look good. You can take real bad coax, stick a pin in the far end, and still see a decent SWR.

> Anyhow, thanks for the feedback. I wanted to make sure I was close to the
> right ring size before I tossed the feedline.

I think your radiator needs to be longer. About 111.75 inches or so I think would be right for the bottom end of the band. When working properly, the tap for the loop will be about in the middle of the range. The cap value is not critical, but can be trimmed for best match once you get everything in the right ballpark. Usually, you don't need to as the loop tap will give you enough leeway. MK

2592. Re: SWR - Why isn't the energy re-absorbed at the TX?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-11 17:55:08 UTC
From: CAM <w5dxp@hotmail.com>
Message-ID: <3D56A4FC.9B7D8070@hotmail.com>
Source record: 137131

VE9SRB wrote:
>
> "CAM" <w5dxp@hotmail.com> wrote:
> > Why not, Steve? Assume you have two 200 watt signals of 100 volts at
> > 2 amps each. You say you can add them to get 400 volts at 4 amps. Why
> > is that not a violation of the conservation of energy principle?
>
> Thats not what I said at all. 100 V forward + 100 V forward (in-phase)
> results in 200 V forward not 400 V forward. So, in a 50 ohm line you would
> have 200 V at 4 A. The resulting forward power would be 800 W.

The 400 volts was a typo, Steve. I meant 200 volts. And you CANNOT get
800 watts out of two 200 watt waves. Please show me how to hook up two
RF generators, each putting out 100 volts at 2 amps to obtain 200 volts
at 4 amps.

> Lets assume that we have a constant 100 V source connected to a 50 ohm load.
> The resulting current in the 50 ohm load is 2 amps. The power dissipated in
> the 50 ohm load is 200 W. In this situation we could say that this is a
> "200 Watt power source". In reality, it is only a constant 100 V source.
> Presuming that it is a "200 Watt power source" is only a result of the fact
> that it is a 100 V source connected, by itself, to a 50 ohm load. The law
> of conservation of energy is maintained because the source delivers 200 W
> and the load dissipates 200 W.
>
> Now lets say we have a second constant 100 V source. When we disconnect the
> first 100 V source and connect this second 100 V source to the 50 ohm load,
> we have the same situation as above. The second source delivers 200 W of
> power and the load dissipates 200 W of power. Again, we could call this
> second source a "200 Watt source". But again, this is only a result of the
> load it is connected to.
>
> Now lets connect both of these constant 100 V sources in series to the load
> at the same time. Are we now connecting two "200 W sources" and would we
> expect the total power dissipated in the 50 ohm load to be 400 W (200W +
> 200W)? No, not at all. The fact that 200 W of power is delivered to the
> load when each source is connected individually to the load is irrelevant.
> All that matters now is what happens when these two constant 100 V sources
> are connected to the 50 ohm load at the same time.
>
> When both of these sources are connected to the 50 ohm load at the same
> time, the total voltage in the load becomes 200 V (100 V + 100V) and the
> total current becomes 4 A.

Not if the power output of each generator is limited to 200 watts!!!!!
You have the generators delivering twice as much power. That's not true
of the waves you are adding in the transmission line. Each of those waves
have a FIXED power associated with them. A forward wave of 106.066 volts
and 0.707 amps in a 150 ohm feedline has a power of 75 watts associated
with it, no more and no less. You cannot magically obtain more energy out
of that wave by adding it to another wave. A wave of 75 joules/sec added
to a wave of 8.33 joules/sec cannot result in 133.33 joules/sec. "75 joules
plus 8.33 joules equals 133.33 joules" certainly violates the conservation
of energy principle. Please see my exchange with Bill Klocko.

Please answer my question, Steve. When the load in the earlier example is
switched from 150 ohms to 50 ohms, the power delivered to the load increases
by 25 watts and 25 watts is no longer dissipated in the signal generator.
How does the 25 watts that was previously dissipated in the signal generator
make it to the 50 ohm load without a voltage and current component?
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
------== Over 80,000 Newsgroups - 16 Different Servers! =-----

2593. Re: EVERY THING IS NOW KNOWN ON ANTENNAS.

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-11 17:57:43 UTC
From: richardharrison@webtv.net
Message-ID: <29761-3D56A597-245@storefull-2393.public.lawson.webtv.net>
Source record: 137133

Art, KB9MZ wrote:
"#1. Accepted law. F1 +/- F2 = F3.

"5. If the other resonant structure which is coupled receives energy it will either null radiation from that portion or radiate in accordance to law #1 shown above."

Art`s #1 seems to be the heterodyne story of sum and difference mixing products. This requires a non-linear circuit (a loop doesn`t qualify), maybe a mixer such as a diode.

Art`s #5 seems to correctly indicate a coupled radiation structure producing destructive interference (in some direction, which means it also produces constructive interference in another direction), or it can produce sum and difference frequencies.

Coupled radiators produce a directional pattern. They usually are linear and so they do not produce mixing. Combined radiation from coupled radiators is limited to the exciting frequency(s).
The frequencies mentioned in bandwidth specifications are limits at which the antenna signal level is reduced to an arbitrary level, often 3 db below the best level, or half the maximum power in the best direction.

This means that when the antenna is excited at the limit frequency instead of it`s maximum gain frequency, its response will be down by the arbitrary amount. This has nothing to do with the antenna generating extra frequencies when excited.

Best regards, Richard Harrison, KB5WZI

2594. Re: Antenna length versus feedline length

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-11 18:11:41 UTC
From: 'Doc <w5lz@icok.net>
Message-ID: <3D56A8BB.B63AA9A6@icok.net>
Source record: 137132

Well, I guess you could scrape all the
insulation off of the wire...
'Doc

2595. Re: SWR - Why isn't the energy re-absorbed at the TX?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-11 18:21:28 UTC
From: CAM <w5dxp@hotmail.com>
Message-ID: <3D56AB28.CC825AFA@hotmail.com>
Source record: 137134

Thanks to Steve and Bill, I now have a relatively simple example that illustrates what I have been saying ever since an argument with Jon Bloom a few years ago over his QEX article, "Where Does the Power Go?"

The following example is driven by a signal generator which contains circuitry that causes all reflected energy to be dissipated. Except for the dissipation in the signal generator and the load, the system is lossless and there are no common mode components.

```
100w Source---50 ohm feedline---+---1/2WL 150 ohm feedline---+
| |
| o---/\/\/\/\/\/\---+
| switch / Load ^ 150 ohms tapped
+--------shield-------------------o | at 50 ohms
|
o----------+
```

With the switch in the 150 ohm load position, there is 100w of forward power on the 50 ohm feedline. There is 25w of reflected power on the 50 ohm feedline that gets dissipated in the signal generator. The forward power on the 150 ohm feedline is 75w and 75w reaches the 150 ohm load resistor because there are no reflections from the 150 ohm load.

Now the switch is thrown to the 50 ohm load position. The forward power on the 50 ohm feedline remains at 100w but now there is no reflected power on the 50 ohm feedline so there is no dissipation of reflected power in the source. We now have 100w reaching the 50 ohm load resistor. The power dissipated in the source has decreased from 25w to zero watts. The power in the load has increased from 75w to 100w.

The question is: How does the 25 joules/sec get from the source to the load without contributing to a component of forward voltage and current on the 150 ohm feedline?

The answer is that it does contribute to forward voltage and current on the 150 ohm feedline and needs to be taken into account in the equations.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
------== Over 80,000 Newsgroups - 16 Different Servers! =-----

2596. Re: Homebrew mobile antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-11 18:46:42 UTC
From: jgboyles@aol.com
Message-ID: <20020811144642.09278.00003257@mb-fa.aol.com>
Source record: 137135

>Details of homebrew mobile antennas are rather scarce.

Sent details by email.
73 Gary N4AST

2597. Re: SWR - Why isn't the energy re-absorbed at the TX?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-11 18:49:02 UTC
From: VE9SRB <srbest@att.net>
Message-ID: <yky59.8249$Ep6.616042@bgtnsc05-news.ops.worldnet.att.net>
Source record: 137136

"CAM" <w5dxp@hotmail.com> wrote in message
news:3D56A4FC.9B7D8070@hotmail.com...
> VE9SRB wrote:
> >
> > "CAM" <w5dxp@hotmail.com> wrote:
> > > Why not, Steve? Assume you have two 200 watt signals of 100 volts at
> > > 2 amps each. You say you can add them to get 400 volts at 4 amps. Why
> > > is that not a violation of the conservation of energy principle?
> >
> > Thats not what I said at all. 100 V forward + 100 V forward (in-phase)
> > results in 200 V forward not 400 V forward. So, in a 50 ohm line you
would
> > have 200 V at 4 A. The resulting forward power would be 800 W.
>
> The 400 volts was a typo, Steve. I meant 200 volts. And you CANNOT get
> 800 watts out of two 200 watt waves. Please show me how to hook up two
> RF generators, each putting out 100 volts at 2 amps to obtain 200 volts
> at 4 amps.
>

You're placing very specific constraints on the example. They're constant
100 V sources. Why, to discuss basic concepts, do you need to limit their
output current to 2 A? It seems that you're trying to limit the example
conditions to satisfy your preconceived conclusion.

> > When both of these sources are connected to the 50 ohm load at the same
> > time, the total voltage in the load becomes 200 V (100 V + 100V) and the
> > total current becomes 4 A.
>
> Not if the power output of each generator is limited to 200 watts!!!!!

You're trying to limit the discussion again. Why do we need to limit the
source to 200 watts maximum output power?

> You have the generators delivering twice as much power. That's not true
> of the waves you are adding in the transmission line. Each of those waves
> have a FIXED power associated with them.

Only when they are considered as being independent waves existing alone in
the transmission line. We are discussing what happens when multiple
"independent waves" combine together in the same transmission line. The
"fixed power" of the individual waves is no longer a valid concept. There
are simply multiple forward voltages and currents combining to become the
steady state total forward V and I. The power in the total wave is a result
of the total V and I. Everything else that happens in the system ensures
that the law of conservation of energy is satisfied.

The relationships associated with adding multiple forward voltages and currents remain valid at all times. 100 V + 100 V (in phase) will always equal 200 V. 200 V forward in a 50 ohm line is always equivalent to 800 W forward. From your perspective, you want to limit either the resultant current or voltage so as to maintian a very specific power relationship.

> Please answer my question, Steve. When the load in the earlier example is
> switched from 150 ohms to 50 ohms, the power delivered to the load increases
> by 25 watts and 25 watts is no longer dissipated in the signal generator.
> How does the 25 watts that was previously dissipated in the signal generator
> make it to the 50 ohm load without a voltage and current component?
> --

I'm not sure what earlier example you are talking about. In any event, what you are talking about does not change the relationships associated with adding forward voltages and currents.

Start with a simple example where you have a fixed voltage source with a fixed internal impedance and we can discuss whatever steady state conditions you want.

Steve VE9SRB

2598. Re: Antenna For Picking Up Marine Broadcasts Around 2 MHz: Suggestions, Pleae?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-11 18:50:40 UTC
From: nm5k@wt.net
Message-ID: <25eb70d7.0208111050.7cf825f2@posting.google.com>
Source record: 137137

"Robert Rose" <rgsrose@tiac.net> wrote in message
news:<aj2uhs$7hb$1@slb1.atl.mindspring.net>...
> Hello:
>
> Am very interested in picking up some of the Marine broadcasts around 2 MHz
> (e.g., the distress freq. at 2182, 2670, etc.)
>
> Presently, have a very simple random-wire receive only antenna running
> around 3 sides of my attic, then down to my receiver.
>
> All I seem to pick up around 2 MHz is noise; higher freq's work reasonably
> well.
> Radio probably not a factor, as it's a new JRC NRD 545.

That is a good sign actually. If you didn't pick up noise, then I'd be
worried.
>
> So, my guess is that my random wire is probably a miserable match for these
> marine freq's.

It doesn't really matter if it is or not. The s/n ratio will likely be
unchanged if you added matching. All you do is pump up the S meter. If
you listen to the radio blindfolded, you will likely notice no real
difference.

>
> Also, there is a strong possibility that a major part of my problem is that
> I'm 25 miles or so from the water.
> (I'm in a town due West by that distance from Boston harbor).
> The marine transmissions are mainly, I'm told, SSB, so I "think" I should be
> able to pick them up ?
>
> Should I use a different antenna for these freq's? A simple vertical whip
> type? Other?
> If so, any suggestions would be most appreciated. (it has to fit reasonably
> in my attic).

In your case you are receiving local "ground wave" signals. You will
need a vertical to do any good. Actually, I'm kind of surprised they
would be very active on those frequencies. Seems to me they would
favor the 162 mhz marine band for local stuff...
>
> I'm really new at this, so please don't hesitate to make the suggestions,
> and your thoughts on this, as detailed as

> you can-really appreciate the help.

For low band use, as a general rule, if you hear a good increase in noise when hooking up your antenna, the antenna is good enough for receiving purposes. "Not counting any prefered pattern" Actually, I consider this true even up to 30 mhz for general use. If you hear noise increase, but not the station, either the propagation is not willing, or the pattern of the antenna is nulling the signal out, or you have a polarization problem. Cross polarization can cost you 20 db in some cases. You might consider a homebrew small receiving loop. With that you can null out noise, etc. Should respond to vertically polarized signals ok. I have one of these I use for MW. It's a 16 inch circle with 12 turns, not counting the 2 turn coupling loop. With it's present variable cap, it tunes 500-2000 kc. A good antenna for your thing would be a outdoor inv L or vertical, but you have ruled that out.. MK

2599. Re: SWR - Why isn't the energy re-absorbed at the TX?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-11 19:00:17 UTC
From: Gene Fuller <W4SZzzzzz@att.net>
Message-ID: <3D56B447.33BA28A@att.net>
Source record: 137138

Cecil,

I musta been asleep in basic circuits class that day they discussed sources that can simultaneously force a specific voltage AND a specific current into any load. Last I heard it was the impedance of the load that determines the V-I relationship in the load, not some "wish" or "demand" from the source.

You have set up an impossible situation. Steve is correct.

I will assume identical voltage sources below, but the same argument holds for current sources or "real" sources.

Case one: The sources are combined in parallel, with the voltages in phase.

The resulting voltage into the 50 ohm load is still 100 volts, and the load current is still 2A. Load power is still 200W. What happens to the other 200W? You can choose from an infinite number of possibilities, but one answer is that the output current from each source drops to 1A, with the corresponding output power of 100W from each source.

Case two: The sources are combined in series, with the voltages in phase.

The resulting voltage into the 50 ohm load is now 200 volts, and the load current is now 4A. Load power is now 800W. Where does the "extra" 400W come from? Again, there is an infinite number of possibilities, but one answer is that the output current from each source rises to 4A, with the corresponding output power of 400W from each source.

You cannot arbitrarily force the conditions you propose. Something has to give, and either the output voltage, the output current, or both must change when you combine sources. If the sources cannot accommodate the new requirements then something will burn up or the proposed load conditions simply cannot be met.

The only thing that would make your scheme hang together is that somehow the load impedance changes to 100 ohms when the sources are combined in series. How does the load change happen?

I am familiar with Thevenin equivalent circuits and Norton equivalent circuits. It appears there is now something new to learn, the CAM equivalent circuit.

To add insult to injury, this sort of manipulation of the V-I characteristics forced onto the load, regardless of the load impedance, is just the sort of thing that makes the E-H antenna "work".

73,
Gene, W4SZ

CAM wrote:
>
> VE9SRB wrote:
> >
> > Thats not what I said at all. 100 V forward + 100 V forward (in-phase)
> > results in 200 V forward not 400 V forward. So, in a 50 ohm line you would
> > have 200 V at 4 A. The resulting forward power would be 800 W.
>
> The 400 volts was a typo, Steve. I meant 200 volts. And you CANNOT get
> 800 watts out of two 200 watt waves. Please show me how to hook up two
> RF generators, each putting out 100 volts at 2 amps to obtain 200 volts
> at 4 amps.

2600. New Boardsystem for Magnetic Loop Antennas

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-11 19:23:08 UTC
From: Andre Vaupel <avaupel@web.de>
Message-ID: <wQy59.2453448$Bm3.402888@news.easynews.com>
Source record: 137139
Cross-posted to: rec.radio.amateur.antenna,rec.radio.shortwave

Hello Dear OM!

Carsten (DF2DD) and Andre (DL4QB.that's me J) are enthusiastic user

of Magnetic Loop Antennas. I searched for information about Magnetic Loops

since a while and I found some very interesting stuff at Carstens Homepage.

There is nice a board with less but very helpful traffic. It was very
helpful

to collect the needed information as well. In the meanwhile, we improved the

Board System and we would like to spent an own Domain very soon J

We thought also about an English part within the Board System. This is now

done and can be used! It would be very nice to get some nice information,

hints and experiences of other Magnetic Loop users.

If you can suggest someone this board, we would be happy as well J!

There are already some docs in German available.if you like to understand
it,

Please ask me and I will translate it for you.

URL: http://www.df2dd.de (klick "Direkt zum Loopforum")

73 de Andre (DL4QB) and Carsten (Df2DD)

2601. Re: SWR - Why isn't the energy re-absorbed at the TX?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-11 19:37:35 UTC
From: VE9SRB <srbest@att.net>
Message-ID: <32z59.7592$Ke2.643669@bgtnsc04-news.ops.worldnet.att.net>
Source record: 137140

"CAM" <w5dxp@hotmail.com> wrote in message
news:3D56AB28.CC825AFA@hotmail.com...
> Thanks to Steve and Bill, I now have a relatively simple example that
> illustrates what I have been saying ever since an argument with Jon
> Bloom a few years ago over his QEX article, "Where Does the Power Go?"
>
> The following example is driven by a signal generator which contains
> circuitry that causes all reflected energy to be dissipated. Except
> for the dissipation in the signal generator and the load, the system
> is lossless and there are no common mode components.
>
> 100w Source---50 ohm feedline---+---1/2WL 150 ohm feedline---+
> | |
> | o---/\/\/\/\/\/\---+
> | switch / Load ^ 150 ohms tapped
> +--------shield-------------------o | at 50 ohms
> |
> o----------+
>
> With the switch in the 150 ohm load position, there is 100w of forward
> power on the 50 ohm feedline. There is 25w of reflected power on the 50
> ohm feedline that gets dissipated in the signal generator. The forward
> power on the 150 ohm feedline is 75w and 75w reaches the 150 ohm load
> resistor because there are no reflections from the 150 ohm load.
>
> Now the switch is thrown to the 50 ohm load position. The forward power
> on the 50 ohm feedline remains at 100w but now there is no reflected
> power on the 50 ohm feedline so there is no dissipation of reflected
> power in the source. We now have 100w reaching the 50 ohm load resistor.
> The power dissipated in the source has decreased from 25w to zero watts.
> The power in the load has increased from 75w to 100w.
>

Your power relationships, as described, are seriously flawed.

First, the *total* power dissipation in the system does not have to be the same in each example - this is not a requirement of the law of conservation of energy.

Second, the *total* power dissipation in the system does not have to be 100 W.

Third, the power dissipation in the source cannot go to zero watts with the 50 ohm load. If it did, there would be no current flow in the source's internal dissipating resistance (the R that "dissipates" the 25 W of

reflected power). So as not to violate kirchoffs and ohms laws, 0 A in the source R would require that the current in the effective load seen at the source output also be zero, thus requiring that no power be delivered to the load.

Fourth, the 25 W of reflected power does not get dissipated in the source quite the way you think.

A more correct way to present this example would be to use a fixed voltage source that constantly drives a 50 ohm line with 100 W of forward power. Your circuit diagram would look as follows:

141.421 V --- 50 ohm Zs -- + -- 50 ohm line -- + Load

Lets first assume that the load is 150 ohms.

In the initial state, the forward source voltage divides between the 50 ohm source impedance (Zs) and the 50 ohm line. 70.711 V forward is developed across Zs - the *initial* power dissipation in Zs is 100 W. 70.711 V forward is developed in the 50 ohm line. 100 W of forward power travels towards the load.

70.711 V forward arrives at the load. It sees a reflection coefficient of 0.5. A reflected voltage of 35.355 V is developed at the 150 ohm load. The total voltage developed at the load is 106.066 V. 75 Watts power is delivered to the load.

The 35.355 V reflected arrives at the source and sees a 50 ohm load - Zs. The 35.355 V is delivered across Zs. It is traveling in the opposite direction as the 70.711 V forward in Zs such that the total steady state voltage across Zs is 35.355 (70.711 - 35.355). The *total* power dissipation in Zs is 25 Watts. Note how the total 25 W is developed - from the combination of a forward and rearward traveling voltage and current. Note as well that the total power dissipation in the system is 100 W - 25 W in the source and 75 W in the load.

Now, lets change the load to 50 ohms from 150 ohms. In this case, the initial state is the same: 70.711 V forward is developed across Zs - the initial power dissipation in Zs is 100 W. 70.711 V forward is developed in the 50 ohm line. 100 W of forward power travels towards the load.

70.711 V forward arrives at the load. It sees a reflection coefficient of 0. No reflected voltage is developed at the load. The total voltage developed at the load is 70.711 V. 100 Watts power is delivered to the load.

Now, at the source, there is no arriving reflected voltage and the steady state voltage remains 70.711 V at Zs. The power dissipation in the source is now 100 W *not* 0 W. The total power dissipation in the system is now 200 W. 100 W in the source and 100 W in the load.

In order to analyze the power relationships in a transmission line system you must consider what is happening with the traveling voltage and current. Looking at only steady state power levels does not provide insight into the

complexity of the problem.

Steve VE9SRB

2602. Re: SWR - Why isn't the energy re-absorbed at the TX?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-11 19:40:06 UTC
From: CAM <w5dxp@hotmail.com>
Message-ID: <3D56BD96.69C4671E@hotmail.com>
Source record: 137143

VE9SRB wrote:
>
> "CAM" <w5dxp@hotmail.com> wrote:

> You're placing very specific constraints on the example. They're constant
> 100 V sources. Why, to discuss basic concepts, do you need to limit their
> output current to 2 A? It seems that you're trying to limit the example
> conditions to satisfy your preconceived conclusion.

Nope, I'm limiting the example conditions to satisfy typical ham conditions.
A typical ham is running 70.7v at 1.414a into a 50 ohm Z0-match. There is
no additional current or power available!!!! If there is no additional voltage
available and no additional current available, how do you get additional power?

> You're trying to limit the discussion again. Why do we need to limit the
> source to 200 watts maximum output power?

Because the typical ham's transceiver is limited to 100 watts!!!! "Blood
out of a Turnip" comes to mind. So does the principle of conservation of
energy. Would you answer a question truthfully, Steve? Please select from
the following:

I, Steve,

a. have not taken the time to understand what Cecil is talking about.
b. have realized my mistake and am attempting to obfuscate the issue.
c. other (please explain)_____

Please help me to understand what you are missing about my argument.

> Only when they are considered as being independent waves existing alone in
> the transmission line.

See my exchange with Bill Klocko. He had no problem with breaking everything
down into independent components. He was forced to arrive at the same conclusion
as you did a year ago - that energy can be annihilated which is, of course,
false. Remember your phantom wave theory?

> We are discussing what happens when multiple
> "independent waves" combine together in the same transmission line. The
> "fixed power" of the individual waves is no longer a valid concept.

The fixed energy is certainly a valid concept!!! Waves in a transmission
line are forced to obey the boundary conditions. If a wave is 106.066 volts
at 0.707 amps in a 150 ohm transmission line, there is no way to get more
power out of that wave than 106.066v * 0.707a = 75 joules/sec except maybe
by supernatural forces or magic.

> There
> are simply multiple forward voltages and currents combining to become the
> steady state total forward V and I. The power in the total wave is a result
> of the total V and I. Everything else that happens in the system ensures
> that the law of conservation of energy is satisfied.

And we are discussing *exactly* what happens. Why are you trying to avoid
that discussion? Overtime I have pinned down an RF engineer on this subject,
he responds with, "That's not important." What are all these RF gurus trying
to hide/avoid. Is it possible that they have been spreading Old Wives' Tales
for so many years that they have forgotten what the facts are? - or maybe
they never knew the facts and we are, as we speak, revolutionizing reflection
theory?

> The relationships associated with adding multiple forward voltages and
> currents remain valid at all times. 100 V + 100 V (in phase) will always
> equal 200 V. 200 V forward in a 50 ohm line is always equivalent to 800 W
> forward. From your perspective, you want to limit either the resultant
> current or voltage so as to maintian a very specific power relationship.

No, no, no. I want to limit the energy to the total energy in the system.
The voltages and currents fall out from the total energy available. You
are simply ignoring the source of energy contained in the destructive
interference process. We had this discussion a year ago. Energy CANNOT
disappear from a point close to the source and magically re-appear close
to the load. Any energy transferred from the source to the load MUST be
contained in the forward energy wave. You are completely ignoring the
energy involved in the destructive/constructive interference process.

> I'm not sure what earlier example you are talking about. In any event, what
> you are talking about does not change the relationships associated with
> adding forward voltages and currents.

Translation: I refuse to answer because my answer would violate the
conservation of energy principle and thus prove that I am wrong.

> Start with a simple example where you have a fixed voltage source with a
> fixed internal impedance and we can discuss whatever steady state conditions
> you want.

Please see my latest example. It is a signal generator delivering a fixed
100 watts into a fixed 50 ohm feedline with no reflections. The load is
switched from 150 ohms to 50 ohms. The 25 watts that was dissipated in
the signal generator during the 150 ohm load is then re-routed to the
50 ohm load. How does that 25 joules/sec make it from the source (when the
load is 150 ohms) to the 50 ohm load (after switching) without becoming part
of the voltage/current contained in the forward wave?
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

2603. Re: RFI problem witho Security System

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-11 19:43:07 UTC
From: Terry Sellick <tsellic@attglobal.net>
Message-ID: <3d56c223_1@news1.prserv.net>
Source record: 137141

I used both 77 and 43 type toroids from Palamor. I bought a
RF kit containing several styles and ID's. I wrapped as many turns
as I could. I'm not sure what F material is.

"CAM" <w5dxp@hotmail.com> wrote in message
news:3D5551A3.321E8E71@hotmail.com...
> Terry Sellick wrote:
> > I have tried placing toroids
> > on both control panel cables, the security system power connection,
> > the security telephone connection, and all cables entering the security
> > panel box.
>
> What kind of material in your toroids? How many turns? Ten turns
> on an 'F' material toroid works wonders for me.
> --
> cheers, CAM http://www.qsl.net/w5dxp
>
>
> -----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
> http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
> -----== Over 80,000 Newsgroups - 16 Different Servers! =-----

2604. Best Homebrew Antenna For 2 Metres?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-11 19:43:39 UTC
From: fiddelhead@hotmail.com
Message-ID: <Xns9267AA2234FC2fiddelheadhotmailcom@198.164.200.20>
Source record: 137142

Hello. I'm running a mobile 2M radio at home from a power supply. Any comments on what would be the best homebrew antenna to build for this that is not a yagi, I need an omni-directional one.

Any help or comments appreciated.

Scott

2605. Re: RFI problem witho Security System

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-11 19:44:31 UTC
From: Terry Sellick <tsellic@attglobal.net>
Message-ID: <3d56c276_2@news1.prserv.net>
Source record: 137145

The cable runs from the second floor to the basement, making several turns through walls and floors. It's almost impossible to run another cable.

"'Doc" <w5lz@icok.net> wrote in message news:3D556979.B64C8230@icok.net...
>
>
> Terry,
> Have you tried using shielded cable along
> with the other things you've done? Never
> messed with a security system, but shielded
> cable worked wonders for my phone/computer
> system.
> 'Doc

2606. Re: SWR - Why isn't the energy re-absorbed at the TX?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-11 19:52:07 UTC
From: CAM <w5dxp@hotmail.com>
Message-ID: <3D56C067.688B8A6E@hotmail.com>
Source record: 137146

Gene Fuller wrote:
> I musta been asleep in basic circuits class that day they discussed
> sources that can simultaneously force a specific voltage AND a specific
> current into any load.

Sorry to disappoint you Gene, but a 100w ham transceiver working into
a 50 ohm Z0-match at the input of an antenna tuner *IS* forcing a specific
voltage AND a specific current into the antenna tuner. In particular, it
is forcing 70.7 volts at 1.414 amps in phase. The power output of the
transceiver is fixed and there are no reflections. These conditions exist
no matter what the antenna impedance or SWR. The energy into the system
(antenna tuner) *IS FIXED* at 70.7 volts * 1.414 amps = 100 watts.

> You have set up an impossible situation. Steve is correct.

The impossible situation is based on Steve's logic. If it is impossible,
Steve is wrong. It was a Primrose Path argument.

Everything you said after the above is irrelevant. We are dealing with a 100
watt ham transceiver delivering 100 watts into 50 ohms (antenna tuner) with
no reflections at the input of the tuner. If you are trying to divert the
issue, it won't work. If you simply don't understand, please pay attention.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

2607. Re: A closer look

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-11 20:01:02 UTC
From: "J. Harvey" <JM002.Harvey_ANTI*SPAM_@Sympatico.ca>
Message-ID: <unz59.248$%R5.150387@news20.bellglobal.com>
Source record: 137149

> > > They are annihilated and so is their energy.

"CAM"
> That complication around black holes is why
> I added "in a transmission line". :-)

Check to see if your transmission line is slowly getting more massive...
::--))

2608. Re: Cheapo 20 foot mast?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-11 20:02:17 UTC
From: CJ <fantastic@sex.edu>
Message-ID: <uldgmbs1l8p1ad@corp.supernews.com>
Source record: 137147

Hello Julian,
I have had 30 ft of Radio Shack "heavy duty steel TV mast" on the roof
in a Radio Shack tripod mount for over 6 years with no issues at all.
It comes in 10 ft lengths and is about a "buck a foot" as I recall.
Maybe more now..since it has been over 6 years ago....

My only other comment is that I have seen some posts from Hams that
used 10 ft lengths of what they called chain link "fence railing"
because it was cheap and later regretted it because it bent and/or
sheared.

I know some Hams detest the words "Radio Shack" and condemn anyone
that uses them..however my RS mast sections and really every other RS
item I have ever owned has worked fine and continues to do so.

I do have links on my web site for Radio Shack manuals for all their
products, Ham Radio and otherwise...
1. http://www.ab7sl.com/index.html?row1col2=links.html

Hope this helps....good luck
--
73 / DX de AB7SL - Charles
AB7SL - Ham Radio Pages
Prescott, Arizona - USA
www.ab7sl.com

"Julian" <Julian@velonospamdog.demon.co.uk> wrote in message
news:kNi+aZEHhpV9EwRA@velodog.demon.co.uk...
> Hello
>
> I want to set up a random wire antenna going from the wall of my house
> to some kind of mast, roughly 20 foot tall. Any ideas on a cheap way
of
> constructing a mast? I could cope with pouring some concrete in a hole
a
> setting a length of plastic tubing in it as a base, but what would be
a
> good cheap material to act as the mast, that would take the weight of
> the wire?
> --
> Julian

2609. Re: SWR - Why isn't the energy re-absorbed at the TX?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-11 20:04:20 UTC
From: CAM <w5dxp@hotmail.com>
Message-ID: <3D56C344.FAE7DB2B@hotmail.com>
Source record: 137150

VE9SRB wrote:
>
> "CAM" <w5dxp@hotmail.com> wrote:
> First, the *total* power dissipation in the system does not have to be the
> same in each example - this is not a requirement of the law of conservation
> of energy.

You're absolutely wrong there, Steve. The signal generator is putting out a constant 100 watts into 50 ohms and dissipating all the reflected power it sees in a 50 ohm resistor. Aren't you familiar with signal generators? In this particular example, the total power dissipation in the system *MUST* be 100 watts. Sorry about that but that is why I chose this particular configuration.

> Second, the *total* power dissipation in the system does not have to be 100
> W.

Yes it does, Steve!!!! The signal generator is delivering 70.7 volts at 1.414 amps (100 watts) into 50 ohms. There is no other source. All the reflected power seen by the source is dissipated by circuitry in the source. I realize that circulators are not perfect, but for the sake of a conceptual argument, let's consider this particular circulator to be perfect and all the reflected power seen by the source is dissipated in a 50 ohm resistor..

> Third, the power dissipation in the source cannot go to zero watts with the
> 50 ohm load.

The power dissipation in the *source's reflected power circuitry* goes to zero watts. Absolutely nothing has been said about the source's internal impedance which is irrelevant since the source sees nothing except a 50 ohm load. This is where you tripped me up a year ago. This time, the problem doesn't exist.

> Fourth, the 25 W of reflected power does not get dissipated in the source
> quite the way you think.

Of course it does, Steve. It has a perfect circulator built in to route the reflected power to a 25 ohm resistor. Everything you had to say after this is invalid because you do not understand the configuration. Please try again.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
------== Over 80,000 Newsgroups - 16 Different Servers! =-----

2610. Re: Need ways to hide my antenna from my neighbors.

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-11 20:05:10 UTC
From: Zoran Brlecic <WA7AA@attbi.com>
Message-ID: <3D56C372.D5B09F75@attbi.com>
Source record: 137148

DJboutit wrote:

> I have a 5/8 comet antenna I need some ways to hide my antenna out of
> the site of my neighbors. I also need ways to hide a antenna tower if
> I were to get high one. I live in a area with alot of people nearby.

So, what do you want us to do? Sell you some sort of invisible paint for the tower or a mass hallucinogen for your neighbors?

I also need a way to power a motor that will produce more energy than it actually uses.

73 ... WA7AA

2611. Re: RFI problem witho Security System

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-11 20:09:33 UTC
From: CAM <w5dxp@hotmail.com>
Message-ID: <3D56C47D.840369B7@hotmail.com>
Source record: 137151

Terry Sellick wrote:
> I used both 77 and 43 type toroids from Palamor. I bought a
> RF kit containing several styles and ID's. I wrapped as many turns
> as I could. I'm not sure what F material is.

'F' is about twice as effective as 77 material but that doesn't seem
to be your problem. I feared that you snapped a few Radio Shack cores
on the wires expecting magical results. Sorry.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

2612. Re: A closer look

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-11 20:17:10 UTC
From: CAM <w5dxp@hotmail.com>
Message-ID: <3D56C646.F913FAF8@hotmail.com>
Source record: 137153

"J. Harvey" wrote:
>
> "CAM"
> > That complication around black holes is why
> > I added "in a transmission line". :-)
>
> Check to see if your transmission line is slowly getting more massive...

I think I understand Steve's and Bill's argument now. Energy is turning into matter at the destructive interference point, running along the ground under the transmission line to the load, and then converting itself into energy once again at the load. Wow! And to think this was happening even before the Manhattan Project.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

2613. Re: Best Homebrew Antenna For 2 Metres?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-11 20:18:18 UTC
From: jgboyles@aol.com
Message-ID: <20020811161818.11433.00003129@mb-fk.aol.com>
Source record: 137152

>I'm running a mobile 2M radio at home from a power supply. Any
>comments on what would be the best homebrew antenna to build for this that
>is not a yagi, I need an omni-directional one.

A J-pole made from 300 ohm twin lead is the first thing that comes to mind.
Another is a ground plane made from an SO-239 coax connector and 4-19" pieces
of some sort of wire with lugs on the ends for the ground plane. One 19" piece
of #12 copper wire soldered to the center pin of the SO-239 for the vertical
radiator. Trim the vertical wire and/or bend the ground plane downward for
best SWR.
73 Gary N4AST

2614. Use coax to feed inv. L??? Re: Inverted L??

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-11 20:25:55 UTC
From: StarGazer <pti@capnet.com>
Message-ID: <3D56C853.2AE26194@capnet.com>
Source record: 137156

ARDUJENSKI wrote:

> >
> >Does it self resonate anywhere?
> >
> >Where do you feed it? Bottom or middle of L?
> >
> >Can't use open wire at bottom can you?
>
> Most multiband INVERTED-L antennas will be bottom fed. Although there are some
> advantaged to corner feeding it it is not a true Marconi and also is limited on
> the bands it can be used on, much like a doublet. Try to load up a 10m by 10m
> doublet on 160m. With an Inverted-L, like any antenna for multiband usage,
> resonance is not a factor. You use an ATU to match. Depending upon the bands
> you plan to use it on and the final dimensions you may be able to use an
> appropriate balun at the base of the inverted-L and run low loss coax back to
> the shack. My goal is to get a remote ATU and install it at the base of an
> Inverrted-L. I am by no means an antenna expert but a mere dabbler in the
> field...Alan KB7MBI

2615. Re: Need ways to hide my antenna from my neighbors.

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-11 20:34:28 UTC
From: VE3TMT <ve3tmt@rac.ca>
Message-ID: <xTz59.150$2T2.119459@news20.bellglobal.com>
Source record: 137154

"DJboutit" <Recordking@Hotmail.com> wrote in message
news:e8d89b3f.0208110847.73139897@posting.google.com...
> I have a 5/8 comet antenna I need some ways to hide my antenna out of
> the site of my neighbors. I also need ways to hide a antenna tower if
> I were to get high one. I live in a area with alot of people nearby.

Hiding the antenna is the easy part, put it inside or paint it green and
stick itin a tree. I'm afraid you're going to have a harder time hiding
your tower. But if you do find a way, please let the rest of us know.

2616. Re: Need ways to hide my antenna from my neighbors.

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-11 20:43:39 UTC
From: jgboyles@aol.com
Message-ID: <20020811164339.11405.00003268@mb-fk.aol.com>
Source record: 137155

>I have a 5/8 comet antenna I need some ways to hide my antenna out of
>the site of my neighbors.

I hid mine by putting it in the attic. Unfortunately, it was outside before,
so the neighbors still know where the rfi is comming from.

> I also need ways to hide a antenna tower

That's a bit tougher, but here goes: They put a cell tower down the road in a
Church parking lot. They were told no antenna towers, but a tower disguised as
a flag pole was just fine. We now have a 100' tall and about 8' diameter flag
pole. That is the fattest flag pole I have ever seen. Old Glory flies proudly
from the top, and everyone appears happy, especially the Church, which is
renting the space for the cell tower. We hams thought we were the only ones
using flag pole stealth antennas.
Good luck hiding your tower.

73 Gary N4AST

2617. Re: Best Homebrew Antenna For 2 Metres?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-11 21:05:21 UTC
From: Reg Edwards <g4fgq.regp@btinternet.com>
Message-ID: <aj6jih$oh5$1@knossos.btinternet.com>
Source record: 137157

Any
> comments on what would be the best homebrew antenna to build for this that
> is not a yagi, I need an omni-directional one.
==========

5/8-wave vertical with 4 radials and a bottom matching coil.

2618. Re: Cheapo 20 foot mast?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-11 21:14:39 UTC
From: dan <danlx@execpc.com>
Message-ID: <3d56d55e$0$1421$272ea4a1@news.execpc.com>
Source record: 137159

Hi Julian,
try your local "junk yard" or politically correct, your recycling
center. They should have lots of pipe around cheap. You could also
try a plumbing contractor, they usually have let me take a few better
looking used lengths of water pipe for free. It will support the wire
and a lot more. Give it a few raps with a hammer to dislodge inner
deposits and a quick rub with abrasive, prime it and paint it any
color you want, or just leave it au natural. Cheap and effective.

On Sun, 11 Aug 2002 18:00:55 +0100, Julian
<Julian@velonospamdog.demon.co.uk> wrote:

>Hello
>
>I want to set up a random wire antenna going from the wall of my house
>to some kind of mast, roughly 20 foot tall. Any ideas on a cheap way of
>constructing a mast? I could cope with pouring some concrete in a hole a
>setting a length of plastic tubing in it as a base, but what would be a
>good cheap material to act as the mast, that would take the weight of
>the wire?

Dan
N9JBF

I've rambled enough, back to the rocking chair. ZZZZZZZZZ
Remove left x for a direct reply.

2619. Re: SWR - Why isn't the energy re-absorbed at the TX?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-11 21:17:14 UTC
From: k1bqt@aol.com
Message-ID: <20020811171714.20545.00002252@mb-mn.aol.com>
Source record: 137158

>Nope, I'm limiting the example conditions to satisfy typical ham conditions.<

When did the behavior of mixers become "atypical"?

Here's an everyday hamish set of conditions (let's see if I understand the process using my hammy logic). I have a 25-watt carrier which I AM modulate to 100% with my little 12.5-watt watt modulator. This causes the voltage on positive voice peaks double and the RF output power to hit 100 watts PEP into my 50-Ohm load. Should my hammy logic tell me this feat impossible to achieve because I only have 37.5 watts available?.

When a single pre-mixed waveform is fed into a linear system, the Cecil plan works (if I want to run 25 watts on AM, I've got to have a 100 watt linear amplifier to reproduce the waveform). Mixing and combining signal, on the other hand, isn't a linear process--unless the rule somehow changes when signals are in phase and on the same frequency.

Rick K1BQT

2620. Re: Need ways to hide my antenna from my neighbors.

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-11 22:00:03 UTC
From: Keith <n6jpa_spam@attbi.com>
Message-ID: <slrnaldefr.1ce.n6jpa_spam@12-225-29-45.client.attbi.com>
Source record: 137160

On 11 Aug 2002 09:47:37 -0700,
DJboutit <Recordking@Hotmail.com> wrote:

> I have a 5/8 comet antenna I need some ways to hide my antenna out of
> the site of my neighbors.

Check out the ventenna.

> I also need ways to hide a antenna tower if
> I were to get high one. I live in a area with alot of people nearby.

You are kidding right? If you put up a tower you might as well
as send up a red flare while installing it. Go with small gauge wire
and string it between the trees.

--
Best Regards, Keith
NW Oregon Radio http://n6jpa.home.attbi.com/
You may be right, I may be crazy,
But it just may be a lunatic you're looking for! -- Billy Joel

2621. Re: A closer look

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-11 22:02:32 UTC
From: klocko@toad.net
Message-ID: <224d9cd4.0208111402.5f094a80@posting.google.com>
Source record: 137161

CAM <w5dxp@hotmail.com> wrote in message news:<3D566EC1.9FF02268@hotmail.com>...
> Bill Klocko wrote:
> > But if the voltages and the currents are cancelled at every point on
> > the coax, they cannot possibly contribute any energy anywhere. They
> > are annihilated and so is their energy.
>
> Whoops Bill, you stepped in it there. Energy in a transmission line CANNOT be
> annihilated. That would certainly violate the conservation of energy principle.
> Waves can be annihilated but the energy in those waves has to go somewhere.
> Energy cannot disappear from the universe. The energy in the cancellation
> effect joins the forward energy on the twinlead. Energy is like a balloon.
> Make it smaller in one place and it gets larger in another place.

Maybe I shouldn't have said energy. The 2 backward-traveling voltage
waves cancel at every point on the section of coax, leaving zero
voltage. The same happens with the 2 backward-traveling current waves,
leaving zero amps. There is no power flow toward the source.
However, the source produces 100 watts which is delivered to the load.
There's your conservation of energy.

> > > As you say, Component #2 and Component #8 cancel, i.e. engage in destructive
> > > interference. The constructive interference power heads back toward the load.
> >
> > I didn't say anything like what appears in the second sentence. And if
> > there is destructive interference, there can't be constructive
> > interference (the addition of components) there or anywhere else. You
> > can't have it both ways.
>
> Antennas have it both ways, Bill. We get destructive interference in one
> location so we can obtain constructive interference in another location
> thus obtaining gain over an isotropic antenna. The conservation of energy
> principle says that for every destructive interference there exists an
> equal constructive interference.

Now look who stepped in the cow pie. This has absolutely nothing to do
with conservation of energy. Field contributions from different parts
of the antenna arrive at a point in space. If they just happen to have
phase values that are 180-degrees opposite, then there is a
destructive interference, or cancellation. That does not mean that the
energy gets magically transported to some other point where they add.
An antenna has gain because field contributions at some other point in
space have phase values that are identical. In this case, there is a
constructive interference, or addition.

I think you're reading something into conservation of energy that is
not there.

> The 50 joules per second involved in the
> destructive interference on the coax joins the forward wave on the twinlead
> as constructive interference and contributes to the 133.33 joules per second
> in the forward wave. To summarize:

> 75 joules/sec is not reflected at the coax/twinlead junction and joins the
> forward wave joules/sec on the twinlead.
>
> 8.33 joules/sec of the reflected energy is re-reflected back toward the
> load and joins the forward wave joules/sec on the twinlead.
>
> 50 joules/sec is involved in destructive interference at the coax/twinlead
> junction. Since there is no reflected energy on the coax, the only other
> thing that can happen is that this 50 joules/sec joins the forward wave
> joules/sec on the twinlead.
>
> Thus: 75 joules/sec + 8.33 joules/sec + 50 joules/sec = 133.33 joules/sec
>
> Why do so many RF engineers insist on violating the conservation of energy
> principle when it is completely unnecessary?

Who violated it? Partial reflection/transmission completely modeled
your problem exactly as it should have. 100 watts supplied by the
source, 100 watts delivered to the load. No predicted power on the
coax. 73,
Bill N3WK

2622. Re: Need ways to hide my antenna from my neighbors.

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-11 22:04:23 UTC
From: CAM <w5dxp@hotmail.com>
Message-ID: <3D56DF67.65A21D19@hotmail.com>
Source record: 137163

VE3TMT wrote:
> Hiding the antenna is the easy part, put it inside or paint it green and
> stick itin a tree. I'm afraid you're going to have a harder time hiding
> your tower. But if you do find a way, please let the rest of us know.

I've seen cellphone towers disguised as trees. Unfortunately, they were
20 feet taller than any of the other trees.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
------== Over 80,000 Newsgroups - 16 Different Servers! =-----

2623. Re: DESPERATELY NEED HELP FROM HY-TOWER USERS!!!!!!!

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-11 22:07:45 UTC
From: w9gb <gregory.beat@attbi.com>
Message-ID: <ReB59.65755$nF5.16093@sccrnsc02>
Source record: 137162

Ed -

Let me know if MFJ/HyGain does not supply data in 2 weeks. Based on ARRL efforts to get PRB-1 extensions passed, if MFJ does not supply data -- then a request could be made to ARRL to stop accepting full print advertisements in QST.

G. Beat
w9gb

"Ed Juge/NM" <ed@juge.org> wrote in message
news:3d513665.0@oracle.zianet.com...
> I am in negotiations with my local planning and zoning commission for
> authority to install a pair of Hy-Gain Hy-Towers. There are a dozen
> residents of the area opposing them. Their main point now, other than
> aesthetics, is that Hy-Gain's specs say 75mph wind survival and we will be
> in an area that gets 60-70 mph winds every few years. One of my Hy-Towers
> has survived 110 mph winds, twice, but I can't prove it.
>
> If you own a Hy-Tower, and it has been through very high winds... in
excess
> of 75 mph, PLEASE send me an email with details. It will need to include
> your name, address and phone number in case they want to verify that I
> didn't dummy up the email.
>
> Thanks... Ed, W5EJ
> Ruidoso, NM
> Phone: 505-258-1721
>
>

2624. Re: A closer look

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-11 22:21:12 UTC
From: CAM <w5dxp@hotmail.com>
Message-ID: <3D56E358.320FB40@hotmail.com>
Source record: 137164

Bill Klocko wrote:
>
> CAM <w5dxp@hotmail.com> wrote:
> > Antennas have it both ways, Bill. We get destructive interference in one
> > location so we can obtain constructive interference in another location
> > thus obtaining gain over an isotropic antenna. The conservation of energy
> > principle says that for every destructive interference there exists an
> > equal constructive interference.
>
> Now look who stepped in the cow pie. This has absolutely nothing to do
> with conservation of energy. Field contributions from different parts
> of the antenna arrive at a point in space. If they just happen to have
> phase values that are 180-degrees opposite, then there is a
> destructive interference, or cancellation. That does not mean that the
> energy gets magically transported to some other point where they add.

Of course it does, Bill, but it is not magic. It is the LAW of physics. If energy disappears at one point because they are 180-degrees opposite, that same energy is *FORCED* to appear somewhere else. That's what the conservation of energy principle is all about. Every case of destructive interference in one location results in a case of constructive interference somewhere else. I am absolutely appalled that you, Steve Best, and Jon Bloom don't understand that law of physics.

> I think you're reading something into conservation of energy that is
> not there.

Feel free to review the conservation of energy principle, Bill. You followed me down the path of component energy. Now you have to live with the consequences. This stuff is intuitively obvious to me. Maybe I need to write a QEX article entitled, "What Really Happens to Reflected Energy".

What it feels like to me is that you guys are defending an RF Good Old Boys Old Wives' Tale. Please tell me that isn't true and you would be interested in alleviating your ignorance with the truth/facts.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

2625. Re: Cheapo 20 foot mast?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-11 22:31:56 UTC
From: Bob Miller <bamiller@texas.net>
Message-ID: <jORWPUR=mPYdJf0i0Z7dc5UkLB+f@4ax.com>
Source record: 137165

Julian <Julian@velonospamdog.demon.co.uk> wrote:

>Hello
>
>I want to set up a random wire antenna going from the wall of my house
>to some kind of mast, roughly 20 foot tall. Any ideas on a cheap way of
>constructing a mast? I could cope with pouring some concrete in a hole a
>setting a length of plastic tubing in it as a base, but what would be a
>good cheap material to act as the mast, that would take the weight of
>the wire?

The current Radio Shack catalog has telescoping metal masts in 19' and 36'
heights. The current ARRL Antenna Book has a 42' A-frame wood mast you could
construct from 3 pieces of pine.

Bob
k5qwg

2626. Re: Cheapo 20 foot mast?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-11 22:52:01 UTC
From: CAM <w5dxp@hotmail.com>
Message-ID: <3D56EA91.2BAABC7E@hotmail.com>
Source record: 137166

Bob Miller wrote:
> The current Radio Shack catalog has telescoping metal masts in 19' and 36'
> heights. The current ARRL Antenna Book has a 42' A-frame wood mast you could
> construct from 3 pieces of pine.

Since guy "wires" are cheaper than pine, I like two 2x4's bolted together for the bottom part plus a single 2x4 for the top part. Treated wood lasts a long time when buried at the base. If a little extra height is needed, extend a 2x2 from the upper 2x4 or use fiberglass poles.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

2627. Re: Need ways to hide my antenna from my neighbors.

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-11 22:59:07 UTC
From: Bob Nielsen <nielsen@remove_this.oz.net>
Message-ID: <aj6q7rnbi0@216.39.144.81>
Source record: 137167

On Sun, 11 Aug 2002 17:04:23 -0500, CAM wrote:
> VE3TMT wrote:
>> Hiding the antenna is the easy part, put it inside or paint it green and
>> stick itin a tree. I'm afraid you're going to have a harder time hiding
>> your tower. But if you do find a way, please let the rest of us know.
>
> I've seen cellphone towers disguised as trees. Unfortunately, they were
> 20 feet taller than any of the other trees.

When I lived in Tucson, there was one nearby which was disguised as a
saguaro cactus. It wasn't cheap, however. The funny thing was that
there were two undisguised cell towers within 150 feet.

Bob, N7XY

2628. Re: A closer look

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-11 23:12:40 UTC
From: tdonaly@aol.com
Message-ID: <20020811191240.26233.00003402@mb-ct.aol.com>
Source record: 137168

>
>Bill Klocko wrote:
>>
>> CAM <w5dxp@hotmail.com> wrote:
>> > Antennas have it both ways, Bill. We get destructive interference in one
>> > location so we can obtain constructive interference in another location
>> > thus obtaining gain over an isotropic antenna. The conservation of energy
>> > principle says that for every destructive interference there exists an
>> > equal constructive interference.
>>
>> Now look who stepped in the cow pie. This has absolutely nothing to do
>> with conservation of energy. Field contributions from different parts
>> of the antenna arrive at a point in space. If they just happen to have
>> phase values that are 180-degrees opposite, then there is a
>> destructive interference, or cancellation. That does not mean that the
>> energy gets magically transported to some other point where they add.
>
>Of course it does, Bill, but it is not magic. It is the LAW of physics. If
>energy disappears at one point because they are 180-degrees opposite, that
>same energy is *FORCED* to appear somewhere else. That's what the
>conservation
>of energy principle is all about. Every case of destructive interference in
>one location results in a case of constructive interference somewhere else.
>I am absolutely appalled that you, Steve Best, and Jon Bloom don't understand
>
>that law of physics.
>
>> I think you're reading something into conservation of energy that is
>> not there.
>
>Feel free to review the conservation of energy principle, Bill. You
>followed me down the path of component energy. Now you have to live
>with the consequences. This stuff is intuitively obvious to me. Maybe
>I need to write a QEX article entitled, "What Really Happens to
>Reflected Energy".
>
>What it feels like to me is that you guys are defending an RF Good Old
>Boys Old Wives' Tale. Please tell me that isn't true and you would be
>interested in alleviating your ignorance with the truth/facts.
>--
>cheers, CAM http://www.qsl.net/w5dxp
>
>

Pardon the ignorance, Cecil, but I'd like to ask you a question. Power, which is
what you like to add together as if you could apply superposition to it, is defined
as a time rate of change of energy. Could you tell me where I could read about

the principal of the conservation of rate-of-change of energy? I've read a few physics
books, and they all discuss the conservation of charge and the
conservation of energy and such, but none of them says anything about the conservation
of rate-of-change. If this is something new, I'd like to know about it.
Thanks.

73

Tom Donaly KA6RUH

2629. Re: Everything is now known on antennas

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-11 23:18:21 UTC
From: "Peter O. Brackett" <ab4bc@ix.netcom.com>
Message-ID: <aj6rbn$fa7$1@slb3.atl.mindspring.net>
Source record: 137069

Rick:

I second everything that you said here below...

[snip]
> >Fractenna was blasted because his was a 'new' idea yet all forgot what
> possible advantages it presented.<
> In my view, fractenna was blasted not for "his new idea", but for his
bombastic
> misuse of the antenna newsgroup. The fractal debate continues, albeit less
> dramatically these days, through the IEEE were a small community of
interested
> researchers explore both the "possible advantages" and the inherent
> disadvantages of fractal radiators. Fortunately, when you play at their
house,
> you are expected to behave yourself and keep your fingers out of your
nose.
>
> Rick K1BQT
[snip]

No one that I recall ever blasted Chip et al for "new ideas". What was
"blasted" and what deserved to be
blasted was the blatant abuse of USENET NG's to promulgate half-truths about
the supposed advances in Science!

About the only thing that was "new" that Dr. Cohen a.k.a. "Chip" et all have
introduced is nothing more nor less than
the application of the already known methods of mathematical optimization,
known as Genetic Algorithms "GA" coupled
the already known techniques of Simulated Anealing "SA", wherein fractal
geometries are used to generate the
"pattern searches" for the search patterns in the design optimization of
antennas.

Certainly no new "Electromagnetic Science" was developed by those
protagonists [Fractal Electromagnetics, heh, heh??],
rather they have, dare I say "merely", applied an already well known method
of mathematical optimization, to the design of
antennas which are completely characterized by the nearly 200 year old
science first fully elucidated by James Clerk Maxwell.
In the application of GA and SA to antenna design, they "might" be the
"first" to do so, but that is a breakthrough only in the
application of already well known methods of mathematical optimization, to a
new application domain [antennas]. And still
ther was never any attempt to prove or show that the resultant designs were

globally optimum or even better than other
nearby local optimum designs.

The "bombatic misuse" is found in their attempt to convince those not
familiar with methods of mathematical optimization that there
was something "new" in the antennas themselves. Whereas it was only the
design method that was new. It is easy to "blind em with
Science" when the readers are simple ham radio USENET NG participants, or
others without prior experience, training or knowledge
of the well known methods of mathematical optimization. Such methods have
been widely used in many other fields, such as the
design of VLSI circuit layouts, the design of entropy compression codes for
images, etc... What the "fractal electromagnetics"
protagonists have done is to apply these already well known methods to
antenna design.

What they have done is nothing more nor less than the application of well
known mathematical optimization techniques, already developed
for applications in other fields, to the design of antennas. And... they
have *never* shown or proved that their chosen methods of
optimization are guaranteed to produce a global optimum, or even to be
better than the results produced by other methods of mathematical
optimization.

There was never any attempt by the protagonists, but lots of false claims to
the contrary, to prove that their design methods, or final designs
were better [more optimum?] than any other approach to the mathematical
optimization of antennas. This was certainly made clear by Steve
Best when he accepted the $1000 Challenge and quite easily generated antenna
designs using "random" pattern search methods, with
performance, on already agreed figures of merit, that exceeded those
obtained by the fractal search methods of mathematical optimization.
Steve Best has shown that the "optimum" designs obtained by the fractal
methods of searching are at *best* merely "local" optima, which are
not as good as other nearby "local optima" and certainly not global optima!

In summary, the only thing that Chip et al have shown with their fractal
antenna work is that it is possible to use fractal mathematics
to generate the sequence of antenna designs, within a conventional
mathematical optimization loop, to be searched for a "local"
design optimum. As such... it is an "interesting" application of known
methods of mathematical optimization, but not a breakthrough
in electromagnetics.

The attempts to throw others off the track and claims of "intellectual
property" protection which go far beyond the simple
copyright or patent of a given antenna design [A design patent rather than
a concept patent] are absurd to say the least.

But... Hey... this is America... if you can fool some of the people some of
the time then you have the right to go ahead... but those who
are knowledgeable of the methods of mathematical optimization and of the

working principles of antennas were not, and are not,
impressed one iota, notwithstanding such absurd claims.

And so... Art Unwin... Fractal Antennas do not violate, or improve upon, any
of the well known Physics of electromagnetics, what they
are is simply the result of applying a mathematical optimization technique
to the design, i.e. a tools and methodology of design application.

For those who might be interested in learning more about the generic methods
of mathematical optimization which can be applied to
many application domain areas see the mathematical optimization decision
tree at the URL below.

http://www-fp.mcs.anl.gov/otc/Guide/OptWeb/

Best Regards,

--Peter K1PO
Indialantic By-the-Sea, FL.

2630. Re: EVERY THING IS NOW KNOWN ON ANTENNAS.

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-11 23:26:26 UTC
From: "Peter O. Brackett" <ab4bc@ix.netcom.com>
Message-ID: <aj6rr0$34e$1@slb1.atl.mindspring.net>
Source record: 137070

Doc:

[snip]
"'Doc" <w5lz@icok.net> wrote in message news:3D553853.F5E201B8@icok.net...
> Art,
> The 'po hoo'ers perform as much service to the hobby
> as the people who experiment with 'new' antenna designs.
> How can you possibly 'prove' a new antenna idea by only
> having positive, or supportive comments? You also need
> the people who try to disprove it.
> 'Doc
[snip]

Bravo Doc... That's the basis of the several hundred year old "Scientific Method". Go scientific method! Let's not discourage rational po poohing!

The Scientific Method is not crucification! Rather it is a method of validation of ideas.

For those small dogs who decry the questions recall the small dog in the scenario, "If you can't run with the big dogs then stay on the porch!"

The world of Science is, and has always been, populated by big dogs who have the God given right to challenge assertions and ask questions, regardless of the "qualifications" of the protagonists.

Such questioning must never be repressed!

Best,

--Peter K1PO
Indialantic By-the-Sea, FL.

2631. antenna for Yupiteru mvt7100

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-11 23:27:50 UTC
From: Marc Lebel <mlebel031@sympatico.ca>
Message-ID: <RrC59.311$ln4.175210@news20.bellglobal.com>
Source record: 137071

Does anyone know where or how i can get a antenna for my unit.

2632. Re: A closer look

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-11 23:43:16 UTC
From: "J. Harvey" <JM002.Harvey_ANTI*SPAM_@Sympatico.ca>
Message-ID: <qEC59.406$2T2.156625@news20.bellglobal.com>
Source record: 137074

"Bill Klocko"
> This has absolutely nothing to do
> with conservation of energy. Field
> contributions from different parts
> of the antenna arrive at a point in space.
> If they just happen to have phase
> values that are 180-degrees opposite,
> then there is a destructive interference,
> or cancellation.

As in *Standing* Wave Ratio (SWR).

I'm starting to come around. If you send out 100 watt pulse while the previous one is headed back from a reflection, you could have two 100 watt pulses in the same line.

This reminds me of a previous thread where everyone finally agreed that EM waves E and H fields both pass through zero at the same time, and then they reappear.

2633. Re: EVERY THING IS NOW KNOWN ON ANTENNAS.

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-11 23:47:27 UTC
From: aunwin@fgi.net
Message-ID: <c4becf19.0208111547.4ad457de@posting.google.com>
Source record: 137072

richardharrison@webtv.net (Richard Harrison) wrote in message
news:<29761-3D56A597-245@storefull-2393.public.lawson.webtv.net>...
> Art, KB9MZ wrote:
> "#1. Accepted law. F1 +/- F2 = F3.
>
> "5. If the other resonant structure which is coupled receives energy it
> will either null radiation from that portion or radiate in accordance to
> law #1 shown above."
>
> Art`s #1 seems to be the heterodyne story of sum and difference mixing
> products.
When you say 'story' are you refuting the correctness of #1 ?

This requires a non-linear circuit (a loop doesn`t qualify),
> maybe a mixer such as a diode.

> Art`s #5 seems to correctly indicate a coupled radiation structure
> producing destructive interference (in some direction, which means it
> also produces constructive interference in another direction), or it can
> produce sum and difference frequencies.
>
> Coupled radiators produce a directional pattern. They usually are linear
> and so they do not produce mixing. Combined radiation from coupled
> radiators is limited to the exciting frequency(s).
> The frequencies mentioned in bandwidth specifications are limits at
> which the antenna signal level is reduced to an arbitrary level, often 3
> db below the best level, or half the maximum power in the best
> direction.
>
> This means that when the antenna is excited at the limit frequency
> instead of it`s maximum gain frequency, its response will be down by the
> arbitrary amount. This has nothing to do with the antenna generating
> extra frequencies when excited.

Is statement # 5 correct or incorrect as it stands, disregarding
jumps or conjecture as to how it is applied ?

I would rather consider the the correctness of the basic
physics rules rather that shooting all different directions
regarding the correctness of application. I was asked by someone to
dish this thing out at ONE portion at a time. If we don't it it will
lead to total confusion among the many on this thread and the silent
readers that are watching. Once we get an understanding of the basic
principles that I have applied in my work we can then determine if my
use of these laws are used correctly by me or not.

Everybody has a picture of the antenna, so when we agree on the first part we can then debate the antenna ONE step at a time. This will not satisfy all but overall I believe the request to be a good one and thus I will try to follow it so that all are on the same wavelength. You might want to model it as we go along which will give insights to the antenna which we can refer to at a later date.
Bearing in mind that many say they 'just can't follow' this thing, a fresh start
is in order with the first part focussing on the laws of physics as stated to see if the basic statements are correct or incorrect which may or may not
spiral off to a more indepth discussion before moving on. At least we can start off with a program that all can follow.

I have made arrangements to have a 'news' article placed on the net regarding this antenna. It was thought it may that in some way promote the thing, but at the last interview I said to the reporter that I felt the topic will not be of interest to his readers which to my surprise he turned to me and said
"Art, this is NOT about antennas, this is about YOU".
Some may find this of interest as many others did who contacted me from as far away as a ham in Colorado and the East Coast. It shows a photo of me that was touched up to remove the horns!
I will give the URL out tomorrow or the next day as I have to Fed X the article
to my son in San Diego to do what needs to be done.
Best regards
Art Unwin KB9MZ
> Best regards, Richard Harrison, KB5WZI

2634. Re: Best Homebrew Antenna For 2 Metres?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-11 23:52:24 UTC
From: Sparks W4EAS <sparksw4eas@mindspring.com>
Message-ID: <3D56F8B8.C27@mindspring.com>
Source record: 137073

"J" Pole Sparks W4EAS

2635. Re: Best Homebrew Antenna For 2 Metres?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-12 00:00:25 UTC
From: 'Doc <w5lz@icok.net>
Message-ID: <3D56FA76.13E5C7C@icok.net>
Source record: 137075

Scott,
A 'J' pole should be easy. A dipole hung
verticlly should be even easier.
'Doc

2636. Re: Need ways to hide my antenna from my neighbors.

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-12 00:01:10 UTC
From: n7ws_at_yahoo.com
Message-ID: <3d56f8a4.1955308@news.triconet.org>
Source record: 137076

On 11 Aug 2002 22:59:07 GMT, Bob Nielsen <nielsen@remove_this.oz.net>
wrote:

|On Sun, 11 Aug 2002 17:04:23 -0500, CAM wrote:
|> VE3TMT wrote:
|>> Hiding the antenna is the easy part, put it inside or paint it green and
|>> stick itin a tree. I'm afraid you're going to have a harder time hiding
|>> your tower. But if you do find a way, please let the rest of us know.
|>
|> I've seen cellphone towers disguised as trees. Unfortunately, they were
|> 20 feet taller than any of the other trees.
|
|When I lived in Tucson, there was one nearby which was disguised as a
|saguaro cactus. It wasn't cheap, however. The funny thing was that
|there were two undisguised cell towers within 150 feet.

Hi Bob,

The company that does this stuff is The Larson Company.

http://www.larson-usa.com/index2.html

follow the link to the Camouflage Division.

These guys are masters at fake rocks, etc. Many of the road projects
in Tucson, particularly in the high rent districts use Larson (or
thechniques they developed) to hide the ugly cuts in the banks along
the road.

The world famous Arizona-Sonora Desert Museum creates a lot of their
exhibits with the same techniques.

2637. 2M Jpole

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-12 00:04:17 UTC
From: Steven & Cindy LeBlanc <oasisin@nbnet.nb.ca>
Message-ID: <5YC59.9107$cH2.729304@ursa-nb00s0.nbnet.nb.ca>
Source record: 137077

I had a set of plans for an adjustable jpole made of 3/4 copper pipe. It has a set of brass nuts and a brass screw to adjust it for swr. I recently lost the plans. I was wondering if any one has such a set of plans. I have search and searched the net, and came up with hundreds of plans, but not this one. Any one know the specs for this antenna??

2638. Re: Need ways to hide my antenna from my neighbors.

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-12 00:06:41 UTC
From: 'Doc <w5lz@icok.net>
Message-ID: <3D56FC10.43AB0AEC@icok.net>
Source record: 137078

DJboutit,
Try hiding it inside of a non-metalic 'Martin House'.
Put the 'Martin House' on top of the tower. Who complains
about bird houses?
'Doc

2639. Re: A closer look

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-12 00:09:20 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <28vdlu0lg4mrpcrj0s3en905t8qq4j9893@4ax.com>
Source record: 137079

On Sun, 11 Aug 2002 19:43:16 -0400, "J. Harvey"
<JM002.Harvey_ANTI*SPAM_@Sympatico.ca> wrote:

>"Bill Klocko"
>> This has absolutely nothing to do
>> with conservation of energy. Field
>> contributions from different parts
>> of the antenna arrive at a point in space.
>> If they just happen to have phase
>> values that are 180-degrees opposite,
>> then there is a destructive interference,
>> or cancellation.
>
>As in *Standing* Wave Ratio (SWR).
>
>I'm starting to come around. If you send out 100 watt pulse while the
>previous one is headed back from a reflection, you could have two 100 watt
>pulses in the same line.

Look at Bart's thought experiment posted recently.

>
>This reminds me of a previous thread where everyone finally agreed that EM
>waves E and H fields both pass through zero at the same time, and then they
>reappear.
>
>
first we gotta get this camel through the eye of a needle!

73's
Richard Clark, KB7QHC

2640. Re: A closer look

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-12 00:11:08 UTC
From: CAM <w5dxp@hotmail.com>
Message-ID: <3D56FD1C.FFE4C839@hotmail.com>
Source record: 137080

Tdonaly wrote:
> Pardon the ignorance, Cecil, but I'd like to ask you a question. Power, which
> is what you like to add together as if you could apply superposition to it, is
> defined as a time rate of change of energy. Could you tell me where I could read about
> the principal of the conservation of rate-of-change of energy? I've read a few
> physics books, and they all discuss the conservation of charge and the
> conservation of energy and such, but none of them says anything about the
> conservation of rate-of-change. If this is something new, I'd like to know about it.

Tom, what do you think the joules in joules/second represent? We are talking
about energy. Nobody is trying to conserve power. If you believe that
75 joules/sec + 8.33 joules/sec = 133.33 joules/sec then all you have to
do is multiply both sides of the equation by one second to get
75 joules + 8.33 joules = 133.33 joules

Now seriously, do you really believe that doesn't violate the conservation
of energy principle?
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

2641. WTB ^ Meter Beam

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-12 00:24:30 UTC
From: sawman02@yahoo.com
Message-ID: <569b8966.0208111624.3722501e@posting.google.com>
Source record: 137081

Looking for a 4 or 5 element 6 meter Beam. Located in NJ E-mail back
to sawman02@yahoo.com

2642. Re: A closer look

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-12 00:31:47 UTC
From: CAM <w5dxp@hotmail.com>
Message-ID: <3D5701F3.F53FF352@hotmail.com>
Source record: 137083

Richard Clark wrote:
> Look at Bart's thought experiment posted recently.

Bart seemed to say we cannot have three or four transformer secondaries driving 50 ohm loads while the primary sees a 50 ohm load. 60 Hz power engineers have been doing that for over a century. The equation that has to be satisfied is:

Vin^2/50 = V1^2/50 + V2^2/50 + V3^2/50 + ... or

Vin^2 = V1^2 + V2^2 + V3^2 + ...

To me, those conditions seem relatively easy to satisfy even though those voltages are not orthogonal to each other. Seems to me, this is the equation that a transmission line must satisfy to avoid violation of the conservation of energy principle (which any power engineer will tell you is not under the control of the whims of RF engineers).
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
------== Over 80,000 Newsgroups - 16 Different Servers! =-----

2643. Re: SWR - Why isn't the energy re-absorbed at the TX?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-12 00:45:31 UTC
From: VE9SRB <srbest@att.net>
Message-ID: <LyD59.8033$Ke2.675274@bgtnsc04-news.ops.worldnet.att.net>
Source record: 137084

"CAM" <w5dxp@hotmail.com> wrote in message
news:3D56BD96.69C4671E@hotmail.com...
>
> I, Steve,
>
> a. have not taken the time to understand what Cecil is talking about.
> b. have realized my mistake and am attempting to obfuscate the issue.
> c. other (please explain)_____
>
> Please help me to understand what you are missing about my argument.
>

Cecil,

I'm not missing anything about your argument. I think you're mistaken about the relationship between the superposition of forward voltages and currents and the law of conservation of energy. Two forward voltages in a transmission line add as vectors such that Vtotal = V1 + V2. The total forward power is simply determined from |Vtotal|^2 / Zo, presuming that Zo is a pure resistance. The law of conservation of energy requires that the total power delivered by the source to the line is equal to the total power dissipated in the line. Additionally, the law of conservation of energy requires that the total power flowing into a junction equals the total power flowing out of the junction, presuming no power is dissipated at the junction. There is nothing in my statements that is inconsistent with these basic facts.

You don't believe that two voltage waves can add such that the resulting power in the total wave is greater than the sum of the individual wave powers, when these are considered separately in the line. I can demonstrate this fact with any example you chose. Not accepting this, you are somehow trying to explain where the missing power comes from as if its re-reflected or redirected from somewhere else. It just does not happen that way. Voltages and currents add and subtract at every point and load in the line resulting in a total power.

Steve VE9SRB

2644. Re: A closer look

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-12 00:46:35 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <ub1elucf86cs8kg9sa0uesb57gmpbtvfrd@4ax.com>
Source record: 137085

On Sun, 11 Aug 2002 19:31:47 -0500, CAM <w5dxp@hotmail.com> wrote:

>Richard Clark wrote:
>> Look at Bart's thought experiment posted recently.
>
>Bart seemed to say

Ah! The difference between seeming and being.

Stick to the original; the problems come with these interpretations.
If you don't know, ask Bart.

73's
Richard Clark, KB7QHC

2645. Re: Need ways to hide my antenna from my neighbors.

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-12 01:04:00 UTC
From: Fredrik Olofsson <574olofsson@telia.com>
Message-ID: <4QD59.121$e5.34966@newsb.telia.net>
Source record: 137086

"Keith" <n6jpa_spam@attbi.com> skrev i meddelandet
news:slrnaldefr.1ce.n6jpa_spam@12-225-29-45.client.attbi.com...
> On 11 Aug 2002 09:47:37 -0700,
> DJboutit <Recordking@Hotmail.com> wrote:
>
> > I also need ways to hide a antenna tower if
> > I were to get high one. I live in a area with alot of people nearby.
>
> You are kidding right? If you put up a tower you might as well
> as send up a red flare while installing it. Go with small gauge wire
> and string it between the trees.
>

"The wire may be invisible, but the birds aren't"

"Is that bird hovering? Oh my God, it's dead!"

(Probably form eham.net)

2646. Re: EVERY THING IS NOW KNOWN ON ANTENNAS.

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-12 01:14:25 UTC
From: richardharrison@webtv.net
Message-ID: <23936-3D570BF1-10@storefull-2396.public.lawson.webtv.net>
Source record: 137091

Art, KB9MZ wrote:
"When you say "story" are you refuting the correctness of #1?"

No slam intended. "Story" is shorter than "process" by two letters. There are true stories as well as false. Short words clarify presentation if well chosen. I may have made a poor choice if #1 is correct. "Story" was not meant to be derogatory.

Nw If Art really was implying a heterodyne process without a mixer, I say it does not exist.
#1 would be irrelevant.

Art also wrote:
"Is statement #5 correct or incorrect as it stands---?"

I don`t know what #5 means. A coupled structure will produce a null in conjuction with another radiator. The depth and direction of the null(s) are dependent on amplitude and phase of currents in the radiator elements. Art offers two possibilities in #5. The first is incomplete because a null is offered as the only outcome. The other possibility relies upon F1 and F2 producing F3 which is nonsense.

Best regards, Richard Harrison, KB5WZI

2647. Re: A closer look

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-12 01:16:38 UTC
From: tdonaly@aol.com
Message-ID: <20020811211638.26238.00004067@mb-ct.aol.com>
Source record: 137087

>
>Tdonaly wrote:
>> Pardon the ignorance, Cecil, but I'd like to ask you a question. Power,
>which
>> is what you like to add together as if you could apply superposition to it,
>is
>> defined as a time rate of change of energy. Could you tell me where I
>could read about
>> the principal of the conservation of rate-of-change of energy? I've read a
>few
>> physics books, and they all discuss the conservation of charge and the
>> conservation of energy and such, but none of them says anything about the
>> conservation of rate-of-change. If this is something new, I'd like to know
>about it.
>
>Tom, what do you think the joules in joules/second represent? We are talking
>about energy. Nobody is trying to conserve power. If you believe that
>75 joules/sec + 8.33 joules/sec = 133.33 joules/sec then all you have to
>do is multiply both sides of the equation by one second to get
>75 joules + 8.33 joules = 133.33 joules
>
>Now seriously, do you really believe that doesn't violate the conservation
>of energy principle?
>--
>cheers, CAM http://www.qsl.net/w5dxp
>
O.K. Cecil, lets say you're right and 75 joules/sec + 8.33 joules/sec = 83.33
joules/sec.
Since voltage is proportional to the square root of power, what you're saying
is that
sqrt(75) + sqrt(8.33) = sqrt(83.33), or, 8.6603 + 2.8862 = 9.1285, which, of
course, is wrong.
Since voltage is supposed to obey the rules of superposition, what
you're really doing is denying the linearity of Maxwell's equations upon which
this whole
electromagnetic edifice is built. Hey! Maybe you're right, and Maxwell and the
rest were
wrong. The next step is figuring out a way to convince us - who were
brainwashed by the textbooks - of the truth of your interesting ideas.
Good luck!

Tom Donaly KA6RUH

(P.S. To forestall a stupid blast from Reg, let me state that Maxwell's
equations were

supposed to have originally been called the Heaviside-Herz equations.)

2648. Re: SWR - Why isn't the energy re-absorbed at the TX?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-12 01:33:40 UTC
From: CAM <w5dxp@hotmail.com>
Message-ID: <3D571074.57BD6E65@hotmail.com>
Source record: 137088

VE9SRB wrote:
> You don't believe that two voltage waves can add such that the resulting
> power in the total wave is greater than the sum of the individual wave
> powers, when these are considered separately in the line. I can demonstrate
> this fact with any example you chose.

Have you referenced Bill Klocko's posting and my response? He broke the waves down into components.

106.066 volts at 0.707 amps
106.066v/0.707a = 150 ohms
106.066v * 0.707a = 75 joules/second in that wave

35.355 volts at 0.236 amps
35.355v/0.236a = 150 ohms
35.355v * 0.236a = 8.33 joules/second in that wave

Adding those two waves:

106.066v + 35.355v = 141.4v
0.707a + 0.236a = 0.943a

141.4v/0.943a = 150 ohms
141.4v * 0.943a = 133.33 joules/second in that wave

Let's look at one second of this dynamic energy movement. Are you really saying that you can turn 75 joules plus 8.33 joules into 133.33 joules? Steve, where is the missing 50 joules?
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
------== Over 80,000 Newsgroups - 16 Different Servers! =-----

2649. Re: A closer look

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-12 01:39:10 UTC
From: CAM <w5dxp@hotmail.com>
Message-ID: <3D5711BE.8A8E43E8@hotmail.com>
Source record: 137090

Richard Clark wrote:
>
> On Sun, 11 Aug 2002 19:31:47 -0500, CAM <w5dxp@hotmail.com> wrote:
>
> >Richard Clark wrote:
> >> Look at Bart's thought experiment posted recently.
> >
> >Bart seemed to say
>
> Ah! The difference between seeming and being.
>
> Stick to the original; the problems come with these interpretations.
> If you don't know, ask Bart.

Ask Bart what he posted? Why not just read Bart's posting?
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

2650. Re: SWR - Why isn't the energy re-absorbed at the TX?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-12 01:41:40 UTC
From: Gene Fuller <W4SZzzzzz@att.net>
Message-ID: <3D57125A.2110D665@att.net>
Source record: 137089

Cecil,

This is a seriously disappointing comment from an electrical engineer.

Where in the world did you ever get the idea that a power source can simultaneously force both voltage and current "no matter what the antenna impedance or SWR"?

[SWR not relevant here]

Since you have postulated that the system is otherwise lossless, such behavior would be a flat-out violation of Ohm's law.

You have created physically impossible assumptions for your model. Any subsequent analysis is likely to be nothing but noise.

And a final comment for the benefit of CW (Clinton) --- Over and out.

73,
Gene, W4SZ

CAM wrote:
>
> Gene Fuller wrote:
> > I musta been asleep in basic circuits class that day they discussed
> > sources that can simultaneously force a specific voltage AND a specific
> > current into any load.
>
> Sorry to disappoint you Gene, but a 100w ham transceiver working into
> a 50 ohm Z0-match at the input of an antenna tuner *IS* forcing a specific
> voltage AND a specific current into the antenna tuner. In particular, it
> is forcing 70.7 volts at 1.414 amps in phase. The power output of the
> transceiver is fixed and there are no reflections. These conditions exist
> no matter what the antenna impedance or SWR. The energy into the system
> (antenna tuner) *IS FIXED* at 70.7 volts * 1.414 amps = 100 watts.

2651. Re: A closer look

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-12 02:04:40 UTC
From: CAM <w5dxp@hotmail.com>
Message-ID: <3D5717B8.E823C8B4@hotmail.com>
Source record: 137092

Tdonaly wrote:
> O.K. Cecil, lets say you're right and 75 joules/sec + 8.33 joules/sec = 83.33
> joules/sec.
> Since voltage is proportional to the square root of power, what you're saying
> is that
> sqrt(75) + sqrt(8.33) = sqrt(83.33), or, 8.6603 + 2.8862 = 9.1285, which, of
> course, is wrong.

Egads Tom, where did you learn your math? The sum of the square roots of
two numbers is NOT equal to the square root of the sum of the numbers
unless the numbers are unity.

The correct equation is sqrt(75 + 8.33) = sqrt(83.33) which is correct.
Square roots do not obey the distributive law of mathematics.

Consider the equation A + B = C

sqrt(A + B) = sqrt(C) is correct, sqrt(A) + sqrt(B) = sqrt(C) is incorrect.

It is true that 106.066^2 + 35.355^2 = 111.8^2 where

106.066^2/150 = 75w, 35.355^2/150 = 8.33w, and 111.8^2/150 = 83.33w
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
------== Over 80,000 Newsgroups - 16 Different Servers! =-----

2652. Re: Yagi Elements - place above or below boom?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-12 02:11:22 UTC
From: Ken Jones <ken.jones@bigfoot.com.invalid>
Message-ID: <ASE59.8799$QV2.1448@news.webusenet.com>
Source record: 137093

Always place the elements above the boom. Go for all the height you can
get!
73
Ken
"Craig" <cpgREMOVETHIS@paradise.net.nz> wrote in message
news:n7lblukmu8lc1jctlvlm2gt6f0lbrhia93@4ax.com...
> Is there a preferred practice when bolting Yagi elements to a
> horizontal boom - should they be bolted above the boom, or on the
> underside of the boom?
> Should the bolt head be uppermost, or the nut?
>
>

2653. Re: SWR - Why isn't the energy re-absorbed at the TX?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-12 02:11:46 UTC
From: CAM <w5dxp@hotmail.com>
Message-ID: <3D571962.B3230FA@hotmail.com>
Source record: 137094

Gene Fuller wrote:
>
> Cecil,
>
> This is a seriously disappointing comment from an electrical engineer.
>
> Where in the world did you ever get the idea that a power source can
> simultaneously force both voltage and current "no matter what the
> antenna impedance or SWR"?

Question: What impedance does an antenna tuner present to a transmitter?
Answer: a constant 50 ohms.

Question: What voltage does a 100w transmitter deliver to a constant 50 ohms?
Answer: a constant 70.7 volts.

Question: What current does a 100w transmitter deliver to a constant 50 ohms?
Answer: a constant 1.414 amps.

The antenna tuner presents 50 ohms to the transmitter no matter what
the antenna impedance or SWR. Do you really disagree with Ohm's law?
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
------== Over 80,000 Newsgroups - 16 Different Servers! =-----

2654. Re: A closer look

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-12 02:17:09 UTC
From: CAM <w5dxp@hotmail.com>
Message-ID: <3D571AA5.418B720D@hotmail.com>
Source record: 137096

CAM wrote:
> The sum of the square roots of
> two numbers is NOT equal to the square root of the sum of the numbers
> unless the numbers are unity.
^^^^^^^^^^^^^^^^^^^^^^^^^^^^

Brain fart. 1 + 1 is not equal to the square root of 2
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
------== Over 80,000 Newsgroups - 16 Different Servers! =-----

2655. Re: A closer look

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-12 02:19:34 UTC
From: klocko@toad.net
Message-ID: <224d9cd4.0208111819.3af3ee5f@posting.google.com>
Source record: 137095

CAM <w5dxp@hotmail.com> wrote in message news:<3D566EC1.9FF02268@hotmail.com>...
> Whoops Bill, you stepped in it there. Energy in a transmission line CANNOT be
> annihilated. That would certainly violate the conservation of energy principle.
> Waves can be annihilated but the energy in those waves has to go somewhere.
> Energy cannot disappear from the universe. The energy in the cancellation
> effect joins the forward energy on the twinlead. Energy is like a balloon.
> Make it smaller in one place and it gets larger in another place.
>
> Antennas have it both ways, Bill. We get destructive interference in one
> location so we can obtain constructive interference in another location
> thus obtaining gain over an isotropic antenna. The conservation of energy
> principle says that for every destructive interference there exists an
> equal constructive interference.

I'll admit I must have been asleep the day the prof covered energy.
Nevertheless, let me see if I understand what it is you're saying
here. Suppose there's an antenna pattern with a deep null at a certain
angle. Are you saying that the energy that would have been at that
angle represents a loss of energy in the system? Are you also saying
that the energy taken out to form the null must then be inserted
somewhere else in the pattern to compensate? I can see energy being
lost through attenuation. I can see energy increasing because of some
net inward energy flow (an additional source). I can also see energy
oscillating between electric and magnetic. In the case of the pattern
null, I just don't see it. If it's a 40-dB null, does 40 dB get added
to a lobe? Where does the energy go - to the next lobe over, or the
next lobe inward?

Let's go back to your simple problem. You're saying that the energy in
the cancelled backward-traveling waves also represents a loss of
energy in the system, and that the energy in the cancellation effect
joins the forward energy on the twinlead. Why should this energy
appear on the opposite side of the coax-twinlead junction? Why should
the energy flow all of a sudden reverse direction?

I still think you're reading more into the conservation of energy
principle than is intended. 73,
Bill N3WK

2656. Re: SWR - Why isn't the energy re-absorbed at the TX?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-12 02:25:09 UTC
From: VE9SRB <srbest@att.net>
Message-ID: <90F59.8727$Ep6.659254@bgtnsc05-news.ops.worldnet.att.net>
Source record: 137097

"CAM" <w5dxp@hotmail.com> wrote in message
news:3D571074.57BD6E65@hotmail.com...
> VE9SRB wrote:
> > You don't believe that two voltage waves can add such that the resulting
> > power in the total wave is greater than the sum of the individual wave
> > powers, when these are considered separately in the line. I can
demonstrate
> > this fact with any example you chose.
>
> Have you referenced Bill Klocko's posting and my response? He broke the
waves
> down into components.
>
> 106.066 volts at 0.707 amps
> 106.066v/0.707a = 150 ohms
> 106.066v * 0.707a = 75 joules/second in that wave
>

This is correct. 106.066 V, existing independently in a 150 ohm line is
eqivalent to 75 W of forward power. No problem here.

> 35.355 volts at 0.236 amps
> 35.355v/0.236a = 150 ohms
> 35.355v * 0.236a = 8.33 joules/second in that wave
>

This is correct. 35.355 V, existing indepentently in a 150 ohm line is
equivalent to 8.33 W of forward power. No problem here.

> Adding those two waves:
>
> 106.066v + 35.355v = 141.4v
> 0.707a + 0.236a = 0.943a
>
> 141.4v/0.943a = 150 ohms
> 141.4v * 0.943a = 133.33 joules/second in that wave
>

This is correct. These two wave combine in the line such that 106.066 V +
35.355 V results in a total forward voltage of 141.4 V. This is equivalent
to 133.33 W of forward power in a 150 ohm line.

This is exactly what I've been saying for some time. Where's the problem?

> Let's look at one second of this dynamic energy movement. Are you really
saying

> that you can turn 75 joules plus 8.33 joules into 133.33 joules? Steve,
where
> is the missing 50 joules?
> --

I'm saying that when a 75 W forward wave combines simultaneously and
in-phase with an 8.33 W forward wave the resulting forward wave will have a
total power of 133.33 W. Do you agree or disagree with this statement?

Steve VE9SRB

2657. Re: Homebrew mobile antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-12 02:26:39 UTC
From: nm5k@wt.net
Message-ID: <25eb70d7.0208111826.294178a7@posting.google.com>
Source record: 137098

"Denis O' Flynn" <denisf@eircom.net> wrote in message
news:<_ee59.8055$zX3.11251@news.indigo.ie>...
> Anyone got any ideas for a homebrew mobile antenna. I plan to use the
> Icom -706 MKII rig and would like to use down to 80m.
>
> Many thanks in anticipation
> de
> Denis EI6HB
> email ei6hb@eircom.net

I made a homebrew 80-10 antenna from an old firestick cb antenna. Normally, it would be tuned to 11m. I cut the winding out in the middle of the stick and replaced with a much larger loading coil. I made the coil on a plastic form, and put end caps on it so the stick would fit though the middle. The stick itself is 5 ft tall. For 80 and 40 meter use, the large coil is used with a 4 ft stinger whip attached to the top of the stick. "9 ft total" There is a single tap for 40m, and I have 3 taps for 75m, depending on the freq I want to use. For 30-10m use, the loading coil is bypassed with a wire and clips, and the stinger is varied for each band to tune. 20m uses about 2 ft of stinger. 10m, about 3 inches or so. I keep a selection of stingers to select from. You do have to get out to change bands, but it only takes a couple of minutes to change. I also can use a 3 ft mast under that antenna for a total height on the low bands of about 12 ft. But I usually only use that when parked to avoid whacking it on trees. One advantage to this setup is the light weight. I get bugcatcher performance at a fraction of the weight a "real bugcatcher" would weigh. So that makes mounting much simplier. The antenna didn't cost me a dime as I had all the junk ready to go. I also have a 6 ft 20m hamstick that I use on 40m with a 4 ft whip. "10 ft total" It works very well. Just as good as my fat coil antenna I think. 20-10m is very simple. Just get a single 10m hamstick, and then get extra stingers for each higher band. IE: appx 2 ft or so for 20m, 1.5 ft for 17m, etc, etc. Will depend on the stick used. A cheap and easy way to work the higher bands with a slim and very light antenna.
And it will work very well. On 20m, it's more efficient than a 20m hamstick would be on 20, due to using extra capacitive loading instead of inductive. With my all bander on 20m, which is about 7 ft tall on that band, I've worked all over the world with results that make you think you are at home instead of a car. 20m mobile is easy unless you have a real dog of an antenna. But I actually work 80/40 most of the time mobile. The fatter 80/40 loading coil brings me up to the "bugcatcher" level as far as performance on those bands with the standard 9 ft antenna I usually use when driving. I use a small tuner

for impedance matching , which is required on most bands. You can also use caps, and tapped coils like the dollar special matcher in the arrl ant handbook. I'd probably use it if I didn't have the tuner. MK

2658. Re: Best Homebrew Antenna For 2 Metres?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-12 02:26:56 UTC
From: "wally." <NOMAIL@optusnet.com.au>
Message-ID: <3d571cf0$0$32485$afc38c87@news.optusnet.com.au>
Source record: 137100

http://home.attbi.com/~buck0/hampage.htm

Cheers,
wally.

<fiddelhead@hotmail.com> wrote in message
news:Xns9267AA2234FC2fiddelheadhotmailcom@198.164.200.20...
> Hello. I'm running a mobile 2M radio at home from a power supply. Any
> comments on what would be the best homebrew antenna to build for this that
> is not a yagi, I need an omni-directional one.
>
> Any help or comments appreciated.
>
> Scott

2659. Re: A closer look

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-12 02:28:58 UTC
From: VE9SRB <srbest@att.net>
Message-ID: <K3F59.8730$Ep6.659599@bgtnsc05-news.ops.worldnet.att.net>
Source record: 137099

"Bill Klocko" <klocko@toad.net> wrote in message
news:224d9cd4.0208111819.3af3ee5f@posting.google.com...
>
> Let's go back to your simple problem. You're saying that the energy in
> the cancelled backward-traveling waves also represents a loss of
> energy in the system, and that the energy in the cancellation effect
> joins the forward energy on the twinlead. Why should this energy
> appear on the opposite side of the coax-twinlead junction? Why should
> the energy flow all of a sudden reverse direction?
>

That's the exact question I asked Cecil sometime ago. I think he actually
believes it magically reverses direction without a physical cause to explain
it.

Cecil, besides your written math, what physical action causes the rearward
traveling energy to reverse direction??

> I still think you're reading more into the conservation of energy
> principle than is intended. 73,

He is.

Steve VE9SRB

2660. Re: A closer look

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-12 02:29:25 UTC
From: CAM <w5dxp@hotmail.com>
Message-ID: <3D571D85.A7C66FB7@hotmail.com>
Source record: 137101

Bill Klocko wrote:
> I'll admit I must have been asleep the day the prof covered energy.
> Nevertheless, let me see if I understand what it is you're saying
> here. Suppose there's an antenna pattern with a deep null at a certain
> angle. Are you saying that the energy that would have been at that
> angle represents a loss of energy in the system? Are you also saying
> that the energy taken out to form the null must then be inserted
> somewhere else in the pattern to compensate?

Yes, energy is like the air in a balloon. Squeeze the balloon in one
place and it gets bigger in another. The nulls in an antenna pattern
are the result of destructive interference in the fields. The lobes
in an antenna pattern are the result of a corresponding constructive
interference pattern in the fields. If I remember correctly, the MOM
calculations are based on those destructive/constructive interference
patterns.

> Let's go back to your simple problem. You're saying that the energy in
> the cancelled backward-traveling waves also represents a loss of
> energy in the system, and that the energy in the cancellation effect
> joins the forward energy on the twinlead. Why should this energy
> appear on the opposite side of the coax-twinlead junction? Why should
> the energy flow all of a sudden reverse direction?

Because it has to go somewhere, Bill, and we know it's not going toward
the source. Since we are dealing with essentially a one dimensional wire,
the energy cannot do anything else except head back toward the load.
Have you taken time to look at the example I gave? When the load is
switched from 150 ohms to 50 ohms the signal generator's reflected
power circuitry stops dissipating 25 watts and the load's delivered
power is increased by 25 watts. How does that 25 watts get to the
load without joining the forward wave?
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

2661. Re: SWR - Why isn't the energy re-absorbed at the TX?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-12 02:41:23 UTC
From: CAM <w5dxp@hotmail.com>
Message-ID: <3D572053.28C80398@hotmail.com>
Source record: 137102

VE9SRB wrote:
> I'm saying that when a 75 W forward wave combines simultaneously and
> in-phase with an 8.33 W forward wave the resulting forward wave will have a
> total power of 133.33 W. Do you agree or disagree with this statement?

I completely disagree that 75 joules + 8.33 joules = 133.33 joules
and that's what happens each second in the example. Where does the
missing 50 joules come from? There is not enough energy in your two
waves above to result in the forward wave. You continue to insist on
violating the conservation of energy principle.

You continue to ignore the 50 joules/sec contributed to the forward wave
by the interference pattern. The correct power equation is:

75w + 8.33w + 25w + 25w = 133.33w or

106.066v^2/150 + 35.355v^2/150 + 35.355v^2/50 + (-35.355v^2)/50

The correct voltage equation at the Z0-match is:

106.066v + 35.355v + 35.355v - 35.355v = 141.4v

where the last two terms in the summation are the voltages involved
in the interference pattern.

How you can maintain that 83.33 = 133.33 is beyond belief.

You haven't answered my other question about how 25 watts makes it
from the source to the load without joining the forward wave. Are
you just going to ignore that question and hope I forget about it?
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

2662. Re: A closer look

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-12 02:52:31 UTC
From: richardharrison@webtv.net
Message-ID: <29765-3D5722EF-9@storefull-2393.public.lawson.webtv.net>
Source record: 137106

Tom, KA6RUH wrote:
"Power, which is what you like to add together as if you could apply superposition to it, is defined as a time rate of change of energy."

Yes, and that change may be in placement, joules per second past a point (a joule is a watt-second, and a watt is a coulomb per second), or a change in state, conversion to heat for example. Whether we work with joules or joules per second is irrelevant.

Power is convenient to use because we can easily measure it and it can be added and subtracted. We assume for practical purposes that the power taken from common transformers equals what is put in, and we can use turns ratios and impedance ratios.

Bird tells us that power delivered to the load is simply forward power minus the reflected power. There is no space in a transmission line for much long-term storage, so the power to the load equals the power delivered by the transmitter in the usual case of insignificant line loss.

Some are questioning a null in radiated power in some particular direction causing a boost elsewhere. Knowledge of the mechanism isn`t necessary to prove the redistribution. All the poweer is radiated for practical purposes. If it doesn`t go one place then it must go elsewhere, and it does.

Real power in a transmission line is either coming or going and it adds or subtracts. This is much simpler than toying with the interference patterns or figuring the impedances produced by wave interference.

Best regards, Richard Harrison, KB5WZI

2663. Re: A closer look

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-12 02:54:42 UTC
From: CAM <w5dxp@hotmail.com>
Message-ID: <3D572372.40E06C8B@hotmail.com>
Source record: 137104

VE9SRB wrote:
>
> "Bill Klocko" <klocko@toad.net> wrote in message
> news:224d9cd4.0208111819.3af3ee5f@posting.google.com...
> >
> > Let's go back to your simple problem. You're saying that the energy in
> > the cancelled backward-traveling waves also represents a loss of
> > energy in the system, and that the energy in the cancellation effect
> > joins the forward energy on the twinlead. Why should this energy
> > appear on the opposite side of the coax-twinlead junction? Why should
> > the energy flow all of a sudden reverse direction?
>
> That's the exact question I asked Cecil sometime ago. I think he actually
> believes it magically reverses direction without a physical cause to explain
> it.

Steve, we have been over and over this point. Anytime there is a destructive interference, there is a corresponding constructive interference. When the medium is a wire with only two directions, a destructive interference pattern in one direction always causes a constructive interference pattern in the *only* other direction. Since we know the destructive interference pattern stops the reflected energy from flowing toward the transmitter, the constructive interference pattern causes that amount of energy to flow toward the load. It has no place to go except join the forward power. It cannot stand still. If it is not flowing toward the source, it is flowing toward the load and you are completely ignoring it.

> Cecil, besides your written math, what physical action causes the rearward
> traveling energy to reverse direction??

For the umteenth time, destructive/constructive interference. Bill calls it cancellation. The voltages cancel and the currents cancel but the energy cannot cancel and cannot go anywhere except toward the load. You are continuing to ignore the 50 watts involved in the interference pattern. According to Bill's own calculations, the two voltages are equal to 35.355v and opposite in phase. The two currents are equal to 0.707a and opposite in phase. That's 25 watts apiece according to Bill's calculations. (Component #8 in his posting)
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
------== Over 80,000 Newsgroups - 16 Different Servers! =-----

2664. Re: A closer look

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-12 02:56:38 UTC
From: VE9SRB <srbest@att.net>
Message-ID: <GtF59.8760$Ep6.662458@bgtnsc05-news.ops.worldnet.att.net>
Source record: 137103

"CAM" <w5dxp@hotmail.com> wrote in message
news:3D571D85.A7C66FB7@hotmail.com...
> Bill Klocko wrote:

> Have you taken time to look at the example I gave? When the load is
> switched from 150 ohms to 50 ohms the signal generator's reflected
> power circuitry stops dissipating 25 watts and the load's delivered
> power is increased by 25 watts. How does that 25 watts get to the
> load without joining the forward wave?

The power discussion in your example does not even closely represent whats
happening. Your example requires us to believe that when the source is
connected to a matched load there is no internal power dissipation.

Start the example with a 141.42 V source with a 50 ohm source impedance, as
I did in the other thread, and lets have the same discussion.

Steve VE9SRB

> --
> cheers, CAM http://www.qsl.net/w5dxp
>
>
> -----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
> http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
> -----== Over 80,000 Newsgroups - 16 Different Servers! =-----

2665. Re: SWR - Why isn't the energy re-absorbed at the TX?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-12 02:58:37 UTC
From: VE9SRB <srbest@att.net>
Message-ID: <xvF59.8762$Ep6.660896@bgtnsc05-news.ops.worldnet.att.net>
Source record: 137105

"CAM" <w5dxp@hotmail.com> wrote in message
news:3D572053.28C80398@hotmail.com...
> VE9SRB wrote:
> > I'm saying that when a 75 W forward wave combines simultaneously and
> > in-phase with an 8.33 W forward wave the resulting forward wave will
have a
> > total power of 133.33 W. Do you agree or disagree with this statement?
>
> I completely disagree that 75 joules + 8.33 joules = 133.33 joules
> and that's what happens each second in the example. Where does the
> missing 50 joules come from? There is not enough energy in your two
> waves above to result in the forward wave. You continue to insist on
> violating the conservation of energy principle.
>

Do you agree or disagree with the following statement: 106.066 V forward +
35.355 V forward equals 141.421 V forward?

Steve VE9SRB

2666. Re: A closer look

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-12 03:13:21 UTC
From: CAM <w5dxp@hotmail.com>
Message-ID: <3D5727D1.BF727120@hotmail.com>
Source record: 137107

VE9SRB wrote:
>
> "CAM" <w5dxp@hotmail.com> wrote in message
> news:3D571D85.A7C66FB7@hotmail.com...
> > Bill Klocko wrote:
>
> > Have you taken time to look at the example I gave? When the load is
> > switched from 150 ohms to 50 ohms the signal generator's reflected
> > power circuitry stops dissipating 25 watts and the load's delivered
> > power is increased by 25 watts. How does that 25 watts get to the
> > load without joining the forward wave?
>
> The power discussion in your example does not even closely represent whats
> happening. Your example requires us to believe that when the source is
> connected to a matched load there is no internal power dissipation.

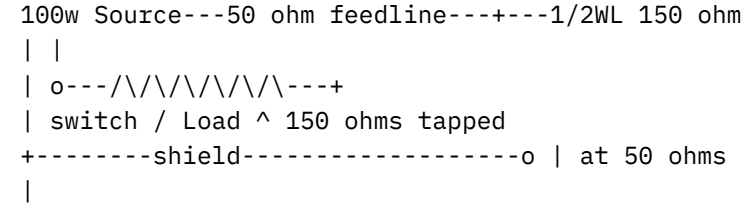
I am not talking about internal source dissipation, Steve. You apparently
are not familiar with a signal generator that has a circulator which routes
most of the reflected power to a resistor. It's the reflected power load
resistor in the signal generator that I am talking about. The internal
power dissipation of the source is irrelevant. The signal generator puts
out a fixed 70.7v at 1.414a into 50 ohms and dissipates all the reflected
power it receives.

It is apparent why you don't want to discuss this example because it would
prove you absolutely wrong once and for all.

> Start the example with a 141.42 V source with a 50 ohm source impedance, as
> I did in the other thread, and lets have the same discussion.

Nope, you first. Here it is again.

The following example is driven by a signal generator which contains
circuitry that causes all reflected energy to be dissipated. Except
for the dissipation in the signal generator and the load, the system
is lossless and there are no common mode components. The source
impedance and the efficiency of the signal generator are irrelevant
as the signal generator outputs a constant 79.7v at 1.414a into 50
ohms and dissipates all the reflected power it sees.



o----------+

With the switch in the 150 ohm load position, there is 100w of forward power on the 50 ohm feedline. There is 25w of reflected power on the 50 ohm feedline that gets dissipated in the signal generator. The forward power on the 150 ohm feedline is 75w and 75w reaches the 150 ohm load resistor because there are no reflections from the 150 ohm load.

Now the switch is thrown to the 50 ohm load position. The forward power on the 50 ohm feedline remains at 100w but now there is no reflected power on the 50 ohm feedline so there is no dissipation of reflected power in the source. We now have 100w reaching the 50 ohm load resistor. The power dissipated in the source has decreased from 25w to zero watts. The power in the load has increased from 75w to 100w.

The question is: How does the 25 joules/sec get from the source to the load without contributing to a component of forward voltage and current on the 150 ohm feedline?
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
------== Over 80,000 Newsgroups - 16 Different Servers! =-----

2667. Re: SWR - Why isn't the energy re-absorbed at the TX?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-12 03:21:04 UTC
From: CAM <w5dxp@hotmail.com>
Message-ID: <3D5729A0.F3854CBA@hotmail.com>
Source record: 137108

VE9SRB wrote:
> Do you agree or disagree with the following statement: 106.066 V forward +
> 35.355 V forward equals 141.421 V forward?

I agree with it but you have omitted two voltage terms. The equation should be:

106.066v + 35.355v + 35.355v - 35.355v = 141.421v

where the last two terms in the summation are the two voltages that cancel during the interference pattern at the Z0-match. Since they cancel, they can be dropped from the equation to obtain yours. But they cannot be dropped from the energy equation because their energies don't cancel. The energy cannot go to zero like the voltage and current can.

The balanced energy equation becomes:

106.066v^2/150 + 35.355v^2/150 + 35.355v^2/50 + (-35.355v)^2/50 = 141.4v^2/150

or 75w + 8.33w + 25w + 25w = 133.33w

All perfectly consistent with no need to violate the conservation of energy principle.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
------== Over 80,000 Newsgroups - 16 Different Servers! =-----

2668. Re: A closer look

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-12 03:49:34 UTC
From: VE9SRB <srbest@att.net>
Message-ID: <ifG59.8799$Ep6.668400@bgtnsc05-news.ops.worldnet.att.net>
Source record: 137109

"CAM" <w5dxp@hotmail.com> wrote in message
news:3D5727D1.BF727120@hotmail.com...
> The question is: How does the 25 joules/sec get from the source to the
> load without contributing to a component of forward voltage and current
> on the 150 ohm feedline?
> --
>

Its already in the 100 W of forward power to begin with. There's nothing special going on here Cecil. The total power delivery in both examples simply occurs as a function of what happens to the 100 W of forward driving power. Its the only power that matters.

In one case (150 ohm load), the 100 W of forward power arrives at the load where 75 W is dissipated and 25 W is returned to the source. The forward power in the 50 ohm line is 100 W and the reflected power is 25 W. The total power dissipation in the two loads is 100 W

In the second case (50 ohm load), the 100 W of forward power arrives at the load where all of it is dissipated - the 25 W of reflected power simply no longer returns to the source. The forward power in the 50 ohm line is 100 W and the reflected power is 0. The total power dissipation in both loads is 100 W.

The only question to consider here is what happens to the 100 W of forward power driving the line. Its the only forward power to consider. When you throw your switch, the 25 W of reflected power simply stops going back towards the source. This is an extremely simple concept. Your incorrectly trying to relate power distribution at T- (before the switch is activated) to T+ (after the switch is activated).

What's the point to this example as it relates to multiple wave addition?

If you really want to understand the concepts associated with adding multiple voltage waves and the resulting total power try this example:

141.421 V -- 50 ohm source Z -+----150 ohm line 1 WL ----+-50 ohm load

Determine the initial conditions in the source and in the line.

Determine the steady state conditions in the source, in the line and the load.

Now examime the initial and re-reflected forward waves in the line and determine all of the power relations.

Steve VE9SRB

2669. Re: DESPERATELY NEED HELP FROM HY-TOWER USERS!!!!!!!

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-12 03:53:51 UTC
From: "J. McLaughlin" <JCM@Power-Net.Net>
Message-ID: <ulec9gdeu3959@corp.supernews.com>
Source record: 137110

Even if the old work is found, it is of limited value. Because the way
to calculate wind action on a self-supported tower has changed over the
many years that the device has existed, a new calculation is desirable.
Zoning boards (yes, even in fly-over-country) tend to have at least one
person who wants the building code to be followed and who expects to
have the seal of an instate P.E. on the papers certifying that the
structure conforms.
Objective and uniformly applied building codes are unlikely to be
put aside by Federal law and are unlikely to be overlooked by local
authority. A zoning ordinance that prohibits a lawful activity is
another thing altogether.
73 Mac N8TT
--
J. Mc Laughlin - Michigan USA
Home: JCM@Power-Net.Net

"w9gb" <gregory.beat@attbi.com> wrote in message
news:ReB59.65755$nF5.16093@sccrnsc02...
> Ed -
>
> Let me know if MFJ/HyGain does not supply data in 2 weeks. Based on
ARRL
> efforts to get PRB-1 extensions passed, if MFJ does not supply data --
then
> a request could be made to ARRL to stop accepting full print
advertisements
> in QST.
>
> G. Beat
> w9gb

2670. Antenna for Icom R2 scanner

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-12 04:04:01 UTC
From: sampett456@yahoo.co.uk
Message-ID: <d8f8142b.0208112004.7e7a2156@posting.google.com>
Source record: 137111

I find the rubbery antenna that comes with the Icom R2 scanner too
short for good reception. But, most other longer antennas just won't fit into
the screw of the scanner. Is there any gadget that will connect another
longer antenna (possibly just a hollow metal tube) with the screw of
the scanner ? Or are there other ways to improve on the effiency of
the existing rubbery antenna ?

Thank you

2671. Re: Long wire antenna for shortwave?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-12 04:30:01 UTC
From: lombryt@hotmail.com
Message-ID: <db35a0c.0208112030.7acf9682@posting.google.com>
Source record: 137112

Bill Crocker <billcrocker@ameritech.net> wrote in message
news:<20020807202646405-0400@news.det.sbcglobal.net>...
> If a long wire antenna runs North, to South, what direction is it's best
> pick-up? East & West, or North & South?
>
> Thanks,
> Bill Crocker

Hi,
Read what I have wrote about my long wire tests (40m long tied 3m high
and sloper 15m) on http://www.astrosurf.com/lombry/menu-qsl.htm

Thierry
ONL5183

2672. Where buy a 5/8 HF all-band vertical ?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-12 04:36:03 UTC
From: lombryt@hotmail.com
Message-ID: <db35a0c.0208112036.3c737dbd@posting.google.com>
Source record: 137113

Hi,

Since a few weeks I try to find on several websites technical data
about 5/8 vertical for the 80/40-10m (and possible WARC) but I can no
more find any antenna of this type (Ushler, Maco, etc). Have they all
been discontinued ?
It is a pity as height enough and with their radian they give a
appreciate gain vs the isotropic (2 lobes)...

Where can I buy a good 5/8 vertical nowadays ? Have you some
brands/models ?

Thanks

Thierry
ON5183

2673. Re: A closer look

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-12 04:49:30 UTC
From: CAM <w5dxp@hotmail.com>
Message-ID: <3D573E5A.C82D380A@hotmail.com>
Source record: 137114

VE9SRB wrote:
>
> "CAM" <w5dxp@hotmail.com> wrote in message
> news:3D5727D1.BF727120@hotmail.com...
> > The question is: How does the 25 joules/sec get from the source to the
> > load without contributing to a component of forward voltage and current
> > on the 150 ohm feedline?
> > --
> >
>
> Its already in the 100 W of forward power to begin with. There's nothing
> special going on here Cecil. The total power delivery in both examples
> simply occurs as a function of what happens to the 100 W of forward driving
> power. Its the only power that matters.
>
> In one case (150 ohm load), the 100 W of forward power arrives at the load
> where 75 W is dissipated and 25 W is returned to the source. The forward
> power in the 50 ohm line is 100 W and the reflected power is 25 W. The
> total power dissipation in the two loads is 100 W

Nope, that's not true. There are no reflections from the 150 ohm load. I'm
beginning to realize that you don't even read my postings.

> In the second case (50 ohm load), the 100 W of forward power arrives at the
> load where all of it is dissipated - the 25 W of reflected power simply no
> longer returns to the source. The forward power in the 50 ohm line is 100 W
> and the reflected power is 0. The total power dissipation in both loads is
> 100 W.

Nope, the second case is our old friend 75w + 8.33w = 133.33w. 133.33w
arrives at the load and 33.33w is reflected. I don't know why I bother.
You don't seem to comprehend anything I say.

> The only question to consider here is what happens to the 100 W of forward
> power driving the line. Its the only forward power to consider. When you
> throw your switch, the 25 W of reflected power simply stops going back
> towards the source. This is an extremely simple concept. Your incorrectly
> trying to relate power distribution at T- (before the switch is activated)
> to T+ (after the switch is activated).
>
> What's the point to this example as it relates to multiple wave addition?

The 150 ohm resistor first dissipates 75 watts. The 50 ohm resistor then dissipates
100 watts. That's a difference of 25 watts. Where is that 25 watts in your equation
of 75w + 8.33w = 133.33w?
--

cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
------== Over 80,000 Newsgroups - 16 Different Servers! =-----

2674. Re: A closer look

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-12 04:58:43 UTC
From: tdonaly@aol.com
Message-ID: <20020812005843.29598.00003520@mb-mj.aol.com>
Source record: 137115

>
>Tdonaly wrote:
>> O.K. Cecil, lets say you're right and 75 joules/sec + 8.33 joules/sec =
>83.33
>> joules/sec.
>> Since voltage is proportional to the square root of power, what you're
>saying
>> is that
>> sqrt(75) + sqrt(8.33) = sqrt(83.33), or, 8.6603 + 2.8862 = 9.1285, which,
>of
>> course, is wrong.
>
>Egads Tom, where did you learn your math? The sum of the square roots of
>two numbers is NOT equal to the square root of the sum of the numbers
>unless the numbers are unity.
>
>The correct equation is sqrt(75 + 8.33) = sqrt(83.33) which is correct.
>Square roots do not obey the distributive law of mathematics.

You don't understand. The number proportional to the 75 watt wave is 8.6603.
The number proportional to the 8.33 watt wave is 2.8866. If you are a believer
in
superposition, you will believe that when you add the voltages in phase you
will
get 11.546, of which the square is 133.32. If you do it your way, the voltages
in the
two waves will have to magically change value thus violating the law of
superposition.

>
>Consider the equation A + B = C
>
>sqrt(A + B) = sqrt(C) is correct, sqrt(A) + sqrt(B) = sqrt(C) is incorrect.
>
>It is true that 106.066^2 + 35.355^2 = 111.8^2 where
>
>106.066^2/150 = 75w, 35.355^2/150 = 8.33w, and 111.8^2/150 = 83.33w
>--
>cheers, CAM http://www.qsl.net/w5dxp
>
>
No, Cecil, you have two voltages, in two waves, each proportional to the square
root of
its respective power. You add the voltages according to superposition and you
get 11.546. Square that number and it gives you 133.32. If you insist on

adding
the powers as if superposition applied to them and then taking the square root
you'll always get answers that other people will find hard to believe. Didn't
they
teach you in elementary electronics class that superposition doesn't apply to
power? This is a classic example of why it doesn't.

73

Tom Donaly KA6RUH

2675. Re: A closer look

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-12 05:16:50 UTC
From: CAM <w5dxp@hotmail.com>
Message-ID: <3D5744C2.E08AAFEF@hotmail.com>
Source record: 137116

Tdonaly wrote:
>
> >Tdonaly wrote:
> >> O.K. Cecil, lets say you're right and 75 joules/sec + 8.33 joules/sec =
> >83.33
> >> joules/sec.
> >> Since voltage is proportional to the square root of power, what you're
> >saying
> >> is that
> >> sqrt(75) + sqrt(8.33) = sqrt(83.33), or, 8.6603 + 2.8862 = 9.1285, which,
> >of
> >> course, is wrong.
> >
> >Egads Tom, where did you learn your math? The sum of the square roots of
> >two numbers is NOT equal to the square root of the sum of the numbers.
> >
> >The correct equation is sqrt(75 + 8.33) = sqrt(83.33) which is correct.
> >Square roots do not obey the distributive law of mathematics.
>
> You don't understand.

Square roots do not obey the distributive law of mathematics. If A + B = C,
the square root of A plus the square root of B never equals the square root of C.
Your mathematical concept is flawed. If A^2 + B^2 = C^2 and then you try to say
sqrt(A^2) + sqrt(B^2) = sqrt(C^2) then that is a math violation. What we are
discussing is irrelevant to your mathematical error.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
------== Over 80,000 Newsgroups - 16 Different Servers! =-----

2676. Re: A closer look

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-12 05:40:16 UTC
From: CAM <w5dxp@hotmail.com>
Message-ID: <3D574A40.F19E1C00@hotmail.com>
Source record: 137117

Tdonaly wrote:
>
> >
> >Tdonaly wrote:
> >> O.K. Cecil, lets say you're right and 75 joules/sec + 8.33 joules/sec =
> >83.33
> >> joules/sec.
> >> Since voltage is proportional to the square root of power, what you're
> >saying
> >> is that
> >> sqrt(75) + sqrt(8.33) = sqrt(83.33), or, 8.6603 + 2.8862 = 9.1285, which,
> >of
> >> course, is wrong.

I think I understand what you are saying now so let's try it again. The
above formula is well known to power engineers. Let's say we have the
following circuit.

9.1285 volts on the primary of a transformer with an input impedance of 10 ohms.
8.6603 volts on a secondary of a transformer with a load of 10 ohms
2.8862 volts on a secondary of a transformer with a load of 10 ohms

Power in equals 9.1285v^2/10 = 8.33 watts
Power out from 1st secondary 8.6603v^2/10 = 7.50 watts
Power out from 2nd secondary 2.8862v^2/10 = 0.83 watts

8.33 watts = 7.50 watts + 0.83 watts

What this proves is that if Steve omits the 50 watts from the interference
pattern, his 106.066v and 35.355v won't add up to 141.4 volts. You simply
cannot get 133.33 watts from the combination of a 75 watt wave and an 8.33
watt wave.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
------== Over 80,000 Newsgroups - 16 Different Servers! =-----

2677. Re: A closer look

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-12 08:57:07 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <r8ueluk72po4qq05s2o0r78u8g4vsr98cc@4ax.com>
Source record: 137118

On Mon, 12 Aug 2002 00:40:16 -0500, CAM <w5dxp@hotmail.com> wrote:

>Tdonaly wrote:
>>
>> >
>> >Tdonaly wrote:
>> >> O.K. Cecil, lets say you're right and 75 joules/sec + 8.33 joules/sec =
>> >83.33
>> >> joules/sec.
>> >> Since voltage is proportional to the square root of power, what you're
>> >saying
>> >> is that
>> >> sqrt(75) + sqrt(8.33) = sqrt(83.33), or, 8.6603 + 2.8862 = 9.1285, which,
>> >of
>> >> course, is wrong.
>
>I think I understand what you are saying now so let's try it again. The
>above formula is well known to power engineers. Let's say we have the
>following circuit.
>
>9.1285 volts on the primary of a transformer with an input impedance of 10 ohms.
>8.6603 volts on a secondary of a transformer with a load of 10 ohms
>2.8862 volts on a secondary of a transformer with a load of 10 ohms
>
>Power in equals 9.1285v^2/10 = 8.33 watts
>Power out from 1st secondary 8.6603v^2/10 = 7.50 watts
>Power out from 2nd secondary 2.8862v^2/10 = 0.83 watts
>
>8.33 watts = 7.50 watts + 0.83 watts
>
>What this proves is that if Steve omits the 50 watts from the interference
>pattern, his 106.066v and 35.355v won't add up to 141.4 volts. You simply
>cannot get 133.33 watts from the combination of a 75 watt wave and an 8.33
>watt wave.

Hi All,

Another
>formula ... well known to power engineers
or specifically, "Reference Data for Radio Engineers," "Magnetic-Core
Transformers,"

Ns / Np = ((Rs / Rp) * (Ws / Wp))^ï¿½
where
N : turns

R : resistance
W : power
E : voltage
p : primary (one of two)
s : secondary (one)

When you substitute all values offered by Cecil, above, into this
equation everything balances (in a manner to be shown, following).

Cecil's model can be used to examine his statement
>You simply cannot get 133.33 watts from the combination
>of a 75 watt wave and an 8.33 watt wave.
through a simple inversion of secondary/primary and a promise to
deliver 13.33 watts (continuing the metaphor of his example):

Power out equals 11.55v^2/10 = 13.33 watts
Power in from 1st primary 8.6603v^2/10 = 7.50 watts
Power in from 2nd primary 2.8862v^2/10 = 0.83 watts

Ns / N1 = ((10 / 10) * (13.33 / 7.5))^ï¿½
Ns / N1 = 1.333

Ns / N2 = ((10 / 10) * (13.33 / .83))^ï¿½
Ns / N2 = 4

for a sanity check, compare the ratios to the known voltages (also
performed and passed employing Cecil's configuration):
Ns / Np = Es / Ep

Ns / N1 = 11.55 / 8.6603
Ns / N1 = 1.333

Ns / N2 = 11.55 / 2.8862
Ns / N2 = 4

Looks like Steve's answer works just as well as yours Cecil (something
I've said all along - you two guys are arguing in different
universes).

Well, let's see. There's one of three possible explanations:
1. I've dicked up the math somewhere;
2. It works for both of you;
3. _____________ (a popular choice, in the class of what is the
definition of "is?")

73's
Richard Clark, KB7QHC

2678. Re: EVERY THING IS NOW KNOWN ON ANTENNAS.

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-12 09:25:28 UTC
From: nm5k@wt.net
Message-ID: <25eb70d7.0208120125.111addab@posting.google.com>
Source record: 137019

aunwin@fgi.net (Art Unwin KB9MZ) wrote in message
> This is not about money now, it is about reaching finality in what I
> still believe is a very viable antenna of which I have made many. So
> cut me some slack guys, look at what I have shown you, the patents,
> the clear descriptions in the Arrl book for associated resonant
> antennas that I alluded to e.t.c.Plus
> a good look at the associated physics on which you base your
> conclusions so that we all can debate the plusses and negs or where
> the experts say that I have wandered from theories accepted in
> academia. Yes, I am being personal with this antenna but I want to
> share it with all because I firmly believe in it. Please don't give me
> another hoop to jump thru.
> Best regards
> Art Un win KB9MZ

Dunno Art, I think it's the other way around. You are giving us hoops
to jump through. I was looking at your webpage and the ZZ1 antenna,
And I'm still not sure what you are using. From that picture, it looks
like you have two dipole elements, each with a cap. Is that right? I
modeled only a single dipole element. I never remember you mentioning
using two dipole elements. You mention two caps in that ZZ1. I never
modeled two caps, much less two parallel dipole elements. I then read
through the text on the website, and I still end up basically confused
as there is no real description of a particular antenna. You talk of
adding a second element. All this time, I thought we were using a
single dipole element? I haven't seen your patent, as I don't ever
remember seeing a link, or a name to look up for it. So I don't know
about the others, but at this point, I'm still confused as heck about
what antenna you are even talking about. The AO list does not do me
much good at all, because I don't have AO. Does the patent have a
decent picture to where I can see exactly what you are talking about?
You are making us jump through hoops, Art. Yes, two parallel dipoles
can be steered. But all this time, I thought you were talking about a
single dipole element. When I first saw the ZZ1 antenna, I thought you
were drawing two pictures of the same single element but with
different views..But, now I'm not so sure.
It seems to me it would have been much easier for you if you modeled
this yourself using a popular program such as eznec, even if you had
to get someone else to do it for you. That way, you can hand out the
ez file, and everyone can see the antenna, and see for themselves how
it models, and judge if it's accurate, or even make one themselves to
try in the real world. There would be no confusion as there is now.
But, you are wanting us to do this, "I've made two already myself",
and I still don't know for sure what in the heck I'm really supposed

to be making. I don't mind modeling something, but it's a waste of my time to keep modeling the wrong antenna. I can't read your mind. You need to get your ducks in a row first. That way you can debate the thing in an orderly military manner. It's more like helter skelter the way things have been going. I hope you take this as friendy criticism...No flaming intended. MK

2679. Re: Need ways to hide my antenna from my neighbors.

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-12 10:57:17 UTC
From: Scott <acepilot@bloomer.net>
Message-ID: <3D57948D.B65BCCDD@bloomer.net>
Source record: 137022

I've seen a company that produced a giant cellphone antenna that was
formed into a cross and placed next to a church. Nobody ever complains
when a church "supposedly" puts up a huge cross ;)

Scott
N0EDV

CAM wrote:
>
> VE3TMT wrote:
> > Hiding the antenna is the easy part, put it inside or paint it green and
> > stick itin a tree. I'm afraid you're going to have a harder time hiding
> > your tower. But if you do find a way, please let the rest of us know.
>
> I've seen cellphone towers disguised as trees. Unfortunately, they were
> 20 feet taller than any of the other trees.
> --
> cheers, CAM http://www.qsl.net/w5dxp
>
> -----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
> http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
> -----== Over 80,000 Newsgroups - 16 Different Servers! =-----

--

Scott
http://corbenflyer.tripod.com
http://groups.yahoo.com/group/ParasolAirplanes
Building RV-4
Gotta Fly or Gonna Die!

2680. Re: 2M Jpole

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-12 11:05:20 UTC
From: VE3TMT <ve3tmt@rac.ca>
Message-ID: <mDM59.601$%R5.315522@news20.bellglobal.com>
Source record: 137024

"Steven & Cindy LeBlanc" <oasisin@nbnet.nb.ca> wrote in message
news:5YC59.9107$cH2.729304@ursa-nb00s0.nbnet.nb.ca...
> I had a set of plans for an adjustable jpole made of 3/4 copper pipe. It
> has a set of brass nuts and a brass screw to adjust it for swr. I
recently
> lost the plans. I was wondering if any one has such a set of plans. I
have
> search and searched the net, and came up with hundreds of plans, but not
> this one. Any one know the specs for this antenna??
>
>

Steven,

On this link you will see the plans I followed, and my SWR is below 1.2 across the entire band. Doesn't use the screws you were mentioning but it works great as is.

Link : http://www.qsl.net/wb8erj/146jpole.htm

Good luck,

Max

2681. Re: Where buy a 5/8 HF all-band vertical ?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-12 11:11:13 UTC
From: 'Doc <w5lz@icok.net>
Message-ID: <3D5797CE.19C4BF28@icok.net>
Source record: 137023

Thierry,
I don't believe anyone makes an 'all-band'
5/8 wave length antenna.
'Doc

2682. Re: G5RV in a V pattern? Possible?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-12 11:33:04 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <3D579CF0.4040402@eznec.com>
Source record: 137020

George, W5YR wrote:
> Roy, unless I totally misunderstood the original posting, the antenna in
> question is a G5RV mounted in a horizontal V configuration, not the usual
> vertical-plane inverted V, with the ends of the antenna some 20 ft apart.

Sorry, I came in late an missed that. The principle is still the same, though.

> I was attempting to point out that having the ends of the legs too close
> together would result in poorer performance relative to that of a dipole
> than with them further apart, as in 180 degrees.
>
> No argument that all the power reaching the antenna is radiated. But what
> if the two ends were placed only, say, 4 " apart and the antenna were a
> 1/2-wave dipole? Would the antenna not then constiute a 1/4-wave open-ended
> transmission line with equal and opposite currents in each leg?

Yes, but not an ideal one. See below.

And would
> not all radiation be essentially cancelled?

The fields from the two wires would very nearly cancel. But for a given power input, the fields would be huge (due to heavy currents due to mutual coupling). So the radiation would be pretty normal if the losses could be kept reasonably low. With the wires that close, though, it would actually be impossible to keep losses really low.

> What happens to the power applied in this case? The line termination is a
> direct short which would produce total reflection and no power would be
> accepted by the antenna to be radiated. Hence, no conflict with
> Conservation of Energy.

Even if you had lossless wires, you wouldn't see a short circuit looking into the input. There would be a small but finite value of resistance. This is the radiation resistance, and it would be present because of the fact that the parallel wires will radiate. (Only in a perfect and lossless coaxial cable, or other fully shielded transmission line, would the input resistance be zero. As long as fields can escape, the resistance will be finite.) If you were able to match your transmitter to that resistance value, all the power you applied would be radiated. The currents in the wires would be very large, resulting in a very large field from each wire. The sum of the fields, while only a fraction of the field from each wire, would be comparable to that from a normal dipole.

I sent George an example EZNEC file, of two parallel wires 4 inches apart at 14 MHz. The feedpoint resistance in this case is 0.02683 ohms

-- very small, but finite. A power of 100 watts would result in a feedpoint current of 61 amps. Interestingly, the pattern is isotropic. Introducing a realistic loss of #12 copper wire reduces the field strength by 15 dB, underlining the practical limitations of loss and the impracticability of this as an antenna.

> As the ends of the legs are moved apart, a real component in the driving
> point impedance is developed and power begins to be accepted and radiated -
> all of it, as you point out - in some field form or other.

There's no magic point where this occurs. The real component is present down to the smallest spacing you'd like. Of course, it gets arbitrarily small as the spacing gets arbitrarily small.

But if you did have a perfectly shielded pair of wires, where the fields were confined by the shield and not allowed to radiate, you'd have zero input resistance regardless of the spacing or the wire length. With zero input resistance, no power could be applied to it.

> As the spacing increases until it reaches 180 deg, the driving-point
> impedance becomes whatever it is for that piece of wire at that location.
> And the real part will accept power and it will be radiated in the manner
> of the dipole it has become.

I keep stumbling over this "accept power" phrase. Any antenna with any finite radiation resistance will "accept power". If you restrict yourself to connecting a 50 ohm fixed impedance source to the antenna, then yes, the amount of power you get to the antenna -- the amount it "accepts" -- is strongly influenced by the feedpoint impedance. But if you have the ability to match the antenna (as I assume is generally the case), then all antennas will "accept power". As the spacing increases, the real part of the resistance increases, and you have to adjust your matching network. That's all.

I don't want to minimize the practical limitations of getting power to an antenna with a very small radiation resistance, or the very real losses that will occur in such an antenna. In fact, I don't think antennas with these characteristics are generally a good idea because of the practical problems involved in feeding them and keeping losses manageable. My only point is that if an antenna with close spaced and out of phase wires doesn't work well, it's not because the fields are cancelling and the power therefore mysteriously disappearing. Field cancellation commonly occurs, and ones with pretty severe field cancellation, such as the 8JK, can actually have useful gain.

> Anywhere close? <:}

Sure, very close. And I've really liked the other postings you've made. They're right on the mark.

2683. Re: EZNEC

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-12 11:39:46 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <3D579E82.9070800@eznec.com>
Source record: 137021

EZNEC users who have the resources to accurately measure antenna
patterns have told me they've gotten excellent results for Yagis of more
than 15 elements. A wide variety of other antennas have performed as
predicted.

I wish I could take credit for this, but I can't. It's due to the NEC-2
calculating engine used by EZNEC. This was developed by the government,
not by me.

This isn't to say, however, that NEC-2 and EZNEC don't have their
limitations and don't take a good deal of care and skill in some
situations. And one of the weak points is the ground models. They assume
a perfectly flat ground that's infinite in extent and homogeneous in
conductivity and permittivity. So assumptions about patterns and
performance over real ground have to be made with some care.

Roy Lewallen, W7EL

Rick Littlefield wrote:
>>Can anyone speak about the accuracy of an Eznec(v3.0.42) model of an antenna
>
> over "real" ground?<
>
> A couple weeks ago, I used EZNEC to model a parallel reflector at 60-feet for
> my 75 dipole to make up a 2-element wide-spaced yagi (over real ground). I then
> installed the reflector exactly as modeled. There's no way I can confirm the
> behaviour of the pattern other than by general impression, but EZNEC predicted
> the feedpoint impedance and SWR (both before and after my installation) with
> uncanny accuracy--giving me at least some degree of confidence that the model
> might be predictive of the antenna's performance other ways.
>
> Rick K1BQT

2684. Re: A closer look

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-12 11:57:01 UTC
From: VE9SRB <srbest@att.net>
Message-ID: <hoN59.9027$Ep6.700572@bgtnsc05-news.ops.worldnet.att.net>
Source record: 137025

"CAM" <w5dxp@hotmail.com> wrote in message
news:3D573E5A.C82D380A@hotmail.com...

> The 150 ohm resistor first dissipates 75 watts. The 50 ohm resistor then
dissipates
> 100 watts. That's a difference of 25 watts. Where is that 25 watts in your
equation
> of 75w + 8.33w = 133.33w?
> --

The 25 W reflection occurs at the junction of the 150 ohm cable, which is terminated in a 150 ohm load. When you replace this junction with a 50 ohm load, the 25 W reflection simply does not occur, so this power no longer goes to the source. That's what happens to your 25 W - it stays at the 50 ohm load. It no longer returns to the source. Its very simple. There is no 75w + 8.33w = 133.33w equation in this example Cecil. This example has absolutely nothing to do with the situation we have been discussing.

If you want to see an example where we have a 75w wave and an 8.33w wave superimposing to create a 133.33 w wave where there is NO corresponding destructive interference or "power cancellation" take a look at this example - don't keep ignoring it.

141.421 V -- 50 ohm source Z -+----150 ohm line 1 WL ----+-50 ohm load

Determine the initial conditions in the source and in the line.

Determine the steady state conditions in the source, in the line and the load.

Now examine the initial and re-reflected forward waves in the line and determine all of the power relations.

Steve VE9SRB

2685. Re: A closer look

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-12 12:11:23 UTC
From: CAM <w5dxp@hotmail.com>
Message-ID: <3D57A5EB.35E6248A@hotmail.com>
Source record: 137026

Richard Clark wrote:
> Looks like Steve's answer works just as well as yours Cecil (something
> I've said all along - you two guys are arguing in different
> universes).

And that's what I've been saying all along, Richard. Steve is arguing
in a universe where the conservation of energy principle doesn't exist.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

2686. Re: A closer look

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-12 12:34:10 UTC
From: CAM <w5dxp@hotmail.com>
Message-ID: <3D57AB42.FDB8799B@hotmail.com>
Source record: 137027

VE9SRB wrote:
>
> "CAM" <w5dxp@hotmail.com> wrote in message
> news:3D573E5A.C82D380A@hotmail.com...
>
> > The 150 ohm resistor first dissipates 75 watts. The 50 ohm resistor then
> > dissipates 100 watts. That's a difference of 25 watts. Where is that 25
> > watts in your equation of 75w + 8.33w = 133.33w?
>
> The 25 W reflection occurs at the junction of the 150 ohm cable, which is
> terminated in a 150 ohm load. When you replace this junction with a 50 ohm
> load, the 25 W reflection simply does not occur, so this power no longer
> goes to the source.

The junction is NOT replaced with a 50 ohm load and to say it is is just
the obfuscation of a smokescreen. The 50/150 junction has not changed. The
only change is changing the load from 150 ohms to 50 ohms. Please adhere
to the boundary conditions.

> That's what happens to your 25 W - it stays at the 50
> ohm load. It no longer returns to the source. Its very simple. There is
> no 75w + 8.33w = 133.33w equation in this example Cecil. This example has
> absolutely nothing to do with the situation we have been discussing.

Of course it does, Steve, that's why I presented it. You are forced to ignore
it since it would prove you wrong. On the off chance you didn't understand
the diagram or the question, here it is again.

Again the source is a signal generator with a circulator that dissipates all
reflected energy.

Configuration #1

100w source---50 ohm feedline---+---1/2WL 150 ohm feedline---150 ohm load
100w forward 75w forward 75w dissipated
25w reflected 0w reflected
and dissipated

Configuration #2

100w source---50 ohm feedline---+---1/2WL 150 ohm feedline---50 ohm load
100w forward 133.33w forward 100w dissipated
0w dissipated 33.33w reflected

In Configuration #1, the circulator is dissipating 25 watts and the 150 ohm
load is dissipating 75 watts.

In Configuration #2, the circulator is dissipating zero watts and the 50 ohm load is dissipating 100 watts.

The 25 watts that was dissipated in the source circulator in Configuration #1 is dissipated in the load in Configuration #2, i.e. 25 watts has moved from the source circulator to the load simply by changing the load from 150 ohms to 50 ohms.

The question still is: Where is that 25 watts in your 75w + 8.33w = 133.33w equation.

The 75w is the same in both configurations. The 8.33w exists only in Configuration #2. What happened to the 25 watts? Where does 25 watts appear in your power equation? How did that 25 watts get from the source circulator in Config #1 to the load in Config #2 without joining the forward voltage and current on the 150 ohm feedline?

I'm going to keep asking this question until I get a straight answer or you refuse to answer.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

2687. Re: A closer look

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-12 12:41:08 UTC
From: VE9SRB <srbest@att.net>
Message-ID: <E1O59.9061$Ep6.703304@bgtnsc05-news.ops.worldnet.att.net>
Source record: 137028

"CAM" <w5dxp@hotmail.com> wrote in message
news:3D57AB42.FDB8799B@hotmail.com...
> Again the source is a signal generator with a circulator that dissipates
all
> reflected energy.
>
> Configuration #1
>
> 100w source---50 ohm feedline---+---1/2WL 150 ohm feedline---150 ohm load
> 100w forward 75w forward 75w
dissipated
> 25w reflected 0w reflected
> and dissipated
>
> Configuration #2
>
> 100w source---50 ohm feedline---+---1/2WL 150 ohm feedline---50 ohm load
> 100w forward 133.33w forward 100w
dissipated
> 0w dissipated 33.33w reflected
>
> In Configuration #1, the circulator is dissipating 25 watts and the 150
ohm
> load is dissipating 75 watts.
>
> In Configuration #2, the circulator is dissipating zero watts and the 50
> ohm load is dissipating 100 watts.
>

From your earlier drawing, I thought that you replaced the 150 ohm line and
150 load with a 50 ohm load. Sorry for the confusion on my part. I'll get
back to you shortly. In fairness, take a close look at the example I posed
to you.

Steve

2688. Re: A closer look

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-12 12:54:16 UTC
From: CAM <w5dxp@hotmail.com>
Message-ID: <3D57AFF8.6838126C@hotmail.com>
Source record: 137029

VE9SRB wrote:
> From your earlier drawing, I thought that you replaced the 150 ohm line and
> 150 load with a 50 ohm load. Sorry for the confusion on my part.

Probably my fault. That ASCII drawing was pretty busy.

> I'll get back to you shortly. In fairness, take a close look at the example
> I posed to you.

I promise to do that, Steve, just as soon as we are finished with this example. You have a tendency to leave one example unfinished and jump from example to example which only winds up confusing everyone. My original example a year ago used a reflection coefficient of 0.707 which made the math easy. You changed the example to a reflection coefficient of 0.5 which introduced a calculator as a requirement and consumed more time. The simplest examples are the most effective.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

2689. Re: Antenna for Icom R2 scanner

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-12 13:20:05 UTC
From: Fredrik Olofsson <574olofsson@telia.com>
Message-ID: <9CO59.246$e5.50892@newsb.telia.net>
Source record: 137030

"sampetten" <sampett456@yahoo.co.uk> skrev i meddelandet
news:d8f8142b.0208112004.7e7a2156@posting.google.com...
> I find the rubbery antenna that comes with the Icom R2 scanner too
> short for good reception. But, most other longer antennas just won't fit
into
> the screw of the scanner. Is there any gadget that will connect another
> longer antenna (possibly just a hollow metal tube) with the screw of
> the scanner ? Or are there other ways to improve on the effiency of
> the existing rubbery antenna ?
>
> Thank you

The connector on the R2 is an SMA. There are adapters that lets you use a
BNC connector instead. BNC is a
larger and more convenient connector. One example of what seems to be a good
adapter is : http://www.wa3hrl.com/smabnc/ . Does that seem to fit the
antennas you've seen?

The antenna picks up stronger signals from metal objects if it is placed
nearby. That works especially good on shortwave. Putting the receiver on
some grounded metal chassi seems to help reception generally.

To simply couple a wire of random length to the R2, you can take a plastic
tube, wind and tape one end of a wire on it and then slide this tube on the
rubber antenna. The rest non-wound part of the wire could be a couple of
feet long and hang in the air.

Don't mess with the R2s SMA connector. You want it to last.

Fredrik

2690. Re: A closer look

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-12 13:26:15 UTC
From: CAM <w5dxp@hotmail.com>
Message-ID: <3D57B777.8BAA9980@hotmail.com>
Source record: 137032

Richard Clark wrote: (about a transformer in Steve's universe :-)
> Power out equals 11.55v^2/10 = 13.33 watts
> Power in from 1st primary 8.6603v^2/10 = 7.50 watts
> Power in from 2nd primary 2.8862v^2/10 = 0.83 watts

Something's obviously wrong, Richard. Power companies would pay mucho dinero for any transformer that inputs 8.33 watts while outputting 13.33 watts but that's the way it is in Steve's universe. In my universe, the input impedance of the two primaries is not 10 ohms. Satisfying the conservation of energy principle requires the input impedances to be more like 6.245 ohms while keeping the voltages constant and the 10 ohm load constant.

Power out equals 11.55v^2/10 = 13.33 watts
Power in from 1st primary 8.6603v^2/6.245 = 12 watts
Power in from 2nd primary 2.8862v^2/6.245 = 1.33 watts

If the choice is between (balancing the voltage equation and un-balancing the energy equation) Vs (balancing the energy equation and unbalancing the voltage equation), Mother Nature in my universe sez balancing the energy equation is the only rational choice.

The longest transmission lines in the world are managed by engineers who would laugh deliriously at the concept of 75w + 8.33w = 133.3w. One simply cannot add the two and only two components below in a valid manner and obtain these results.

(106.066v at 0.707a) + (35.355v at 0.236a) = 141.4v at 0.943a

Referencing Bill Klocko's posting, there are two more components that must enter the above equation, component #2 and component #8

Assuming the reference is the 100w forward wave with 70.71v at 90 deg accompanied by 1.414a at 90 deg, component #2 is 35.355v at 90 deg accompanied by 0.707 at -90 deg, and component #8 is 35.355v at -90 deg accompanied by 0.707a at 90 deg. Component #2 and Component #8 cancel, but their energy remains. Those 50 joules per second are what is missing from the 75w + 8.33w = 133.33w energy equation.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
------== Over 80,000 Newsgroups - 16 Different Servers! =-----

2691. Re: Cheapo 20 foot mast?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-12 13:26:25 UTC
From: Alex Flinsch <alex@localhost.localdomain>
Message-ID: <slrnalfe41.nma.alex@homer.linux1.lan>
Source record: 137031

On <Julian@velonospamdog.demon.co.uk> wrote:
> Hello
>
> I want to set up a random wire antenna going from the wall of my house
> to some kind of mast, roughly 20 foot tall. Any ideas on a cheap way of
> constructing a mast? I could cope with pouring some concrete in a hole a
> setting a length of plastic tubing in it as a base, but what would be a
> good cheap material to act as the mast, that would take the weight of
> the wire?

I use the following setup for a portable/temporary mast

2'x2' square of 1/2" plywood, with holes drilled about 1" in from each corner
4 large nail type tent stakes
old xmas tree stand bolted to center of plywood square
23' fiberglass & aluminium extension utility pole

I just nail the plywood square to the ground (using the tent stakes thru the corner holes), and insert the pole into the xmas tree stand. total cost (excluding the xmas tree stand) was about $35 (most of which was the utility pole). I did need to remove the rubber grip from the base of the pole to get it to fit into the stand, but it works really well, and is easily portable.

2692. Re: A closer look

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-12 14:17:15 UTC
From: tdonaly@aol.com
Message-ID: <20020812101715.12774.00003564@mb-fz.aol.com>
Source record: 137033

>
>On Mon, 12 Aug 2002 00:40:16 -0500, CAM <w5dxp@hotmail.com> wrote:
>
>>Tdonaly wrote:
>>>
>>> >
>>> >Tdonaly wrote:
>>> >> O.K. Cecil, lets say you're right and 75 joules/sec + 8.33 joules/sec =
>>> >83.33
>>> >> joules/sec.
>>> >> Since voltage is proportional to the square root of power, what you're
>>> >saying
>>> >> is that
>>> >> sqrt(75) + sqrt(8.33) = sqrt(83.33), or, 8.6603 + 2.8862 = 9.1285,
>which,
>>> >of
>>> >> course, is wrong.
>>
>>I think I understand what you are saying now so let's try it again. The
>>above formula is well known to power engineers. Let's say we have the
>>following circuit.
>>
>>9.1285 volts on the primary of a transformer with an input impedance of 10
>ohms.
>>8.6603 volts on a secondary of a transformer with a load of 10 ohms
>>2.8862 volts on a secondary of a transformer with a load of 10 ohms
>>
>>Power in equals 9.1285v^2/10 = 8.33 watts
>>Power out from 1st secondary 8.6603v^2/10 = 7.50 watts
>>Power out from 2nd secondary 2.8862v^2/10 = 0.83 watts
>>
>>8.33 watts = 7.50 watts + 0.83 watts
>>
>>What this proves is that if Steve omits the 50 watts from the interference
>>pattern, his 106.066v and 35.355v won't add up to 141.4 volts. You simply
>>cannot get 133.33 watts from the combination of a 75 watt wave and an 8.33
>>watt wave.
>
>Hi All,
>
>Another
>>formula ... well known to power engineers
>or specifically, "Reference Data for Radio Engineers," "Magnetic-Core
>Transformers,"

>
> Ns / Np = ((Rs / Rp) * (Ws / Wp))^ï¿½
> where
> N : turns
> R : resistance
> W : power
> E : voltage
> p : primary (one of two)
> s : secondary (one)
>
>When you substitute all values offered by Cecil, above, into this
>equation everything balances (in a manner to be shown, following).
>
>Cecil's model can be used to examine his statement
>>You simply cannot get 133.33 watts from the combination
>>of a 75 watt wave and an 8.33 watt wave.
>through a simple inversion of secondary/primary and a promise to
>deliver 13.33 watts (continuing the metaphor of his example):
>
>Power out equals 11.55v^2/10 = 13.33 watts
>Power in from 1st primary 8.6603v^2/10 = 7.50 watts
>Power in from 2nd primary 2.8862v^2/10 = 0.83 watts
>
> Ns / N1 = ((10 / 10) * (13.33 / 7.5))^ï¿½
> Ns / N1 = 1.333
>
> Ns / N2 = ((10 / 10) * (13.33 / .83))^ï¿½
> Ns / N2 = 4
>
>for a sanity check, compare the ratios to the known voltages (also
>performed and passed employing Cecil's configuration):
> Ns / Np = Es / Ep
>
> Ns / N1 = 11.55 / 8.6603
> Ns / N1 = 1.333
>
> Ns / N2 = 11.55 / 2.8862
> Ns / N2 = 4
>
>Looks like Steve's answer works just as well as yours Cecil (something
>I've said all along - you two guys are arguing in different
>universes).
>
>Well, let's see. There's one of three possible explanations:
>1. I've dicked up the math somewhere;
>2. It works for both of you;
>3. _____________ (a popular choice, in the class of what is the
>definition of "is?")
>
>73's

>Richard Clark, KB7QHC
>
Hi, Richard,
I didn't expect to convince Cecil with my simple observation. I merely wished to point out that he could either add powers the way he does, and violate the superposition principle, or he could concentrate on the voltages and come up with a different answer. The transformer example he gave is obfuscation unless he can prove that his transformer is directly analogous, mathematically, and physically, with a transmission line. If it is, then why argue transmission lines when you can argue transformers, which are ostensibly simpler? You're right, Richard, both Cecil and Steve eventually come up with the same numbers, it's the method of interpreting how they were arrived at, and what they mean, that has generated all the verbiage.
73
Tom Donaly KA6RUH

2693. Re: EVERY THING IS NOW KNOWN ON ANTENNAS.

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-12 14:20:10 UTC
From: aunwin@fgi.net
Message-ID: <c4becf19.0208120620.58f05c4f@posting.google.com>
Source record: 137034

"J. Harvey" <JM002.Harvey_ANTI*SPAM_@Sympatico.ca> wrote in message
news:<AAh59.6050$Tv.1023227@news20.bellglobal.com>...
> "Art Unwin KB9MZ" quoted some dumb bunny...
> > "...there is nothing 'new' to be found."
>
> Yeah right...
>
> *Switch mode antennas*
>
> A radiator interspersed with numerous optically-controlled switches. The
> switches are something like (?) especially-designed ultrahigh speed FET

>
> The basic idea is that the electrical length of the antenna element could be
> dynamically controlled.
****
If one has a constant impedance which is what my antenna revolves
around
then you wiil always control the electrical lengths of the electrical
length.
****
> By using "switch mode power supply" and "power factor correction"
> techniques, even the input impedance could be controlled.
>That's a neat trick !
>
****

I do not know whether you are pulling my leg or not, but here are my
comments
on what you have written.

ALL multi frequency anteenas should an impedance that is controlled.
A good example is a loop or even a trapped dipole, to not do so
requires extra means to obtain a good/usable SWR.

"Trick" is not what I call a good use of the term. It is done all the
time!
The antenna that I describe revolves around constant impedance and
control of the electrical length, it would not be succesful
otherwise.And as Peter Bracket
stated somewhere, the outcome MUST be predictable both in action and
also on
mathematical ground.(The man must be an engineer) If it is not then
the use of the term "trick" would be suitable.
I say again 'the antenna' is not new, I have invented nothing.All i am

doing is presenting a concept that meets most amateur requirements
Your 'tactical....
antenna seems awfully complex to me. As with the physical shape of 'my
dipole'
and the mathematics that go with it all is simple enough to follow by
all hams who have a basic license. And that's how I like it rather
than vague claims
that are often made by many.
Yes Peter, you are absolutely correct. If it cannot be proved
mathematically
then we have an enigma wrapped up in a mystery paper and we can
declare that
'The Emporer is not wearing clothes!"
Best Regards
Art Unwin KB9MZ.....XG.

2694. Re: A closer look

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-12 15:30:31 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <hnjflu8ipvle1sdjqebptees89u260u9r2@4ax.com>
Source record: 137035

On Mon, 12 Aug 2002 08:26:15 -0500, CAM <w5dxp@hotmail.com> wrote:

>Richard Clark wrote:
>> Power out equals 11.55v^2/10 = 13.33 watts
>> Power in from 1st primary 8.6603v^2/10 = 7.50 watts
>> Power in from 2nd primary 2.8862v^2/10 = 0.83 watts
>
>Something's obviously wrong, Richard.

remaining definition of "is" omitted....

Hi Cecil,

Well, the problem is then equally shared with your answer isn't it?
That is the irony of such condemnation, your own foundation is built
on the same drifting sand.

Well, I didn't expect any math problems revealed, and there is no
offer of a new physics of transformers emerging to challenge the 19th
& 20th centuries' understandings.

73's
Richard Clark, KB7QHC

2695. Re: A closer look

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-12 15:36:34 UTC
From: CAM <w5dxp@hotmail.com>
Message-ID: <3D57D602.31F15A9@hotmail.com>
Source record: 137036

Tdonaly wrote:
> I didn't expect to convince Cecil with my simple observation. I merely
> wished to point out that he could either add powers the way he does,
> and violate the superposition principle, or he could concentrate on the
> voltages and come up with a different answer.

If one adds two and only two waves, one cannot at the same time obtain the sum of the voltages and the sum of the currents without doubling the power output of the transmitters which changes the voltages and currents from what they were initially. The voltage equation doesn't balance because it is impossible to balance the voltage equation with two and only two components. You proved that with your observation.

Let's say we manage to sum the outputs of two 100 watt transmitters into a single load. The power to that load is 200 watts. The sum of the voltages is NOT what appears across the load and the sum of the currents is NOT what appears across the load. If both transmitters are putting out 70.7v at 1.414a and you sum their outputs into a 50 ohm load by network matching, the best you can do is 100 volts at 2 amps or 200 watts. Blood out of a turnip comes to mind.

You cannot take two 100w transmitters, each putting out 70.7v at 1.414a and sum the outputs to get 141.4v at 2.828a. That's getting 400 watts out of two 100 watt transmitters. All I am saying is that Steve left some energy out of his energy equation.

> The transformer
> example he gave is obfuscation unless he can prove that his transformer is
> directly analogous, mathematically, and physically, with a transmission line.

It is analogous in that both are required to satisfy the principle of the conservation of energy. The transformer has multiple primaries and a single secondary. If you cannot perform the same feat with a transformer that you perform with a transmission line, then something is missing. That something is the power involved in the interference pattern which exists in a transmission line but not in a transformer.

> You're right, Richard, both Cecil and Steve eventually
> come up with the same numbers, ...

Ahhhhh, but as you can see from my follow-up posting, Steve lives in a universe where the conservation of energy principle is meaningless and one can obtain more power out of a transformer than one puts in.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
------== Over 80,000 Newsgroups - 16 Different Servers! =-----

2696. Re: A closer look

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-12 15:46:58 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <j3mflu0u55946qh759o09bc97ajluvtck6@4ax.com>
Source record: 137037

On Mon, 12 Aug 2002 10:36:34 -0500, CAM <w5dxp@hotmail.com> wrote:

>> You're right, Richard, both Cecil and Steve eventually
>> come up with the same numbers, ...
>
>Ahhhhh, but as you can see from my follow-up posting, Steve lives in
>a universe where the conservation of energy principle is meaningless
>and one can obtain more power out of a transformer than one puts in.

Hi Cecil,

I see that you do not dispute Tom's assessment of my observation (nor
my observation). All good and well.

However, you do ascribe an error to Steve, that through symmetrical
results must apply equally to you :-(

Watch the irony, it cuts both ways.

73's
Richard Clark, KB7QHC

2697. Re: 2M Jpole

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-12 16:34:42 UTC
From: DA <dmamb@hotmail.com>
Message-ID: <aj8o32ktu1@galileo.ticon.net>
Source record: 137038

I believe this is the link to the plans you are looking for:
http://www.packetradio.com/j-poles-unlimited.html

---K9DA

"Steven & Cindy LeBlanc" <oasisin@nbnet.nb.ca> wrote in message
news:5YC59.9107$cH2.729304@ursa-nb00s0.nbnet.nb.ca...
> I had a set of plans for an adjustable jpole made of 3/4 copper pipe. It
> has a set of brass nuts and a brass screw to adjust it for swr. I
recently
> lost the plans. I was wondering if any one has such a set of plans. I
have
> search and searched the net, and came up with hundreds of plans, but not
> this one. Any one know the specs for this antenna??
>
>

2698. Re: Feeding an Inv-L at the bottom?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-12 16:39:05 UTC
From: Floyd Sense <sentek@sprintmail.com>
Message-ID: <JwR59.206$zJ.10303@newsread2.prod.itd.earthlink.net>
Source record: 137039

Man, you must live somewhere where it still rains. You couldn't drive nails into the ground here, let alone pieces of coat hangers. Since the grass no longer grows here either, laying radials on top doesn't work too well. You can cut slits into just about anything using a lawn edger with a vertical blade. Cuts a slit about 1/4. These edgers can be rented just about anywhere.

--
K8AC
Floyd Sense in Angier, NC
"Fred Hambrecht" <w4jle@charter.net> wrote in message
news:ul949ui2bq135e@corp.supernews.com...
> Don't bother to cut slits for the radials. Cut pieces of coat hanger into
6"
> pieces. Bend then in half. Next lay out the radial and use the bent pieces
> to stake the wire down. Kind of like stapling the wire to the ground. This
> will keep them out of the lawn mower and within a month you won't be able
to
> find them as the grass covers them.
>
>
> "StarGazer" <pti@capnet.com> wrote in message
> news:3D547E7F.B2F2D5A6@capnet.com...
> > If one feeds an inv-L at the bottom how come the radial lengths
> > don't have to be the same length as the L part?
> > Like a dipole should be?
> >
> > I picture it as a dipole with the ground being the other half of the
> > dipole. How does the ground know what its electrical length has
> > to be?
> >
> > If I want to put radials under my lawn what it the best way
> > to cut a sliver into it for the radial?
> >
> >
>
>
>

2699. Re: Cheapo 20 foot mast?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-12 16:46:33 UTC
From: WA6LZH <tangeram@lucent.com>
Message-ID: <3D57E669.1000001@lucent.com>
Source record: 137040

I have had excellent results with IMC THick Wall Galvanized Electrical Conduit. About ten dollars for ten feet of the thick stuff it telescopes together. I started with 1 1/4 then 1 then 3/4 for a thrity footer on my roof (Which gets me to almost 50ft). They fit pretty close to tight by you'll need to insert a nut and bolt or do what I did and drill and tap for a set screw. Supporting a dipole I would use two guys away from the ends. I find masts made this way to be sturdier than the common variety of push up's. Remember to leave the plastic busings in as thy make the telescoping fit better. If you don't want or need to telescope you can simply connect them together with the included couplings. I also use the 1 1/4 " as a mast on my tower. It supported a tribander for the last five years.

Tony WA6LZH

2700. Re: EVERY THING IS NOW KNOWN ON ANTENNAS.

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-12 17:10:44 UTC
From: aunwin@fgi.net
Message-ID: <c4becf19.0208120910.ea65c3c@posting.google.com>
Source record: 137041

nm5k@wt.net (Mark Keith) wrote in message
news:<25eb70d7.0208120125.111addab@posting.google.com>...
> aunwin@fgi.net (Art Unwin KB9MZ) wrote in message
> > This is not about money now, it is about reaching finality in what I
> > still believe is a very viable antenna of which I have made many. So
> > cut me some slack guys, look at what I have shown you, the patents,
> > the clear descriptions in the Arrl book for associated resonant
> > antennas that I alluded to e.t.c.Plus
> > a good look at the associated physics on which you base your
> > conclusions so that we all can debate the plusses and negs or where
> > the experts say that I have wandered from theories accepted in
> > academia. Yes, I am being personal with this antenna but I want to
> > share it with all because I firmly believe in it. Please don't give me
> > another hoop to jump thru.
> > Best regards
> > Art Un win KB9MZ
>
> Dunno Art, I think it's the other way around. You are giving us hoops
> to jump through. I was looking at your webpage and the ZZ1 antenna,
> And I'm still not sure what you are using. From that picture, it looks
> like you have two dipole elements, each with a cap. Is that right? I
> modeled only a single dipole element.
snip need to get your ducks in a row first. That way you can debate
the
> thing in an orderly military manner. It's more like helter skelter the
> way things have been going. I hope you take this as friendy
> criticism...No flaming intended. MK
Keith,

No. Of course not, you are friendly and you have followed pretty good.
Sometime one strays from the task at hand to answer a question which
can then confuse others who thought they had things corectly.
Let me try it again and you can use your EZNEC which I have not used
and model the following:

A twenty metre length dipole unbroken at its center.
Feeding method should be a delta match I.E. two connection points
about the center which tapers down to to a feed point commonly used to
reduce a high impedance to a low impedance.
Hopefully you followe that as it is pretty standard.
Now place in close proximity say an inch away from the center of the
previous
dipole, a loop antenna which is variable with the use of a capacitor,
usually in the range of 5 to 60 pF when looking at the range 14 to 30
Mhz.,

This is reshaped or squeezed to form an oblong (very inefficient)
with the long side of the oblong parallel to and about the center of
the dipole.(put the oblong on the other side from the delta match to
make things easier)
With the above you have two resonant circuits which are loosly coupled
to each other.
Now to some this would be no sweat but it may be a hurdle to you.
If we move the oblong shaped loop so the long side touches and become
one
common electrical length which provides for one antenna, dipole
shaped, with a parallel cuicuit at it's center. On the other side we
have the delta match connected.
Now we can model it as a single antenna where the object is to radiate
bidirectionally and where the capacitor provides for a constant
impedance at the feed point through out any portion of the range
provided by the now co-joined loop in a similar fashion it would do
separately and away from other radiating members.
So now you must look at the possible variables as follows:
We are striving for a constan impedance around which every thing
revolves
As I said in another posting, to use the range of capacitor given if
you go to the charts it will provide for a common reactance, 250 ohm
seems a good choice
thought you can go higher or lower depending on attributes later
desired from the antenna.
Great..... we have got rid of one variable.
Now we hae two variables left assuming that we have decided on a
common
diameter for all parts of the dipole. (later experience will show
that modification of various diameters can/are useful, but at this
time we are not interested in niceties...keep it simple.
We now have the basics for a program where the only variables are the
overall length of the dipole and also the length of the parallel
circuit or contact point of the quasi loop
So now we can use a computor program which comprises of a sweep thru
the basic frequencies provided by the loop to obtain a common lengths
throu out the
frequency range.
I rely on your useage of computor programing of which I am not an
expert, to come up with the final figures.
Note, when you look at your created current curve for the antenna you
will note
that the loop is ineffective when using for twenty meters and will
provide
for the normal current curve(one current maxima) and a bidirection
radiation pattern.
As you move towards the other end of the range, 10 meters, the current
curve will become mischapened and provide for two points of current
maxima in hase,which in turn supplies collinear gains over a simple
dipole.

At the extreme range the current curve will provide for two full an natural curves, in phase, which supplies the maximum collinear gain availabble for the above antenna arrangement.

8888888888 cap 88888888
LOOP 8 8
8888888888888888888888
1111111111111111111111111111111111111111111111111111111111111111
< coupling length >
DIPOLE

feed point ca be anywhere, for atarters, about the center point

If past experiences are observed the more that is said of this antenna the more it becomes confusing. On another thread the basics that this design revolves around, accepted laws of nature, has come to a screeching halt because one of natures laws has been violated and I am stuck here in first year 101, cannot proceed.Stop and reregister next year.

Hopefully all is now very clear and you can play with your programing to emulate
what the above antenna does in practice over and over with predictable results
that I assume all will turn to over the tradititional as shown by Uda with the traditional yagi.

Have fun Keith, give a shout if you need extra guidance.
And as I have said in private you appear to be the only one to give it a shot on the computor and put your personal beliefs aside.
Great job.
Warmest regards
Art Unwin
KB9MZ........XG

2701. Re: A closer look

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-12 17:11:49 UTC
From: CAM <w5dxp@hotmail.com>
Message-ID: <3D57EC55.806D0727@hotmail.com>
Source record: 137042

Richard Clark wrote:
>
> On Mon, 12 Aug 2002 08:26:15 -0500, CAM <w5dxp@hotmail.com> wrote:
>
> >Richard Clark wrote:
> >> Power out equals 11.55v^2/10 = 13.33 watts
> >> Power in from 1st primary 8.6603v^2/10 = 7.50 watts
> >> Power in from 2nd primary 2.8862v^2/10 = 0.83 watts
> >>
> >Something's obviously wrong, Richard.
>
> remaining definition of "is" omitted....
>
> Hi Cecil,
>
> Well, the problem is then equally shared with your answer isn't it?

Nope it isn't, Richard. The point is there no law of physics that
says the voltage equation must balance. However, there is a law of
physics that says the energy equation must balance. If the choice
is between balancing the voltage equation and balancing the energy
equation, balancing the energy equation wins every time.

Given two primary inputs on a transformer and one secondary output
on the transformer, there is no way to achieve 106.066 volts at
0.707 amps on one input, 35.355 volts at 0.236 amps on the other
input, and have 141.4 volts at 0.943 amps on the output. Clearly,
if the transmission line is capable of such a feat, then something
important has been omitted from the equations. That something is
the energy involved in the interference pattern which contributes
to the forward voltage and current.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

2702. Re: A closer look

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-12 17:16:05 UTC
From: CAM <w5dxp@hotmail.com>
Message-ID: <3D57ED55.6A5D3B46@hotmail.com>
Source record: 137044

Richard Clark wrote:
>
> On Mon, 12 Aug 2002 10:36:34 -0500, CAM <w5dxp@hotmail.com> wrote:
>
> >> You're right, Richard, both Cecil and Steve eventually
> >> come up with the same numbers, ...
> > >
> > >Ahhhhh, but as you can see from my follow-up posting, Steve lives in
> > >a universe where the conservation of energy principle is meaningless
> > >and one can obtain more power out of a transformer than one puts in.
> >
> > Hi Cecil,
> >
> > I see that you do not dispute Tom's assessment of my observation (nor
> > my observation). All good and well.
> >
> > However, you do ascribe an error to Steve, that through symmetrical
> > results must apply equally to you :-(
> >
> > Watch the irony, it cuts both ways.

Please quote me the preservation of voltage principle, Richard. What
does destructive interference do to your preservation of voltage
principle?
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
------== Over 80,000 Newsgroups - 16 Different Servers! =-----

2703. Re: EVERY THING IS NOW KNOWN ON ANTENNAS.

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-12 17:18:27 UTC
From: "Alexander S. Wood" <alec_wood@dont.spam.me.ntlworld.com>
Message-ID: <k6S59.1021$eX4.14688@newsfep3-gui.server.ntli.net>
Source record: 137043

"Mark Keith" <nm5k@wt.net> wrote in message
news:25eb70d7.0208120125.111addab@posting.google.com...
><snip>
> Dunno Art, I think it's the other way around. You are giving us hoops
> to jump through. <snip>
>. I can't read your mind. You
> need to get your ducks in a row first. That way you can debate the
> thing in an orderly military manner. It's more like helter skelter the
> way things have been going. I hope you take this as friendy
> criticism...No flaming intended. MK

On this subject, I think you've hit the real issue here Mark. I have followed the "Fractenna" debate for some time with initially great interest, it's now a much more weary trawl.

Personally, I am now very interested in these E-H antennas. When I saw them I thought "you must be joking", but I try to keep an open mind. However the proponents of this and other "new" technologies seem to feel the need to act like QVC presenters, and attempt to blind us with pseudo-science and marketing babble.

I would love to see some of these guys engage in a more honest debate. Less of the marketing hype, and a bit more REAL FACTS AND FIGURES. These should be reproduceable for verification. I'd be impressed by a headline on the QRZ site saying "Fractenna beats all comers" as a result of his attendance at one of the open antenna comparison days that I believe the ARRL run from time to time. I've a feeling I'll have a long wait.

I am afraid the cynical amongst us will continue to wonder what they have to hide if they continue to hide the REAL science behind a barricade of lawyers and marketing men.

However, I have no doubt that new antenna design await discovery, but babbling on about "quantum radiators" and similar rubbish does nothing to impress or earn my respect from a scientific point of view.

One last point, you mention modelling, I presume by computer. If a "new technology" was to be discovered, it could be a waste of time attempting to model it using software based on "old technology". For example a mathematical model of a steam engine will not tell me much about the prospective power output of my new V8, would a new antenna technology be so radically different - it could be.

Kind regards

Alec Wood M1BNK
Teesside UK

2704. Re: A closer look

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-12 17:48:03 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <f8tflu4crdgdcka990k390132e9nd3c4se@4ax.com>
Source record: 137045

On Mon, 12 Aug 2002 12:16:05 -0500, CAM <w5dxp@hotmail.com> wrote:

>Richard Clark wrote:
>>
>> On Mon, 12 Aug 2002 10:36:34 -0500, CAM <w5dxp@hotmail.com> wrote:
>>
>> >> You're right, Richard, both Cecil and Steve eventually
>> >> come up with the same numbers, ...
>> >
>> >Ahhhhh, but as you can see from my follow-up posting, Steve lives in
>> >a universe where the conservation of energy principle is meaningless
>> >and one can obtain more power out of a transformer than one puts in.
>>
>> Hi Cecil,
>>
>> I see that you do not dispute Tom's assessment of my observation (nor
>> my observation). All good and well.
>>
>> However, you do ascribe an error to Steve, that through symmetrical
>> results must apply equally to you :-(
>>
>> Watch the irony, it cuts both ways.
>
>Please quote me the preservation of voltage principle, Richard. What
>does destructive interference do to your preservation of voltage
>principle?

Hi Cecil,

I have no interest in the specifics of the problems you maintain
plague Steve's argument for they plague yours as well by symmetrical
results. Unless, of course, your universe is non-linear. THAT would
be a more interesting topic of discussion.

73's
Richard Clark, KB7QHC

2705. Re: A closer look

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-12 17:56:01 UTC
From: CAM <w5dxp@hotmail.com>
Message-ID: <3D57F6B1.9CDBBD17@hotmail.com>
Source record: 137047

Tdonaly wrote:
> I didn't expect to convince Cecil with my simple observation. I merely
> wished to point out that he could either add powers the way he does,
> and violate the superposition principle, or he could concentrate on the
> voltages and come up with a different answer..

Here's how to satisfy both the superposition principle and the conservation
of energy principle.

Consider P1 + P2 + P3 + P4 = Ptot

You say there is not an equation that will satisfy

sqrt(P1) + sqrt(P2) + sqrt(P3) + sqrt(P4) = sqrt(Ptot)

I say you are wrong. The square root of a number can be either
positive or negative. There exists a solution to both equations
that allows the voltages to sum to the correct value and the
powers to sum to the correct value.

The reason that the previous equation did not balance when the
square roots were taken is that the voltages that cancel were
left out of the equation.

I have already published the consistent results. The voltage equation is:

106.066v + 35.355v + 35.355v - 35.355v = 141.4v

The power equation is: 75w + 8.33w + 25w + 25w = 133.33w

Both equations balance perfectly and are perfectly consistent with
reality and the laws of physics. Why not adopt them?
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
------== Over 80,000 Newsgroups - 16 Different Servers! =-----

2706. Re: A closer look

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-12 17:56:10 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <k1tfluolmu1577refsossu7omr8bfot53p@4ax.com>
Source record: 137046

On Mon, 12 Aug 2002 12:11:49 -0500, CAM <w5dxp@hotmail.com> wrote:

>there is no way to achieve 106.066 volts at
>0.707 amps on one input, 35.355 volts at 0.236 amps on the other
>input, and have 141.4 volts at 0.943 amps on the output.

Hi Cecil,

Back to boring. I've already demonstrated the principle using your model, and your numbers. I don't think it necessary to repeat this for each twist in the road.

Find a power engineering equation that demonstrates your assertion above, offer a citation, and show your own work this time.

73's
Richard Clark, KB7QHC

2707. Re: A closer look

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-12 17:59:59 UTC
From: CAM <w5dxp@hotmail.com>
Message-ID: <3D57F79F.14535F26@hotmail.com>
Source record: 137048

Richard Clark wrote:
> I have no interest in the specifics of the problems you maintain
> plague Steve's argument for they plague yours as well by symmetrical
> results.

Nope they don't, Richard. I have already published perfectly consistent
results. Perhaps you missed them.

75w + 8.33w + 25w + 25w = 133.33w

106.066v + 35.355v + 35.355v - 35.355v = 141.4v

Both equations balance. No violation of the superposition principle
or the conservation of energy principle. What's wrong with that?
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

2708. Re: A closer look

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-12 18:04:29 UTC
From: CAM <w5dxp@hotmail.com>
Message-ID: <3D57F8AD.28E58B0C@hotmail.com>
Source record: 137049

Richard Clark wrote:
>
> On Mon, 12 Aug 2002 12:11:49 -0500, CAM <w5dxp@hotmail.com> wrote:
>
> >there is no way to achieve 106.066 volts at
> >0.707 amps on one input, 35.355 volts at 0.236 amps on the other
> >input, and have 141.4 volts at 0.943 amps on the output.
>
> Hi Cecil,
>
> Back to boring. I've already demonstrated the principle using your
> model, and your numbers. I don't think it necessary to repeat this
> for each twist in the road.
>
> Find a power engineering equation that demonstrates your assertion
> above, offer a citation, and show your own work this time.

It's pretty obvious, Richard. Take a transformer with those two signals
as the inputs. Try to get 133.33 watts out of a transformer when the
two powers on the inputs total 83.33 watts. Clearly, something else
is happening in the transmission line. That something else is the
energy involved in the interference pattern which doesn't exist
in the transformer.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

2709. Re: A closer look

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-12 18:07:22 UTC
From: CAM <w5dxp@hotmail.com>
Message-ID: <3D57F95A.57C31854@hotmail.com>
Source record: 137050

CAM wrote:
>
> Richard Clark wrote:
> > Well, the problem is then equally shared with your answer isn't it?
>
> Nope it isn't, Richard. The point is there no law of physics that
> says the voltage equation must balance.

Slight correction: The above statement applies to transformers. For
transmission lines I should have said that there is no law of physics
that calls for the preservation of voltage.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
------== Over 80,000 Newsgroups - 16 Different Servers! =-----

2710. Re: A closer look

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-12 18:20:20 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <amuflugod5dmi4vk8gicg0r6fvm5d6c5rh@4ax.com>
Source record: 137051

On Mon, 12 Aug 2002 12:59:59 -0500, CAM <w5dxp@hotmail.com> wrote:

>Richard Clark wrote:
>> I have no interest in the specifics of the problems you maintain
>> plague Steve's argument for they plague yours as well by symmetrical
>> results.
>
>Nope they don't, Richard.

Hi Cecil,

They must, you two are arguing the opposite sides of the same coin.
If you can point to an error in one, it must exist with the other -
the same math and the same model was used both times.

>Find a power engineering equation that demonstrates your assertion
>above, offer a citation, and show your own work this time.

73's
Richard Clark, KB7QHC

2711. Re: A closer look

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-12 19:18:49 UTC
From: CAM <w5dxp@hotmail.com>
Message-ID: <3D580A19.7130F232@hotmail.com>
Source record: 137052

Richard Clark wrote:
>
> On Mon, 12 Aug 2002 12:59:59 -0500, CAM <w5dxp@hotmail.com> wrote:
>
> >Richard Clark wrote:
> >> I have no interest in the specifics of the problems you maintain
> >> plague Steve's argument for they plague yours as well by symmetrical
> >> results.
> >>
> >Nope they don't, Richard.
>
> They must, you two are arguing the opposite sides of the same coin.

No we are not, Richard. I am arguing a perfectly consistent side
where all the voltages add up to the exact value they should and
all the powers add up to the exact value they should. Steve's
powers don't add up.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

2712. Re: Shielded parallel feedlines

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-12 19:46:19 UTC
From: Dave Allen <david_e_allen@agilent.com>
Message-ID: <3D58108A.32E8516A@agilent.com>
Source record: 137053

My (future) solution to this will be a remote tuner at the base of the antenna (under the feedpoint). Best of both worlds - open feeder between tuner and antenna, and coax to bury, etc coming into the shack. And better lightning protection available for coax (none really for open wire). The burying itself is good lighning protection.

73, dave, wb0taq, colorado

Chris Codella wrote:

> I would like to replace the coax that feeds my 80m dipole with a balanced
> feedline so I can use it with a tuner on other bands efficiently. But
> open-wire and other balanced lines need special consideration going through
> walls, near objects, etc. Also, my other antennas are fed with buried coax,
> mostly for appearance sake. You can't bury open wire.

2713. Re: EVERY THING IS NOW KNOWN ON ANTENNAS.

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-12 19:49:03 UTC
From: 'Doc <w5lz@icok.net>
Message-ID: <3D581129.1E207696@icok.net>
Source record: 137054

Art,
Why do I get the impression that you are in the
second stage of the old saying, "If you can't dazzle
them with brilliance, baffle them with B.S."? This
can't be the same description you used to get a
patent, and while on that subject, what is the patent
number? Maybe I can make some sense out of that...
'Doc

2714. Re: 2M Jpole

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-12 19:54:19 UTC
From: accrider3@aol.comnojunque
Message-ID: <20020812155419.26491.00002355@mb-bd.aol.com>
Source record: 137055

I built this J pole antenna and it works quite well the only modification was wear the swr adj screw nut. I fitted into a drilled hole in the pipe cap. It was easier than trying to hold it from below and I was worried about solder getting into the threads.
Up at 20 feet i can few hit a repeaters 20-40 miles away with HT at one watt.

2715. Re: EVERY THING IS NOW KNOWN ON ANTENNAS.

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-12 19:56:20 UTC
From: 'Doc <w5lz@icok.net>
Message-ID: <3D5812DF.54D4D712@icok.net>
Source record: 137056

Art,
At this point, I can only wonder if your son
is in the process of having a sanity hearing
conducted for you.
'Doc

2716. Re: EVERY THING IS NOW KNOWN ON ANTENNAS.

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-12 19:59:47 UTC
From: 'Doc <w5lz@icok.net>
Message-ID: <3D5813AE.97D619D@icok.net>
Source record: 137057

Art,
Hows you son coming along with that sanity hearing?
'Doc

2717. A closer look (conservation of energy)

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-12 20:05:58 UTC
From: klocko@toad.net
Message-ID: <224d9cd4.0208121205.6b9886cc@posting.google.com>
Source record: 137058

> > CAM <w5dxp@hotmail.com> wrote:
> > Antennas have it both ways, Bill. We get destructive interference in one
> > location so we can obtain constructive interference in another location
> > thus obtaining gain over an isotropic antenna. The conservation of energy
> > principle says that for every destructive interference there exists an
> > equal constructive interference.

Bill Klocko wrote:
> > Now look who stepped in the cow pie. This has absolutely nothing to do
> with conservation of energy. Field contributions from different parts
> of the antenna arrive a.t a point in space. If they just happen to have
> phase values that are 180-degrees opposite, then there is a
> destructive interference, or cancellation. That does not mean that the
> energy gets magically transported to some other point where they add.

CAM wrote:
> Of course it does, Bill, but it is not magic. It is the LAW of physics. If
> energy disappears at one point because they are 180-degrees opposite, that
> same energy is *FORCED* to appear somewhere else. That's what the conservation
> of energy principle is all about. Every case of destructive interference in
> one location results in a case of constructive interference somewhere else.
> I am absolutely appalled that you, Steve Best, and Jon Bloom don't understand
> that law of physics.

> Feel free to review the conservation of energy principle, Bill. You
> followed me down the path of component energy. Now you have to live
> with the consequences. This stuff is intuitively obvious to me. Maybe
> I need to write a QEX article entitled, "What Really Happens to
> Reflected Energy".

> What it feels like to me is that you guys are defending an RF Good Old
> Boys Old Wives' Tale. Please tell me that isn't true and you would be
> interested in alleviating your ignorance with the truth/facts.

You've challenged me to review conservation of energy, and I did. This
is not simply a quick look at the Antenna Book - I've examined
transmission line, antenna, general electromagnetics, physics, and
systems (radar) texts. The following is a sample of significant
results from some of the heavyweights. I hope you're happy with the
results. To all casual readers who don't want to read all the details,
skip down to the Summary.

A transmission line text
on pp. 137-138 of Transmission Lines and Networks, by Johnson, he
works an example to find the receiving-end voltage, current and power

using a transmission line chart. He simplifies it by saying that "the overall losses are small (alphaL << 1), and so we can use the principle of the conservation of power." ... "Since the losses in the line are negligible, the receiving-end power is equal to the sending-end power."

Also (p. 145): "If the current and impedance at one point are known, the magnitude of the current at another point can be found from the conservation of power"

On p. 14, Johnson presents an example of a battery connected to one end of an infinitely long line. He then presents expressions for the incremental energy, the total stored energy on the line, and the rate at which energy is increasing. "This [rate at which energy is increasing] is, of course, equal to the power continuously supplied by the battery."

I could find no indication in Johnson of a destructive interference pattern resulting in a constructive interference.

Another transmission line text
There is only index listing related to energy in Microwave Transmission by Slater. This one entry is for energy density related to Poynting's vector. There are no index entries for conservation or conservation of energy.

Still another transmission line text
There are no index entries for conservation, conservation of energy, or energy in
Field Theory of Guided Waves by Collin. (There is an entry for energy transport
velocity, but that's a different concern).

Yet another transmission line text
In Transmission Lines and Waveguides by Blake, there are only two index listings related to energy. These entries (p. 3 and p. 4) deal with the difference between the transmission of energy (power) vs the transmission of information (signals).

An antenna text
From p. 10 of Antennas, by Lamont Blake
"One of the fundamental laws of physics is the Law of Conservation of Energy. An
electromagnetic wave represents a flow of energy in the direction of propagation. The rate at which energy flows through a unit area of surface in space (energy per unit time per unit of area) is called the power density of the wave, usually expressed in watts per square meter. The principle of energy conservation can be applied to a

uniform spherical wave in the following terms, with reference to
Figure 1-2. If the source radiates power at a constant rate uniformly
in all directions, the total power flowing through any spherical
surface centered at the source will be uniformly distributed over the
surface and must equal the power radiated."

Translation: Suppose there's an antenna in free space and the input
power to it is 100 watts. Obtain the power density at points on a
sphere a large distance from the antenna. Integrate the product of
power density and surface area over the complete surface of the
sphere. The answer, according to conservation of energy, must be 100
watts. Blake uses an isotrope, but this works for any antenna.

Again, I could find no indication that constructive interference is
caused by a destructive interference pattern.

An electromagnetics text
>From pp. 21-23 and 28-30 of Advanced Engineering Electromagnetics by
Balanis
"within a region V bounded by [enclosed surface] S, the supplied power
is equal
to the power exiting S plus the power dissipated within that region
plus the
rate of change (increase if positive) of the electric and magnetic
energies
stored within that same region."

Translation: the sum of the power lost to heat, appearing as either
electric or
magnetic energy, and flowing across the surface equals the supplied
power. There is nothing about a destructive interference pattern
leading to a constructive interference.

---
physics texts
The physics texts I examined (four) deal with conservation of energy
mostly in the contexts of mechanical systems, thermodynamics,
acoustics, and wave propagation in fluids.

Terman
For those fans of Terman (count me as one of them), both the 1937 and
1947 editions of Radio Engineering have absolutely no index entries
for conservation, conservation of energy, or energy.

Summary
For transmission lines, conservation of energy means that the power
delivered to the load is the same as the power generated by the
source.

For antennas, it means that the total radiated power over the surface of a sphere is the same as the power radiated by the antenna.

For general electromagnetics, the sum of the stored electric and magnetic energies, the power flow out of the bounding surface, and any dissipated power must be equal to the supplied power.

In all the texts reviewed, there is absolutely no indication that a destructive
interference pattern at one point results in a constructive interference somewhere else. If conservation of energy is so extremely important to us engineers, you'd think it would be dealt with in exhausting detail in every text. It isn't.

In the context of your simple problem, the only thing to be said about conservation of energy is that it is not violated - the power dissipated in the load (100 watts) is identical to the power generated by the source. And that's all that can be said.

If you still insist on using conservation of energy to argue your position, maybe you could supply the name of some top-notch reference that we all could read. Otherwise, you haven't made your case, and you're using this principle inappropriately.

73,
Bill N3WK

2718. How far away: HF Dipole and tri-bander vertical?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-12 20:11:51 UTC
From: cprstn54zz@att.net
Message-ID: <3d58121b.340125@news-server.optonline.net>
Source record: 137059

I can put my triband antenna (50/144/440 MFJ-1536 just reduced to $119) 3 ft above the center insulator of my multi-band HF dipole 60 ft from my shack (where it will out of sight = XYL happy), or over my shack (where it will be in the view = XYL unhappy). If I put it near the dipole, will 600 watts of HF de-sense the tribander on RX, assuming I am using a VX-5R or similar?

I suspect it will since a mere 100 watts of CW on HF makes the TV's within 20 ft of the dipole blink. Will things be satisfactory even if the antennas are 60 ft apart? Should I just resign myself to doing HF or VHF but not both at the same time and put the antennas close?

Ken KC2JDY
Ken
(to reply via email
remove "zz" from address)

2719. Longwire antennas

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-12 20:14:01 UTC
From: eatc7402 <eatc7402@attbi.com>
Message-ID: <cGU59.113109$D36.98625@rwcrnsc53>
Source record: 137060

I need some advice on the design of a long wire antenna.
I have about 150' length of space to work with. The antenna
must be end fed. I would like to use it primarily for 80-40 meters,
but if it works on other freqs thats okay too. I realize that I will
more than likely need an antenna tuner to match the impedance
of the antenna to 50 ohms coax connector of the transmitter.
Its been a lot of years since I've put up an antenna. Any design
tips, sites with good designs on them etc would be most
helpful.
Thanks

David Freedman
K0KWK

2720. Re: Shielded parallel feedlines

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-12 20:16:56 UTC
From: 'Doc <w5lz@icok.net>
Message-ID: <3D5817B3.3F4967EC@icok.net>
Source record: 137061

Dave,
If you could place the tuner at the antenna
feed point, you wouldn't need the open-wire
feed line at all.
'Doc

2721. Re: A closer look

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-12 20:42:27 UTC
From: VE9SRB <srbest@att.net>
Message-ID: <T4V59.9591$Ep6.743270@bgtnsc05-news.ops.worldnet.att.net>
Source record: 137062

"CAM" <w5dxp@hotmail.com> wrote in message
news:3D57AFF8.6838126C@hotmail.com...
> VE9SRB wrote:
> > From your earlier drawing, I thought that you replaced the 150 ohm line
and
> > 150 load with a 50 ohm load. Sorry for the confusion on my part.
>
> Probably my fault. That ASCII drawing was pretty busy.
>
> > I'll get back to you shortly. In fairness, take a close look at the
example
> > I posed to you.
>
> I promise to do that, Steve, just as soon as we are finished with this
> example. You have a tendency to leave one example unfinished and jump from
> example to example which only winds up confusing everyone. My original
> example a year ago used a reflection coefficient of 0.707 which made the
> math easy. You changed the example to a reflection coefficient of 0.5
which
> introduced a calculator as a requirement and consumed more time. The
simplest
> examples are the most effective.
> --

Your example is going to take us right back to the same place we were sometime again. We both agree on the steady state conditions in terms of voltage, current and power. There are multiple forward waves that combine (constructive interference in this case) resulting in a total forward power of 133.33 W. There are multiple rearward waves that combine (destructive interference in this case) resulting in a total rearward wave of 0 W. We only disagree in the physical interpretation of what's happening to cause this.

My interpretation is that the superposition of voltages is sufficient to explain what happens in either direction and that the law of conservation of energy is satisfied because the total net power flowing into the junction equals the total net power flowing out of the junction.

Your interpretation requires me to accept that the energy involved in the destructive interference somehow manages to reverse direction and join the forward traveling energy. There is no physical mechanism that can cause this to happen, so I simply disagree with your interpretation.

Lets accept that we disagree on the physical interpretation of your example and examine my example proposed just recently. In my example the multiple

forward waves (75 W and 8.33 W) superimpose to bring the total forward power to 133.33 W but there is no corresponding destructive interference (energy cancellation) anywhere else in the system. I would like to see how you explain this.

Steve VE9SRB

2722. Re: A closer look (conservation of energy)

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-12 20:51:14 UTC
From: VE9SRB <srbest@att.net>
Message-ID: <6dV59.9606$Ep6.744405@bgtnsc05-news.ops.worldnet.att.net>
Source record: 137063

"Bill Klocko" <klocko@toad.net> wrote in message
news:224d9cd4.0208121205.6b9886cc@posting.google.com...

> I could find no indication in Johnson of a destructive interference
> pattern resulting in a constructive interference.

Bill

I proposed a simple example to Cecil where there are multiple forward waves (75 W and 8.33 W) that combine to result in a total forward wave with a power of 133.33 W. In this example, there is no place in the system where there is a corresponding level of destructive interference as Cecil's Law of Conservation of Energy interpretation would require. I would like to see how he explains this.

The example is very simple.

141.421 V -- 50 ohm source Z -+----150 ohm line 1 WL ----+-50 ohm load

From the initial state to the steady state there is only constructive interference and the total power continues to increase everywhere. There is no destructive interference. The law of conservation of energy still applies in that the total power delivered by the source equals the total power dissipated by the load.

Steve VE9SRB

2723. Re: Longwire antennas

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-12 21:02:02 UTC
From: Reg Edwards <g4fgq.regp@btinternet.com>
Message-ID: <aj97o9opi1@helle.btinternet.com>
Source record: 137064

Just erect a long wire antenna, tune it agaist ground and see what you get.

Then write a book on your findings.

Reg.

2724. Re: EVERY THING IS NOW KNOWN ON ANTENNAS.

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-12 21:09:54 UTC
From: aunwin@fgi.net
Message-ID: <c4becf19.0208121309.758c7065@posting.google.com>
Source record: 137065

"George, W5YR" <w5yr@att.net> wrote in message news:<3D55E6AE.FEBBB9AD@att.net>...
> Art, with all respect, why must you depend upon and regard this group of
> *amateur* radio operators as the prevailing body that must pass judgement
> on your antenna for it to have any merit or value?
>
> You claim a new invention, have a patent (I think you said) but evidently
> you are now just sitting around and writing complaints to the newsgroup
> because no one is jumping up and down with enthusiasm.
>
> I guess I am most disturbed by your continued pleas for someone (an
> "authority") to explain to you and the world what you have and how it
> works. I may be wrong but it seems to me that you should be teaching *us*
> about your ideas and explaining to us how your antenna works and what is
> can do, etc.
>
> I think it is more than unfair to the list for you to expect us to justify
> your concepts and authenticate your methods. That is *your* responsibility,
> not ours.
>
> Why are you not disclosing this in the professional journals under
> peer-review? Why are you not pursuing the manufacture and sale of this
> antenna? Why is the approval of this particular group so important that its
> absence or at least deferral stands in your way of progressing in your own
> business?
>
> I mean no disrespect but I just cannot equate your enthusiasm for your
> invention with your reluctance to do anything about it except complain to
> the members of this newsgroup about their attitudes and lack of support.
>
> A major stumbling block, to be very frank, is that after having read all
> your postings, I still cannot begin to imagine what you are talking about,
> and I do have some background and education in the business. So, I am
> unable to comment one way or the other on what you are presenting as I
> simply cannot understand what you are trying to describe. I suspect many
> others share that position.
>
> Finally, gaining the support of this group may work wonders for your
> self-confidence and morale, but as far as helping to further your
> professional image or serving as a lever for venture capital to manufacture
> these antennas, I am afraid that you are looking in the wrong direction.
>
> Get some professional help to write a definitive analysis and description
> of your antenna. Get it informally peer-reviewed to catch the easy stuff.
> Then submit it to the appropriate professional journal(s) and let the

> scientific community do its thing. If validation is forthcoming, you are
> there. If not, at least you will have solid critiques to guide you in the
> sequel.
>
> Then, come tell us what a wonderful antenna you have, how it works, and how
> much one will cost! <:}
>
> All the best, Art. No one means you any ill will - we just can't follow
> what you are saying or why you are so dependent upon us.
>
> 73/72/oo, George W5YR - the Yellow Rose of Texas
> Fairview, TX 30 mi NE of Dallas in Collin county EM13qe
> Amateur Radio W5YR, in the 56th year and it just keeps getting better!
> QRP-L 1373 NETXQRP 6 SOC 262 COG 8 FPQRP 404 TEN-X 11771 I-LINK 11735
> Icom IC-756PRO #02121 Kachina 505 DSP #91900556 Icom IC-765 #02437
>

First George I am not upset with your post.If I remember correctly you
sent me a similar one years ago. At that time this group with Tom W8TI
at the fore front
(must not forget Force 12 who had a booklet on the subject) were
lashing at
all manufactures for claiming things that they could not produce or
was misleading.
Also many times, myself included, was shown to be lacking with
computor programs
education where many claims were made in error based on faulty
programing.
Even tho a business man W7ET, wanted to totally finance the operation
in which I would have a controlling interest. I was VERY concerned at
the ethics of such a venture that possibly, I also would be making
clains that were untennable.
I could have rested on 'buyer beware" but that is not how I or my
family thinks who were aware that their money return would be made
quickly if ethics were ignored
I have or had patents that describes the antenna, that describes the
antenna to the PTO's satisfaction. The single claim allowed in no way
reflected what I asked for and I will post a news account of my
struggles where the patent office suggested that it was this or
nothing. That was totally restricted in phrasing such that it was
useless as a future business tool.
What people say I should have done cannot now be done. Frankly you
have no idea
of the many hurdles I had to overcome. It is all in the past now and I
have now abandoned all rights that I may have had. I know I do not
have the RIGHT to ask my peers or possible elmers why the antenna
works or doesn't work, but I had hoped for an explanation, somewhat in
depth as given to SWR meters, conjugate matches e.t.c
Being well into retirement I have no aspirations in life left other
than to get this load off my concience so I can explain to those close

to me how I failed them, nothing more.....no monetary interests left (My family doesn't ask for explanation ofcourse.) You have been informed in a loose sort of way of certain efforts I made in those years and with the news article that will be placed on the net you will realise that efforts that I have already informed you of are miniscule compared to what at present you do know.
Even as monday morning quarter back could I have perceived that what I was to run into. My struggles and the controlling ethics is more that you can see unless you are able to walk in my shoes. But no matter, I am trying to share with all what I have found to be a terrific antenna that provides an advancement over the Uda Yagi array. An antenna that deserves our attention because of the 'leap in the state of the art' which I believe it represents.
It has a patent, readily made with predicted radiation patterns, excepted by the U of I. Yes, I know similar claims have been made before and have failed to materialised,
In my case I believe I have supplied reasonable credentials to worthy an examination by my peers. I will catch hell from all if my antenna does not produce my claims which will follow me for ever, but as a former engineer of many years I truly believe all that I have said and done with this antenna
is true.
Lets all have fun and be happy, this could be the big laugh that we all have been waiting for. Time for all of us to lighten up.
Art Unwin KB9MZ.....XG

2725. Re: Antenna Farm

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-12 22:12:47 UTC
From: W4WNT <w4wnt@carolina.rr.com>
Message-ID: <zpW59.7196$Xa.445583@twister.southeast.rr.com>
Source record: 137066

Hi Steve,

You might look into the American Red Cross or the Salvation Army. Here in Charlotte NC, each of these groups have a ham radio club associated with them. The charity provides space for a club room and the members provide emergency response communications. If such an arrangement exists in your town, they would be happy to take you up on the offer.

Good Luck,

Bill, W4WNT
"Steve H Gordon" <af4spilot@directvinternet.com> wrote in message news:3d56fd3a$1_2@nopics.sjc...
> Looking for approved charity to donate antenna farm, including Mosely TA-33
> (4EL) WARC (Triband pluse WARC bands), (2) 40M Hamsticks as rotatable
> diploe, Heavy Duty Rotor and controller, top section of tower.
>
> Located in South Florida. 954-964-2139
>
> Steve
> AF4S
>
>
>

2726. Re: G5RV in a V pattern? Possible?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-12 22:18:30 UTC
From: W4WNT <w4wnt@carolina.rr.com>
Message-ID: <WuW59.7242$Xa.444922@twister.southeast.rr.com>
Source record: 137067

Hi Tom,

Considering that a G5RV has a very complex pattern even when hung straight and high, you may not affect it much by doing an "upside down Vee" if the feed point is 20 feet off the ground. You could even do an inverted W which might take less space. You will be using a tuner anyway you set it up.

Good Luck,

Bill, W4WNT

"Tom" <auctionid4me@yahoo.co.uk> wrote in message news:1Xb59.2315$wp2.142804@newsfep1-win.server.ntli.net...
> I have no interest in the experimentation with antenna, however
> due to a home move and limited space I am curious to know the
> following:
>
> Is it possible to a G5RV in a V pattern, about 20' above the ground.
> legs and the end.
>
> The 2 legs being about 20' apart.
>
> Ie.
>
>
> \ 20' apart /
> \ /
> \ /
> \ /
> \ /
> \ /
> \ /
> \ /
> \/
> Feeder Point
>
>

2727. Re: Yagi Elements - place above or below boom?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-12 22:23:13 UTC
From: Paul N3EOP <n3eop@arrl.or.callsign.net>
Message-ID: <Xns92689C8649830n3eophotmailcom@64.164.98.6>
Source record: 137068

Placing the elements above the boom creates a torque along the boom.

It's generally easier to install an antenna with the elements on the underside, since this is the way gravity pulls on the antenna.

I put the bolt head on the upper side of the boom, and the nut on the lower side (against the elements). Probably doesn't make any practical difference, but it would seem to encourage water to drip from the smaller area.

2728. Re: EVERY THING IS NOW KNOWN ON ANTENNAS.

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-12 22:24:51 UTC
From: richardharrison@webtv.net
Message-ID: <8055-3D5835B3-494@storefull-2398.public.lawson.webtv.net>
Source record: 136969

Art, KB9MZ wrote:
"---a terrific antenna that provides an advancement over the Uda Yagi array."

Apples and oranges! A delta matched dipole may match a transmission line more handily than a multielement parasitic beam, but the Yagi will likely produce more signal with less noise.

Please be reasonable with us. Give us a comparison of the dipole with the novel matching arrangement versus the same antenna with not so equipped. Thanks.

Best regards, Richard Harrison, KB5WZI

2729. Re: EVERY THING IS NOW KNOWN ON ANTENNAS.

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-12 23:12:14 UTC
From: "J. Harvey" <JM002.Harvey_ANTI*SPAM_@Sympatico.ca>
Message-ID: <LgX59.928$%R5.488206@news20.bellglobal.com>
Source record: 136970

"'Doc"
> Art,
> ...what is the patent number ?

5,625,367

Enter the above number here...
http://patft.uspto.gov/netahtml/srchnum.htm

2730. Re: EVERY THING IS NOW KNOWN ON ANTENNAS.

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-12 23:12:25 UTC
From: "J. Harvey" <JM002.Harvey_ANTI*SPAM_@Sympatico.ca>
Message-ID: <WgX59.929$%R5.487997@news20.bellglobal.com>
Source record: 136971

"J. Harvey"
> *Switch mode antennas*
> By using "switch mode power supply" and
> "power factor correction" techniques, even
> the input impedance could be controlled.

"Art Unwin KB9MZ"
> I do not know whether you are pulling my leg...

Same thing as they do at 60Hz for power supplies, just at RF instead.
Trivial and obvious. Not pulling your leg - I'm just about ten to fifteen
years ahead of my time.

> Your 'tactical' antenna seems awfully complex
> to me.

You should see the matching radio !

2731. Re: how to deal with limited antenna space?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-12 23:33:25 UTC
From: WA6LZH <tangeram@lucent.com>
Message-ID: <3D5845C5.7070406@lucent.com>
Source record: 136972

You know something tells me that a simple random wire strung at an angle to the top of the tree and fed against the frame/body of the mobile home would give a good account of itself. You would need a random wire tuner at the shack end, an L-network or similar, or one of the new computer aided would work fine. It would be a very convenient all band antenna and depending on your ground conductivity might be a very good performer.

Tony

2732. Re: A closer look (conservation of energy)

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-12 23:50:18 UTC
From: CAM <w5dxp@hotmail.com>
Message-ID: <3D5849BA.277CF447@hotmail.com>
Source record: 136973

Bill Klocko wrote:
> If you still insist on using conservation of energy to argue your
> position, maybe you could supply the name of some top-notch reference
> that we all could read.

An argumentum ad verecundiam, Bill? You are reading that top-notch reference right here. The aliens abducted me, explained all this, and told me to teach it to RF engineers :-) Seriously, we are delving deeper into this subject than has ever been done before. This all started when Steve attempted to prove that Walter Maxwell was mistaken with his "100% re-reflected" statements. Well, Steve succeeded and now must face the consequences of taking such a close look "into the conjugate mirror". Since this is apparently a new theory, I'm going to publish something and submit it for peer review. It would be a lot easier to explain with proper graphics.

You guys remind me of the doctor when I say, "Doctor, it hurts when I do this." The doctor responds, "Well, then don't do that". I am thinking thoughts that apparently have never been thought before. Your advice is to stop thinking and seek advice from experts who also have never thought those thoughts before. No thanks.

I notice that before you were challenged, you had no problem breaking down all the waves into their separate voltage, current, and power components. You discovered where that path leads and are apparently backing off from it. Well, I'm not. Thar's joules in them thar waves. The wave voltage and current are constrained by certain boundary conditions one of which is an absolutely necessary energy foundation under each one. If an electron can be considered independently, there's no reason each wave cannot be considered independently. It's up to an individual to choose to do so or not.

Take a look at the example I made up for Steve and tell us how the 25 watts of previously reflected power makes it to the load when the load is changed without adding to the voltage and current in the forward wave. Can we at least agree that all the generated power that makes it to the load must have joined the forward power in the transmission line? How else can it make it from the source to the load?
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

2733. Re: A closer look

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-13 00:02:50 UTC
From: CAM <w5dxp@hotmail.com>
Message-ID: <3D584CAA.919E758F@hotmail.com>
Source record: 136975

VE9SRB wrote:
> My interpretation is that the superposition of voltages is sufficient to
> explain what happens in either direction and that the law of conservation of
> energy is satisfied because the total net power flowing into the junction
> equals the total net power flowing out of the junction.

If you don't want to think about it, that's your choice. But it is you
who triggered this discussion with your assertion that 75 joules/sec
plus 8.33 joules/sec equals 133.33 joules/sec. You didn't make that
statement in your magazine article, did you?

> Your interpretation requires me to accept that the energy involved in the
> destructive interference somehow manages to reverse direction and join the
> forward traveling energy. There is no physical mechanism that can cause
> this to happen, so I simply disagree with your interpretation.

You have got to be kidding. For that, I can surely find a reference. How
do you think antennas manage to achieve gain? Are you familiar with the
MOM software?

The physical mechanism that causes destructive interference to happen is when
two waves collide such that the two voltages are equal in magnitude and opposite
in phase AND the two currents are equal in magnitude and opposite in phase.
Bill calls it cancellation. Waves can be canceled but the energy in the waves
cannot be canceled. We know it is canceled toward the load. The only other
possible direction for that energy to go is back towards the antenna. It cannot
stand still.

> Lets accept that we disagree on the physical interpretation of your example
> and examine my example proposed just recently. In my example the multiple
> forward waves (75 W and 8.33 W) superimpose to bring the total forward power
> to 133.33 W but there is no corresponding destructive interference (energy
> cancellation) anywhere else in the system. I would like to see how you
> explain this.

I notice you didn't answer my question. How does that 25w of reflected power,
dissipated at the source when the load is 150 ohms, make it to the load when
the load is switched to 50 ohms, without joining the forward voltage and
current? Where is that 25w in your 75w + 8.33w = 133.33w equation? That equation
continues to be ridiculous. Have you explained to the power companies that
83.33 watts equals 133.33 watts and therefore they should lower your power
bill?

I'm going to write an article, complete with graphics, and at least put it
on my web page. I might even talk some magazine into publishing it.
--

cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
------== Over 80,000 Newsgroups - 16 Different Servers! =-----

2734. Looking for Kraus ANTENNAS volume 1 copies

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-13 00:03:43 UTC
From: fractenna@aol.com
Message-ID: <20020812200343.01356.00002984@mb-cr.aol.com>
Source record: 136974

Have picked up one recently, need 8 more. E-mail me if you have it and want to part with it.

Please state cond'x.

73
Chip N1IR

2735. Re: A closer look (conservation of energy)

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-13 00:07:41 UTC
From: CAM <w5dxp@hotmail.com>
Message-ID: <3D584DCD.743791CD@hotmail.com>
Source record: 136976

VE9SRB wrote:
>
> "Bill Klocko" <klocko@toad.net> wrote in message
> news:224d9cd4.0208121205.6b9886cc@posting.google.com...
>
> > I could find no indication in Johnson of a destructive interference
> > pattern resulting in a constructive interference.
>
> Bill
>
> I proposed a simple example to Cecil where there are multiple forward waves
> (75 W and 8.33 W) that combine to result in a total forward wave with a
> power of 133.33 W. In this example, there is no place in the system where
> there is a corresponding level of destructive interference as Cecil's Law of
> Conservation of Energy interpretation would require. I would like to see
> how he explains this.
>
> The example is very simple.
>
> 141.421 V -- 50 ohm source Z -+----150 ohm line 1 WL ----+-50 ohm load
>
> From the initial state to the steady state there is only constructive
> interference and the total power continues to increase everywhere. There is
> no destructive interference. The law of conservation of energy still
> applies in that the total power delivered by the source equals the total
> power dissipated by the load.

Steve, this example is identical to the other one. All the voltages, currents,
and powers are identical. The only thing that has changed is that, instead of
a Z0-match, we now have a Zg-match. Nothing conceptually new here. The
reflection at the 50/150 junction is a same-cycle reflection but the
reflection mechanics are exactly the same as the earlier example. The '+' sign
marks the location of the Zg-match. The destructive interference takes place
at that point just like it took place at the '+' sign in the other example.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

2736. Re: A closer look (conservation of energy)

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-13 00:14:38 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <ldjglu4oe449ln6gvd5kf2t20bmo1739jp@4ax.com>
Source record: 136977

On Mon, 12 Aug 2002 18:50:18 -0500, CAM <w5dxp@hotmail.com> wrote:

>You guys remind me of the doctor when I say, "Doctor, it hurts when
>I do this."

Yes Cecil,

We are all mindful of:
>Starting from a very simple example, would some
>of you gurus please tell me where I am going wrong?

Which lead nowhere but your shaggy-dog story.

Who are you trying to convince? The candidate pool for you and Art
shrinks by the day as you two practice your opinion shopping here.

73's
Richard Clark, KB7QHC

2737. Re: A closer look (conservation of energy)

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-13 00:20:40 UTC
From: VE9SRB <srbest@att.net>
Message-ID: <shY59.9838$Ep6.765793@bgtnsc05-news.ops.worldnet.att.net>
Source record: 136978

"CAM" <w5dxp@hotmail.com> wrote in message
news:3D584DCD.743791CD@hotmail.com...
> VE9SRB wrote:
> >
> Steve, this example is identical to the other one. All the voltages,
currents,
> and powers are identical. The only thing that has changed is that, instead
of
> a Z0-match, we now have a Zg-match. Nothing conceptually new here.

That's not true at all. If your so sure, then describe the initial state conditions, the steady state conditions and the relationships between all forward and reflected voltages, currents and power. As in the other example, there is a 75 W and an 8.33 W forward wave that superimpose to result in a 133.33 W forward wave. However, there is no destructive interference or energy cancellation anywhere else in the system to give the extra energy you require to explain what happens in your example. I would like you to explain what happens here under those conditions.

Steve VE9SRB

2738. Re: A closer look (conservation of energy)

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-13 00:23:17 UTC
From: "J. Harvey" <JM002.Harvey_ANTI*SPAM_@Sympatico.ca>
Message-ID: <mjY59.950$%R5.512564@news20.bellglobal.com>
Source record: 136979

"CAM"
> Since this is apparently a new theory, I'm going
> to publish something and submit it for peer review.

I got lost a while back, but I've been 'listening' with interest.

This may be overly basic, but then again...can't be too careful.

Make sure that when you multiply volts times amps to get watts that the volts and the amps are both happening in the *same place* along the transmission line.

2739. Re: G5RV in a V pattern? Possible?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-13 00:33:42 UTC
From: Fulano de Tal <therealexray@netscape.net>
Message-ID: <3D5853E6.C47BC107@netscape.net>
Source record: 136980

W4WNT wrote:
>
> Hi Tom,
>
> Considering that a G5RV has a very complex pattern even when hung straight
> and high, you may not affect it much by doing an "upside down Vee" if the
> feed point is 20 feet off the ground. You could even do an inverted W which
> might take less space. You will be using a tuner anyway you set it up.
>
> Good Luck,
>
> Bill, W4WNT

Anybody know of a good weblink that shows the V and H patterns on the
various bands?
-BM
>
> "Tom" <auctionid4me@yahoo.co.uk> wrote in message
> news:1Xb59.2315$wp2.142804@newsfep1-win.server.ntli.net...
> > I have no interest in the experimentation with antenna, however
> > due to a home move and limited space I am curious to know the
> > following:
> >
> > Is it possible to a G5RV in a V pattern, about 20' above the ground.
> > legs and the end.
> >
> > The 2 legs being about 20' apart.
> >
> > Ie.
> >
> >
> > \ 20' apart /
> > \ /
> > \ /
> > \ /
> > \ /
> > \ /
> > \ /
> > \ /
> > \/
> > Feeder Point
> >
> >

2740. Re: EVERY THING IS NOW KNOWN ON ANTENNAS.

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-13 00:52:00 UTC
From: aunwin@fgi.net
Message-ID: <c4becf19.0208121652.7594edad@posting.google.com>
Source record: 136981

"Alexander S. Wood" <alec_wood@dont.spam.me.ntlworld.com> wrote in message
news:<k6S59.1021$eX4.14688@newsfep3-gui.server.ntli.net>...
> "Mark Keith" <nm5k@wt.net> wrote in message
> news:25eb70d7.0208120125.111addab@posting.google.com...
> ><snip>
> > Dunno Art, I think it's the other way around. You are giving us hoops
> > to jump through. <snip>
> >. I can't read your mind. You
> > need to get your ducks in a row first. That way you can debate the
> > thing in an orderly military manner. It's more like helter skelter the
> > way things have been going. I hope you take this as friendy
> > criticism...No flaming intended. MK
>
> On this subject, I think you've hit the real issue here Mark. I have
> followed the "Fractenna" debate for some time with initially great interest,
> it's now a much more weary trawl.
>
> Personally, I am now very interested in these E-H antennas. When I saw them
> I thought "you must be joking", but I try to keep an open mind. However the
> proponents of this and other "new" technologies seem to feel the need to act
> like QVC presenters, and attempt to blind us with pseudo-science and
> marketing babble.
>
> I would love to see some of these guys engage in a more honest debate. Less
> of the marketing hype, and a bit more REAL FACTS AND FIGURES. These should
> be reproduceable for verification. I'd be impressed by a headline on the QRZ
> site saying "Fractenna beats all comers" as a result of his attendance at
> one of the open antenna comparison days that I believe the ARRL run from
> time to time. I've a feeling I'll have a long wait.
>
> I am afraid the cynical amongst us will continue to wonder what they have to
> hide if they continue to hide the REAL science behind a barricade of lawyers
> and marketing men.
>
> However, I have no doubt that new antenna design await discovery, but
> babbling on about "quantum radiators" and similar rubbish does nothing to
> impress or earn my respect from a scientific point of view.
>
> One last point, you mention modelling, I presume by computer. If a "new
> technology" was to be discovered, it could be a waste of time attempting to
> model it using software based on "old technology". For example a
> mathematical model of a steam engine will not tell me much about the
> prospective power output of my new V8, would a new antenna technology be so
> radically different - it could be.

>
> Kind regards
>
> Alec Wood M1BNK
> Teesside UK
Alec, you make a very good point regarding computor programs
In my earlier days I tried to model a particular antenna I was playing
with.
The computor gave me 20 odd db gain which I was looking for
naturally!
Unfortunately I was a victim of poor programing and stuck with the
view of garbage in/garbage out. So when I tried to model combination
antenna it again suplied me with answers that I liked and expected,
who wouldn't?
So please understand my reluctance to provide copies of my programing
since a defect in the programing would remove all interest in the
actual antenna.
I am not knocking programing but my early efforts especially with this
particular antenna gave me fits from which I have not as yet
recovered.
Getting older seems to make the chance of making programing errors
more probable
which is my one fear with respect to this antenna even tho it works
just like the results showed.
Cheers and beers
Art Unwin KB9MZ......XG

2741. Re: DESPERATELY NEED HELP FROM HY-TOWER USERS!!!!!!!

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-13 00:54:05 UTC
From: w9gb <gregory.beat@attbi.com>
Message-ID: <NMY59.111352$uj.63593@rwcrnsc51.ops.asp.att.net>
Source record: 136982

Ed -

I contacted MFJ this morning, and received a couple of very quick responses ()best you not know how that was accomplished)

AS MR. McLaughlin has suggested a current or "new" P.E.'s review of the design may be the best bet, okay here are the details:

When MFJ purchased Hy-Gain from Telex, there was quite a bit of the original documentation and information supplied AND quite a bit that was missing or lost through the years at Hy-Gain,
MFJ actually had to go to the advertising companies used by Hy-Gain through the years to recover the original photographs, pictures and text for the MFJ catalog -- that process alone took over one year.

If the Hy-Gain staff has advised that they don't have the original engineering data that Ed requested, it may well be that the originals documents have been lost.

Have Mr. Juge contact Randy Nash, Hy-Gain Antenna Production Manager. Randy was responsible for the reintroduction and reproduction of the Hy-Tower product. He will supply what information he has available for Mr. Juge's zoning board. 1-800-973-6572.

MFJ / Hy-Gain Antennas

Best luck
73 de w9gb

"Ed Juge/NM" <ed@juge.org> wrote in message
news:3d513665.0@oracle.zianet.com...
> I am in negotiations with my local planning and zoning commission for
> authority to install a pair of Hy-Gain Hy-Towers. There are a dozen
> residents of the area opposing them. Their main point now, other than
> aesthetics, is that Hy-Gain's specs say 75mph wind survival and we will be
> in an area that gets 60-70 mph winds every few years. One of my Hy-Towers
> has survived 110 mph winds, twice, but I can't prove it.
>
> If you own a Hy-Tower, and it has been through very high winds... in
excess
> of 75 mph, PLEASE send me an email with details. It will need to include
> your name, address and phone number in case they want to verify that I
> didn't dummy up the email.
>
> Thanks... Ed, W5EJ
> Ruidoso, NM

> Phone: 505-258-1721
>
>

2742. Re: A closer look (conservation of energy)

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-13 01:20:00 UTC
From: CAM <w5dxp@hotmail.com>
Message-ID: <3D585EC0.6023727A@hotmail.com>
Source record: 136984

Richard Clark wrote:
> Who are you trying to convince? The candidate pool for you and Art
> shrinks by the day as you two practice your opinion shopping here.

I have proved my point, Richard. You just haven't accepted it. I'll write an article and see what happens. What is wrong with the following equations?

106.066v + 35.355v + 35.355v - 35.355v = 141.4v

75w + 8.33w + 25w + 25w = 133.33w

Voltages sum to the proper value and power sums to the proper value. What more do you want?
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

2743. Re: A closer look (conservation of energy)

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-13 01:24:46 UTC
From: CAM <w5dxp@hotmail.com>
Message-ID: <3D585FDE.5A440253@hotmail.com>
Source record: 136985

VE9SRB wrote:
>
> "CAM" <w5dxp@hotmail.com> wrote in message
> news:3D584DCD.743791CD@hotmail.com...
> > VE9SRB wrote:
> > >
> > Steve, this example is identical to the other one. All the voltages,
> currents,
> > and powers are identical. The only thing that has changed is that, instead
> of
> > a Z0-match, we now have a Zg-match. Nothing conceptually new here.
>
> That's not true at all. If your so sure, then describe the initial state
> conditions, the steady state conditions and the relationships between all
> forward and reflected voltages, currents and power.

It appears all you have changed from the other example is to remove a piece
of coax that had an SWR of 1:1. That's no change at all, Steve. I am amazed
that you do not know that. The only change is that the generated power
reaches the 50/150 junction a little faster. Steady state conditions are
identical because nothing has changed.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

2744. Electrostatic and magnetic fields

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-13 01:29:16 UTC
From: CW <clinton.magers@attbi.com>
Message-ID: <MhZ59.96291$sA3.24374@rwcrnsc52.ops.asp.att.net>
Source record: 136986

I have been taking an electronics course. One of the classes was a prep course to take the CET exam. We were using a new book and found numerous mistakes. One of the questions asked in the review section was what was the phase relationship of the electrostatic and electromagnetic fields in a circuit. The book said they were in phase but didn't elaborate. My first instinct was that they would be 90 degrees out from one another but now I am not sure. The class discussion was inconclusive. I am sure a lot of you will find this rather basic but that's why I'm asking here.
Help please.
--

CW
KC7NOD

2745. Re: A closer look

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-13 01:31:51 UTC
From: VE9SRB <srbest@att.net>
Message-ID: <bkZ59.9940$Ep6.773243@bgtnsc05-news.ops.worldnet.att.net>
Source record: 136987

"CAM" <w5dxp@hotmail.com> wrote in message
news:3D584CAA.919E758F@hotmail.com...
> You have got to be kidding. For that, I can surely find a reference. How
> do you think antennas manage to achieve gain? Are you familiar with the
> MOM software?
>
> The physical mechanism that causes destructive interference to happen is
when
> two waves collide such that the two voltages are equal in magnitude and
opposite
> in phase AND the two currents are equal in magnitude and opposite in
phase.
> Bill calls it cancellation.

That's wave cancellation. We all agree on this point.

>Waves can be canceled but the energy in the waves
> cannot be canceled. We know it is canceled toward the load. The only other
> possible direction for that energy to go is back towards the antenna. It
cannot
> stand still.
>

I don't think it stands still at all. I think that the rearward traveling energy is there all the time and that all of the energy components traveling in the rearward direction continue to maintain a steady state equilibrium of "cancellation". The time continuous forward source wave arriving at the junction must continuously develop a rearward traveling component of energy because of the physical boundary it continues to encounter at the junction. The time continuous reflected wave must continuously transmit and reflect some level of energy because of the physical boundary it encounters at the junction. These waves maintain a continuous and ongoing state of interaction and superposition at the physical junction. In the rearward direction, the energy in the rearward waves continuously cancels to a net wave of 0 power. This is an ongoing continuous process that maintains an equilibrium that we call the steady state. At any instant in time, the forward wave arriving at the junction can be broken into its transmitted and reflected components. The reflected wave arriving at the junction can be broken down into its transmitted and reflected components.

I don't think we need to go your extra step and state that the rearward energy reverses direction. Your interpretation of energy reversal would require us to accept that the forward source wave no longer develops a reflected component of energy because of the cancellation event that occurs at the junction. There are two major problems with your interpretation.

First, this defies the physical boundary conditions at the junction. Second, the energy can't be going in two directions at the same instant in time. It can't travel in the rearward direction (as required by the physical boundary condition) and the forward direction (as required by your interpretation) at the exact same time. (Note that for the energy components to cancel in the rearward direction, they must be traveling in the rearward direction.)

This may all be a matter of semantics but that's my interpretation.

So, please find and site a your technical reference, other than "Reflections", that specifically states that the energy involved in a destructive interference event in a transmission line must reverse direction and join the forward energy in the line. Also, please site a reference that specifically states that multiple forward powers traveling in a transmission obey superposition principles, such that Ptotal forward = Pforward 1 + Pforward 2.

>
> I notice you didn't answer my question.
>

I've answered it several times. You don't understand my answer or you simply won't accept that I answered it unless I agree with you. I also note that you will not examine the simple example I posed.

Steve VE9SRB

2746. Re: A closer look (conservation of energy)

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-13 01:33:10 UTC
From: CAM <w5dxp@hotmail.com>
Message-ID: <3D5861D6.78C4E704@hotmail.com>
Source record: 136989

"J. Harvey" wrote:
>
> "CAM"
> > Since this is apparently a new theory, I'm going
> > to publish something and submit it for peer review.
>
> I got lost a while back, but I've been 'listening' with interest.
>
> This may be overly basic, but then again...can't be too careful.
>
> Make sure that when you multiply volts times amps to get watts that the
> volts and the amps are both happening in the *same place* along the
> transmission line.

For any independent wave within a transmission line, that is always the case. The transmission line forces certain boundary conditions on a wave. Voltage and current for an independent wave are always in phase or 180 degrees out of phase depending on direction of energy flow. Thus, the cosine of the angle between them is always unity. Thus, V*I is the joules/second associated with that particular wave and that's all the enegy associated with that wave. V/I is the characteristic impedance of the transmission line. Bill performed all the same calculations that I did and came up with wave components identical to mine. From that point, the rest of the story becomes clear, at least to me. The only objections have been, "We RF gurus don't allow ourselves to think such thoughts" and "You shouldn't be thinking thoughts that nobody has thought before", i.e. "Show us some references".

I wonder how Einstein responded when someone asked him for references on the theory of relativity?
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

2747. Re: A closer look (conservation of energy)

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-13 01:35:08 UTC
From: VE9SRB <srbest@att.net>
Message-ID: <gnZ59.9945$Ep6.774032@bgtnsc05-news.ops.worldnet.att.net>
Source record: 136988

"CAM" <w5dxp@hotmail.com> wrote in message
news:3D585FDE.5A440253@hotmail.com...

> It appears all you have changed from the other example is to remove a
piece
> of coax that had an SWR of 1:1. That's no change at all, Steve.

Its a very significant change. You would know that if you examinee all the
details of the traveling waves.

>I am amazed
> that you do not know that. The only change is that the generated power
> reaches the 50/150 junction a little faster. Steady state conditions are
> identical because nothing has changed.
> --
>

The steady state is identical but what happens to get there is entirely
different and illustrates that your interpretation is incorrect.

Why are you afraid to examine the details of this simple example.

Steve VE9SRB

2748. Re: Electrostatic and magnetic fields

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-13 01:37:34 UTC
From: CAM <w5dxp@hotmail.com>
Message-ID: <3D5862DE.7484D39F@hotmail.com>
Source record: 136991

CW wrote:
>
> I have been taking an electronics course. One of the classes was a prep
> course to take the CET exam. We were using a new book and found numerous
> mistakes. One of the questions asked in the review section was what was the
> phase relationship of the electrostatic and electromagnetic fields in a
> circuit. The book said they were in phase but didn't elaborate. My first
> instinct was that they would be 90 degrees out from one another but now I am
> not sure. The class discussion was inconclusive. I am sure a lot of you will
> find this rather basic but that's why I'm asking here.
> Help please.

Doesn't "electrostatic" mean the electrical charges are at rest?
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

2749. Re: A closer look (conservation of energy)

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-13 01:38:30 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <5noglugg6e7l20r3sue2muoisvcfcpjfq4@4ax.com>
Source record: 136990

On Mon, 12 Aug 2002 20:20:00 -0500, CAM <w5dxp@hotmail.com> wrote:

>You just haven't accepted it.

Hi Cecil,

Can you quote one post of mine where I make that declaration? I can point to several recent ones, like in the past 24 hours, that contradict you directly.

Like I said, a shaggy-dog story - a boring one too.

73's
Richard Clark, KB7QHC

2750. Re: EVERY THING IS NOW KNOWN ON ANTENNAS.

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-13 01:41:25 UTC
From: aunwin@fgi.net
Message-ID: <c4becf19.0208121741.6f960abc@posting.google.com>
Source record: 136992

'Doc <w5lz@icok.net> wrote in message news:<3D5813AE.97D619D@icok.net>...
> Art,
> Hows you son coming along with that sanity hearing?
> 'Doc

Doctor,
My son is not part of this debate ! Is this a prelude
to a rerun of the fractal debate ? Where slurs and insult's
are thrown at each other ?
Your comments make me very uneasy, could you explain yourself better ?

Art Unwin KB9MZ.......XG

2751. Re: Feeding an Inv-L at the bottom?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-13 01:41:49 UTC
From: Fred Hambrecht <w4jle@charter.net>
Message-ID: <ulgov0cnmk5u6d@corp.supernews.com>
Source record: 136993

Whoops, forgot I was in a conference that parses every word like Clinton...

WARNING - This suggestion may not work in the following conditions:

1. Your yard is paved in concrete, asphalt, or because of local soil or environmental conditions the insertion of the coathanger pieces is precluded.

2. Any other conditions that I may not have thought of in presenting a solution not tested for every variable encountered at every likely users location.

3. Upon reflection, I hereby withdraw my suggestion pending a 5 year study of feasibility and apologize to the group that I was so bold as to offer any solution.

73 Fred W4JLE

> "Floyd Sense" <sentek@sprintmail.com> wrote in message
> news:JwR59.206$zJ.10303@newsread2.prod.itd.earthlink.net...
> > Man, you must live somewhere where it still rains. You couldn't drive
> nails
> > into the ground here, let alone pieces of coat hangers. Since the grass
> no
> > longer grows here either, laying radials on top doesn't work too well.
> You
> > can cut slits into just about anything using a lawn edger with a
vertical
> > blade. Cuts a slit about 1/4. These edgers can be rented just about
> > anywhere.
> >
> > --
> > K8AC
> > Floyd Sense in Angier, NC
> > "Fred Hambrecht" <w4jle@charter.net> wrote in message
> > news:ul949ui2bq135e@corp.supernews.com...
> > > Don't bother to cut slits for the radials. Cut pieces of coat hanger
> into
> > 6"
> > > pieces. Bend then in half. Next lay out the radial and use the bent
> pieces
> > > to stake the wire down. Kind of like stapling the wire to the ground.
> This
> > > will keep them out of the lawn mower and within a month you won't be
> able
> > to

> > > find them as the grass covers them.
> > >
> > >
> > > "StarGazer" <pti@capnet.com> wrote in message
> > > news:3D547E7F.B2F2D5A6@capnet.com...
> > > > If one feeds an inv-L at the bottom how come the radial lengths
> > > > don't have to be the same length as the L part?
> > > > Like a dipole should be?
> > > >
> > > > I picture it as a dipole with the ground being the other half of the
> > > > dipole. How does the ground know what its electrical length has
> > > > to be?
> > > >
> > > > If I want to put radials under my lawn what it the best way
> > > > to cut a sliver into it for the radial?
> > > >
> > > >
> > >
> > >
> > >
> >
> >
>
>

2752. Re: Electrostatic and magnetic fields

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-13 02:07:40 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <93pglu4acolndaa440asfv64q55g69oj2p@4ax.com>
Source record: 136994

On Tue, 13 Aug 2002 01:29:16 GMT, "CW" <clinton.magers@attbi.com>
wrote:

>I have been taking an electronics course. One of the classes was a prep
>course to take the CET exam. We were using a new book and found numerous
>mistakes. One of the questions asked in the review section was what was the
>phase relationship of the electrostatic and electromagnetic fields in a
>circuit. The book said they were in phase but didn't elaborate. My first
>instinct was that they would be 90 degrees out from one another but now I am
>not sure. The class discussion was inconclusive. I am sure a lot of you will
>find this rather basic but that's why I'm asking here.
>Help please.

Hi OM,

They can be in any phase, but at your level of instruction the choices
are generally 0ï¿½ and 180ï¿½ with angles in between left for advanced
study. Those topics generally include inductors and capacitors.

The 90ï¿½ that is so impressed upon you is from our discussion of
propagating fields (not the fields you are studying by the way) being
orthogonal to each other. Otherwise, a specific 90ï¿½ phase in
electronics is exceedingly rare. In your course work, you are far
more likely to encounter 45ï¿½ phase relationships because it is also
the -3dB point for a passive circuit which occurs at a frequency of
1/RC.

In your lab work, make every effort to garner a scope and two signal
generators to produce lissajous patterns. This simple method is also
one of the more accurate ones available at the bench for measuring
phase. Grab hold of a couple of L-C-R substitution boxes and you have
the complete lab for studying phase.

Here is a mnemonic to aid you for those phase characteristics
ELI the ICEman
E phase for L circuits is ahead of I phase;
I phase for C circuits is ahead of E phase.
E and I are in phase for R circuits.

73's
Richard Clark, KB7QHC

2753. Re: EVERY THING IS NOW KNOWN ON ANTENNAS.

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-13 02:09:38 UTC
From: 'Doc <w5lz@icok.net>
Message-ID: <3D586A54.ED91B4E1@icok.net>
Source record: 136995

Art,
You brought your son into this, claiming he is
doing what he needs to do, conserning some mysterious
matter. This isn't a 'prelude' to anything. From
your posts and general behavior, that 'mysterious'
matter your son is busy with could certainly be a
sanity hearing for you.
"'Doc" is a nickname. Don't confuse me with a
'doctor' of anything. As far as my posts making you
feel 'uneasy', I don't doubt that at all.
'Doc

2754. Re: A closer look (conservation of energy)

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-13 02:11:37 UTC
From: VE9SRB <srbest@att.net>
Message-ID: <tVZ59.9984$Ep6.778396@bgtnsc05-news.ops.worldnet.att.net>
Source record: 136996

"CAM" <w5dxp@hotmail.com> wrote in message
news:3D585FDE.5A440253@hotmail.com...
> It appears all you have changed from the other example is to remove a
piece
> of coax that had an SWR of 1:1. That's no change at all, Steve. I am
amazed
> that you do not know that. The only change is that the generated power
> reaches the 50/150 junction a little faster. Steady state conditions are
> identical because nothing has changed.
> --
> cheers, CAM http://www.qsl.net/w5dxp

Since it appears that you would prefer to ignore this simple example, I'll explain it to you.

Example:

141.421 V -- 50 ohm source Z -+----150 ohm line 1 WL ----+-50 ohm load

In the initial state, before any reflections exist on the line, the 141.421 V source voltage is divided between the 50 ohm source impedance and the 150 ohm line.

The initial forward voltage in the 50 ohm source impedance is 35.36 V. The initial forward power dissipation in the 50 ohm source impedance is 25 W (35.36^2/50). The initial forward voltage in the 150 ohm line is 106.07 V. The initial forward power in the 150 ohm line is 75 W (106.07^2/150).

Now lets jump to the steady state and examine the reflected and re-reflected voltage at the source and apply superposition to determine the total voltages and powers everywhere in the system.

The steady state reflected voltage arriving at the source is -70.71 V. The steady state reflected power arriving at the source is 33.33 W (70.71^2/150). The steady state re-reflected voltage at the source is +35.36 V. The steady state re-reflected power at the source is 8.33 W (35.36^2/150).

The total steady state forward voltage in the 150 ohm line is given by the vector sum of the initial forward voltage (106.07 V) and the total steady state re-reflected voltage (35.36 V). The total forward voltage is 141.42 V and the total forward power is 133.33 W (141.42^2/150).

Now at this point, your interpretation of the law of conservation of energy would require that there be some point of energy cancellation to create the 50 W of power needed to satisfy your power equation of 75 W (initial forward wave) + 8.33 W (re-reflected wave) + (50W of energy cancellation) = 133.33

W.

Where does this 50 W of power come from? Is there an energy cancellation event in the rearward direction at the source? Remember that the initial power dissipation in the source is 25 W. Should the power dissipation in the source now decrease to -25 W?

At the source, there is a rearward voltage delivered to the source impedance that is equal to the sum of the reflected voltage (-70.71 V) voltage and the re-reflected voltage (35.36 V). The total rearward voltage delivered to the source impedance is -35.36 V. Since this voltage is traveling in the rearward direction, the total voltage in the source impedance is equal to the forward voltage minus the rearward voltage. The total voltage developed across the source impedance is equal to 35.36 V - (-35.36 V) = 70.71 V. {ignore the rounding errors} The total steady state power dissipation in the source impedance increase from 25 W to 100 W. There is no energy reduction or cancellation.

While the superposition of forward voltages results in a forward power of 133.33 W, there is no corresponding cancellation of energy event that your interpretation of the law of conservation of energy requires - your extra 50 W of power. It does not exist in this example. In this simple example, the power in the source increase from the initial state, the forward power increases from the initial state and the power in the load increases from the initial state. Yet, the law of conservation of energy is satisfied: The total power delivered to the line (100 W) is dissipated in the load (100 W).

Steve VE9SRB

2755. Re: G5RV in a V pattern? Possible?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-13 02:17:18 UTC
From: hillbilly3302 <davesradio@alltel.net>
Message-ID: <O_Z59.64$9T4.68193@news2>
Source record: 136997

A G5RV will work in just about any way you can get it up..... some ways
better than others

drc
k5drc

"Tom" <auctionid4me@yahoo.co.uk> wrote in message
news:1Xb59.2315$wp2.142804@newsfep1-win.server.ntli.net...
> I have no interest in the experimentation with antenna, however
> due to a home move and limited space I am curious to know the
> following:
>
> Is it possible to a G5RV in a V pattern, about 20' above the ground.
> legs and the end.
>
> The 2 legs being about 20' apart.
>
> Ie.
>
>
> \ 20' apart /
> \ /
> \ /
> \ /
> \ /
> \ /
> \ /
> \ /
> \/
> Feeder Point
>
>

2756. Re: EZNEC

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-13 02:24:33 UTC
From: Rick Karlquist <richard@karlquist.removethis.com>
Message-ID: <B5_59.75182$UU1.14346@sccrnsc03>
Source record: 136998

"KAZeringue" <kazeringue@aol.com> wrote in message
news:3D559F73.3030202@aol.com...
> Can anyone speak about the accuracy of an Eznec(v3.0.42) model of an
> antenna over "real" ground?

> Keith, W4KAZ

I have been A/B'ing a 60 foot high inverted vee (120 degree apex)
on 20 meters with a widely separated ground mounted
half wave vertical. I've often seen the vertical beat the vee
by 3 to 6 dB and vice versa. Sometimes, they are the same.
Probably depends on the optimum propagation angle at the time.

According to NEC, the vee should beat the dipole at any angle
over any ground (except a couple of degrees over sea water),
and beat it by a significant amount.

I suspect NEC overestimates the gain vee and underestimates the
gain of the vertical (both must be off, you can't explain
the discrepancy only in terms of the vertical being off, AFAIK).

I would be careful about making any assumptions about NEC's
analysis of ground effects. Always A/B real antennas to check.
If necessary, temporarily install switching relays.

Rick N6RK

2757. Re: Electrostatic and magnetic fields

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-13 02:26:17 UTC
From: CW <clinton.magers@attbi.com>
Message-ID: <d7_59.112056$uj.64405@rwcrnsc51.ops.asp.att.net>
Source record: 136999

You're right. I wasn't thinking about it that way. I took it as electric
field. Good point.
--

CW
KC7NOD

"CAM" <w5dxp@hotmail.com> wrote in message
news:3D5862DE.7484D39F@hotmail.com...
> CW wrote:
> >
> > I have been taking an electronics course. One of the classes was a prep
> > course to take the CET exam. We were using a new book and found numerous
> > mistakes. One of the questions asked in the review section was what was
the
> > phase relationship of the electrostatic and electromagnetic fields in a
> > circuit. The book said they were in phase but didn't elaborate. My first
> > instinct was that they would be 90 degrees out from one another but now
I am
> > not sure. The class discussion was inconclusive. I am sure a lot of you
will
> > find this rather basic but that's why I'm asking here.
> > Help please.
>
> Doesn't "electrostatic" mean the electrical charges are at rest?
> --
> cheers, CAM http://www.qsl.net/w5dxp
>
>
> -----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
> http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
> ------== Over 80,000 Newsgroups - 16 Different Servers! =-----

2758. Re: A closer look

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-13 02:48:43 UTC
From: CAM <w5dxp@hotmail.com>
Message-ID: <3D58738B.76564239@hotmail.com>
Source record: 137000

VE9SRB wrote:
>
> "CAM" <w5dxp@hotmail.com> wrote in message
> news:3D584CAA.919E758F@hotmail.com...
> > You have got to be kidding. For that, I can surely find a reference. How
> > do you think antennas manage to achieve gain? Are you familiar with the
> > MOM software?
> >
> > The physical mechanism that causes destructive interference to happen is
> when
> > two waves collide such that the two voltages are equal in magnitude and
> opposite
> > in phase AND the two currents are equal in magnitude and opposite in
> phase.
> > Bill calls it cancellation.
>
> That's wave cancellation. We all agree on this point.
>
> >Waves can be canceled but the energy in the waves
> > cannot be canceled. We know it is canceled toward the load. The only other
> > possible direction for that energy to go is back towards the antenna. It
> > cannot stand still.
>
> I think that the rearward traveling
> energy is there all the time and that all of the energy components traveling
> in the rearward direction continue to maintain a steady state equilibrium of
> "cancellation".

There are NO energy components traveling in the rearward direction when
the SWR is 1:1. You are back to your phantom wave theory. That's what
happens when you try to violate the conservation of energy principle.
You are forced to come up with supernatural phantom waves that cannot be
detected accompanied by supernatural phantom energy that cannot be detected.

> The time continuous forward source wave arriving at the
> junction must continuously develop a rearward traveling component of energy
> because of the physical boundary it continues to encounter at the junction.

Yes, and for a Z0-match to exist, it must be canceled by a complimentary
wave component from the reflected power that is not re-reflected that flows
through the 150/50 ohm junction in our example. That cancellation is continuous
destructive interference. There is no rearward moving energy on the feedline
with an SWR of 1:1. It cannot be measured. It is not there. There is no other
place for the constructive interference energy to go except back toward the load.

> The time continuous reflected wave must continuously transmit and reflect
> some level of energy because of the physical boundary it encounters at the
> junction. These waves maintain a continuous and ongoing state of
> interaction and superposition at the physical junction. In the rearward
> direction, the energy in the rearward waves continuously cancels to a net
> wave of 0 power.

Exactly, 0 joules/sec equals 0 joules. That canceled (50 joules/sec) energy has
to go somewhere. There is nowhere else for it to go except back toward the load.

> This is an ongoing continuous process that maintains an
> equilibrium that we call the steady state. At any instant in time, the
> forward wave arriving at the junction can be broken into its transmitted and
> reflected components. The reflected wave arriving at the junction can be
> broken down into its transmitted and reflected components.

Bill kindly broke everything down into components. There were eight of
them. Have you read the exchange between Bill and me?

> I don't think we need to go your extra step and state that the rearward
> energy reverses direction.

Of course not because then Walter Maxwell would be essentially correct and
we all know you will never admit that. The conservation of energy principle
tells us that the energy in the canceled waves has to go somewhere since
it cannot disappear from the universe. We know it is not going rearward
toward the load because we cannot measure it. We know it is not standing
still because the Z0-match would explode. So Steve, can you figure out what
only other direction is left? Hint: It's the process of elimination. :-)

> Your interpretation of energy reversal would
> require us to accept that the forward source wave no longer develops a
> reflected component of energy because of the cancellation event that occurs
> at the junction.

That's not true, Steve. The cancellation is a *continuous* process
just like any other superposition of waves. The forward source continuously
develops a reflected component that is interfered with by the continuous
supply of a complimentary wave reflected from the load and not re-reflected
at the boundary. In our example, the power reflected from the load is 33.33
watts. The power that is re-reflected at the 150/50 boundary is 8.33 watts.
That 25 watts that makes it through the 150/50 boundary continuously interferes
with the 25 watts that is reflected from the 50/150 boundary. The phases of
the voltages are opposite and the phases of the currents are opposite. That's
why they cancel and they cancel continuously in a superposed wave pattern.
Voltages can cancel. Currents can cancel. Joules/second cannot cancel.

> There are two major problems with your interpretation.
> First, this defies the physical boundary conditions at the junction.

You have been saying false things about what I am proposing. I assume they
are honest mistakes but it indicates you don't understand what I am saying.

> Second, the energy can't be going in two directions at the same instant in
> time.

Get real, Steve. Does light that bounces off a mirror go in two directions
at the same time? The cancellation happens in continuous time. It is a continuous
process just as bouncing a flashlight beam off a mirror is a continuous process.
Some photons are flowing in one direction while other photons are flowing in
the opposite direction.

> It can't travel in the rearward direction (as required by the
> physical boundary condition) and the forward direction (as required by your
> interpretation) at the exact same time.

It is NOT traveling in the rearward direction and the forward direction at
the same time! THERE IS NO ENERGY TRAVELING IN THE REARWARD DIRECTION IN A
FEEDLINE WITH AN SWR = 1:1. None can be measured. It is not there. Your appeal
to some supernatural phantom waves just won't do. But that is exactly the
position that your premises and logic have brought you to. Next you will
be saying it is that way because God wants it that way. :-)

> (Note that for the energy
> components to cancel in the rearward direction, they must be traveling in
> the rearward direction.)

While they are being superposed into cancellation, they are traveling in the
rearward direction for an infinitesimal distance, i.e. a distance that approaches
zero in the limit. At any measurable distance away from the Z0-match, there is
NO REARWARD ENERGY FLOW! If there were a rearward energy flow, we could measure
it and the SWR would not be 1:1. Please realize that everything is happening
at an infinitesimally small point at the Z0-match. One micron from the Z0-match
back toward the source, there is ZERO rearward traveling energy.

> So, please find and site a your technical reference, other than
> "Reflections", that specifically states that the energy involved in a
> destructive interference event in a transmission line must reverse direction
> and join the forward energy in the line.

Seems to me, I should be able to find a reference that says that. It may,
however, be an optics reference but valid for any EM waves.

> Also, please site a reference that
> specifically states that multiple forward powers traveling in a transmission
> obey superposition principles, such that Ptotal forward = Pforward 1 +
> Pforward 2.

The powers don't obey superposition principles, Steve. Voltage and current
obey superposition principles. Powers (of the nature of joules/second) obey
the conservation of energy principle. I have said this until I am blue in
the face. Why aren't you listening?

The superposed voltages in our example are:

106.066v + 35.355v + 35.355v - 35.355v = 141.4v

The superposed currents in our example are:

0.707a + 0.236a + 0.707a - 0.707a = 0.943a

The last two terms in the sum are the two interference voltages.

The conservation of energy equations are:

106.066v^2/150 + 35.355v^2/150 + 35.355v^2/50 +(-35.355v^2)/50 = 141.4v^2/150

0.707a^2*150 + 0.236a^2*150 + 0.707a^2*50 +(-0.707a^2)*50 = 0.943a^2*150

75 joules/sec + 8.33 joules/sec + 25 joules/sec + 25 joules/sec = 133.3 joules/sec

Voltages are consistent and obey the superposition principle.
Energy is consistent and obeys the conservation of energy principle.

What is wrong with an explanation that is consistent with all the laws
of physics?

> I've answered (your question) several times.

Nope, you've mealy-mouthed around it several times. How do you get 25 joules/sec
from the source to the load without it becoming part of the forward wave? We
know it gets there. How does it get there? Supernatural Phantom Waves? It's
not there in your 75w + 8.33w = 133.33w equation. Where is it?

> I also note that you will not examine the simple example I posed.

I examined it, Steve. It is identical to the other example except the Z0-match
has been replaced by a Zg-match. There's nothing new to discuss. Consider that
all the voltages, currents, and powers are identical to the other example.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

2759. Re: A closer look (conservation of energy)

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-13 02:58:04 UTC
From: CAM <w5dxp@hotmail.com>
Message-ID: <3D5875BC.E4A373A@hotmail.com>
Source record: 137001

VE9SRB wrote:
> The steady state is identical but what happens to get there is entirely
> different and illustrates that your interpretation is incorrect.
>
> Why are you afraid to examine the details of this simple example.

I have examined them, Steve. I don't see any difference between a source with a 50 ohm source impedance and a source with a circulator load of 50 ohms that dissipates all the reflected power. Please explain the difference between encountering a 50 ohm resistor as the source impedance and encountering a 50 ohm resistor as a circulator load. How does the reflected power know the difference between those two 50 ohm resistors? Are you aware that reflection wave mechanics works perfectly well without a transmission line?
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
------== Over 80,000 Newsgroups - 16 Different Servers! =-----

2760. Re: A closer look (conservation of energy)

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-13 03:00:30 UTC
From: CAM <w5dxp@hotmail.com>
Message-ID: <3D58764E.3050643B@hotmail.com>
Source record: 137002

Richard Clark wrote:
>
> On Mon, 12 Aug 2002 20:20:00 -0500, CAM <w5dxp@hotmail.com> wrote:
>
> >You just haven't accepted it.
>
> Hi Cecil,
>
> Can you quote one post of mine where I make that declaration? I can
> point to several recent ones, like in the past 24 hours, that
> contradict you directly.
>
> Like I said, a shaggy-dog story - a boring one too.

What is wrong with a theory that is perfectly consistent with superposition
principles AND the conservation of energy principle?
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
------== Over 80,000 Newsgroups - 16 Different Servers! =-----

2761. Re: EVERY THING IS NOW KNOWN ON ANTENNAS.

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-13 03:29:50 UTC
From: 'Doc <w5lz@icok.net>
Message-ID: <3D587D17.8E9D1791@icok.net>
Source record: 137003

Art,
I've been reminded of something I should have
remembered from some early training. With that
in mind... What ever you say Art. What ever you
say.
'Doc

PS - By the way, I'm not a 'doctor' of anything, it's
a nickname.

2762. Re: How far away: HF Dipole and tri-bander vertical?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-13 03:43:58 UTC
From: 'Doc <w5lz@icok.net>
Message-ID: <3D588072.39C84560@icok.net>
Source record: 137004

Ken,
Being near the dipole shouldn't de-sense your
VHF radio, but, it might. Depends a lot on the
VHF radio. Give it a try. If it doesn't work
out, tell the wife you tried.
'Doc

2763. Re: A closer look (conservation of energy)

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-13 03:48:04 UTC
From: CAM <w5dxp@hotmail.com>
Message-ID: <3D588174.E76DC4AF@hotmail.com>
Source record: 137006

VE9SRB wrote:
> 141.421 V -- 50 ohm source Z -+----150 ohm line 1 WL ----+-50 ohm load
>
> In the initial state, before any reflections exist on the line, the 141.421
> V source voltage is divided between the 50 ohm source impedance and the 150
> ohm line.

> The initial forward voltage in the 50 ohm source impedance is 35.36 V. The
> initial forward power dissipation in the 50 ohm source impedance is 25 W
> (35.36^2/50). The initial forward voltage in the 150 ohm line is 106.07 V.
> The initial forward power in the 150 ohm line is 75 W (106.07^2/150).
>
> Now lets jump to the steady state and examine the reflected and re-reflected
> voltage at the source and apply superposition to determine the total
> voltages and powers everywhere in the system.
>
> The steady state reflected voltage arriving at the source is -70.71 V. The
> steady state reflected power arriving at the source is 33.33 W
> (70.71^2/150). The steady state re-reflected voltage at the source is
> +35.36 V. The steady state re-reflected power at the source is 8.33 W
> (35.36^2/150).

The fact that you assert that 8.33w is re-reflected means it must be reflected
from a 150 ohm to 50 ohm impedance transition. So you are admitting that a
Zg-match exists at that point. That point acts identically to the Z0-match
point in the earlier example. You cannot have it both ways, Steve. Either
the Zg-match point exists or it doesn't. If it does, it acts exactly like
the earlier Z0-match point. If it doesn't exist, there won't be 8.33 watts
re-reflected. So please make up your mind.

> The total steady state forward voltage in the 150 ohm line is given by the
> vector sum of the initial forward voltage (106.07 V) and the total steady
> state re-reflected voltage (35.36 V). The total forward voltage is 141.42 V
> and the total forward power is 133.33 W (141.42^2/150).
>
> Now at this point, your interpretation of the law of conservation of energy
> would require that there be some point of energy cancellation to create the
> 50 W of power needed to satisfy your power equation of 75 W (initial forward
> wave) + 8.33 W (re-reflected wave) + (50W of energy cancellation) = 133.33
> W.
>
> Where does this 50 W of power come from? Is there an energy cancellation
> event in the rearward direction at the source? Remember that the initial
> power dissipation in the source is 25 W. Should the power dissipation in
> the source now decrease to -25 W?

It is the same as before, Steve. Of the 33.33 watts of reflected power, 25 watts makes it through the Zg-match point, i.e. the point where the impedance transitions from Z0=150 ohms to Zg=50 ohms, you know - the point where your 8.33 watts re-reflected occurs. It wouldn't be re-reflected if the Zg-match transition point didn't exist, now would it? The reflected power is 33.33 watts. The re-reflected power is 8.33 watts. That leaves the same 25 watts that we encountered in the first example.

Of the 100 watts of forward power from the generator, 25 watts is reflected at the Zg-match point, i.e. the point where the impedance transitions from Zg=50 ohms to Z0=150 ohms. If, as you say, the 150/50 transition point causes 8.33 watts of re-reflections, then it has to be causing 25w of reflections from the 100w of source power going the other direction. You cannot have re-reflections happening in one direction and no reflections in the other. So there's our other 25 watts. The voltage and power equations are identical to the other example, just as I said they were.

Like I said, nothing has changed. Reflection wave mechanics works even when there is no transmission line.

> At the source, there is a rearward voltage delivered to the source impedance
> that is equal to the sum of the reflected voltage (-70.71 V) voltage and the
> re-reflected voltage (35.36 V). The total rearward voltage delivered to the
> source impedance is -35.36 V. Since this voltage is traveling in the
> rearward direction, the total voltage in the source impedance is equal to
> the forward voltage minus the rearward voltage. The total voltage developed
> across the source impedance is equal to 35.36 V - (-35.36 V) = 70.71 V.
> {ignore the rounding errors} The total steady state power dissipation in
> the source impedance increase from 25 W to 100 W. There is no energy
> reduction or cancellation.

You are allowing the 150/50 transition point to exist in part of your discussion and then disappear in the other part of your discussion. Please make up your mind. Does the 50/150 transition point exist? If it does, it behaves identically to the Z0-match point in the earlier example. If it doesn't exist, you are going to have to give up the 8.33 watts of re-reflected power. Which will it be?

> While the superposition of forward voltages results in a forward power of
> 133.33 W, there is no corresponding cancellation of energy event that your
> interpretation of the law of conservation of energy requires - your extra 50
> W of power. It does not exist in this example.

Of course it does, Steve. It exists at the Zg-match point. That the Zg-match point causes 8.33 watts of re-reflection proves that the 50/150 transition point exists and cancellation is taking place at that point. You simply cannot have it both ways. Either the Zg-match point exists as a 50 ohm to 150 ohm transition or it doesn't. If it does exist, it acts exactly like the Z0-match point in the earlier example. If it does not exist, you cannot have 8.33 watts of re-reflection occurring. Please make up your mind.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
------== Over 80,000 Newsgroups - 16 Different Servers! =-----

2764. Re: Feeding an Inv-L at the bottom?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-13 03:48:41 UTC
From: 'Doc <w5lz@icok.net>
Message-ID: <3D58818E.CC4447FC@icok.net>
Source record: 137005

Any borrowed edger, skill-saw, chainsaw, 'ditch-witch',
etc, will work just fine. Note the 'borrowed'.
'Doc
PS - Glue works too.

2765. antennas and more

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-13 03:57:03 UTC
From: George Kinzer <horseflygk@worldnet.att.net>
Message-ID: <js%59.10117$Ep6.791211@bgtnsc05-news.ops.worldnet.att.net>
Source record: 137007

to cbers everywhere
Ive just completed a very nice, easy to follow cd with plans to build 11 meter (CB) antennas, with MORE info on tune-ups, convertions, mic wiring, you name it...this thing is loaded with useful info on doing your own repairs and modifications. Explains how toos, and pdf file on home-kits and MORE...pictures are high quality, formulas, and do-nots that will get you up and sounding great...want to install your own talk-back, echo board, want to make your own swing-kit? well theres More, More, More (title of my cd) anyone interested, email me. Many hours and weekends compiling all this info in an easy to read format...Ive decided NOT to copyright this, as friends and 'Masters' have help write this/ you'll be amazed at how much you'll learn..
.'Golden Screwdriver' is a drop in the
bucket.... email me at horseflygk@att.net I'm 10-7, later

--
If first you don't suceed, do the same thing again...see what happens

2766. Re: A closer look (conservation of energy)

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-13 04:26:35 UTC
From: "J. Harvey" <JM002.Harvey_ANTI*SPAM_@Sympatico.ca>
Message-ID: <mT%59.1051$%R5.625326@news20.bellglobal.com>
Source record: 137008

"CAM"
> Voltage and current for an independent wave
> are always in phase or 180 degrees out of phase
> depending on direction of energy flow.

Uh oh... does that mean that if I walk around (or duck under) to the other side of a transmission line and look at it from the other side (thereby effectively reversing the direction of energy flow), that the relative phases of the voltages and currents will change ?

> I wonder how Einstein responded when someone
> asked him for references on the theory of relativity?

Well, he didn't post his theories on an Internet newsgroup.

If the Internet had been invented before the wheel, then the wheel would have never made it past the newsgroup skeptics. We would all be walking...

2767. Re: Cushcraft AR-6

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-13 04:38:32 UTC
From: "Michael R. McCarrey" <wa7qzr.take-out-the-junk@NOSPAMattbi.com>
Message-ID: <c3069.76513$UU1.15049@sccrnsc03>
Source record: 137009

Thanks for the dimension, Ed. I'll use the larger ring I made.
73
Mike

On Sun, 11 Aug 2002 10:22:44 -0700, Edward A. Feustel wrote:

> I have measured mine which happens to be on the ground at the moment.
> The diameter seems to be between 10 and 11 inches. It is hard to measure
> because of the center post.
>
> Ed, N5EI
>
> "Michael R. McCarrey" <wa7qzr.take-out-the-junk@NOSPAMattbi.com> wrote
> in message news:Wib59.51812$UU1.9899@sccrnsc03...
>> On Sat, 10 Aug 2002 09:08:35 -0700, Mark Keith wrote:
>>
>> > "Michael R. McCarrey" <wa7qzr@Don'tBotherImSickOfSPAM.net> wrote in
>> > message news:<Ol359.74953$D36.72353@rwcrnsc53>...
>> >> Hello;
>> >>
>> >> Does anyone happen to know what the diameter of the tuning ring on
>> >> an AR-6 might be? Cushcraft "Technical Support" doesn't :-)
>> >>
>> >> Please reply here.
>> >>
>> >> Thanks,
>> >>
>> >> Mike
>> >
>> > I have the manuals for both antennas."AR-10 and AR-6". I thought they
>> > gave the dimensions for the loops but I guess they don't. It's not
>> > really critical. Appx 9 inches dia will work for 10m. I would think
>> > the 6m version is appx 4-5 inches dia. It's not critical as you tap
>> > the middle area of the coil. If your dia varies a bit from theirs, it
>> > will just tap at a slightly different place. I've made homebrew
>> > versions of both those antennas. MK
>>
>> Hi Mark,
>>
>> This antenna began it's life as a CB antenna (AR-11, I think). A
>> previous owner shortened the base section, trying for 29.6 mHz., I
>> assume.
>>
>> When I got hold of it, I "reconstructed" it according to the AR-6
>> dimensions, including the coax capacitor. As you mentioned, the

>> Cushcraft manuals don't include the ring dimensions. I constructed
>> three different rings: 8", 6", and 4". No matter which one I use, I end
>> up with resonance between 52-54 mHz (I'm trying for 50.25 mHz center),
>> with an XC of over 150-Ohms. The lowest SWR obtainable is always above
>> 2:1, with the tuning arm set right at the radiator end of the ring.
>>
>> I've been using RG-8/U coax to feed it, but I'm beginning to think it's
>> perhaps decomposed somewhere along the run. I guess it's time to drag
>> out the Cantenna. It's a shame when you can't trust new coax to really
>> be "new".
>>
>> Anyhow, thanks for the feedback. I wanted to make sure I was close to
>> the right ring size before I tossed the feedline.
>>
>> 73
>>
>> Mike

2768. Re: G5RV in a V pattern? Possible?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-13 04:39:43 UTC
From: CJ <fantastic@sex.edu>
Message-ID: <ulh3cjnal16ae0@corp.supernews.com>
Source record: 137010

So will any random length of wire......

--
73 / DX de AB7SL - Charles
AB7SL - Ham Radio Pages
Prescott, Arizona - USA
www.ab7sl.com

" hillbilly3302" <davesradio@alltel.net> wrote in message
news:O_Z59.64$9T4.68193@news2...
> A G5RV will work in just about any way you can get it up..... some
ways
> better than others
>
> drc
> k5drc
>
> "Tom" <auctionid4me@yahoo.co.uk> wrote in message
> news:1Xb59.2315$wp2.142804@newsfep1-win.server.ntli.net...
> > I have no interest in the experimentation with antenna, however
> > due to a home move and limited space I am curious to know the
> > following:
> >
> > Is it possible to a G5RV in a V pattern, about 20' above the ground.
> > legs and the end.
> >
> > The 2 legs being about 20' apart.
> >
> > Ie.
> >
> >
> > \ 20' apart /
> > \ /
> > \ /
> > \ /
> > \ /
> > \ /
> > \ /
> > \ /
> > \/
> > Feeder Point
> >
> >
>
>

2769. Re: Cushcraft AR-6

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-13 04:48:24 UTC
From: "Michael R. McCarrey" <wa7qzr.take-out-the-junk@NOSPAMattbi.com>
Message-ID: <rc069.76622$UU1.14897@sccrnsc03>
Source record: 137011

On Sun, 11 Aug 2002 10:51:22 -0700, Mark Keith wrote:

> "Michael R. McCarrey" <wa7qzr.take-out-the-junk@NOSPAMattbi.com> wrote
> in message news:<Wib59.51812$UU1.9899@sccrnsc03>...
>> On Sat, 10 Aug 2002 09:08:35 -0700, Mark Keith wrote:
>>
>> > "Michael R. McCarrey" <wa7qzr@Don'tBotherImSickOfSPAM.net> wrote in
>> > message news:<Ol359.74953$D36.72353@rwcrnsc53>...
>> >> Hello;
>> >>
>> >> Does anyone happen to know what the diameter of the tuning ring on
>> >> an AR-6 might be? Cushcraft "Technical Support" doesn't :-)
>> >>
>> >> Please reply here.
>> >>
>> >> Thanks,
>> >>
>> >> Mike
>> >
>> > I have the manuals for both antennas."AR-10 and AR-6". I thought they
>> > gave the dimensions for the loops but I guess they don't. It's not
>> > really critical. Appx 9 inches dia will work for 10m. I would think
>> > the 6m version is appx 4-5 inches dia. It's not critical as you tap
>> > the middle area of the coil. If your dia varies a bit from theirs, it
>> > will just tap at a slightly different place. I've made homebrew
>> > versions of both those antennas. MK
>>
>> Hi Mark,
>>
>> This antenna began it's life as a CB antenna (AR-11, I think). A
>> previous owner shortened the base section, trying for 29.6 mHz., I
>> assume.
>>
>> When I got hold of it, I "reconstructed" it according to the AR-6
>> dimensions, including the coax capacitor. As you mentioned, the
>> Cushcraft manuals don't include the ring dimensions. I constructed
>> three different rings: 8", 6", and 4". No matter which one I use, I end
>> up with resonance between 52-54 mHz (I'm trying for 50.25 mHz center),
>> with an XC of over 150-Ohms. The lowest SWR obtainable is always above
>> 2:1, with the tuning arm set right at the radiator end of the ring.
>
> You shouldn't have to be all the way towards the radiator. Mine
> "usually" tune about in the middle of the coil. If you don't get a good
> match no matter where you tap the coil, you may need the tweak the cap

> value or radiator length. I show the "normal" length for the C/C version
> as 7 inches, or 18 cm long. I'd probably set the radiator height as
> about 111.75 inches or so to tune 50.25 mhz. I've built one of these
> antennas for 6m and had no problems tuning it. It acted the same as my
> 10m versions. If you are ending up tuned to 52-54 mhz, I would think
> your radiator is a bit short. The loop/cap is just an impedance matching
> device. If your antenna is short or long, the matching device is not
> going to be able to "pull" it into tune too much. You will have to
> adjust the radiator. Don't give up. It will work with a flat 1:1 swr. I
> just looked at mine out in the backyard. Now, mine is tuned for about
> the middle upper part of the band, for FM use. "about 52-52.5 mhz" My
> radiator is 104.5 inches. My loop is made from 3/8 inch copper tube, and
> is appx 6 inches dia. The tap is about 6 inches from the base, or about
> 1/3 the way from the base to the radiator. My cap is exactly 8 inches
> long of rg-58. As I remember , it had a good match. But I haven't used
> it in quite a while. I built a 3 el yagi since then.
>>
>> I've been using RG-8/U coax to feed it, but I'm beginning to think it's
>> perhaps decomposed somewhere along the run. I guess it's time to drag
>> out the Cantenna. It's a shame when you can't trust new coax to really
>> be "new".
>
> I doubt it's the coax. Bad coax gives you easier matches than good coax.
> Really bad coax will make anything look good. You can take real bad
> coax, stick a pin in the far end, and still see a decent SWR.
>
>
>> Anyhow, thanks for the feedback. I wanted to make sure I was close to
>> the right ring size before I tossed the feedline.
>
> I think your radiator needs to be longer. About 111.75 inches or so I
> think would be right for the bottom end of the band. When working
> properly, the tap for the loop will be about in the middle of the range.
> The cap value is not critical, but can be trimmed for best match once
> you get everything in the right ballpark. Usually, you don't need to as
> the loop tap will give you enough leeway. MK

Thanks for all your comments, Mark. It looks like the problem is the capacitor. My radiator is 112", which is what CC indicated for 50.0 mHz and 4-1/4" of RG-8/U for the capacitor, again, right out of the CC manual. I'll start over again with the long stub, and trim it up a bit at a time and se how close to CC's length I end up.

I made my rings out of aluminum tubing (and that was really fun bending too <grin>) to reduce dissimilar metal corrosion as much as possible.

Thanks again for all your input.

73

Mike

2770. Re: SWR - Why isn't the energy re-absorbed at the TX?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-13 06:46:47 UTC
From: "Ian White, G3SEK" <G3SEK@ifwtech.co.uk>
Message-ID: <FwG7TWCXtKW9EAP2@ifwtech.co.uk>
Source record: 137016

Richard Harrison wrote:
>No observant knowledgeable person would argue that the Bird wattmeter
>does not work.

The Bird wattmeter is very poor evidence for anybody's argument, because it does not truly measure watts.

The sensor in the Bird does not sense power. It generates two RF voltages - one proportional to the RF voltage on the line, and one proportional to the RF current - which are added or subtracted. There is no multiplication of voltage and current, so there's no power detection here..

When the sensor is rotated in the 'forward' direction, the total RF voltage is proportional to the vector *sum* of the voltage and the current in the line. Rotated to the 'reverse' direction, the current-signal is reversed in phase but the voltage is not, so the sensor generates the vector *difference*. With a matched load, the sensor is designed so that these quantities are equal and opposite in the reverse direction, so the difference is zero.

The sensor also contains a diode detector, which simply detects the net RF voltage (sum or difference) presented to it. What the Bird finally measures is microamperes in the meter movement.

The conversion from microamperes to indicated RF power takes place literally on the scale of the meter - no electronics involved at all. That "power" calibration is only valid for a 50 ohm load [1].

Any other so-called RF "wattmeter" that depends on sensing voltages and currents on the line is the same - it isn't a true wattmeter because it doesn't truly sense power. On the contrary, its power calibration depends *totally* upon the theory that you're trying to discuss here.... so if you try to call the Bird wattmeter as a 'witness', you're into a circular argument.

[1] With a mismatched load, both the forward and reverse power indications are invalid. However, such meters have the peculiar property that the difference between the indicated forward and reverse powers is equal to the power delivered to the load, regardless of the actual load impedance. But this is a peculiarity of the meter - it still doesn't mean that it senses true power.

--
73 from Ian G3SEK 'In Practice' columnist for RadCom (RSGB)
Editor, 'The VHF/UHF DX Book'
http://www.ifwtech.co.uk/g3sek

2771. Re: antennas and more

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-13 07:05:09 UTC
From: Zoran Brlecic <WA7AA@attbi.com>
Message-ID: <3D58AFA0.1666E193@attbi.com>
Source record: 137012

George Kinzer wrote:

> I'm 10-7, later

Good, and I am 7.5" now.

WA7AA

2772. A Challenge

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-13 08:17:16 UTC
From: John Davies <couperin@singnet.com.sg>
Message-ID: <ajaf5k$9sc$1@reader01.singnet.com.sg>
Source record: 137013

Hello,

I am new here and hope someone can help. I will hopefully be getting my 9V1 license before the end of the year (a full license for the HF bands). I am not familiar with amateur antenna systems in particular although I do understand general antenna theory. The problem in Singapore is that most of us live in apartments, myself included. I am on the 2nd floor of a 4-floor block. I have considered end-fed longwires via an ATU but I do not think the condominium management would approve . What they are really after is something out of sight. The roof may be an option. It is flat. I could mount a vertical with ground-plane radials no problem. The management would probably balk at anything higher than 15 feet, however.
An ATU could be mounted a the base of the antenna and weatherproofed. With such a small space available to me, what do you suggest as an off-the shelf antenna ? To make things worse, the roof access would be closed off to me after installation so I could not use any manual traps or such like. I would like to operate on all hf bands but I do realise that 80m may be impossible.
Looking forward to any advice.

2773. Re: EZNEC

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-13 09:08:06 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <3D58CC76.7000505@eznec.com>
Source record: 137014

Making good comparative measurements isn't easy.

When doing A/B comparisons, *always* make the measurements when receiving. Don't rely on reports from other stations. Make many measurements to average out ionospheric QSB. Especially when comparing vertical and horizontal antennas, take many measurements over a period of time. The received signal polarization can rotate, causing one antenna to be 20 dB or more better than the other at some times, and the other antenna 20 dB or more better at others. This shift can have a period from seconds to many minutes.

If you want quantitative measurements, use a step attenuator when making the measurements or calibrate your S meter on the same band and under the same RF gain, etc., settings with a step attenuator. Don't count on the number of dB per S unit to be constant over the scale, or for there to be a particular number of dB per S unit.

Vertical antennas are much more sensitive to ground conductivity than horizontal antennas (except at high angles), so poor estimations of ground conductivity (ofthen the best you can do) will affect modeling results with verticals more with horizontal antennas.

When comparing antennas with different elevation patterns, the difference between the two depends on the arrival angle of the signal. This can sometimes be estimated with a program like W6ELPROP, but sometimes multiple modes are possible, making it difficult to determine the arrival angle.

Roy Lewallen, W7EL

Rick Karlquist wrote:
> "KAZeringue" <kazeringue@aol.com> wrote in message
> news:3D559F73.3030202@aol.com...
>
>>Can anyone speak about the accuracy of an Eznec(v3.0.42) model of an
>>antenna over "real" ground?
>
>
>>Keith, W4KAZ
>
>
> I have been A/B'ing a 60 foot high inverted vee (120 degree apex)
> on 20 meters with a widely separated ground mounted
> half wave vertical. I've often seen the vertical beat the vee
> by 3 to 6 dB and vice versa. Sometimes, they are the same.
> Probably depends on the optimum propagation angle at the time.

>
> According to NEC, the vee should beat the dipole at any angle
> over any ground (except a couple of degrees over sea water),
> and beat it by a significant amount.
>
> I suspect NEC overestimates the gain vee and underestimates the
> gain of the vertical (both must be off, you can't explain
> the discrepancy only in terms of the vertical being off, AFAIK).
>
> I would be careful about making any assumptions about NEC's
> analysis of ground effects. Always A/B real antennas to check.
> If necessary, temporarily install switching relays.
>
> Rick N6RK
>
>

2774. Re: antennas and more

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-13 09:09:40 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <3D58CCD4.3070608@eznec.com>
Source record: 137015

That's three, isn't it? About what I'd estimated.

Roy Lewallen, W7EL

Zoran Brlecic wrote:
> George Kinzer wrote:
>
>
>
>> I'm 10-7, later
>
>
> Good, and I am 7.5" now.
>
>
>
>
> WA7AA
>

2775. Re: EVERY THING IS NOW KNOWN ON ANTENNAS.

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-13 11:38:47 UTC
From: nm5k@wt.net
Message-ID: <25eb70d7.0208130338.396a74b5@posting.google.com>
Source record: 137017

aunwin@fgi.net (Art Unwin KB9MZ) wrote in message n
>
> Have fun Keith, give a shout if you need extra guidance.
> And as I have said in private you appear to be the only one to give it
> a shot on the computor and put your personal beliefs aside.
> Great job.
> Warmest regards
> Art Unwin
> KB9MZ........XG

Ok, If I read all this right, you are using only one dipole, and one
loop. In that case, I already modeled it correctly the first time.
I've been feeding ity at the center of the dipole. I just wanted to
clear this up , as your ZZ1 antenna appeared to use two dipole
elements. I'll try to double check this, but I think I did it right
the first time. MK

2776. FS: AEA Isoloop antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-13 11:55:50 UTC
From: jonweiner@aol.com
Message-ID: <20020813075550.07645.00000003@mb-ba.aol.com>
Source record: 137018

I have for sale an AEA Isoloop magnetic loop antenna. Covers 14-30Mhz. In very good condition with copy of the original instructions. $175. for pick up at Greer, SC or plus shipping.

2777. Re: EVERY THING IS NOW KNOWN ON ANTENNAS.

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-13 12:52:42 UTC
From: cprstn54zz@att.net
Message-ID: <3d58fe83.60860265@news-server.optonline.net>
Source record: 136919

On 10 Aug 2002 08:17:39 -0700, Aunwin@fgi.net (Art Unwin KB9MZ) wrote:
>So he aproached a professor of a major university to review his work
>and got the retort that 'Antennas are the most widely discussed and
>investigated subject in the world and there is nothing 'new' to be
>found'.

Although trained as an engineer, I am a relative newbie to RF. I found it interesting that the only practical ways we have of generating RF energy is to course alternating current through a wire path (excepting also electric spark). This seems very limited. Light was for thousands of years generated only by burning or heating something, then heating a wire electrically, then applying a potential to some gases, then by chemical reaction, then via soilid-state device. Perhaps a similar future awaits RF and other parts of the EM spectrum. Who is to say we won't find a way to excite matter so that it releases controllable RF energy? Then antennas would look like light fixtures.

Ken KC2JDY

Ken
(to reply via email
remove "zz" from address)

2778. Re: A closer look

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-13 12:53:23 UTC
From: VE9SRB <srbest@att.net>
Message-ID: <7j769.9764$Ke2.855191@bgtnsc04-news.ops.worldnet.att.net>
Source record: 136920

"CAM" <w5dxp@hotmail.com> wrote in message
news:3D58738B.76564239@hotmail.com...

> It is NOT traveling in the rearward direction and the forward direction at
> the same time! THERE IS NO ENERGY TRAVELING IN THE REARWARD DIRECTION IN A
> FEEDLINE WITH AN SWR = 1:1. None can be measured.

There is no NET energy traveling in the rearward direction. We cannot measure the individual energy components. All we can measure is the total net wave component.

Its like a mutlipath fade where different waves meet and combine to a NET energy of 0 at a single point in space. Just because we can't measure the individual wave components does not mean that they no longer exist or that they are not still there effecting the cancellation. The fact that the energy cancels at the multipath fade point does not mean it has to reverse direction, travel or jump through space to somewhere else to combine with other traveling energy components. If it did, the energy in the individual waves would be lost and the waves would not travel past the point where the multipath fade occurs - this would truly violate the law of conservation of energy. For your interpretation of energy conservation to work it must be valid under every imaginable situation - it is not.

Cecil, this has been fun but I'm going to leave the discussion because we have now reached the endless circulating loop. Take care.

Steve VE9SRB

2779. Re: A closer look (conservation of energy)

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-13 12:55:00 UTC
From: VE9SRB <srbest@att.net>
Message-ID: <Ek769.9766$Ke2.855274@bgtnsc04-news.ops.worldnet.att.net>
Source record: 136921

"CAM" <w5dxp@hotmail.com> wrote in message
news:3D588174.E76DC4AF@hotmail.com...
>
> Of course it does, Steve. It exists at the Zg-match point. That the
Zg-match
> point causes 8.33 watts of re-reflection proves that the 50/150 transition
> point exists and cancellation is taking place at that point. You simply
cannot
> have it both ways. Either the Zg-match point exists as a 50 ohm to 150 ohm
> transition or it doesn't. If it does exist, it acts exactly like the
Z0-match
> point in the earlier example. If it does not exist, you cannot have 8.33
watts
> of re-reflection occurring. Please make up your mind.
> --

Cecil, the rearward voltage (energy) delivered to the source impedance combines with the forward voltage (energy) in the source impedance. The total power (energy) is dissipated there. There simply is no reversal of energy to join with the forward wave.

As I said in the other thread, this has been fun but we have now reached the endless loop of going back and forth, so I'm going to leave the discussion.

Take care.

Steve VE9SRB

2780. Re: BACK TO BASICS - EM waves, E and H fields, in phase orinquadr...

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-13 13:12:13 UTC
From: "William E. Sabin" <sabinw@mwci-news>
Message-ID: <3D5905AD.9020700@mwci-news>
Source record: 136922

William E. Sabin wrote:

> William E. Sabin wrote:
>
>> Ian White, G3SEK wrote:
>>
>>>
>>>
>>> Why? Because it's fundamentally, irretrievably asymmetrical! One leg
>>> of the dipole is connected only to one conductor (coax inner) but the
>>> other leg is connected to two - the inside and outside of the shield,
>>> which operate as two independent conductors because of the skin effect.
>>>
>>> Immediately you connect the coax, current flows on to the outside of
>>> the shield and it becomes part of the radiating system - just as if
>>> you'd connected another wire to that side of the feedpoint.
>>
>>
>>
>>
>>
>> Imagine a coax with a resistor connected across the far end. The
>> current will return via the inner surface of the shield, regardless of
>> the impedance of the outer surface of the shield.
>>
>> Reason: Maxwell's equation curl H = J (neglect the dE/dt as
>> irrelevant within the shield). This law says in a roundabout way that
>> in order for the H field to be zero within the shield the magnetic
>> flux linkages at the inner surface due to the center wire and the
>> magnetic flux linkages due to the return current on the inner surface
>> must be equal and in opposite directions. See also Terman 1955 page
>> 22, which states (equivalently) that "the general principle is that
>> current flows where it is encircled by the smallest number of flux
>> lines". This can be true only if the current returns via the inner
>> surface.
>>
>> The idea that the division of current is according to the impedance of
>> the outside surface of the braid, is basically and fundamentally
>> incorrect. There is more than just Ohm's law involved here. Intuitions
>> fail in this situation.
>>
>> The current on the outside is due entirely to electromagnetic coupling
>> from the antenna elements.
>>

>> Furthermore, another Maxwell equation says that the divergence of B =
>> zero, which leads to the conclusion that current flows only in closed
>> paths. This means that the common mode current that flows into a
>> ground connection must find its way back to the antenna by some means,
>> usually by electromagnetic induction (transformer action). If the
>> antenna is highly isolated from "ground", as in space, there is no
>> common mode current into a "ground" connection, and only the generator
>> platform, transmission line and antenna are the closed path for common
>> mode current.
>>
>> The example above referred to a resistor across the end of the coax.
>> The situation for the dipole is no different, if electromagnetic
>> coupling from dipole elements to coax outer surface is treated
>> separately (superposition applies).
>>
>> Bill W0IYH
>
>
>
>
> There is another error that is being repeated. The coax circuit is being
> modeled as a coax in conjunction with a "wire" that is somehow external
> to the coax and operating independently of the coax. The common mode
> current is assumed to flow in that wire and to be unassociated with the
> inside of the coax.
>
> This external, independent wire idea is prevalent and is not correct,
> and leads to misunderstandings. A common mode current that flows on the
> outer surface produces a common mode voltage along the outer surface.
> This voltage is *transformer-coupled* to the center wire and constitutes
> an almost identical common mode voltage along the center wire. This
> transformer action is greatly enhanced by the presence of a current
> balun. In fact, that is one of the main features of the current balun:
> it inhibits the conversion of a common mode voltage *along* the length
> of the coax into a differential mode voltage *across* the coax. Without
> this transformer coupling, that is exactly what would happen.
>
> The outside of the coax and the inside of the coax are not, and cannot
> be regarded as, separate and isolated entities. Coax is not that simple.
>
> Bill W0IYH
>
>

Assume a dipole, coax and generator in free space,
with no electrical connection to any exernal object.

The generator sends an "electron" current through
the center wire into the right hand side of the
dipole.

Because no electrons leave the wire (true!), the rms electron current arriving at the shield from the left side of the dipole *must* be exactly equal to the rms current that goes into the right side of the dipole.

Because of the requirement that the magnetic field due to the center-wire current and the magnetic field created by the return current on the *inside* surface must exactly cancel each other at the inner surface, the resulting conclusion is that *all* of the electron current from the left side must flow on the inner surface, and none of it flows on the outside surface, regardless of the impedance along the outside surface.

This verifies the claim that all of the current on the outer surface is due to electromagnetic induction, provided that there is no electron current leakage path. Such a path would *contribute* to a common mode leakage electron current.

Note also that Kirchhoff is not violated, but that electromagnetic interactions determine the paths of current. This is slightly different from the conventional lumped circuit.

It is also interesting to consider the mag field cancellation on the inner surface of the shield. In order to achieve cancellation, the two mag fields must be exactly opposite in direction and exactly equal in amplitude at every cross section location. We can see that we cannot depend on the complete path through the coax center wire to the dipole wires and the shield to achieve this cancellation. The probability of this occurring is essentially *zero*.

Instead, the cancellation occurs at each and every cross section. Each tiny segment of coax is a network of series L (both wire and shield), shunt C and mag fields. This tiny network performs, in a complicated way, the desired cancellation at the inner surface. In other words, the coax forces the center current and the return current to be exactly in opposite directions and equal amplitudes at each location. This cancellation occurs on an instantaneous basis.

This does not mean that the voltage across, and the current through, must be in phase (for example if the load impedance is complex). The tiny

network does whatever is necessary to assure the cancellation.

And because of the cancellation, no ac voltage drop occurs along the length of the shield, despite the value of the shield inductance per unit length, which is usually about 25 percent of the center wire value (not zero!).

Bill W0IYH

2781. Re: EVERY THING IS NOW KNOWN ON ANTENNAS.

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-13 13:26:56 UTC
From: CAM <w5dxp@hotmail.com>
Message-ID: <3D590920.5EFEA157@hotmail.com>
Source record: 136923

Ken wrote:
> Who is to say we won't find a way to excite matter so that
> it releases controllable RF energy?

Stars release plenty of RF energy but I doubt that it is
"controllable". :-)
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
------== Over 80,000 Newsgroups - 16 Different Servers! =-----

2782. Re: EVERY THING IS NOW KNOWN ON ANTENNAS.

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-13 13:42:48 UTC
From: nm5k@wt.net
Message-ID: <25eb70d7.0208130542.726670a7@posting.google.com>
Source record: 136924

aunwin@fgi.net (Art Unwin KB9MZ) wrote in message
>
> Have fun Keith, give a shout if you need extra guidance.
> And as I have said in private you appear to be the only one to give it
> a shot on the computor and put your personal beliefs aside.
> Great job.
> Warmest regards
> Art Unwin
> KB9MZ........XG

I'm afraid I'm even more confused now after looking at your patent.
#1, I get no pictures at all, when I try to d/l them. I don't know if
my firewall is blocking them or what. I killed my firewall, and still
didn't get any images.
But in reading the text, it totally contradicts what I was asking you
, and what you state about the number of dipole elements. I asked you
yesterday if the antenna used more than one dipole element. Fairly
simple question really. But you gave me about 87 miles of text, that
after digesting I came to the conclusion that yes, you are only using
one element. So I came to the conclusion I modeled it correctly the
first time. "Actually would have been the 2nd time, as you veto'd the
first." So now I go to the text on the patent page, and what do I see?

"from patent page"
*** BRIEF DESCRIPTION OF THE DRAWINGS

FIG. 1 shows a variable capacitance antenna having three dipole
elements.

FIG. 2 shows a cross section of the support boom of a variable
capacitance antenna detailing the structure of the variable capacitor
portion and the remote tuning portion.

FIG. 3 shows a rack and pinion movement for the remote tuning portion
of a variable capacitance antenna.

FIG. 4 shows a variable capacitor portion for use with two elements.

DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENTS

FIG. 1 shows an embodiment of the variable capacitance antenna having
three dipole elements. The director element 1, driver element 2, and
reflector element 3 are shown mounted on a common support boom 4. The
variable capacitance antenna requires at least one driver element 2,
however, there can be any number of directors including zero. In a
preferred embodiment, the variable capacitance antenna contains one
director element 1 and one reflector element 3, however, reflector

elements may also be any number including zero.

**** unquote..

Here , you talk of three dipole elements???? Multi elements????
Can you see the contradiction between this antenna and what you are posting here as a description?

I about give up. Until I can get an EXACT picture of the antenna, there is no way I can make any kind of lucid comment on it. Your description you gave me to model does not match this patented antenna. I'm getting almost as confused as you seem to be. Also, you have some other text in that patent that I don't quite agree with. IE: that a trapped dipole is a variation of a yagi, and is limited to three bands. I don't agree with either one of those statements as far as a single trapped dipole.

You claim you can steer a single dipole element by adjusting the cap on the matching device. It's plain to see from modeling, that this is just plain untrue. I can change the value of the cap and it has no effect on the pattern. Only the match.
But yes, if you use TWO parallel dipole elements, each with a cap/loop matching device, it's possible to steer the antenna. Nothing really new there. Whether it's better than using other methods to change phase, I'm not sure. I kind of doubt it. I've seen people using parallel dipoles and "L/C" phasing boxes for years. It seems to work pretty well. Myself, when I did it, I changed the feedlines to change phase. IE: adding lengths to one side of two equal lengths lines, etc. Nothing fancy, but worked ok. Is this what you mean basically? From your patent, it would seem so. Please unconfuse us in a simple "not too many words" manner please. I wish I could d/l the images from the patent site...That would help greatly. Maybe it would help if you could draw an exact picture of the complete antenna, and scanned it and post to the ng. You could put it on your server and post a link. I'm afaid I'm getting more confused by the day. MK

2783. Re: A closer look

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-13 14:16:30 UTC
From: CAM <w5dxp@hotmail.com>
Message-ID: <3D5914BE.A5AB1CE9@hotmail.com>
Source record: 136925

VE9SRB wrote:
>
> "CAM" <w5dxp@hotmail.com> wrote in message
> news:3D58738B.76564239@hotmail.com...
>
> > It is NOT traveling in the rearward direction and the forward direction at
> > the same time! THERE IS NO ENERGY TRAVELING IN THE REARWARD DIRECTION IN A
> > FEEDLINE WITH AN SWR = 1:1. None can be measured.
>
> There is no NET energy traveling in the rearward direction. We cannot
> measure the individual energy components. All we can measure is the total
> net wave component.

Steve, there is no NET energy traveling in the rearward direction because ALL the energy in that direction has been superposed to zero. If there were components of energy flowing rearward toward the source, those energy components would cause losses in the wire. We know there are no losses in the wire from any rearward flowing energy. Therefore, rearward flowing energy has ceased to exist in that portion of the system. It has been canceled by destructive interference. Since energy cannot be destroyed, it has to take the only other possible direction back toward the load through constructive interference. The confining of EM fields to the interior of a coaxial line leaves only two possibilities for the direction of energy flow. If it exists as RF energy and it is not flowing toward the source, then it is flowing toward the load. There's no other possibility. The absence of energy flowing rearward toward the source dictates that all energy at that point is flowing toward the load.

> Its like a mutlipath fade where different waves meet and combine to a NET
> energy of 0 at a single point in space.

Nope it isn't, Steve. In the case of free space, destructive interference can occur anywhere in the fields and constructive interference occur anywhere else. But in a transmission line, the fields are confined to essentially a one-dimensional world. The fields are confined to the transmission line and field components do not extend from the source to the load. Field components are forced by the laws of physics to travel from the source to the load. Since the fields are confined to such a small area, any energy canceled by destructive interference must reappear close by in the transmission line as constructive interference. The physical distance between the destructive interference and the constructive interference is limited by the physical extent of the fields confined to the coax which is a pretty short distance. In the examples given, you cannot sneak energy from the source past the transmission line to the load without it traveling in the transmission line. Nice try but that is simply Hocus-Pocus Electromagnetics.

> Just because we can't measure the
> individual wave components does not mean that they no longer exist or that
> they are not still there effecting the cancellation.

That's an absolute Old Wives' Tale. We know all the energy makes it to load in a lossless system. That energy cannot exist in two places at once. It's either flowing rearward OR it's making it to the load. The same energy cannot be both flowing rearward and forward at the same time. If it is flowing forward, it is not continuing to flow rearward. What is it about "destructive" that you don't understand?

> The fact that the
> energy cancels at the multipath fade point does not mean it has to reverse
> direction, travel or jump through space to somewhere else to combine with
> other traveling energy components.

It travels, it doesn't jump. Your approach has the energy magically jumping from the source to the load bypassing the transmission line. That is simply impossible, Steve. You are going to need assistance from a supernatural RF God to pull that one off.

Any time energy is canceled, it must instantaneously reappear to keep from violating the conservation of energy principle. You say the energy is canceled but it doesn't reappear. That's a clear violation of the conservation of energy principle.

When the fields from an antenna are canceled at a point, they are reinforced at another point sometimes quite a distance away. The reason this can happen with antennas is that the fields are unconfined. They can appear anywhere in free space. The same thing cannot happen with a transmission line where the fields are confined to the interior of the coax and there are no fields outside the (perfect) coax.

> If it did, the energy in the individual
> waves would be lost and the waves would not travel past the point where the
> multipath fade occurs - this would truly violate the law of conservation of
> energy. For your interpretation of energy conservation to work it must be
> valid under every imaginable situation - it is not.

The difference is that in free space, the EM fields are not confined. In a transmission line, the EM fields are confined to the transmission line. In coax, the EM fields are confined between outer layer of the inner conductor and the inner layer of the braid. This puts EM fields in coax in essentially a one-dimensional world. The energy in the coax can only move in two and only two directions. The energy in EM fields in free space are free to move anywhere in free space. In that respect, antenna fields and transmission line fields are quite different.

An antenna field can extend for any distance. A transmission line field confined inside RG8x can extend only approximately the distance between the inner conductor and outer conductor. The distance between the destructive interference and the constructive interference is rather limited inside coax. It certainly does NOT extend from the source to the load as your explanations would have them do.

> Cecil, this has been fun but I'm going to leave the discussion because we
> have now reached the endless circulating loop. Take care.

I have come up with voltage equations that satisfy the superposition principle. I have come up with energy equations that satisfy the conservation of energy principle. You haven't. It seems that our only point of disagreement is whether the energy from destructive interference in a transmission line changes direction and becomes constructive interference in that new direction. I think I can prove my assertion but it will take a trip to the Texas A&M library.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

2784. Re: A Challenge

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-13 14:19:25 UTC
From: "R. Scott" <washingtonham@yahoo.com>
Message-ID: <3D59156D.AFA1C2BE@yahoo.com>
Source record: 136927

I had the same situation in Spain with miltary housing. BUT, I
presented them with the HF6V and they approved it even though it was
taller. Give it a whirl, I worked the world with it

http://www.bencher.com/hf6vx.html

At 19ft this is a bit smaller, but I cannot atest to the performance.

http://www.cushcraft.com/amateur/details.asp?catid=69

Hygain has the 12AVQ that is 13ft tall but is only 20/15/10
their 14AVQ is 10-40 and is 18ft tall

http://www.hy-gain.com/hy-gain/products.php?catid=4

Good luck and hope to work you soon

Scotty N7HJ

2785. Re: A closer look (conservation of energy)

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-13 14:24:04 UTC
From: CAM <w5dxp@hotmail.com>
Message-ID: <3D591684.1BC92E5@hotmail.com>
Source record: 136926

VE9SRB wrote:
>
> "CAM" <w5dxp@hotmail.com> wrote in message
> news:3D588174.E76DC4AF@hotmail.com...
> >
> > Of course it does, Steve. It exists at the Zg-match point. That the
> Zg-match
> > point causes 8.33 watts of re-reflection proves that the 50/150 transition
> > point exists and cancellation is taking place at that point. You simply
> cannot
> > have it both ways. Either the Zg-match point exists as a 50 ohm to 150 ohm
> > transition or it doesn't. If it does exist, it acts exactly like the
> Z0-match
> > point in the earlier example. If it does not exist, you cannot have 8.33
> watts
> > of re-reflection occurring. Please make up your mind.
> > --
>
> Cecil, the rearward voltage (energy) delivered to the source impedance
> combines with the forward voltage (energy) in the source impedance. The
> total power (energy) is dissipated there.

There is no rearward energy delivered to the source impedance during steady
state. It is canceled at the same point at which your 8.33 watts of re-reflections
occur. The same discontinuity that causes the 8.33 watts of re-reflections,
causes cancellation of the rearward wave. You simply cannot have it both
ways. If there exists 6.33 watts of re-reflection, then there exists a
150/50 discontinuity which causes cancellation of the rearward traveling
energy. That 150/50 discontinuity is not some RF diode existing in only
one direction. Or do RF diodes exist in your universe?
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
------== Over 80,000 Newsgroups - 16 Different Servers! =-----

2786. Re: SWR - Why isn't the energy re-absorbed at the TX?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-13 14:31:36 UTC
From: tdonaly@aol.com
Message-ID: <20020813103136.25363.00000031@mb-fz.aol.com>
Source record: 136928

Ian White wrote,
>
>The Bird wattmeter is very poor evidence for anybody's argument, because
>it does not truly measure watts.
>
According to Feynman, nothing directly measures energy. Energy is always calculated from other quantities. An indicator, such as the needle on a meter can multiply just as easily as an ancient slide rule, or a look-up table in a computer, or the multiplication table you've memorized in your head. Whenever you figure out how to "truly measure" power, be sure and call up your local university and tell the physics faculty what you've discovered. I'm

sure they'll all be very interested.

Tom Donaly KA6RUH

2787. Re: EVERY THING IS NOW KNOWN ON ANTENNAS.

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-13 14:44:04 UTC
From: aunwin@fgi.net
Message-ID: <c4becf19.0208130644.1d1fa63f@posting.google.com>
Source record: 136929

'Doc <w5lz@icok.net> wrote in message news:<3D586A54.ED91B4E1@icok.net>...
> Art,
> You brought your son into this, claiming he is
> doing what he needs to do, conserning some mysterious
> matter. This isn't a 'prelude' to anything. From
> your posts and general behavior, that 'mysterious'
> matter your son is busy with could certainly be a
> sanity hearing for you.
> "'Doc" is a nickname. Don't confuse me with a
> 'doctor' of anything. As far as my posts making you
> feel 'uneasy', I don't doubt that at all.
> 'Doc

Well you and the others with their silence have made it quite clear to
me
that all bars are now removed and the insults and slurs are now about
to begin in earnest.
I have no wish to subject my family to what will now become a
raucious pack of wolves ala Fractal style. I have tried before to
explain my antenna and probably will do so again in the future. But I
will not give up or be pushed aside.
The English have never been ones to run away from hurdles or percieved
difficulties, other wise I would not have emmigrated as many of the
english do.
I will honour my commitment of providing to somebody the news article
that I referred to earlier, which I assume he will share with you and
probably
will generate another separate thread.
With my withdrawal from this thread I can assume that the subject
can be terminated and placed in the archives once again.

To those who have shown kindness and understanding and an open mind
with respect to various problems you have my heartfelt thanks.
I will continue in any dialogue that they may wish for but on a
private level
Every body, have a great week end with your families and friends. In
the final analysis it is those who give us the greatest joy's in life
so look after them.

Regards
Art Unwin
KB9MZ.......XG

2788. Re: A closer look (conservation of energy)

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-13 14:59:57 UTC
From: VE9SRB <srbest@att.net>
Message-ID: <N9969.9855$Ke2.864123@bgtnsc04-news.ops.worldnet.att.net>
Source record: 136930

"CAM" <w5dxp@hotmail.com> wrote in message
news:3D591684.1BC92E5@hotmail.com...

> There is no rearward energy delivered to the source impedance during
steady
> state. It is canceled at the same point at which your 8.33 watts of
re-reflections
> occur.

You really need to consider how ridiculous this statement is. Your
statement contradicts basic circuit theory and basic transmission line
theory.

What mechanism causes the cancellation? There is only one rearward steady
state wave flowing into the source. How can a cancellation occur with only
one wave? At any impedance junction energy is transmitted and reflected as
a function of the value of the reflection coefficient. 33.33 W of power
arrives at the source, 8.33 W is re-reflected. 25.0 W is "delivered" to the
source impedance. The total steady state power dissipation in the source
impedance is determined by the superposition of the forward and rearward
voltages in the source impedance. We're at a point where you are ignoring
simple circuit theory to convince yourself that you're correct.

What other rearward wave cancels the rearward voltage entering the source?

Steve

2789. Re: EVERY THING IS NOW KNOWN ON ANTENNAS.

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-13 15:23:36 UTC
From: 'Doc <w5lz@icok.net>
Message-ID: <3D59246E.35F5344B@icok.net>
Source record: 136931

Mark,
Don't bother, you'll never get the same answer from Art
twice in a row. Have you ever seen that behavior before?
Ought to be sort of familiar here...
'Doc

2790. Re: SWR - Why isn't the energy re-absorbed at the TX?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-13 15:43:56 UTC
From: CAM <w5dxp@hotmail.com>
Message-ID: <3D59293C.5706DD07@hotmail.com>
Source record: 136933

Tdonaly wrote:
>
> Ian White wrote,
> >
> >The Bird wattmeter is very poor evidence for anybody's argument, because
> >it does not truly measure watts.
> >
> According to Feynman, nothing directly measures energy. Energy is always
> calculated from other quantities. An indicator, such as the needle on a
> meter can multiply just as easily as an ancient slide rule, or a look-up table
> in a computer, or the multiplication table you've memorized in your head.
> Whenever you figure out how to "truly measure" power, be sure and call up
> your local university and tell the physics faculty what you've discovered.

I know how to "truly measure" power but the process uses up
all the power. :-(
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
------== Over 80,000 Newsgroups - 16 Different Servers! =-----

2791. Re: Where buy a 5/8 HF all-band vertical ?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-13 15:44:45 UTC
From: nm5k@wt.net
Message-ID: <25eb70d7.0208130744.508fcd71@posting.google.com>
Source record: 136932

'Doc <w5lz@icok.net> wrote in message news:<3D5797CE.19C4BF28@icok.net>...
> Thierry,
> I don't believe anyone makes an 'all-band'
> 5/8 wave length antenna.
> 'Doc

Gonna be a tough project. You would need a motorized crankup mast or
tower that would extend from 21 ft up to 167 ft. Then a selectable
tapped loading coil. Maybe relays could do the trick. The 21-167 ft
tower is going to be the fun part.
I won't even mention the needed good ground system... MK

2792. Re: A closer look (conservation of energy)

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-13 16:05:52 UTC
From: CAM <w5dxp@hotmail.com>
Message-ID: <3D592E60.3D81F4CB@hotmail.com>
Source record: 136934

VE9SRB wrote:
>
> "CAM" <w5dxp@hotmail.com> wrote in message
> news:3D591684.1BC92E5@hotmail.com...
>
> > There is no rearward energy delivered to the source impedance during
> steady
> > state. It is canceled at the same point at which your 8.33 watts of
> re-reflections
> > occur.
>
> You really need to consider how ridiculous this statement is. Your
> statement contradicts basic circuit theory and basic transmission line
> theory.

Nope it doesn't, Steve. Your RF diode contradicts basic transmission theory. You simply cannot have an impedance discontinuity that exists in one direction but not in the other direction. Either the impedance discontinuity exists in which case it causes re-reflections AND destructive interference or the impedance discontinuity doesn't exist in which case there aren't any re-reflections. You simply cannot have it both ways.

> What mechanism causes the cancellation?

Destructive interference.

> There is only one rearward steady state wave flowing into the source.

There is NO rearward steady state wave flowing "into" the source. Put your finger on the point "at" the source where the 8.33 watts of re-reflection occurs. That's the point where destructive interference occurs. You simply cannot have a point that causes 8.33 watts of re-flection only to have that point disappear at your whim when you don't like the results. That point is "at" the 150 ohm to 50 ohm transition point. It is not *in* the source impedance. In your drawing, it is *at* the '+' character just like it was in the earlier example. Reflection wave mechanics work even when there is no transmission line.

> How can a cancellation occur with only one wave?

There are two complimentary waves, Steve, just as there were in the earlier example. The 50/150 ohm discontinuity point cannot exist in only one direction. You say it exists long enough to cause 8.33 watts of re-reflection and then disappears. That is certainly a violation of the laws of physics. That impedance discontinuity point exists at

the '+' character in your drawing.

> At any impedance junction energy is transmitted and reflected as
> a function of the value of the reflection coefficient. 33.33 W of power
> arrives at the source, 8.33 W is re-reflected. 25.0 W is "delivered" to the
> source impedance.

No it isn't, Steve. The same point that causes the 8.33w to be re-flected
works in the other direction to cause a complementary 25 watt wave to
develop. IF THE REFLECTION COEFFICIENT IS 0.5, IT IS 0.5 IN BOTH DIRECTIONS!
Wherever it is that the generated forward wave sees the 50 ohm to 150 ohm
discontinuity is where the 25w of complementary wave originates. Your own
figures indicate that the 25 watts exist.

Please pay close attention: You add 75 watts to 8.33 watts to get the
forward power of 133.33 watts. The generator is outputting 100 watts.
Where is the 100 watts minus 75 watts? It's the very power we are
talking about that causes the destructive interference. Since you
allow energy to magically disappear and reappear somewhere else,
you cannot see the contradiction in your statements.

> The total steady state power dissipation in the source
> impedance is determined by the superposition of the forward and rearward
> voltages in the source impedance. We're at a point where you are ignoring
> simple circuit theory to convince yourself that you're correct.

It is not "in" the source impedance, Steve. It is "at" the source impedance.
A point "at" the source impedance is a 50 ohm to 150 ohm impedance discontinuity.
That impedance discontinuity is bi-directional. It CANNOT, as you say, act like
an impedance discontinuity in one direction and disappear in the other direction.
You have taken others to task for suggesting such a violation of circuit theory
and transmission line theory in the past. Please show us an example of a uni-
directional impedance discontinuity.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

2793. Re: BACK TO BASICS - EM waves, E and H fields, in phase orinquadr...

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-13 16:08:20 UTC
From: "Ian White, G3SEK" <G3SEK@ifwtech.co.uk>
Message-ID: <6Y+0ZwA07SW9EALk@ifwtech.co.uk>
Source record: 136944

William E. Sabin wrote:
>
>
>Assume a dipole, coax and generator in free space, with no electrical
>connection to any exernal object.
>
OK. Let's also assume that the coax runs away at right-angles to the dipole.

>The generator sends an "electron" current through the center wire into
>the right hand side of the dipole.
>
>Because no electrons leave the wire (true!), the rms electron current
>arriving at the shield from the left side of the dipole *must* be
>exactly equal to the rms current that goes into the right side of the
>dipole.
>
Here we disagree. For your statement about exactly equal currents in both legs of the dipole to be true, it requires that the whole system is symmetrical about its centerline - but it is not. One side of the dipole is connected to the center conductor, but the other side is connected to the shield. That is not symmetrical and can never be made so.

The practical test for symmetry is to stand a mirror up along the centerline of your drawing. Is the reflection in the mirror the same as what you see when you take the mirror away? No, it isn't.

To anticipate one possible reply (or something that might cross the minds of others reading this), it is not sufficient to say "make the coax thinner, and you can make the system near-enough symmetrical." That solution is unacceptable because our entire discussion hinges on that small but important difference between "near-enough" and "exactly".

So from my viewpoint, I'm continuing with

>Because of the requirement that the magnetic field due to the
>center-wire current and the magnetic field created by the return
>current on the *inside* surface must exactly cancel each other at the
>inner surface, the resulting conclusion is that *all* of the electron
>current from the left side must flow on the inner surface, and none of
>it flows on the outside surface, regardless of the impedance along the
>outside surface.
>
Half-agree. Re-quoting what you just said, but splitting it into two parts:

>Because of the requirement that the magnetic field due to the
>center-wire current and the magnetic field created by the return
>current on the *inside* surface must exactly cancel each other at the
>inner surface,

Fully agree, including the "exactly"... but not with the next part:

>the resulting conclusion is that *all* of the electron current from the
>left side must flow on the inner surface, and none of it flows on the
>outside surface,

To me, that implies something totally different.

My position starts from the requirement that the skin effect must happen at all surfaces that have an RF current flowing over them - regardless of the circuit configuration that makes those currents flow. This was proved by Davidson; I mailed Bill a photocopy of that result some years ago, and if anyone else is interested, a scanned copy of is still on my website at:
http://www.ifwtech.co.uk/g3sek/misc/skin.htm

Given the skin effect, the coax then behaves as three conductors: the two inside, very closely electromagnetically linked so that their currents are exactly equal and opposite; and the third one outside which is independent of the other two. The magnitude (and phase) of the outer-surface current will of course be determined by all the rest of the circuit conditions, but its existence as a separate current is undeniable.

Equally undeniable is Kirchhoff's law to account for all the electrons flowing at the junction between the three separate conductors: leg of dipole, inside of shield and outside of shield.

Recalling that the currents on the center conductor and the inside of the shield are always exactly equal, my own "resulting conclusion" is that the difference in currents between the two legs of the dipole (which must exist, due to the unavoidable asymmetry) will flow on the *outside* of the shield.

>regardless of the impedance along the outside surface.

The impedance along the outside surface of the coax certainly does affect the amount of current that flows. These things can happen because the outer surface of the coax has become part of the radiating system, so all analyses of the "antenna" must include that "third wire".

The transmitter is fully enclosed and floating in space, so that is a high-impedance point for outer-surface currents. If the coax is a half-wavelength long, there will be a high surface impedance at the feedpoint, so surface current s will be discouraged. If the coax is a physical quarter-wavelength long, that high impedance will invert to a low surface impedance at the feedpoint, so surface currents can flow more freely. The physical asymmetry at the feedpoint remains the same, but its electrical effect can be modified by changing the outer-surface

impedance at the feedpoint.

That is exactly what we do when we add a feedline choke. It increases the surface impedance at the feedpoint, and forces all currents in the system to readjust themselves to take account of this new condition. (The feedline choke also has effects inside the coax, but those do not change the effects on the outside.)

>This verifies the claim that all of the current on the outer surface is >due to electromagnetic induction,

Sorry, I think that is based on an incorrect assumption, and is oversimplified.

Whatever current there is on the outer surface, it must be consistent with *all* of the following:

* The requirement that RF currents will flow independently on independent surfaces (regardless of the circuit configuration that makes those currents flow)

* The exact equality of currents on the center conductor and the inside of the shield (equal and opposite, that is)

* Kirchhoff's law, applied at the end of the shield where three conductors join (all electron currents must be accounted for; none may leak away or be ignored)

* The physical asymmetry at the feedpoint, which means that the whole system is not symmetrical and the currents in the dipole legs are *not* exactly equal.

* The impedance presented to surface currents at the feedpoint (determined in this free-space example by the length of the feedline)

* However much electromagnetic induction is also taking place, in any respect.

It is impossible to identify any of these as either cause or effect - under the applicable laws of physics, they all must coexist.

What you can do is choose the order in which you apply things you do know, in order to deduce things you don't know.

There are many areas where this simple approach is incomplete - but incomplete is not the same as "wrong". I freely admit that my approach does not provide the deeper insights that Bill's approach does. Mine is strictly an engineer's approach, to tell me as much as I need to know in order to tackle the practical problems involving surface currents.

--
73 from Ian G3SEK 'In Practice' columnist for RadCom (RSGB)
Editor, 'The VHF/UHF DX Book'
http://www.ifwtech.co.uk/g3sek

2794. Re: SWR - Why isn't the energy re-absorbed at the TX?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-13 16:15:57 UTC
From: richardharrison@webtv.net
Message-ID: <8055-3D5930BD-605@storefull-2398.public.lawson.webtv.net>
Source record: 136937

Ian, G3SEK wrote:
"---such meters (Bird wattmeters) have the peculiar property that the difference between the indicated forward and reverse powers is equal to the power delivered to the load, regardless of the actual load impedance."

Mission accomplished!

Ian also wrote:
"Any other so-called RF wattmeter that depends on sensing voltages and currents on the line is the same - it isn`t a true wattmeter because it doesn`t truly sense power."

That is not a disqualification. A speedometer measures neither distance nor time directly. It measures a proportional electric current. Same with a fuel gauge. It measures neither gallons nor litres.

Ian also wrote:
"The conversion from microamperes to indicated power takes place litterally on the scale of the meter---."

Same for MPH or 1/2-full. Accuracy is in the calibration.

Ian also wrote:
"That "power" calibration is only valid for a 50 ohm load [1].

The same is true in a sense for a speedometer. Change the wheel size and the speed indication is invalid. This is a matter of specification.compliance. The wattmeter impedance and the speedometer wheel size are specifications. If these change, recalibration is needed.

Ian also wrote:
"The sensor also contains a diode detector---."

R-F like a-c of any frequency neads to be rectified for display on a d-c instrument. Dynamometers have too much inductance to use at r-f and are insensitive.

Ian has in one short remarkable paragraph given a nice explanation of how the Bird wattmeter works. It includes how one direction is selected and the other is rejected, This is the key to how this instrument operates.

Ian also wrote:
"It generates two voltages one proportional to the RF voltage - one proportional to the RF current - which are added or subtracted. There is no multiplication of voltage and current, so there`s no power detection here..."

Wrong! My slide rule also adds and subtracts to multiply and divide, using scale lengths. The maker brags of accuracy assured by "engine divided" scales. It`s all a matter of callibration of scales.

Ian also wrote:
"The Bird wattmeter is very poor evidence for anybody`s argument because it does not truly measure watts."

Imperfect as the Bird is, it is the best instrument to indicate power commonly available to the amateur. Its operation indicating forward, reflected, difference power, and their locations, is more revealing than other commonly available instruments.

I beg to differ with Ian`s assessment of the Bird`s utility.

Best regards, Richard Harrison, KB5WZI

2795. Re: Where buy a 5/8 HF all-band vertical ?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-13 16:25:26 UTC
From: Irv Finkleman <finkirv@shaw.ca>
Message-ID: <3D5932B3.3D8D5F82@shaw.ca>
Source record: 136935

Thierry wrote:
>
> Hi,
>
> Since a few weeks I try to find on several websites technical data
> about 5/8 vertical for the 80/40-10m (and possible WARC) but I can no
> more find any antenna of this type (Ushler, Maco, etc). Have they all
> been discontinued ?
> It is a pity as height enough and with their radian they give a
> appreciate gain vs the isotropic (2 lobes)...
>
> Where can I buy a good 5/8 vertical nowadays ? Have you some
> brands/models ?
>
> Thanks
>
> Thierry
> ON5183

Bear in mind that the length of the antenna must
vary with each band -- therefore such a design is
not very practical. That's why we never hear of
a multiband 5/8 antenna.
--
Diagnosed Type II Diabetes March 5 2001
Beating it with diet and exercise!
297/215/210 (to be revised lower)
58"/43"(!)/44" (already lower too!)

Visit my FINALLY UPDATED website at
http://members.shaw.ca/finkirv/

Irv Finkleman,
Grampa/Ex-Navy/Old Fart/Ham Radio VE6BP
Calgary, Alberta, Canada

2796. Re: SWR - Why isn't the energy re-absorbed at the TX?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-13 16:30:29 UTC
From: richardharrison@webtv.net
Message-ID: <8055-3D593425-609@storefull-2398.public.lawson.webtv.net>
Source record: 136936

Tdonaly wrote:
"According to Feynman, nothing directly measures energy."

Bird has laboratory grade broadband r-f power calorimeters for sale in its catalog. But, alas, this is also an indirect power measurement.

Best regards, Richard Harrison, KB5WZI

2797. Re: EVERY THING IS NOW KNOWN ON ANTENNAS.

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-13 16:45:48 UTC
From: richardharrison@webtv.net
Message-ID: <8055-3D5937BC-611@storefull-2398.public.lawson.webtv.net>
Source record: 136942

Ken, KC2JDY wrote:
"The antennas would look like light fixtures."

My city is already surrounded by candelabra antennas.

How big are light fixtures in terms of wavelength?

Remmber the MASER which came before the LASER?

Best regards, Richard Harrison, KB5WZI

2798. Re: A closer look (conservation of energy)

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-13 16:51:01 UTC
From: VE9SRB <srbest@att.net>
Message-ID: <VNa69.9976$Ke2.873033@bgtnsc04-news.ops.worldnet.att.net>
Source record: 136938

"CAM" <w5dxp@hotmail.com> wrote in message
re correct.
>
> It is not "in" the source impedance, Steve. It is "at" the source
impedance.
> A point "at" the source impedance is a 50 ohm to 150 ohm impedance
discontinuity.
> That impedance discontinuity is bi-directional.

Not at the source. There is no 50 ohm transmission line between the 50 ohm source impedance and the 150 ohm line in these simple examples. Impedance discontinuities are only relevant for the waves traveling INSIDE the 150 ohm transmission line. Simple circuit theory is used looking forward from the source into the transmission line.

> It CANNOT, as you say, act like
> an impedance discontinuity in one direction and disappear in the other
direction.
> You have taken others to task for suggesting such a violation of circuit
theory
> and transmission line theory in the past. Please show us an example of a
uni-
> directional impedance discontinuity.
> --

Cecil, from the perspective of the source looking into the transmission line, there is no forward reflection coefficient. All the source "sees" is an impedance connected to it. The source does not distinguish between a fixed Zo load and a Zo transmission line. They look the same. There is no forward reflection coefficient looking from the source towards the transmission line. There is no reflection mechanism looking from the source into the transmission line. Reflections only occur for the forward wave arriving at the load and the rearward wave arriving at the source. In the initial state, the forward voltage delivered to the ZO impedance connected at the source is determined by simple voltage division between the source impedance and Zo. There is no reflection to create the wave cancellation you are claiming exists. If you can't get beyond this simple circuit understanding of what happens in the initial state then lets stop here.

Alternately, use your bi-directional impedance continuity at the source to describe the initial state voltage conditions in this example.

141.42 V --50 ohm Source Z---+ 150 ohm line ----+ 150 ohm load.

The 141.42 V source drives a forward voltage of 35.36 V across the 50 ohm source impedance and a forward voltage of 106.06 V into the 150 ohm line.

Nothing else happens in the forward direction. There are no reflections at the junction between the source impedance and the 150 ohm line (in the forward direction).

Steve VE9SRB

2799. Re: Amateur CB Radio

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-13 16:58:35 UTC
From: CJ <fantastic@sex.edu>
Message-ID: <ulielti83fuv6c@corp.supernews.com>
Source record: 136939
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.dx,rec.radio.amateur.equipment

Hello Walt,
That is some of the very BEST Ham Radio news I have heard in a long time Walt. Thank you for posting it. It's going to bring many more people into the ranks. It also serves to establish at long last a "no-Morse code" license (I read about the "Morse appreciation" - test -) and should go a long ways to encouraging other countries to do the same. It is long overdue. I am also thrilled to see the new and correct nomenclature of "Hobby Radio" be used. Too many Hams make radio a religion and a life's philosophy. Especially hard-core CW advocates and many DX'ers. It is a "hobby" and the UK has it nailed 100% correctly.

Moreover your advice to ignore and purposely not make contacts with any of the new license holders once they get on the air is really silly. It makes you look like an asshole and an old curmudgeon fuck dick. I hope instead the new license holders ignore "YOU". They would be far better off to do so and thus never have to meet you or hear your prejudiced views on "Hobby Radio"

Have a nice day.....

--
73 / DX de AB7SL - Charles
AB7SL - Ham Radio Pages
Prescott, Arizona - USA
www.ab7sl.com

"Walt Davidson" <walt99@tiscali.co.uk> wrote in message news:d0hhlu4lsn3ep483csciel3o44dtqpdd20@4ax.com...
> The licensing authority in the UK is in the process of combining the
> amateur radio and CB services in this country into a single, unified
> service under the banner of "Hobby Radio". A government statistical
> forecast published this month indicates that there is a target to
> phase out the separate CB license completely by 2004.
>
> As a major step towards the unification of the two services, the
> licensing authority, working in collusion with one of the UK's amateur
> radio societies, has introduced a so-called "Foundation Amateur Radio
> License". To obtain this license, which gives access to all modes on
> all the amateur bands between 1.8 MHz and 440 MHz, with the exception
> of the 28 MHz band, the requirement for a Morse Test has been waived
> (in contravention of the international ITU agreement) and a minimalist
> technical "test" is all that is required to qualify. The technical
> test includes about twenty questions of the type, "What is the correct
> wiring for a power plug?" and "Is resistance measured in ohms, volts

> or amps?". Even a knowledge of Ohm's Law is deemed too advanced for
> this class of license test. A so-called "Morse Appreciation" is
> performed, which involves listening to individual Morse characters,
> sent as slowly and as often as desired, and looking them up
> individually in a textbook.
>
> The callsigns issued for this type of pseudo-CB license are in the
> M3*** series. In common with other CB licensees, they are allowed to
> use only commercially-made, type-approved equipment. This unwelcome
> feature alone, is totally contrary to the traditional amateur radio
> ethic of experimentation.
>
> If, like me, you deprecate this ultimate step in the dumbing-down and
> devaluation of our hobby, I hope you will make your disapproval clear
> by refraining from making contact with, or acknowledging the existence
> of, the M3*** CB calls on the amateur bands. There is a perfectly
> adequate Novice Licence scheme already in existence in the UK, which
> serves as a good introductory path into the hobby.
>
> 73 de G3NYY
>
> --
> Walt Davidson Email: g3nyy @freeuk.com

2800. Re: BACK TO BASICS - EM waves, E and H fields, in phase orinquadr...

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-13 17:04:23 UTC
From: Reg Edwards <g4fgq.regp@btinternet.com>
Message-ID: <ajbe6mqcp1@knossos.btinternet.com>
Source record: 136940

> >> Reason: Maxwell's equation curl H = J (neglect the dE/dt as
> >> irrelevant within the shield).

==========
Best not to expose ignorance. Its quite clear Maxwell has never been
understood or even speed read.

Heaviside's work should be studied - if the reader is capable of
understanding it!

2801. Re: EZNEC

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-13 17:04:24 UTC
From: Reg Edwards <g4fgq.regp@btinternet.com>
Message-ID: <ajbe6oqcp2@knossos.btinternet.com>
Source record: 136941

```
> When doing A/B comparisons, *always* make the measurements when
> receiving. Don't rely on reports from other stations.
====================

You're catching on.
```

2802. Re: A closer look (conservation of energy)

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-13 17:14:16 UTC
From: CAM <w5dxp@hotmail.com>
Message-ID: <3D593E68.4488CB8C@hotmail.com>
Source record: 136943

VE9SRB wrote:
>
> "CAM" <w5dxp@hotmail.com> wrote in message
> re correct.
> >
> > It is not "in" the source impedance, Steve. It is "at" the source
> impedance.
> > A point "at" the source impedance is a 50 ohm to 150 ohm impedance
> discontinuity.
> > That impedance discontinuity is bi-directional.
>
> Not at the source. There is no 50 ohm transmission line between the 50 ohm
> source impedance and the 150 ohm line in these simple examples. Impedance
> discontinuities are only relevant for the waves traveling INSIDE the 150 ohm
> transmission line. Simple circuit theory is used looking forward from the
> source into the transmission line.

I just realized what your basic mental blunder is, Steve. You start out analyzing the example using wave analysis. In the middle of the analysis, when it suits your ulterior motives, you switch to circuit analysis. You, of all people should know that is a no-no. Whatever analysis method is chosen to start with must be stuck with throughout the entire analysis. There are all sorts of examples where switching from wave analysis to circuit analysis in midstream will cause erroneous results just like the one you have encountered.

> Cecil, from the perspective of the source looking into the transmission
> line, there is no forward reflection coefficient.

That's because you switched from wave analysis to circuit analysis in midstream. That's a no-no, Steve. I'm surprised a PhD doesn't know that.

You must choose either wave analysis or circuit analysis to start with and stick with that decision throughout the entire analysis.

If you choose wave analysis, then there certainly exists a 50 ohm to 150 ohm impedance discontinuity seen by the source. It exists at the interface between the 50 ohm environment and the 150 ohm environment. Like I said before, wave analysis works just fine even when there is no transmission line present.

If you choose circuit analysis, there is no reflection coefficient, no reflected power, and no re-reflected power.

I can handle either analysis that you choose but I will not remain silent while you willy-milly switch from one type of analysis to another in

midstream for the purpose of obfuscating the results. You cannot set up
reflected power in one model and then in midstream, switch to another
model where reflected power is not allowed.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

2803. Re: EVERY THING IS NOW KNOWN ON ANTENNAS.

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-13 17:34:52 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <4eciluomhvpvpqoj0jpdb3m35la30sdvt9@4ax.com>
Source record: 136945

On 13 Aug 2002 06:42:48 -0700, nm5k@wt.net (Mark Keith) wrote:

>aunwin@fgi.net (Art Unwin KB9MZ) wrote in message
>>
>> Have fun Keith, give a shout if you need extra guidance.
>> And as I have said in private you appear to be the only one to give it
>> a shot on the computor and put your personal beliefs aside.
>> Great job.
>> Warmest regards
>> Art Unwin
>> KB9MZ........XG
>
>I'm afraid I'm even more confused now after looking at your patent.
>#1, I get no pictures at all, when I try to d/l them. I don't know if
>my firewall is blocking them or what. I killed my firewall, and still
>didn't get any images.

This is probably due to your plug-in to viewing the images expired.
The Patent Office posts their images in a format (TIFF it looks like)
that requires a commercial plug-in (or so one would think). The first
visit usually has my browser complaining of needing some add-on and
when I visit any particular site to satisfy that requirement, it is
painfully obvious that those to select from are all jockeying for
eventual cash outlay.

>But in reading the text, it totally contradicts what I was asking you
>, and what you state about the number of dipole elements. I asked you

SOP

>yesterday if the antenna used more than one dipole element. Fairly
>simple question really. But you gave me about 87 miles of text, that
>after digesting I came to the conclusion that yes, you are only using
>one element. So I came to the conclusion I modeled it correctly the
>first time. "Actually would have been the 2nd time, as you veto'd the
>first." So now I go to the text on the patent page, and what do I see?
>
>"from patent page"
>*** BRIEF DESCRIPTION OF THE DRAWINGS
>
>FIG. 1 shows a variable capacitance antenna having three dipole
>elements.

This is consistent with the image I e-mailed you. And, of course,
wholly inconsistent with the discussion that precedes these postings.

>
>FIG. 2 shows a cross section of the support boom of a variable
>capacitance antenna detailing the structure of the variable capacitor
>portion and the remote tuning portion.
>

I did not bother to post you that cartoon straight out of Rube
Goldberg.

>FIG. 3 shows a rack and pinion movement for the remote tuning portion
>of a variable capacitance antenna.
>

The statement is enough, a drawing hardly counts for much in the
analysis of the antenna itself.

>FIG. 4 shows a variable capacitor portion for use with two elements.

The statement is enough, a drawing hardly counts for much in the
analysis of the antenna itself.

>Here , you talk of three dipole elements???? Multi elements????
>Can you see the contradiction between this antenna and what you are
>posting here as a description?

Well Mark, to be fair, Art has deliberately avoided its discussion for
the reasons he anticipated: it is much too elaborate compared to the
general idea.

>
>I about give up. Until I can get an EXACT picture of the antenna,
>there is no way I can make any kind of lucid comment on it.
and of course the remainder of your commentary reads like a descent
into hell.

Simply put, Art is not prepared to present anything except a vague
outline for a coupled antenna system. That has been played out long
ago.

73's
Richard Clark, KB7QHC

2804. Re: SWR - Why isn't the energy re-absorbed at the TX?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-13 17:41:48 UTC
From: "Ian White, G3SEK" <G3SEK@ifwtech.co.uk>
Message-ID: <FeEb4uBcTUW9EAtb@ifwtech.co.uk>
Source record: 136946

Richard Harrison wrote:
>Ian, G3SEK wrote:
>"---such meters (Bird wattmeters) have the peculiar property that the
>difference between the indicated forward and reverse powers is equal to
>the power delivered to the load, regardless of the actual load
>impedance."
>
>Mission accomplished!

That is bare-faced selective quoting! In the very next sentence, I said:
"But this is a peculiarity of the meter - it still doesn't mean that it
senses true power."

[...]
>
>Ian also wrote:
>"It generates two voltages one proportional to the RF voltage - one
>proportional to the RF current - which are added or subtracted. There is
>no multiplication of voltage and current, so there`s no power detection
>here..."
>
>Wrong! My slide rule [...]

The point is was making is that although there are signals present that
are proportional to voltage and to current, they don't get multiplied -
they only get added or subtracted.

>Ian also wrote:
>"The Bird wattmeter is very poor evidence for anybody`s argument because
>it does not truly measure watts."
>
>Imperfect as the Bird is, it is the best instrument to indicate power
>commonly available to the amateur. Its operation indicating forward,
>reflected, difference power, and their locations, is more revealing than
>other commonly available instruments.
>
But only if you know the basic theory behind it. In this discussion,
various aspects of that basic theory are in dispute, so your arguments
become circular.

>I beg to differ with Ian`s assessment of the Bird`s utility.
>
I made no assessment at all about its practical utility. I have one and
I use it... but not as a prop for an argument about basic transmission
line theory.

--
73 from Ian G3SEK 'In Practice' columnist for RadCom (RSGB)
Editor, 'The VHF/UHF DX Book'
http://www.ifwtech.co.uk/g3sek

2805. Re: A closer look (conservation of energy)

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-13 17:43:25 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <6bhilucqpjru16mk2dhrjbjb2gumagn2p4@4ax.com>
Source record: 136947

On Tue, 13 Aug 2002 14:59:57 GMT, "VE9SRB" <srbest@att.net> wrote:

>
>"CAM" <w5dxp@hotmail.com> wrote in message
>news:3D591684.1BC92E5@hotmail.com...

My buddy, last night, made an observation (or simply a joke) that
applies here.

Insanity is when you keep doing the same thing, expecting something
different will happen.

73's
Richard Clark, KB7QHC

2806. Re: SWR - Why isn't the energy re-absorbed at the TX?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-13 17:55:38 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <v6iilu8lsr66ibvjdcdqo9800rcm5sm3p6@4ax.com>
Source record: 136948

On Tue, 13 Aug 2002 11:30:29 -0500 (CDT), richardharrison@webtv.net
(Richard Harrison) wrote:

>Tdonaly wrote:
>"According to Feynman, nothing directly measures energy."
>
>Bird has laboratory grade broadband r-f power calorimeters for sale in
>its catalog. But, alas, this is also an indirect power measurement.
>
>Best regards, Richard Harrison, KB5WZI

Hi Richard,

Indirect? How so?

73's
Richard Clark, KB7QHC

2807. Re: A closer look (conservation of energy)

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-13 18:07:41 UTC
From: VE9SRB <srbest@att.net>
Message-ID: <NVb69.10129$Ke2.879784@bgtnsc04-news.ops.worldnet.att.net>
Source record: 136949

"CAM" <w5dxp@hotmail.com> wrote in message
news:3D593E68.4488CB8C@hotmail.com...
> VE9SRB wrote:

> I can handle either analysis that you choose but I will not remain silent
> while you willy-milly switch from one type of analysis to another in
> midstream for the purpose of obfuscating the results. You cannot set up
> reflected power in one model and then in midstream, switch to another
> model where reflected power is not allowed.
> --

I realize now what your perspective is on the initial state condition and the bi-directional reflection coefficient at the source. Unfortuantely, there are no "waves" in the source impedance. These examples involve simple voltage sources connected to a transmission line. They create voltage and current as a function of the effective load connected to them. The "waves" and your wave theory are only relevant in the transmission line. If you replaced the 150 ohm transmission line and 150 ohm load with a 150 resistor would you use wave theory to determine the voltage in the source impedance or circuit theory? I realize that your wave theory math would give the "correct" answer but it certainly does not represent what's physically happening.

I would suggest reading Johnson's text - Transmission Lines and Network. If you review chapter 4 you will see how the analysis is handled.

Take care Cecil, this discussion has digressed to a ridiculous level so I really will bow out.

Steve VE9SRb

2808. Re: SWR - Why isn't the energy re-absorbed at the TX?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-13 18:10:43 UTC
From: CAM <w5dxp@hotmail.com>
Message-ID: <3D594BA3.336F4B25@hotmail.com>
Source record: 136950

"Ian White, G3SEK" wrote:
> The point is was making is that although there are signals present that
> are proportional to voltage and to current, they don't get multiplied -
> they only get added or subtracted.

That's why wattmeters have an associated Z0, usually 50 ohms. The addition
of signals proportional to voltage and current is only accurate from a
power standpoint if they have been calibrated to the proper Z0 environment.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

2809. Re: A closer look (conservation of energy)

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-13 18:12:21 UTC
From: CAM <w5dxp@hotmail.com>
Message-ID: <3D594C05.631F9244@hotmail.com>
Source record: 136951

Richard Clark wrote:
> Insanity is when you keep doing the same thing, expecting something
> different will happen.

You don't understand, Richard. The aliens ordered me to bestow this
knowledge on my fellow hams. What is it about my presentation that
you don't understand?
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

2810. Re: Feeding an Inv-L at the bottom?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-13 18:20:23 UTC
From: dan <danlx@execpc.com>
Message-ID: <3d594f8c$0$1424$272ea4a1@news.execpc.com>
Source record: 136952

On Tue, 13 Aug 2002 03:48:41 GMT, 'Doc <w5lz@icok.net> wrote:

> Any borrowed edger, skill-saw, chainsaw, 'ditch-witch',
>etc, will work just fine. Note the 'borrowed'.
> 'Doc
>PS - Glue works too.
Doc,
Don't the glue bottles get caught up in the lawnmower? I think you
could find smaller, thinner and cheaper objects to hold down the wire
with. ;<}

Dan
N9JBF

I've rambled enough, back to the rocking chair. ZZZZZZZZZ
Remove left x for a direct reply.

2811. Re: A closer look (conservation of energy)

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-13 18:27:35 UTC
From: CAM <w5dxp@hotmail.com>
Message-ID: <3D594F97.8D4F073A@hotmail.com>
Source record: 136953

VE9SRB wrote:
>
> "CAM" <w5dxp@hotmail.com> wrote in message
> news:3D593E68.4488CB8C@hotmail.com...
> > VE9SRB wrote:
>
> > I can handle either analysis that you choose but I will not remain silent
> > while you willy-milly switch from one type of analysis to another in
> > midstream for the purpose of obfuscating the results. You cannot set up
> > reflected power in one model and then in midstream, switch to another
> > model where reflected power is not allowed.
>
> I realize now what your perspective is on the initial state condition and
> the bi-directional reflection coefficient at the source. Unfortuantely,
> there are no "waves" in the source impedance.

Waves of zero length and same-cycle reflections work just fine with wave analysis, Steve. Your error is in adopting the wave model for half the example and then switching to the circuit model for the rest of the example. You simply cannot transfer reflected power from the wave model into the circuit model. Nice try though. I'm sure you managed to confuse a lot of folk who don't know that it is a violation of the rules to intermix models. But after violating the conservation of energy principle, what's one more violation, eh?

If you want to use the wave model, you must at least install an infinitesimally short piece of 50 ohm feedline between the source and the 150 ohm feedline. When you do that, the results are identical to the other example, just like I said from the beginning.

> I would suggest reading Johnson's text - Transmission Lines and Network. If
> you review chapter 4 you will see how the analysis is handled.

I read that book cover to cover in 1958. He does not go into the depth needed for this discussion. And I don't recall Johnson trying to intermix the wave model and circuit model. I have known that one cannot intermix models since the late 50's. When did you learn that? When did you forget that?

I would suggest that you get you a good book on the rules for modeling electronic circuits and transmission line.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
------== Over 80,000 Newsgroups - 16 Different Servers! =-----

2812. Re: BACK TO BASICS - EM waves, E and H fields, in phase orinquadr...

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-13 18:48:35 UTC
From: "William E. Sabin" <sabinw@mwci-news>
Message-ID: <3D595483.6040600@mwci-news>
Source record: 136954

Ian White, G3SEK wrote:

> William E. Sabin wrote:
>
>> Assume a dipole, coax and generator in free space, with no electrical
>> connection to any exernal object.
>>
> OK. Let's also assume that the coax runs away at right-angles to the
> dipole.
>
>> The generator sends an "electron" current through the center wire into
>> the right hand side of the dipole.
>>
>> Because no electrons leave the wire (true!), the rms electron current
>> arriving AT THE SHIELD from the left side of the dipole *must* be
>> exactly equal to the rms current that goes into the right side of the
>> dipole.

This is an obviously true statement. It says "the
electron current that arrives at the shield
connection from the left side *MUST* be exactly
equal to the current that enters the right side
from the center lead". Since no electrons leave
the system, this has to be true, and symmetry has
nothing to do with it.

>> Because of the requirement that the magnetic field due to the
>> center-wire current and the magnetic field created by the return
>> current on the *inside* surface must exactly cancel each other at the
>> inner surface, the resulting conclusion is that *all* of the electron
>> current from the left side must flow on the inner surface, and none of
>> it flows on the outside surface, regardless of the impedance along the
>> outside surface.

This statement is a logical conclusion to the fact
that the mag fields cancel at the inner surface,
therefore the inner surface current *has* to be
identical to the center wire current. The outer
surface current does not contribute to the
cancellation at the inner surface.

Common mode currents, induced by electromagnetic
induction, are caused by asymmetry. The effect of
these currents is to modify the impedance of the
dipole(the outside surface becomes "like" a
parasitic element).

Bill W0IYH

2813. Re: Shielded parallel feedlines

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-13 18:49:40 UTC
From: Dave Allen <david_e_allen@agilent.com>
Message-ID: <3D5954C4.2B9582BC@agilent.com>
Source record: 136955

Hey! A better idea already! :-)

My only reason for mounting the remote tuner on the ground is that it will be a homebrew tuner, and the support will be mast, not tower. So I was hoping to keep it more accessible for tweaks and such.

It will be a homebrew tuner because I can't find any on the market that you can set the settings yourself. They only tune automatically, and only when transmitting. This will be for a pactor MBO where most of the time is spent scanning many freqs and bands, so I need to be able to "set up" the tuner without transmitting to it...

Other ideas are appreciated.

73, dave, wb0taq, colorado

'Doc wrote:

> Dave,
> If you could place the tuner at the antenna
> feed point, you wouldn't need the open-wire
> feed line at all.
> 'Doc

2814. Re: Cheapo 20 foot mast?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-13 18:50:19 UTC
From: Jason <uPVC@btinternet.com>
Message-ID: <ajbkdb$78t$1@knossos.btinternet.com>
Source record: 136956

Whats wrong with a 20ft scaffolding pole guyed.
I've got two 20ft scaffolding poles one steel one aluminium then rotor then
6ft pundlok with beam on top, and never had a problem.

--
Yours
Jason

uPVC@btinternet.com

2815. Re: A closer look (conservation of energy)

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-13 19:01:23 UTC
From: VE9SRB <srbest@att.net>
Message-ID: <7Ic69.10188$Ke2.884397@bgtnsc04-news.ops.worldnet.att.net>
Source record: 136957

"CAM" <w5dxp@hotmail.com> wrote in message

> I read that book cover to cover in 1958. He does not go into the depth
needed
> for this discussion. And I don't recall Johnson trying to intermix the
wave
> model and circuit model.

Well, you should read it again.

Page 19. "The sending end cannot know that the line is not infinite until the arrival of the first reflection from the receiving end; therefore, the line will initially look like an impedance Zo at the sending end. Using the voltage divider principle to calculate the initial sending voltage, we find

Eforward = Esource * Zo / (Zo + Zs)

[Cecil, this looks like circuit theory to me. I don't see where he uses a reflection coefficient here.]

A wave of voltage of this value travels to the receiving end, where it is reflected with the coefficient rhoR. The reflection travels back to the generator end, where it is reflected with the coefficient rhoS."

Page 98. "When the generator is first connected to the line, it sees an impedance equal to Zo until the arrival of the first reflection from the load. Therefore, for the first few moments the sending-end voltage [forward voltage] of the line will be Eg Zo / (Zo + Zg)." [Again, the circuit theory principle I use is not a problem].

The only place Johnson discusses reflection and re-reflection is WITHIN the transmission line. He never discusses your concept of wave reflection within the source and he frequently "mixes" circuit theory and wave theory within his examples and discussion of basic theory.

My analysis technique is consistent with every text on transmission line theory, so stop simply telling me that you're right and I'm wrong. Please site your reference where it is demonstrated that reflections exist within the source or generator (under these simple example conditions) as the source "forward" voltage first encounters the transmission line. Also site your reference that discusses the concept of rearward wave cancellation within the source (at the transmission line junction) to support your discussion.

Steve VE9SRB

2816. Stay away from the MFJ-1764 and 1762

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-13 19:22:24 UTC
From: vhfradiobuff@aol.comspamsux
Message-ID: <20020813152224.03142.00000001@mb-fw.aol.com>
Source record: 136958

I've been using the MFJ-1764 and MFJ-172 for a while and they've performed fine, but after a night of high winds, rain, lightning and thunder, I awoke to two bent antennas. The wind speed that night (August 2nd) was 21 mph with the highest gust being 42 mph. The 1764 was bent in half and the 1762's reflector was bent into an upside down V shape. I thought you might be interested in knowing how these antennas stood up in a moderate storm. If you go to http://www.wunderground.com/history/airport/KWRI/2002/8/2/DailyHistory.html, you will see the actual conditions that night in my area.

I was recently trying to decide which 2m/70cm yagi to buy and had narrowed it down to the MFJ-1768 or the Cushcraft A27010S. Because of my recent experience with these two MFJ antennas, I decided to give Cushcraft a try and have ordered their antenna.

You an see the pictures at http://vhfradiobuff.tripod.com/dsc00004.jpg and http://vhfradiobuff.tripod.com/dsc00003.jpg.
=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-
73! de Andy KC2SSB (ex: KF4KHC/HL9HCT)
Beachwood, NJ USA! Grid FM29vw
http://vhfradiobuff.tripod.com

2817. FS: Bilal Isotron antennas

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-13 19:25:47 UTC
From: jonweiner@aol.com
Message-ID: <20020813152547.17091.00000136@mb-mu.aol.com>
Source record: 136959

I have for sale two Bilal Isotron antennas. Model 80 (80 meters) $70., and model 40 (40 & 30 meters) $60. Prefer pick up at Greenville, SC or add $8. each for shipping. Antennas have been assembled and used indoors only. Complete with original instruction manuals.

2818. Re: A closer look (conservation of energy)

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-13 19:39:52 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <h8oilusl0ngda50ajnaqml4k0htf9a7tui@4ax.com>
Source record: 136960

On Tue, 13 Aug 2002 13:12:21 -0500, CAM <w5dxp@hotmail.com> wrote:

>Richard Clark wrote:
>> Insanity is when you keep doing the same thing, expecting something
>> different will happen.
>
>You don't understand, Richard. The aliens ordered me to bestow this
>knowledge on my fellow hams. What is it about my presentation that
>you don't understand?

sort of proves my buddy's joke doesn't it?

73's
Richard Clark, KB7QHC

2819. Re: A closer look (conservation of energy)

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-13 20:00:23 UTC
From: CAM <w5dxp@hotmail.com>
Message-ID: <3D596557.4361CEEE@hotmail.com>
Source record: 136961

VE9SRB wrote:
>
> "CAM" <w5dxp@hotmail.com> wrote:
> [Cecil, this looks like circuit theory to me. I don't see where he uses a
> reflection coefficient here.]

Johnson understood what he was doing and apparently you don't. There's nothing in wave analysis that prohibits a fixed impedance so he wasn't using circuit analysis at all.

> The only place Johnson discusses reflection and re-reflection is WITHIN the
> transmission line. He never discusses your concept of wave reflection
> within the source and he frequently "mixes" circuit theory and wave theory
> within his examples and discussion of basic theory.

He must have understood what he was doing. You obviously don't. I can't find my copy of Johnson at the moment so I don't have access to the book.

> My analysis technique is consistent with every text on transmission line
> theory, so stop simply telling me that you're right and I'm wrong.

I'm right and you're wrong! :-) Please produce just one text on transmission line theory that says that 75 joules/sec plus 8.33 joules/sec equals 133.33 joules/sec. If you can produce that transmission line textbook, I will show you an author who is insane.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

2820. Re: A closer look (conservation of energy)

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-13 20:06:07 UTC
From: CAM <w5dxp@hotmail.com>
Message-ID: <3D5966AF.45ADFBBD@hotmail.com>
Source record: 136962

Richard Clark wrote:
>
> On Tue, 13 Aug 2002 13:12:21 -0500, CAM <w5dxp@hotmail.com> wrote:
>
> >Richard Clark wrote:
> >> Insanity is when you keep doing the same thing, expecting something
> >> different will happen.
> >>
> >You don't understand, Richard. The aliens ordered me to bestow this
> >knowledge on my fellow hams. What is it about my presentation that
> >you don't understand?
>
> sort of proves my buddy's joke doesn't it?

I think you missed the point with the transformer example. The voltages
on the two inputs don't add up to the voltage on the output if the
impedances are kept constant. To get Steve's results, the impedances
have to be changed. Changing the impedances is impossible inside a
transmission line. Therefore, Steve is missing some power. Did you
miss that point, Richard.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
------== Over 80,000 Newsgroups - 16 Different Servers! =-----

2821. Re: Stay away from the MFJ-1764 and 1762

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-13 20:13:26 UTC
From: Fred Hambrecht <w4jle@charter.net>
Message-ID: <uliq3cbitv778d@corp.supernews.com>
Source record: 136963

While the winds at the recording sight may not have exceeded 42 Mph, you may have been subject to a local microburst several times that value.

What other things were destroyed, i.e. tree branches, TV antennas etc.?

"VHFRadioBuff" <vhfradiobuff@aol.comspamsux> wrote in message news:20020813152224.03142.00000001@mb-fw.aol.com...
> I've been using the MFJ-1764 and MFJ-172 for a while and they've performed
> fine, but after a night of high winds, rain, lightning and thunder, I awoke to
> two bent antennas. The wind speed that night (August 2nd) was 21 mph with the
> highest gust being 42 mph. The 1764 was bent in half and the 1762's reflector
> was bent into an upside down V shape. I thought you might be interested in
> knowing how these antennas stood up in a moderate storm. If you go to
>
http://www.wunderground.com/history/airport/KWRI/2002/8/2/DailyHistory.html,
> you will see the actual conditions that night in my area.
>
> I was recently trying to decide which 2m/70cm yagi to buy and had narrowed it
> down to the MFJ-1768 or the Cushcraft A27010S. Because of my recent experience
> with these two MFJ antennas, I decided to give Cushcraft a try and have ordered
> their antenna.
>
> You an see the pictures at http://vhfradiobuff.tripod.com/dsc00004.jpg and
> http://vhfradiobuff.tripod.com/dsc00003.jpg.
> =-
> 73! de Andy KC2SSB (ex: KF4KHC/HL9HCT)
> Beachwood, NJ USA! Grid FM29vw
> http://vhfradiobuff.tripod.com

2822. Re: A closer look (conservation of energy)

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-13 20:23:48 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <5sqilusqga98i52pp4bdl7t8bjabsnkj0t@4ax.com>
Source record: 136964

On Tue, 13 Aug 2002 15:06:07 -0500, CAM <w5dxp@hotmail.com> wrote:

>Richard Clark wrote:
>>
>> On Tue, 13 Aug 2002 13:12:21 -0500, CAM <w5dxp@hotmail.com> wrote:
>>
>> >Richard Clark wrote:
>> >> Insanity is when you keep doing the same thing, expecting something
>> >> different will happen.
>> >
>> >You don't understand, Richard. The aliens ordered me to bestow this
>> >knowledge on my fellow hams. What is it about my presentation that
>> >you don't understand?
>>
>> sort of proves my buddy's joke doesn't it?
>
>I think you missed the point

:-)

2823. Re: A closer look (conservation of energy)

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-13 20:29:10 UTC
From: VE9SRB <srbest@att.net>
Message-ID: <q_d69.10889$Ep6.860629@bgtnsc05-news.ops.worldnet.att.net>
Source record: 136965

"CAM" <w5dxp@hotmail.com> wrote in message
news:3D596557.4361CEEE@hotmail.com...
> VE9SRB wrote:
> >
> > "CAM" <w5dxp@hotmail.com> wrote:
> > [Cecil, this looks like circuit theory to me. I don't see where he uses
a
> > reflection coefficient here.]
>
> Johnson understood what he was doing and apparently you don't. There's
nothing
> in wave analysis that prohibits a fixed impedance so he wasn't using
circuit
> analysis at all.
>
> > The only place Johnson discusses reflection and re-reflection is WITHIN
the
> > transmission line. He never discusses your concept of wave reflection
> > within the source and he frequently "mixes" circuit theory and wave
theory
> > within his examples and discussion of basic theory.
>
> He must have understood what he was doing. You obviously don't. I can't
> find my copy of Johnson at the moment so I don't have access to the book.
>
> > My analysis technique is consistent with every text on transmission line
> > theory, so stop simply telling me that you're right and I'm wrong.
>
> I'm right and you're wrong! :-) Please produce just one text on
transmission
> line theory that says that 75 joules/sec plus 8.33 joules/sec equals
133.33
> joules/sec. If you can produce that transmission line textbook, I will
show
> you an author who is insane.
> --
> cheers, CAM http://www.qsl.net/w5dxp
>
>

Its been fun. Take care Cecil.

Steve

2824. Re: A closer look (conservation of energy)

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-13 20:29:15 UTC
From: klocko@toad.net
Message-ID: <224d9cd4.0208131229.54bc5d71@posting.google.com>
Source record: 136966

CAM <w5dxp@hotmail.com> wrote in message news:<3D5849BA.277CF447@hotmail.com>...
> Bill Klocko wrote:
> > If you still insist on using conservation of energy to argue your
> > position, maybe you could supply the name of some top-notch reference
> > that we all could read.
>
> An argumentum ad verecundiam, Bill? You are reading that top-notch
> reference right here. The aliens abducted me, explained all this,
> and told me to teach it to RF engineers :-) Seriously, we are delving
> deeper into this subject than has ever been done before. This all
> started when Steve attempted to prove that Walter Maxwell was mistaken
> with his "100% re-reflected" statements. Well, Steve succeeded and now
> must face the consequences of taking such a close look "into the
> conjugate mirror". Since this is apparently a new theory, I'm going
> to publish something and submit it for peer review. It would be a
> lot easier to explain with proper graphics.

I'm glad you're delving deeper into this than ever before. I'm also
glad you admit that your method for getting

75w + 25w + 25w + 8.33w = 133.33w

is yours and yours alone. You just can't base your argument for that
25 watts reversing direction on conservation of energy. You should
call it CAM's destructive/constructive interference postulate until
you get a paper published.

> You guys remind me of the doctor when I say, "Doctor, it hurts when
> I do this." The doctor responds, "Well, then don't do that". I am
> thinking thoughts that apparently have never been thought before.
> Your advice is to stop thinking and seek advice from experts who also
> have never thought those thoughts before. No thanks.
>
> I notice that before you were challenged, you had no problem breaking
> down all the waves into their separate voltage, current, and power
> components. You discovered where that path leads and are apparently
> backing off from it. Well, I'm not. Thar's joules in them thar waves.
> The wave voltage and current are constrained by certain boundary
> conditions one of which is an absolutely necessary energy foundation
> under each one. If an electron can be considered independently, there's
> no reason each wave cannot be considered independently. It's up to
> an individual to choose to do so or not.

Why do you think I'm backing off? Concepts such as wave components,
partial
reflection/transmission, and superposition are completely consistent

and compatible with conservation of energy. I'll continue to use these methods just like I did in computing all those component values in a previous post. I just disagree with your use of the conservation of energy principle to justify your speculation about that 25 watts reversing direction. As I said, the only thing that conservation of energy says about your problems is that all the power generated by the source is dissipated in the load. That's the only equation that conservation of energy needs to be balanced. The mechanism for how that power gets to the load is another source of disagreement.

> Take a look at the example I made up for Steve and tell us how the
> 25 watts of previously reflected power makes it to the load when
> the load is changed without adding to the voltage and current
> in the forward wave. Can we at least agree that all the generated
> power that makes it to the load must have joined the forward
> power in the transmission line? How else can it make it from
> the source to the load?

I haven't looked at that problem, but we can agree that all the generated power that makes it to the load must have joined the forward power in the transmission line. We disagree on the mechanism for how it's done. I would bet that partial reflection/transmission with superposition of voltages/currents completely explains it. Call it "phantom waves" if you want. It works.

73,
Bill N3WK

2825. Re: BACK TO BASICS - EM waves, E and H fields, in phase orinquadr...

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-13 20:39:06 UTC
From: "Ian White, G3SEK" <G3SEK@ifwtech.co.uk>
Message-ID: <295ngJEq5WW9EAIO@ifwtech.co.uk>
Source record: 136967

William E. Sabin wrote:
>Ian White, G3SEK wrote:
>
>> William E. Sabin wrote:
>>
>>> Assume a dipole, coax and generator in free space, with no
>>>electrical connection to any exernal object.
>>>
>> OK. Let's also assume that the coax runs away at right-angles to the
>>dipole.
>>
>>> The generator sends an "electron" current through the center wire
>>>into the right hand side of the dipole.
>>>
>>> Because no electrons leave the wire (true!), the rms electron
>>>current arriving AT THE SHIELD from the left side of the dipole
>>>*must* be exactly equal to the rms current that goes into the right
>>>side of the dipole.
>
>
>This is an obviously true statement. It says "the electron current that
>arrives at the shield connection from the left side *MUST* be exactly
>equal to the current that enters the right side from the center lead".
>Since no electrons leave the system, this has to be true, and symmetry
>has nothing to do with it.
>
>
That is only true if you ignore the existence of the independent
outside-surface current, and/or ignore Kirchhoff's law.

>>> Because of the requirement that the magnetic field due to the
>>>center-wire current and the magnetic field created by the return
>>>current on the *inside* surface must exactly cancel each other at the
>>>inner surface,

The premise is good...

>>>the resulting conclusion is that *all* of the electron current from
>>>the left side must flow on the inner surface, and none of it flows
>>>on the outside surface, regardless of the impedance along the
>>>outside surface.

... but the conclusion is logically false. All that you are entitled to
conclude is that the currents on the center conductor and the *inside*
of the shield are equal and opposite. Nothing more.

The additional conclusion that "none of it flows on the outside surface" requires an additional assumption, namely your initial assumption that the currents on both legs of the dipole "*MUST* be exactly equal". Can you justify that, and also the statement that "symmetry has nothing to do with it"?

--
73 from Ian G3SEK 'In Practice' columnist for RadCom (RSGB)
Editor, 'The VHF/UHF DX Book'
http://www.ifwtech.co.uk/g3sek

2826. Re: Stay away from the MFJ-1764 and 1762

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-13 21:08:11 UTC
From: vhfradiobuff@aol.comspamsux
Message-ID: <20020813170811.20728.00000062@mb-fb.aol.com>
Source record: 136968

>What other things were destroyed, i.e. tree branches, TV antennas etc.?

Well, there were lots of small branches, nothing major.. MFJ replied to an email that I sent to them about the antennas. They have offered to replace any parts that may have been damaged, so it may work out well for me.
=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-
73! de Andy KC2SSB (ex: KF4KHC/HL9HCT)
Beachwood, NJ USA! Grid FM29vw
http://vhfradiobuff.tripod.com

2827. Re: Stay away from the MFJ-1764 and 1762

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-13 21:21:19 UTC
From: Lou <tech@dp.net>
Message-ID: <ajbu86$2456$1@news.dp.net>
Source record: 136869

I'll agree, the MFJ antennas do not hold up well. Even my 5/8 wave 2 meter antennas suffered severe damage in a minor wind storm.... And they are far less cumbersome with regard to wind load. I can't recall now, the Model Number of the HF/6/2 meter MFJ. Strikes me that is one of those listed below. It was in good condition, having been given to me. I installed it. One storm later, it was trash. That was a few years ago. Our storms have gotten seemingly worse since then. So I can imagine what would happen today! I like some of MFJs stuff, but some leaves a lot to be desired.
The "antennas" - I would certainly not tackle again. Just my consumer opinion.

Lou/tech@DP.NET

"VHFRadioBuff" <vhfradiobuff@aol.comspamsux> wrote in message news:20020813152224.03142.00000001@mb-fw.aol.com...
> I've been using the MFJ-1764 and MFJ-172 for a while and they've performed
> fine, but after a night of high winds, rain, lightning and thunder, I awoke to
> two bent antennas. The wind speed that night (August 2nd) was 21 mph with the
> highest gust being 42 mph. The 1764 was bent in half and the 1762's reflector
> was bent into an upside down V shape. I thought you might be interested in
> knowing how these antennas stood up in a moderate storm. If you go to
> http://www.wunderground.com/history/airport/KWRI/2002/8/2/DailyHistory.html,
> you will see the actual conditions that night in my area.
>
> I was recently trying to decide which 2m/70cm yagi to buy and had narrowed it
> down to the MFJ-1768 or the Cushcraft A27010S. Because of my recent experience
> with these two MFJ antennas, I decided to give Cushcraft a try and have ordered
> their antenna.
>
> You an see the pictures at http://vhfradiobuff.tripod.com/dsc00004.jpg and
> http://vhfradiobuff.tripod.com/dsc00003.jpg.
> =-
> 73! de Andy KC2SSB (ex: KF4KHC/HL9HCT)
> Beachwood, NJ USA! Grid FM29vw
> http://vhfradiobuff.tripod.com

2828. Re: SWR - Why isn't the energy re-absorbed at the TX?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-13 21:27:07 UTC
From: richardharrison@webtv.net
Message-ID: <23933-3D5979AB-582@storefull-2396.public.lawson.webtv.net>
Source record: 136870

Richard Clark wrote:
"Indirect? How so?"

Richard Clark is the metrologist, not I, but I recall making the measurements. It requires measuring the temperature rise and the time that`s required in a particular volume of water. The heat added to the water is that dissipated by the electrical energy which produces it.

This involves reading the temperatures in and out of the water flowing through the device and timing the filling of a container of a particular volume. Then you compute. That`s a lot of beating around the bush. That`s not a direct indication such as noting the deflection of a spring, or reading the level of mercury in a manometer.

Best regards, Richard Harrison, KB5WZI

2829. Re: A Challenge

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-13 22:09:02 UTC
From: dt@dt.prohosting.com
Message-ID: <ur8h2s96p.fsf@dt.prohosting.com>
Source record: 136871

I don't know if it would be practical for you to build your own antenna, but I have just published a design for a trapless vertical that works on 20, 15 and 10 meters. The main vertical element is only 11 feet (3.3 meters) tall. If the radials slope downward (recommended but not required) you'll need a bit more height for the radials. I see no problem meeting the "15 ft. maximum height" requirement with this antenna, though. Performance on all three bands is roughly equivalent to a quarter wave ground plane.

http://dt.prohosting.com/hacks/antenna/

David

2830. Re: A closer look

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-13 22:27:37 UTC
From: richardharrison@webtv.net
Message-ID: <23814-3D5987D9-519@storefull-2391.public.lawson.webtv.net>
Source record: 136872

CAM, W5DXP wrote:
"You cannot take two transmitters, each putting out 70.7 v at 1.414 a and sum the outputs to get 141.4 v out at 2.828 a. That`s getting 400 watts from two 100 watt transmitters."

Cecil is right, of course, because the transmitters are incapable of more than 100 watts each.

There are audio chips that are capable of more output than they produce into a specified 8-ohm load with a 16-volt collector supply. Such chips may supply 1/2 amp or 2 watts into 8 ohms. With the equivalent of a series connection, two of these chips can double the voltage across the load and this doubles the current too. This produces 8 watts in the 8-ohm load. But, this is only because the chip was capable of twice the current output, a full amp.

With power limited r-f transmitters the story is different. Take it from me. I`ve paralleled two 50 KW transmitters and the most I could reasonably get out was 100 KW.

Best regards, Richard Harrison, KB5WZI

2831. Re: A closer look

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-13 23:10:11 UTC
From: tdonaly@aol.com
Message-ID: <20020813191011.08897.00000118@mb-mw.aol.com>
Source record: 136873

Richard Harrison wrote,
>
>CAM, W5DXP wrote:
>"You cannot take two transmitters, each putting out 70.7 v at 1.414 a
>and sum the outputs to get 141.4 v out at 2.828 a. That`s getting 400
>watts from two 100 watt transmitters."
>
>Cecil is right, of course, because the transmitters are incapable of
>more than 100 watts each.
>
>There are audio chips that are capable of more output than they produce
>into a specified 8-ohm load with a 16-volt collector supply. Such chips
>may supply 1/2 amp or 2 watts into 8 ohms. With the equivalent of a
>series connection, two of these chips can double the voltage across the
>load and this doubles the current too. This produces 8 watts in the
>8-ohm load. But, this is only because the chip was capable of twice the
>current output, a full amp.
>
>With power limited r-f transmitters the story is different. Take it from
>me. I`ve paralleled two 50 KW transmitters and the most I could
>reasonably get out was 100 KW.
>
>Best regards, Richard Harrison, KB5WZI
>
How did you isolate the transmitters so that they didn't load one another,
Richard?

Tom Donaly KA6RUH

2832. Re: Amateur CB Radio

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-13 23:44:18 UTC
From: JB <ac6tk@nospamcybertime.net>
Message-ID: <ajc5ks$2ct5$1@madmax.keyway.net>
Source record: 136874
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.dx,rec.radio.amateur.equipment

After occasionally tuning across the CB frequencies in an attempt to see what people are so steadfastly defending, I have routinely heard very little verbal exchange of ideas. Primarily I see radios being used as a sort of cathartic tool of cowards for whipping on other anonymous radio signals without fear of a knuckle sandwich, or even worse, a tool for broadcasting deranged and psychotic outbursts and incomprehensible word salads, gibberish and other exhibitions of lunacy.

Perhaps this is a local problem, in which case I apologize to those who may have been driven off for meaningful exercise of the 1st Amendment here, or in other areas those who have truly been able to.

Otherwise what's to "talk" to?

Jim, ac6tk

"CJ" <fantastic@sex.edu> wrote in message news:ulielti83fuv6c@corp.supernews.com...
: Hello Walt,
: That is some of the very BEST Ham Radio news I have heard in a long
: time Walt. Thank you for posting it. It's going to bring many more
: people into the ranks. It also serves to establish at long last a
: "no-Morse code" license (I read about the "Morse appreciation" - test -)
: and should go a long ways to encouraging other countries to do the same.
: It is long overdue. I am also thrilled to see the new and correct
: nomenclature of "Hobby Radio" be used. Too many Hams make radio a
: religion and a life's philosophy. Especially hard-core CW advocates and
: many DX'ers. It is a "hobby" and the UK has it nailed 100% correctly.
:
: Moreover your advice to ignore and purposely not make contacts with
: any of the new license holders once they get on the air is really silly.
: It makes you look like an asshole and an old curmudgeon fuck dick. I
: hope instead the new license holders ignore "YOU". They would be far
: better off to do so and thus never have to meet you or hear your
: prejudiced views on "Hobby Radio"
:
: Have a nice day.....
:
: --
: 73 / DX de AB7SL - Charles
: AB7SL - Ham Radio Pages
: Prescott, Arizona - USA
: www.ab7sl.com
:
:

: "Walt Davidson" <walt99@tiscali.co.uk> wrote in message
: news:d0hhlu4lsn3ep483csciel3o44dtqpdd20@4ax.com...
: > The licensing authority in the UK is in the process of combining the
: > amateur radio and CB services in this country into a single, unified
: > service under the banner of "Hobby Radio". A government statistical
: > forecast published this month indicates that there is a target to
: > phase out the separate CB license completely by 2004.
: >
: > As a major step towards the unification of the two services, the
: > licensing authority, working in collusion with one of the UK's amateur
: > radio societies, has introduced a so-called "Foundation Amateur Radio
: > License". To obtain this license, which gives access to all modes on
: > all the amateur bands between 1.8 MHz and 440 MHz, with the exception
: > of the 28 MHz band, the requirement for a Morse Test has been waived
: > (in contravention of the international ITU agreement) and a minimalist
: > technical "test" is all that is required to qualify. The technical
: > test includes about twenty questions of the type, "What is the correct
: > wiring for a power plug?" and "Is resistance measured in ohms, volts
: > or amps?". Even a knowledge of Ohm's Law is deemed too advanced for
: > this class of license test. A so-called "Morse Appreciation" is
: > performed, which involves listening to individual Morse characters,
: > sent as slowly and as often as desired, and looking them up
: > individually in a textbook.
: >
: > The callsigns issued for this type of pseudo-CB license are in the
: > M3*** series. In common with other CB licensees, they are allowed to
: > use only commercially-made, type-approved equipment. This unwelcome
: > feature alone, is totally contrary to the traditional amateur radio
: > ethic of experimentation.
: >
: > If, like me, you deprecate this ultimate step in the dumbing-down and
: > devaluation of our hobby, I hope you will make your disapproval clear
: > by refraining from making contact with, or acknowledging the existence
: > of, the M3*** CB calls on the amateur bands. There is a perfectly
: > adequate Novice Licence scheme already in existence in the UK, which
: > serves as a good introductory path into the hobby.
: >
: > 73 de G3NYY
: >
: > --
: > Walt Davidson Email: g3nyy @freeuk.com
:
:

2833. Re: Feeding an Inv-L at the bottom?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-13 23:45:29 UTC
From: Bob Miller <bamiller@texas.net>
Message-ID: <loBZPdeIo=JYRA=gqHFSjYM2HQ4+@4ax.com>
Source record: 136875

"Fred Hambrecht" <w4jle@charter.net> wrote:

>Whoops, forgot I was in a conference that parses every word like Clinton...
>
>
>3. Upon reflection, I hereby withdraw my suggestion pending a 5 year study
>of feasibility and apologize to the group that I was so bold as to offer any
>solution.
>
>73 Fred W4JLE

Maybe I'm being simple-minded, but it would seem if you watered the yard the
little coathanger "U"s would drive into the dirt.

Bob
k5qwg
>
>> "Floyd Sense" <sentek@sprintmail.com> wrote in message
>> news:JwR59.206$zJ.10303@newsread2.prod.itd.earthlink.net...
>> > Man, you must live somewhere where it still rains. You couldn't drive
>> nails
>> > into the ground here, let alone pieces of coat hangers. Since the grass
>> no
>> > longer grows here either, laying radials on top doesn't work too well.
>> You
>> > can cut slits into just about anything using a lawn edger with a
>vertical
>> > blade. Cuts a slit about 1/4. These edgers can be rented just about
>> > anywhere.
>> >
>> > --
>> > K8AC
>> > Floyd Sense in Angier, NC
>> > "Fred Hambrecht" <w4jle@charter.net> wrote in message
>> > news:ul949ui2bq135e@corp.supernews.com...
>> > > Don't bother to cut slits for the radials. Cut pieces of coat hanger
>> into
>> > 6"
>> > > pieces. Bend then in half. Next lay out the radial and use the bent
>> pieces
>> > > to stake the wire down. Kind of like stapling the wire to the ground.
>> This
>> > > will keep them out of the lawn mower and within a month you won't be
>> able
>> > to

>> > > find them as the grass covers them.
>> > >
>> > >
>> > > "StarGazer" <pti@capnet.com> wrote in message
>> > > news:3D547E7F.B2F2D5A6@capnet.com...
>> > > > If one feeds an inv-L at the bottom how come the radial lengths
>> > > > don't have to be the same length as the L part?
>> > > > Like a dipole should be?
>> > > >
>> > > > I picture it as a dipole with the ground being the other half of the
>> > > > dipole. How does the ground know what its electrical length has
>> > > > to be?
>> > > >
>> > > > If I want to put radials under my lawn what it the best way
>> > > > to cut a sliver into it for the radial?
>> > > >
>> > > >
>> > >
>> > >
>> > >
>> >
>> >
>>
>>
>

2834. Re: BACK TO BASICS - EM waves, E and H fields, in phase orinquadr...

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-13 23:49:11 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <3D599AF7.9050003@eznec.com>
Source record: 136876

We've had this discussion on this newsgroup before a number of times. If anyone is interested, I posted the results of some experiments which clearly show current on both the inside and outside of a coax cable in the absence of mutual coupling to any antenna. All currents are fully explained by simple circuit theory with the principles being described by Ian.

You should be able to find the postings with a Google search. The topic was "What's the difference.....", and the first results were posted on May 1, 2001. A correction and further discussion took place on several following days.

Roy Lewallen, W7EL

2835. Re: SWR - Why isn't the energy re-absorbed at the TX?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-14 00:10:08 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <at7jlughnn1la2rireinrfhghukfqdq98o@4ax.com>
Source record: 136877

On Tue, 13 Aug 2002 16:27:07 -0500 (CDT), richardharrison@webtv.net (Richard Harrison) wrote:

>Richard Clark wrote:
>"Indirect? How so?"
>
>Richard Clark is the metrologist, not I, but I recall making the
>measurements. It requires measuring the temperature rise and the time
>that`s required in a particular volume of water. The heat added to the
>water is that dissipated by the electrical energy which produces it.
>
>This involves reading the temperatures in and out of the water flowing
>through the device and timing the filling of a container of a particular
>volume. Then you compute. That`s a lot of beating around the bush.
>That`s not a direct indication such as noting the deflection of a
>spring, or reading the level of mercury in a manometer.
>
>Best regards, Richard Harrison, KB5WZI

Hi Richard,

That is hardly indirect, but I can understand your logic (must be my weather-man background ;-)

The Hewlett Packard model Calorimeter was the most accurate Wattmeter available up to 1 GHz compared with most (read ALL) "indirect" meters of the 1950's-1960's.

73's
Richard Clark, KB7QHC

2836. Re: A Challenge

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-14 00:14:50 UTC
From: k1bqt@aol.com
Message-ID: <20020813201450.18255.00000142@mb-mk.aol.com>
Source record: 136878

Hi David--

Nice work, but not unique. As I recall, Dr. Tom of Force 12 used interleaved spiral end-loading for a multiband verical several years ago (the Z3??), and so have others. I presently have a 12-foot self-supported OCFD design on the roof covering 7 bands (20-2 meters) that's 12-feet high. Welcome to the neighborhood.

Rick K1BQT

2837. Re: A closer look (conservation of energy)

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-14 00:15:24 UTC
From: CAM <w5dxp@hotmail.com>
Message-ID: <3D59A11C.C6D7F002@hotmail.com>
Source record: 136879

VE9SRB wrote:
> Its been fun. Take care Cecil.

All you have to do to convince me that you are arguing in good
faith is to present a reference that agrees with your power equation:

75w + 8.33w = 133.33w

You have taken Walter Maxwell to task many times for his "virtual short"
which seems to operate as some sort of RF diode. I don't agree with
Walt's "virtual short" but your impedance transition that presents
a 150/50 ohm transition to reflected waves but doesn't present a
50/150 ohm impedance transition to forward waves is exactly the
same concept as Walt's "virtual short". So, Steve, you wind up defending
yourself with the the same argument that you chastised Walt for
using. The readers are left to draw their own conclusion.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

2838. Re: A closer look

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-14 00:24:54 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <q98jlug4sdofjur6bnuicl7p2bh246ka5f@4ax.com>
Source record: 136880

On Tue, 13 Aug 2002 17:27:37 -0500 (CDT), richardharrison@webtv.net
(Richard Harrison) wrote:

>CAM, W5DXP wrote:
>"You cannot take two transmitters, each putting out 70.7 v at 1.414 a
>and sum the outputs to get 141.4 v out at 2.828 a. That`s getting 400
>watts from two 100 watt transmitters."
>
>Cecil is right, of course, because the transmitters are incapable of
>more than 100 watts each.

A gross distinction that has crept into the argument without being
stated in the premise of combining waves (not transmitters).

>
>There are audio chips that are capable of more output than they produce
>into a specified 8-ohm load with a 16-volt collector supply. Such chips
>may supply 1/2 amp or 2 watts into 8 ohms. With the equivalent of a
>series connection, two of these chips can double the voltage across the
>load and this doubles the current too. This produces 8 watts in the
>8-ohm load. But, this is only because the chip was capable of twice the
>current output, a full amp.
>
>With power limited r-f transmitters the story is different. Take it from
>me. I`ve paralleled two 50 KW transmitters and the most I could
>reasonably get out was 100 KW.
>
>Best regards, Richard Harrison, KB5WZI

Hi Richard,

Right as rain, both in the practical failure and the practical
application of stretching a Watt. It also illustrates the driving
mechanism of Cecil's (unstated, but certainly counted on condition of
limited sources) that has collapsed at other stages like the failure
of the Transformer metaphor to sustain only ONE outcome. Such myopic
constraints lead to t'aint so-t'is so types of argument being
whipsawed by these simple errors.

73's
Richard Clark, KB7QHC

2839. Re: DESPERATELY NEED HELP FROM HY-TOWER USERS!!!!!!!

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-14 00:27:59 UTC
From: Ed Juge/NM <ed@juge.org>
Message-ID: <3d59a5c3.0@oracle.zianet.com>
Source record: 136882

That's interesting because I contacted MFJ owner Martin Jue, a personal
friend, and was unable to get anything beyond the advertising on their web
site.

Ed, W5EJ

"w9gb" <gregory.beat@attbi.com> wrote in message
news:NMY59.111352$uj.63593@rwcrnsc51.ops.asp.att.net...
> Ed -
>
> I contacted MFJ this morning, and received a couple of very quick
responses
> ()best you not know how that was accomplished)
>
> AS MR. McLaughlin has suggested a current or "new" P.E.'s review of the
> design may be the best bet, okay here are the details:
>
> When MFJ purchased Hy-Gain from Telex, there was quite a bit of the
original
> documentation and information supplied AND quite a bit that was missing or
> lost through the years at Hy-Gain,
> MFJ actually had to go to the advertising companies used by Hy-Gain
through
> the years to recover the original photographs, pictures and text for the
MFJ
> catalog -- that process alone took over one year.
>
> If the Hy-Gain staff has advised that they don't have the original
> engineering data that Ed requested, it may well be that the originals
> documents have been lost.
>
> Have Mr. Juge contact Randy Nash, Hy-Gain Antenna Production Manager.
Randy
> was responsible for the reintroduction and reproduction of the Hy-Tower
> product. He will supply what information he has available for Mr. Juge's
> zoning board. 1-800-973-6572.
>
> MFJ / Hy-Gain Antennas
> ----------------------------------
> Best luck
> 73 de w9gb
>
>
> "Ed Juge/NM" <ed@juge.org> wrote in message
> news:3d513665.0@oracle.zianet.com...

> > I am in negotiations with my local planning and zoning commission for
> > authority to install a pair of Hy-Gain Hy-Towers. There are a dozen
> > residents of the area opposing them. Their main point now, other than
> > aesthetics, is that Hy-Gain's specs say 75mph wind survival and we will
be
> > in an area that gets 60-70 mph winds every few years. One of my
Hy-Towers
> > has survived 110 mph winds, twice, but I can't prove it.
> >
> > If you own a Hy-Tower, and it has been through very high winds... in
> excess
> > of 75 mph, PLEASE send me an email with details. It will need to
include
> > your name, address and phone number in case they want to verify that I
> > didn't dummy up the email.
> >
> > Thanks... Ed, W5EJ
> > Ruidoso, NM
> > Phone: 505-258-1721
> >
> >
>
>

2840. Re: DESPERATELY NEED HELP FROM HY-TOWER USERS!!!!!!!

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-14 00:33:47 UTC
From: Ed Juge/NM <ed@juge.org>
Message-ID: <3d59a5c4.0@oracle.zianet.com>
Source record: 136881

Hey, guys, I appreciate your good intentions. However, only three out of a dozen or more responses were what I asked for in the message below. The majority of others were telling me why this won't do any good or to contact Hy-Gain, etc. We've already tried Hy-Gain and MFJ.

Our P&Z is in a small mountain village, not a big, sophisticated city. We have already had the "what's relevant?" conversation with the planning director and the village attorney. TESTAMONIALS ABOUT HY-TOWERS THAT HAVE SURVIVED STRONG WINDS IS QUITE ADEQUATE FOR THEM AND WILL CARRY A LOT OF WEIGHT.

So, with all due respect... please save your opinions as to why this information is useless.

Thanks... Ed, W5EJ

> "Ed Juge/NM" <ed@juge.org> wrote in message
> news:3d513665.0@oracle.zianet.com...
> > I am in negotiations with my local planning and zoning commission for
> > authority to install a pair of Hy-Gain Hy-Towers. There are a dozen
> > residents of the area opposing them. Their main point now, other than
> > aesthetics, is that Hy-Gain's specs say 75mph wind survival and we will
be
> > in an area that gets 60-70 mph winds every few years. One of my
Hy-Towers
> > has survived 110 mph winds, twice, but I can't prove it.
> >
> > If you own a Hy-Tower, and it has been through very high winds... in
> excess
> > of 75 mph, PLEASE send me an email with details. It will need to
include
> > your name, address and phone number in case they want to verify that I
> > didn't dummy up the email.
> >
> > Thanks... Ed, W5EJ
> > Ruidoso, NM
> > Phone: 505-258-1721
> >
> >
>
>

2841. Re: A closer look (conservation of energy)

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-14 00:39:28 UTC
From: CAM <w5dxp@hotmail.com>
Message-ID: <3D59A6C0.115EC5B6@hotmail.com>
Source record: 136883

Bill Klocko wrote:
> I'm glad you're delving deeper into this than ever before. I'm also
> glad you admit that your method for getting
>
> 75w + 25w + 25w + 8.33w = 133.33w
>
> is yours and yours alone. You just can't base your argument for that
> 25 watts reversing direction on conservation of energy. You should
> call it CAM's destructive/constructive interference postulate until
> you get a paper published.

Bill, my knowledge is so old I don't even remember when I learned it. Doesn't 75 joules + 25 joules + 25 joules + 8.33 joules = 133.33 joules??? Isn't an equation like that what it takes to satisfy the conservation of energy principle? You, yourself, broke the component waves down into voltages, currents, and powers. Your results agree exactly with mine. I am amazed that you didn't take the next small step in logic. Someone has to think original thoughts for the first time. Why not join me in thinking the unthinkable?

Bill, you came up with those above power components. I left them out of my posting and you independently came up with them. To refresh your memory:

75w the part of the 100w of source power that is not reflected from the 50/150 ohm transition point, i.e. the part that passes through the 50/150 ohm junction and is not reflected. This is the 75w in Steve's energy equation.

25w the part of the 100w of source power that is reflected from the 50/150 ohm transition point. This is left out of Steve's energy equation.

8.33w the part of the 33.33w of reflected power on the 150 ohm T-line that is re-reflected from the 150/50 transition point. This is the 8.33 watts in Steve's energy equation.

25w the part of the 33.33w of reflected power on the 150 ohm T-line that is not re-reflected from the 150/50 transition point, i.e. the part that passes through the 150/50 junction and is not re-reflected. This is left out of Steve's energy equation.

The above four components are all the power that can contribute to the forward wave which we know is 133.33 watts. Don't you think it odd that 75w + 25w + 8.33w + 25w adds up to exactly 133.33 watts, the exact amount of energy in the forward wave on the 150 ohm line? Don't you think it odd that 75w + 8.33w doesn't add up to the amount of energy in the forward wave????

> Why do you think I'm backing off? Concepts such as wave components,
> partial reflection/transmission, and superposition are completely consistent
> and compatible with conservation of energy.

75 joules/sec + 8.33 joules/sec = 133.33 joules/sec is consistent with
the conservation of energy principle?????? Shirley, you jest. There is
not enough energy in just those two waves to support the 133.33 joules/sec
forward wave. Can you furnish a reference that says that 75 joules/sec
plus 8.33 joules/sec equals 133.33 joules/sec?

> As I said, the only thing that conservation of
> energy says about your problems is that all the power generated by the
> source is dissipated in the load.

Sorry Bill, that's not the only thing it says. Indirectly, it says that
energy cannot make it from the source to the antenna without traveling
through the transmission line. That should be intuitively obvious to
the most casual observer but Steve left it out of his energy equation.

> I haven't looked at that problem, but we can agree that all the
> generated power that makes it to the load must have joined the forward
> power in the transmission line.

Then how can you support the equation that 75w + 8.33w = 133.3w???
If there are only 83.33 joules/sec available how in the world do we
wind up with a total of 133.33 joules/sec????? Where did the extra
50 joules/sec come from?
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

2842. Re: Amateur CB Radio

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-14 00:44:52 UTC
From: Hank Oredson <horedson@att.net>
Message-ID: <8Kh69.10512$Ke2.915522@bgtnsc04-news.ops.worldnet.att.net>
Source record: 136884
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.dx,rec.radio.amateur.equipment

"JB" <ac6tk@nospamcybertime.net> wrote in message
news:ajc5ks$2ct5$1@madmax.keyway.net...
>
> After occasionally tuning across the CB frequencies in an attempt to
> see what people are so steadfastly defending, I have routinely heard
> very little verbal exchange of ideas. Primarily I see radios being used
> as a sort of cathartic tool of cowards for whipping on other anonymous
> radio signals without fear of a knuckle sandwich, or even worse, a tool
> for broadcasting deranged and psychotic outbursts and incomprehensible
> word salads, gibberish and other exhibitions of lunacy.

Didn't you mean "... drunken lunacy."?
Not far from here is a large truck stop.
It's kinda fun listening to the ladies on their way to service the truckers.

> Perhaps this is a local problem, in which case I apologize to those who
> may have been driven off for meaningful exercise of the 1st Amendment
> here, or in other areas those who have truly been able to.
>
> Otherwise what's to "talk" to?
>
> Jim, ac6tk
>
> "CJ" <fantastic@sex.edu> wrote in message
news:ulielti83fuv6c@corp.supernews.com...
> : Hello Walt,
> : That is some of the very BEST Ham Radio news I have heard in a long
> : time Walt. Thank you for posting it. It's going to bring many more
> : people into the ranks. It also serves to establish at long last a
> : "no-Morse code" license (I read about the "Morse appreciation" - test -)
> : and should go a long ways to encouraging other countries to do the same.
> : It is long overdue. I am also thrilled to see the new and correct
> : nomenclature of "Hobby Radio" be used. Too many Hams make radio a
> : religion and a life's philosophy. Especially hard-core CW advocates and
> : many DX'ers. It is a "hobby" and the UK has it nailed 100% correctly.
> :
> : Moreover your advice to ignore and purposely not make contacts with
> : any of the new license holders once they get on the air is really silly.
> : It makes you look like an asshole and an old curmudgeon fuck dick. I
> : hope instead the new license holders ignore "YOU". They would be far
> : better off to do so and thus never have to meet you or hear your
> : prejudiced views on "Hobby Radio"
> :
> : Have a nice day.....

> :
> : --
> : 73 / DX de AB7SL - Charles
> : AB7SL - Ham Radio Pages
> : Prescott, Arizona - USA
> : www.ab7sl.com
> :
> :
> : "Walt Davidson" <walt99@tiscali.co.uk> wrote in message
> : news:d0hhlu4lsn3ep483csciel3o44dtqpdd20@4ax.com...
> : > The licensing authority in the UK is in the process of combining the
> : > amateur radio and CB services in this country into a single, unified
> : > service under the banner of "Hobby Radio". A government statistical
> : > forecast published this month indicates that there is a target to
> : > phase out the separate CB license completely by 2004.
> : >
> : > As a major step towards the unification of the two services, the
> : > licensing authority, working in collusion with one of the UK's amateur
> : > radio societies, has introduced a so-called "Foundation Amateur Radio
> : > License". To obtain this license, which gives access to all modes on
> : > all the amateur bands between 1.8 MHz and 440 MHz, with the exception
> : > of the 28 MHz band, the requirement for a Morse Test has been waived
> : > (in contravention of the international ITU agreement) and a minimalist
> : > technical "test" is all that is required to qualify. The technical
> : > test includes about twenty questions of the type, "What is the correct
> : > wiring for a power plug?" and "Is resistance measured in ohms, volts
> : > or amps?". Even a knowledge of Ohm's Law is deemed too advanced for
> : > this class of license test. A so-called "Morse Appreciation" is
> : > performed, which involves listening to individual Morse characters,
> : > sent as slowly and as often as desired, and looking them up
> : > individually in a textbook.
> : >
> : > The callsigns issued for this type of pseudo-CB license are in the
> : > M3*** series. In common with other CB licensees, they are allowed to
> : > use only commercially-made, type-approved equipment. This unwelcome
> : > feature alone, is totally contrary to the traditional amateur radio
> : > ethic of experimentation.
> : >
> : > If, like me, you deprecate this ultimate step in the dumbing-down and
> : > devaluation of our hobby, I hope you will make your disapproval clear
> : > by refraining from making contact with, or acknowledging the existence
> : > of, the M3*** CB calls on the amateur bands. There is a perfectly
> : > adequate Novice Licence scheme already in existence in the UK, which
> : > serves as a good introductory path into the hobby.
> : >
> : > 73 de G3NYY
> : >
> : > --
> : > Walt Davidson Email: g3nyy @freeuk.com

--

... Hank

Hank: http://horedson.home.att.net
W0RLI: http://w0rli.home.att.net

2843. Re: A closer look

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-14 00:50:56 UTC
From: CAM <w5dxp@hotmail.com>
Message-ID: <3D59A970.D9A7FBA5@hotmail.com>
Source record: 136885

Richard Harrison wrote:
> With power limited r-f transmitters the story is different. Take it from
> me. I`ve paralleled two 50 KW transmitters and the most I could
> reasonably get out was 100 KW.

Well, you obviously haven't been paying attention to what Steve has been
saying. He can take two signals of 1581v at 31.6a and "add" them to get 3162v
at 63.2a. Your two 50 KW transmitters wind up outputting 200 KW. That's how
he gets 133.33 watts out of adding 75 watt and 8.33 watt signals.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

2844. Re: A closer look

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-14 00:54:53 UTC
From: CAM <w5dxp@hotmail.com>
Message-ID: <3D59AA5D.7E2221FE@hotmail.com>
Source record: 136886

Richard Clark wrote:
>
> (Richard Harrison) wrote:
> >Cecil is right, of course, because the transmitters are incapable of
> >more than 100 watts each.
>
> A gross distinction that has crept into the argument without being
> stated in the premise of combining waves (not transmitters).

Who among the readers of this newsgroup doesn't know that one cannot
get blood out of a turnip?
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

2845. Re: Feeding an Inv-L at the bottom?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-14 01:02:20 UTC
From: N4LQ <N4LQ@igLou.com>
Message-ID: <3d585a7b_1@news.iglou.com>
Source record: 136983

If you don't mind a little dust, you can use your cicular saw and make a really nice cut in the dirt.

--
Steve Ellington N4LQ.
"Floyd Sense" <sentek@sprintmail.com> wrote in message news:JwR59.206$zJ.10303@newsread2.prod.itd.earthlink.net...
> Man, you must live somewhere where it still rains. You couldn't drive nails
> into the ground here, let alone pieces of coat hangers. Since the grass no
> longer grows here either, laying radials on top doesn't work too well. You
> can cut slits into just about anything using a lawn edger with a vertical
> blade. Cuts a slit about 1/4. These edgers can be rented just about
> anywhere.
>
> --
> K8AC
> Floyd Sense in Angier, NC
> "Fred Hambrecht" <w4jle@charter.net> wrote in message
> news:ul949ui2bq135e@corp.supernews.com...
> > Don't bother to cut slits for the radials. Cut pieces of coat hanger into
> 6"
> > pieces. Bend then in half. Next lay out the radial and use the bent pieces
> > to stake the wire down. Kind of like stapling the wire to the ground. This
> > will keep them out of the lawn mower and within a month you won't be able
> to
> > find them as the grass covers them.
> >
> >
> > "StarGazer" <pti@capnet.com> wrote in message
> > news:3D547E7F.B2F2D5A6@capnet.com...
> > > If one feeds an inv-L at the bottom how come the radial lengths
> > > don't have to be the same length as the L part?
> > > Like a dipole should be?
> > >
> > > I picture it as a dipole with the ground being the other half of the
> > > dipole. How does the ground know what its electrical length has
> > > to be?

> > >
> > > If I want to put radials under my lawn what it the best way
> > > to cut a sliver into it for the radial?
> > >
> > >
> >
> >
> >
>
>

2846. Re: A closer look (conservation of energy)

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-14 01:03:04 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <3D59AC48.4080007@eznec.com>
Source record: 136887

I haven't been following this thread carefully, but glance at it once in a while. I'm bemused by the casual way powers are added like they're D.C. Steady state powers aren't D.C., but vary with time.

Furthermore, consider two superimposed waves, one with V1, I1 and the other V2, I2 (all sinusoidal functions of time). The powers in the waves are P1 = V1 * I1, P2 = V2 * I2, where P1 and P2 are functions of time. The total power at the point of superimposition = Pt = (V1 + V2) * (I1 + I2) = V1 * I1 + V2 * I2 + V1 * I2 + V2 * I1. This is clearly not the sum of P1 and P2 except in some very special cases.

I find transmission line analysis to be pretty simple. But then, I avoid creating traveling power waves, then adding them up like D.C. Once you begin doing that, you can reach about any conclusion you'd like, and will only be right if you're really lucky. It's a lot more direct and productive to add forward and reverse V and I waves, since it's really the fields that are propagating. If you want to know the power at any point, simply multiply the superimposed waves at that point. That's the way I do it, anyway, and have never had any problem understanding the results.

Roy Lewallen, W7EL

2847. Re: A closer look

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-14 01:19:08 UTC
From: VE9SRB <srbest@att.net>
Message-ID: <gei69.11278$Ep6.889699@bgtnsc05-news.ops.worldnet.att.net>
Source record: 136888

"CAM" <w5dxp@hotmail.com> wrote in message

> Well, you obviously haven't been paying attention to what Steve has been
> saying. He can take two signals of 1581v at 31.6a and "add" them to get
3162v
> at 63.2a. Your two 50 KW transmitters wind up outputting 200 KW. That's
how
> he gets 133.33 watts out of adding 75 watt and 8.33 watt signals.
> --
>

Cecil, this is an aside and not a question related specifically to our examples. You like to discuss energy based a delivered transmitter power. If a 100 W transmitter delivers 100 W of power to a transmission line system in the steady state, how much total energy is in the transmission line system?

Steve VE9SRB

2848. Re: EVERY THING IS NOW KNOWN ON ANTENNAS.

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-14 01:20:43 UTC
From: "J. Harvey" <JM002.Harvey_ANTI*SPAM_@Sympatico.ca>
Message-ID: <Mfi69.2666$2T2.812757@news20.bellglobal.com>
Source record: 136889

"Richard Clark"
> The Patent Office posts their images in a format
> (TIFF it looks like) that requires a commercial
> plug-in (or so one would think).

Apple's Quicktime will do it.
Innomage's InterneTiffX (v. 3.0?) is another good option.

Both are free in their basic versions (all you need).

Apparently the TIFF format is a treaty issue.

2849. Re: Amateur CB Radio

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-14 01:28:52 UTC
From: "J. Harvey" <JM002.Harvey_ANTI*SPAM_@Sympatico.ca>
Message-ID: <oni69.2673$2T2.817338@news20.bellglobal.com>
Source record: 136890

"JB"
> ...a sort of cathartic tool of cowards for whipping
> on other anonymous ...postings... without fear of
> a knuckle sandwich, or even worse, a tool for
> broadcasting deranged and psychotic outbursts
> and incomprehensible word salads, gibberish
> and other exhibitions of lunacy.

Are you referring to 'rec.radio.amateur.antenna' ?

;-)

2850. Re: A closer look (conservation of energy)

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-14 01:58:05 UTC
From: CAM <w5dxp@hotmail.com>
Message-ID: <3D59B92D.CEA37EDC@hotmail.com>
Source record: 136891

Roy Lewallen wrote:
> Furthermore, consider two superimposed waves, one with V1, I1 and the
> other V2, I2 (all sinusoidal functions of time). The powers in the waves
> are P1 = V1 * I1, P2 = V2 * I2, where P1 and P2 are functions of time.
> The total power at the point of superimposition = Pt = (V1 + V2) * (I1 +
> I2) = V1 * I1 + V2 * I2 + V1 * I2 + V2 * I1. This is clearly not the sum
> of P1 and P2 except in some very special cases.

Which is exactly why it is impossible, Roy, given two and only two waves.
Take the following simple example based on a transformer.

Primary #1, 100 volts at 2 amps
Primary #2, 100 volts at 2 amps
Secondary 200 volts at 4 amps into 50 ohms

Is this possible? If not, why is it possible in a transmission line?
Clearly, in the above example there is not enough energy being supplied
to the transformer primaries to obtain 800 watts output. What is the
best we can do driving 50 ohms with the secondary? Hint: It's not 200
volts at 4 amps.

Where is the extra energy coming from that allows a transmission line
to react different from the transformer? Steve would have us believe
there is no extra energy. If no extra energy is needed, why can't we
obtain the above output from the transformer? If extra energy is needed
in the transmission line, where does it come from?
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

2851. Re: A Challenge

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-14 02:02:46 UTC
From: theplanters95@aol.comnospam
Message-ID: <20020813220246.09805.00000128@mb-mc.aol.com>
Source record: 136892

Do you have any more info on your OCFD antenna design?

Randy

2852. Re: Best Homebrew Antenna For 2 Metres?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-14 02:12:58 UTC
From: tmgroatatpeakpeakdotcom
Message-ID: <3d59bad4.1394360@news.peakpeak.com>
Source record: 136893

On Sun, 11 Aug 2002 19:43:39 GMT, fiddelhead@hotmail.com wrote:

>Hello. I'm running a mobile 2M radio at home from a power supply. Any
>comments on what would be the best homebrew antenna to build for this that
>is not a yagi, I need an omni-directional one.
>
>Any help or comments appreciated.
>
>Scott

Build a properly decoupled J-pole or ground plane, up high and in the
clear. The gain differences between 1/4 wave, 1/2 wave, 5/8 wave, etc.
aren't as important as keeping teh antenna above and far away from
anything that could block the transmitted signal or interfere with
reception. For best results keep away from computers, televisions,
other electronic noise-makers, or any wire attached to one.

--KR0U

2853. Re: A closer look

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-14 02:13:36 UTC
From: CAM <w5dxp@hotmail.com>
Message-ID: <3D59BCD0.9773E70A@hotmail.com>
Source record: 136894

VE9SRB wrote:
> Cecil, this is an aside and not a question related specifically to our
> examples. You like to discuss energy based a delivered transmitter power.
> If a 100 W transmitter delivers 100 W of power to a transmission line system
> in the steady state, how much total energy is in the transmission line
> system?

How long is the transmission line?
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

2854. Re: Amateur CB Radio

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-14 02:14:00 UTC
From: "Joe S." <joe@schlatter.org>
Message-ID: <ajceif0alm@enews3.newsguy.com>
Source record: 136897
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.dx,rec.radio.amateur.equipment

You are right on.

--

Regards,
Joe S.

"JB" <ac6tk@nospamcybertime.net> wrote in message
news:ajc5ks$2ct5$1@madmax.keyway.net...
>
> After occasionally tuning across the CB frequencies in an attempt to
> see what people are so steadfastly defending, I have routinely heard
> very little verbal exchange of ideas. Primarily I see radios being used
> as a sort of cathartic tool of cowards for whipping on other anonymous
> radio signals without fear of a knuckle sandwich, or even worse, a tool
> for broadcasting deranged and psychotic outbursts and incomprehensible
> word salads, gibberish and other exhibitions of lunacy.
>
> Perhaps this is a local problem, in which case I apologize to those who
> may have been driven off for meaningful exercise of the 1st Amendment
> here, or in other areas those who have truly been able to.
>
> Otherwise what's to "talk" to?
>
> Jim, ac6tk
>
> "CJ" <fantastic@sex.edu> wrote in message
news:ulielti83fuv6c@corp.supernews.com...
> : Hello Walt,
> : That is some of the very BEST Ham Radio news I have heard in a long
> : time Walt. Thank you for posting it. It's going to bring many more
> : people into the ranks. It also serves to establish at long last a
> : "no-Morse code" license (I read about the "Morse appreciation" - test -)
> : and should go a long ways to encouraging other countries to do the same.
> : It is long overdue. I am also thrilled to see the new and correct
> : nomenclature of "Hobby Radio" be used. Too many Hams make radio a
> : religion and a life's philosophy. Especially hard-core CW advocates and
> : many DX'ers. It is a "hobby" and the UK has it nailed 100% correctly.
> :
> : Moreover your advice to ignore and purposely not make contacts with
> : any of the new license holders once they get on the air is really silly.
> : It makes you look like an asshole and an old curmudgeon fuck dick. I
> : hope instead the new license holders ignore "YOU". They would be far

> : better off to do so and thus never have to meet you or hear your
> : prejudiced views on "Hobby Radio"
> :
> : Have a nice day.....
> :
> : --
> : 73 / DX de AB7SL - Charles
> : AB7SL - Ham Radio Pages
> : Prescott, Arizona - USA
> : www.ab7sl.com
> :
> :
> : "Walt Davidson" <walt99@tiscali.co.uk> wrote in message
> : news:d0hhlu4lsn3ep483csciel3o44dtqpdd20@4ax.com...
> : > The licensing authority in the UK is in the process of combining the
> : > amateur radio and CB services in this country into a single, unified
> : > service under the banner of "Hobby Radio". A government statistical
> : > forecast published this month indicates that there is a target to
> : > phase out the separate CB license completely by 2004.
> : >
> : > As a major step towards the unification of the two services, the
> : > licensing authority, working in collusion with one of the UK's amateur
> : > radio societies, has introduced a so-called "Foundation Amateur Radio
> : > License". To obtain this license, which gives access to all modes on
> : > all the amateur bands between 1.8 MHz and 440 MHz, with the exception
> : > of the 28 MHz band, the requirement for a Morse Test has been waived
> : > (in contravention of the international ITU agreement) and a minimalist
> : > technical "test" is all that is required to qualify. The technical
> : > test includes about twenty questions of the type, "What is the correct
> : > wiring for a power plug?" and "Is resistance measured in ohms, volts
> : > or amps?". Even a knowledge of Ohm's Law is deemed too advanced for
> : > this class of license test. A so-called "Morse Appreciation" is
> : > performed, which involves listening to individual Morse characters,
> : > sent as slowly and as often as desired, and looking them up
> : > individually in a textbook.
> : >
> : > The callsigns issued for this type of pseudo-CB license are in the
> : > M3*** series. In common with other CB licensees, they are allowed to
> : > use only commercially-made, type-approved equipment. This unwelcome
> : > feature alone, is totally contrary to the traditional amateur radio
> : > ethic of experimentation.
> : >
> : > If, like me, you deprecate this ultimate step in the dumbing-down and
> : > devaluation of our hobby, I hope you will make your disapproval clear
> : > by refraining from making contact with, or acknowledging the existence
> : > of, the M3*** CB calls on the amateur bands. There is a perfectly
> : > adequate Novice Licence scheme already in existence in the UK, which
> : > serves as a good introductory path into the hobby.
> : >
> : > 73 de G3NYY

> : >
> : > --
> : > Walt Davidson Email: g3nyy @freeuk.com
> :
> :
>

2855. Re: A closer look (conservation of energy)

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-14 02:26:39 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <3D59BFDF.3070404@eznec.com>
Source record: 136895

The validity, let alone necessity, of using transformers to explain transmission line phenomena escapes me, unless some weight is being put on the fact that both start with the same five letters. But I find transmission line phenomena easy to understand without the analogies, and I don't have time for this silliness. So I'll return you to your regularly scheduled programming. Have fun.

Roy Lewallen, W7EL

CAM wrote:
> Roy Lewallen wrote:
>
>>Furthermore, consider two superimposed waves, one with V1, I1 and the
>>other V2, I2 (all sinusoidal functions of time). The powers in the waves
>>are P1 = V1 * I1, P2 = V2 * I2, where P1 and P2 are functions of time.
>>The total power at the point of superimposition = Pt = (V1 + V2) * (I1 +
>>I2) = V1 * I1 + V2 * I2 + V1 * I2 + V2 * I1. This is clearly not the sum
>>of P1 and P2 except in some very special cases.
>
>
> Which is exactly why it is impossible, Roy, given two and only two waves.
> Take the following simple example based on a transformer.
>
> Primary #1, 100 volts at 2 amps
> Primary #2, 100 volts at 2 amps
> Secondary 200 volts at 4 amps into 50 ohms
>
> Is this possible? If not, why is it possible in a transmission line?
> Clearly, in the above example there is not enough energy being supplied
> to the transformer primaries to obtain 800 watts output. What is the
> best we can do driving 50 ohms with the secondary? Hint: It's not 200
> volts at 4 amps.
>
> Where is the extra energy coming from that allows a transmission line
> to react different from the transformer? Steve would have us believe
> there is no extra energy. If no extra energy is needed, why can't we
> obtain the above output from the transformer? If extra energy is needed
> in the transmission line, where does it come from?

2856. Help with 20 meter 1/2 wave Vert

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-14 02:31:00 UTC
From: WD4LVO <wd4lvo@bellsouth.net>
Message-ID: <09r69.20685$g47.1136925@e3500-atl1.usenetserver.com>
Source record: 136820

I have some sections of a vertical antenna that I was hoping I can make a 14.000 - 14.060 MHz 1/2 wave antenna out of. The pieces I have are as follows:

1 section is a 1inch dia 6ft long
2nd section is a 3/4 dia 6ft long
3rd section is a 13inch piece of 1/2 pvc pipe that I could wind a loading coil on
4th section is a 9ft long whip

I have randomly tried to wind some wire on the short 13inch piece after the first two sections that are 12ft high and have not been able to match around 14 mhz. I might have to make the loading coil longer?
I only plan to deploy the antenna at
the destination, more like a field station ant so lenght is not a problem. I have a 1/4 wave now and
was looking to make a 1/2 if possible out of the pieces. I only need it to cover the cw portion of 20 meters. I was wondering if it was possible to make one out of my existing pieces, need some dimensions and loading coil windings.
Need some help in figuring the number of turns for the loading coil and gauge of
wire. I have the whole thing mounted ontop of a pickup truck. removable of course, I would like to achieve at least a 1/2 wave with this setup or 5/8 wave.
I don't know if it will help over a quarter wave when all will be using is a QRP rig.

Thanks Ozzy -WD4LVO.

2857. Re: How far away: HF Dipole and tri-bander vertical?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-14 02:31:03 UTC
From: W4WNT <w4wnt@carolina.rr.com>
Message-ID: <Hhj69.15488$Xa.691238@twister.southeast.rr.com>
Source record: 136896

If the HF rig makes the TV blink, you need to look into:
1. the HF radio grounding system
2. the TV antenna ("rabbit ears" won't cut it!)

Good Luck,
Bill, W4WNT

"Ken" <cprstn54zz@att.net> wrote in message
news:3d58121b.340125@news-server.optonline.net...
> I can put my triband antenna (50/144/440 MFJ-1536 just reduced to
> $119) 3 ft above the center insulator of my multi-band HF dipole 60 ft
> from my shack (where it will out of sight = XYL happy), or over my
> shack (where it will be in the view = XYL unhappy). If I put it near
> the dipole, will 600 watts of HF de-sense the tribander on RX,
> assuming I am using a VX-5R or similar?
>
> I suspect it will since a mere 100 watts of CW on HF makes the TV's
> within 20 ft of the dipole blink. Will things be satisfactory even if
> the antennas are 60 ft apart? Should I just resign myself to doing HF
> or VHF but not both at the same time and put the antennas close?
>
> Ken KC2JDY
> Ken
> (to reply via email
> remove "zz" from address)

2858. Re: Amateur CB Radio

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-14 02:37:13 UTC
From: VE3TMT <ve3tmt@rac.ca>
Message-ID: <Cnj69.2727$2T2.841904@news20.bellglobal.com>
Source record: 136899
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.dx,rec.radio.amateur.equipment

"CJ" <fantastic@sex.edu> wrote in message

Hey Charles,

Just how many e-mail address' do you have. Just trying to stay one step
ahead of the kill file is my guess.

2859. Re: How far away: HF Dipole and tri-bander vertical?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-14 02:46:52 UTC
From: cprstn54zz@att.net
Message-ID: <3d59c3d3.9656656@news-server.optonline.net>
Source record: 136898

On Wed, 14 Aug 2002 02:31:03 GMT, "W4WNT" <w4wnt@carolina.rr.com>
wrote:
>If the HF rig makes the TV blink, you need to look into:
>1. the HF radio grounding system
>2. the TV antenna ("rabbit ears" won't cut it!)

Well, its cable TV and I am seeing big RF off the cable sheathing
itself, as I am seeing from all grounded conductors in the part of the
house near the dipole. I have yet to test whether it affects a TV
playing a videotape. My plan is to put ferrite toroid chokes where I
must.

Ken KC2JDY

Ken
(to reply via email
remove "zz" from address)

2860. Is Lithium Grease good for assembling antenna mating sections?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-14 02:47:54 UTC
From: StarGazer <pti@capnet.com>
Message-ID: <3D59C4DA.3E49CAF4@capnet.com>
Source record: 136900

dfgh

2861. Re: A closer look

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-14 02:57:21 UTC
From: richardharrison@webtv.net
Message-ID: <8055-3D59C711-696@storefull-2398.public.lawson.webtv.net>
Source record: 136902

Tom, KA6RUH wrote:
"How did you isolate thetransmitters so that they didn`t load one another--?"

I drove both transmitters from the same oscillator and combined their outputs through a hybrid ring. It worked well. May have been more than was needed.

Best regards, Richard Harrison, KB5WZI

2862. Re: DESPERATELY NEED HELP FROM HY-TOWER USERS!!!!!!!

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-14 03:09:57 UTC
From: w9gb <gregory.beat@attbi.com>
Message-ID: <9Sj69.90800$UU1.15973@sccrnsc03>
Source record: 136901

Ed -

As I said, "best you not know how that was accomplished".
Never ask the magician how the magic trick works, "takes all the fun out of the illusion".

Greg
w9gb

"Ed Juge/NM" <ed@juge.org> wrote in message
news:3d59a5c3.0@oracle.zianet.com...
> That's interesting because I contacted MFJ owner Martin Jue, a personal
> friend, and was unable to get anything beyond the advertising on their web
> site.
>
> Ed, W5EJ
>
>
> "w9gb" <gregory.beat@attbi.com> wrote in message
> news:NMY59.111352$uj.63593@rwcrnsc51.ops.asp.att.net...
> > Ed -
> >
> > I contacted MFJ this morning, and received a couple of very quick
> responses
> > ()best you not know how that was accomplished)
> >
> > AS MR. McLaughlin has suggested a current or "new" P.E.'s review of the
> > design may be the best bet, okay here are the details:
> >
> > When MFJ purchased Hy-Gain from Telex, there was quite a bit of the
> original
> > documentation and information supplied AND quite a bit that was missing
or
> > lost through the years at Hy-Gain,
> > MFJ actually had to go to the advertising companies used by Hy-Gain
> through
> > the years to recover the original photographs, pictures and text for the
> MFJ
> > catalog -- that process alone took over one year.
> >
> > If the Hy-Gain staff has advised that they don't have the original
> > engineering data that Ed requested, it may well be that the originals
> > documents have been lost.
> >
> > Have Mr. Juge contact Randy Nash, Hy-Gain Antenna Production Manager.

> Randy
> > was responsible for the reintroduction and reproduction of the Hy-Tower
> > product. He will supply what information he has available for Mr.
Juge's
> > zoning board. 1-800-973-6572.
> >
> > MFJ / Hy-Gain Antennas
> > ----------------------------------
> > Best luck
> > 73 de w9gb
> >
> >
> > "Ed Juge/NM" <ed@juge.org> wrote in message
> > news:3d513665.0@oracle.zianet.com...
> > > I am in negotiations with my local planning and zoning commission for
> > > authority to install a pair of Hy-Gain Hy-Towers. There are a dozen
> > > residents of the area opposing them. Their main point now, other than
> > > aesthetics, is that Hy-Gain's specs say 75mph wind survival and we
will
> be
> > > in an area that gets 60-70 mph winds every few years. One of my
> Hy-Towers
> > > has survived 110 mph winds, twice, but I can't prove it.
> > >
> > > If you own a Hy-Tower, and it has been through very high winds... in
> > excess
> > > of 75 mph, PLEASE send me an email with details. It will need to
> include
> > > your name, address and phone number in case they want to verify that I
> > > didn't dummy up the email.
> > >
> > > Thanks... Ed, W5EJ
> > > Ruidoso, NM
> > > Phone: 505-258-1721
> > >
> > >
> >
> >
>
>

2863. Re: A closer look (conservation of energy)

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-14 03:29:16 UTC
From: CAM <w5dxp@hotmail.com>
Message-ID: <3D59CE8C.96346F05@hotmail.com>
Source record: 136903

Roy Lewallen wrote:
> The validity, let alone necessity, of using transformers to explain
> transmission line phenomena escapes me, unless some weight is being put
> on the fact that both start with the same five letters. But I find
> transmission line phenomena easy to understand without the analogies,
> and I don't have time for this silliness. So I'll return you to your
> regularly scheduled programming. Have fun.

Aren't you even curious as to why you can send two identical waves
into a transmission line and double the voltages while doubling the
currents and you cannot do that with a transformer? Shouldn't we
replace all the transformers with transmission lines since we can
get more voltage and more current out of the transmission lines than
we can get out of transformers?
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
------== Over 80,000 Newsgroups - 16 Different Servers! =-----

2864. Re: A closer look (conservation of energy)

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-14 03:53:34 UTC
From: richardharrison@webtv.net
Message-ID: <23816-3D59D43E-258@storefull-2391.public.lawson.webtv.net>
Source record: 136904

Roy, W7EL wrote:
"The validity, let alone the necessity of using transformers to explain transmission line phenomena escapes me, unless some weight is being put on the fact that both start with the same five letters."

Some readers are more familiar with transformers than transmission lines. Few are more familiar with transmission lines. Ideally both are lossless, and you get no more energy out than you put in for either device as both are passive. That is, neither has an inherent energy source beyond its external excitation. Further similarities are that both can transition from balanced to unbalanced and both can change impedances.

Transformers are accepted without argument (maybe everywhere but here) as having a real voltage and current product which is the same on the output as on the input. This is true of transmission lines too. I guess that Cecil`s point is that there is no inherent energy source in the transmission line to boost real power. So, any real product of voltage and current which exceeds the power input is a mistake.

Best regards, Richard Harrison, KB5WZI

2865. Re: DESPERATELY NEED HELP FROM HY-TOWER USERS!!!!!!!

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-14 04:17:54 UTC
From: "J. McLaughlin" <JCM@Power-Net.Net>
Message-ID: <uljmei1eikh2ee@corp.supernews.com>
Source record: 136905

Dear Ed:
OK. The fix is in.
However, if those-who-do-not-wish-for-you-to-do-what-you-wish-to-do retain a good old country lawyer, things will change on a dime. I guess it all depends on the other people because NM sure has some smart lawyers.
We all have our fingers crossed for you. Mac N8TT

--
J. Mc Laughlin - Michigan USA
Home: JCM@Power-Net.Net

2866. Re: EZNEC

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-14 04:25:41 UTC
From: Rick Karlquist <richard@karlquist.removethis.com>
Message-ID: <9Zk69.107642$sA3.212408@rwcrnsc52.ops.asp.att.net>
Source record: 136906

Good advice. I have been doing it exactly that
way for years. It's not easy. You have
to be careful. You may be right about the
polarization. That would explain the random
favoring of one antenna.

Rick N6RK

"Roy Lewallen" <w7el@eznec.com> wrote in message
news:3D58CC76.7000505@eznec.com...
> Making good comparative measurements isn't easy.
>
> When doing A/B comparisons, *always* make the measurements when
> receiving. Don't rely on reports from other stations. Make many
> measurements to average out ionospheric QSB. Especially when comparing
> vertical and horizontal antennas, take many measurements over a period
> of time. The received signal polarization can rotate, causing one
> antenna to be 20 dB or more better than the other at some times, and the
> other antenna 20 dB or more better at others. This shift can have a
> period from seconds to many minutes.
>
> If you want quantitative measurements, use a step attenuator when making
> the measurements or calibrate your S meter on the same band and under
> the same RF gain, etc., settings with a step attenuator. Don't count on
> the number of dB per S unit to be constant over the scale, or for there
> to be a particular number of dB per S unit.
>
> Vertical antennas are much more sensitive to ground conductivity than
> horizontal antennas (except at high angles), so poor estimations of
> ground conductivity (ofthen the best you can do) will affect modeling
> results with verticals more with horizontal antennas.
>
> When comparing antennas with different elevation patterns, the
> difference between the two depends on the arrival angle of the signal.
> This can sometimes be estimated with a program like W6ELPROP, but
> sometimes multiple modes are possible, making it difficult to determine
> the arrival angle.
>
> Roy Lewallen, W7EL
>
> Rick Karlquist wrote:
> > "KAZeringue" <kazeringue@aol.com> wrote in message
> > news:3D559F73.3030202@aol.com...
> > >
> >>Can anyone speak about the accuracy of an Eznec(v3.0.42) model of an

> >>antenna over "real" ground?
> >
> >
> >>Keith, W4KAZ
> >
> >
> > I have been A/B'ing a 60 foot high inverted vee (120 degree apex)
> > on 20 meters with a widely separated ground mounted
> > half wave vertical. I've often seen the vertical beat the vee
> > by 3 to 6 dB and vice versa. Sometimes, they are the same.
> > Probably depends on the optimum propagation angle at the time.
> >
> > According to NEC, the vee should beat the dipole at any angle
> > over any ground (except a couple of degrees over sea water),
> > and beat it by a significant amount.
> >
> > I suspect NEC overestimates the gain vee and underestimates the
> > gain of the vertical (both must be off, you can't explain
> > the discrepancy only in terms of the vertical being off, AFAIK).
> >
> > I would be careful about making any assumptions about NEC's
> > analysis of ground effects. Always A/B real antennas to check.
> > If necessary, temporarily install switching relays.
> >
> > Rick N6RK
> >
> >
>

2867. Re: A closer look

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-14 05:39:54 UTC
From: "George, W5YR" <w5yr@att.net>
Message-ID: <3D59ED27.67240134@att.net>
Source record: 136907

Cecil, while you are at the library, get their copy of Reflections II and read through Chapters 17, 23 and 24. Won't take long . . .

Walt is saying the same thing that you are about how the rearward-traveling reflected wave is re-reflected back to the load, courtesy of a properly adjusted transmatch, stub or reflection generator of your choice. He discusses several varieties.

Also, find a copy of the January 1995 issue of CQ and see Warren Bruene's article on pages 13-17 entitled "Reflected Power Stays in the Coax" in which he explains why reflected power does not make it past the tuner input where it is re-reflected by merging at that plane with the incoming forward wave of the delivered power from the transmitter.

Steve has in past discussions with Walt Maxwell pooh-poohed the concept of a virtual short or open as a reflection generator. While Walt's terminology might not be realistic or appealing to some, his analysis of the currents and voltages associated with the incoming forward wave and the reflected wave that has passed through the tuner, or stub or whatever, does indeed confirm that "something" takes place at the tuner input plane when the two wave fronts meet. And that "something" is the mechanism for re-reflecting the original reflected wave from the load. He demonstrates that the currents and voltages have the proper phases to combine constructively with the incoming forward wave such that the energy in the reflected wave is not redirected back through the tuner as a component of the total forward power.

The final exam for re-reflected power is simply that the coax between the tuner and transmitter shows no reflected power traveling from the tuner to the transmitter, hence the reflected wave must have been re-directed in the tuner back to the load. The second part of the exam is to observe that after steady-state conditions are achieved, the forward power in the feedline to the antenna exactly equals the delivered power plus the re-reflected power - all assuming, of course, lossless lines and components. Walt takes loss into account, so it is not all a fairy tale.

73/72/oo, George W5YR - the Yellow Rose of Texas
Fairview, TX 30 mi NE of Dallas in Collin county EM13qe
Amateur Radio W5YR, in the 56th year and it just keeps getting better!
QRP-L 1373 NETXQRP 6 SOC 262 COG 8 FPQRP 404 TEN-X 11771 I-LINK 11735
Icom IC-756PRO #02121 Kachina 505 DSP #91900556 Icom IC-765 #02437

CAM wrote:
>
> VE9SRB wrote:
> >

> > "CAM" <w5dxp@hotmail.com> wrote in message
> > news:3D58738B.76564239@hotmail.com...
> >
> > > It is NOT traveling in the rearward direction and the forward direction at
> > > the same time! THERE IS NO ENERGY TRAVELING IN THE REARWARD DIRECTION IN A
> > > FEEDLINE WITH AN SWR = 1:1. None can be measured.
> >
> > There is no NET energy traveling in the rearward direction. We cannot
> > measure the individual energy components. All we can measure is the total
> > net wave component.
>
> Steve, there is no NET energy traveling in the rearward direction because
> ALL the energy in that direction has been superposed to zero. If there were
> components of energy flowing rearward toward the source, those energy
> components would cause losses in the wire. We know there are no losses in
> the wire from any rearward flowing energy. Therefore, rearward flowing
> energy has ceased to exist in that portion of the system. It has been
> canceled by destructive interference. Since energy cannot be destroyed,
> it has to take the only other possible direction back toward the load
> through constructive interference. The confining of EM fields to the
> interior of a coaxial line leaves only two possibilities for the direction
> of energy flow. If it exists as RF energy and it is not flowing toward the
> source, then it is flowing toward the load. There's no other possibility.
> The absence of energy flowing rearward toward the source dictates that
> all energy at that point is flowing toward the load.
>
> > Its like a mutlipath fade where different waves meet and combine to a NET
> > energy of 0 at a single point in space.
>
> Nope it isn't, Steve. In the case of free space, destructive interference
> can occur anywhere in the fields and constructive interference occur anywhere
> else. But in a transmission line, the fields are confined to essentially a
> one-dimensional world. The fields are confined to the transmission line and
> field components do not extend from the source to the load. Field components
> are forced by the laws of physics to travel from the source to the load. Since
> the fields are confined to such a small area, any energy canceled by destructive
> interference must reappear close by in the transmission line as constructive
> interference. The physical distance between the destructive interference and
> the constructive interference is limited by the physical extent of the fields
> confined to the coax which is a pretty short distance. In the examples given,
> you cannot sneak energy from the source past the transmission line to the load
> without it traveling in the transmission line. Nice try but that is simply
> Hocus-Pocus Electromagnetics.
>
> > Just because we can't measure the
> > individual wave components does not mean that they no longer exist or that
> > they are not still there effecting the cancellation.
>
> That's an absolute Old Wives' Tale. We know all the energy makes it to
> load in a lossless system. That energy cannot exist in two places at once.

> It's either flowing rearward OR it's making it to the load. The same energy
> cannot be both flowing rearward and forward at the same time. If it is
> flowing forward, it is not continuing to flow rearward. What is it about
> "destructive" that you don't understand?
>
> > The fact that the
> > energy cancels at the multipath fade point does not mean it has to reverse
> > direction, travel or jump through space to somewhere else to combine with
> > other traveling energy components.
>
> It travels, it doesn't jump. Your approach has the energy magically jumping
> from the source to the load bypassing the transmission line. That is simply
> impossible, Steve. You are going to need assistance from a supernatural RF
> God to pull that one off.
>
> Any time energy is canceled, it must instantaneously reappear to keep from
> violating the conservation of energy principle. You say the energy is canceled
> but it doesn't reappear. That's a clear violation of the conservation of
> energy principle.
>
> When the fields from an antenna are canceled at a point, they are reinforced
> at another point sometimes quite a distance away. The reason this can happen
> with antennas is that the fields are unconfined. They can appear anywhere in
> free space. The same thing cannot happen with a transmission line where the
> fields are confined to the interior of the coax and there are no fields
> outside the (perfect) coax.
>
> > If it did, the energy in the individual
> > waves would be lost and the waves would not travel past the point where the
> > multipath fade occurs - this would truly violate the law of conservation of
> > energy. For your interpretation of energy conservation to work it must be
> > valid under every imaginable situation - it is not.
>
> The difference is that in free space, the EM fields are not confined. In a
> transmission line, the EM fields are confined to the transmission line. In
> coax, the EM fields are confined between outer layer of the inner conductor
> and the inner layer of the braid. This puts EM fields in coax in essentially
> a one-dimensional world. The energy in the coax can only move in two and only
> two directions. The energy in EM fields in free space are free to move anywhere
> in free space. In that respect, antenna fields and transmission line fields
> are quite different.
>
> An antenna field can extend for any distance. A transmission line field confined
> inside RG8x can extend only approximately the distance between the inner conductor
> and outer conductor. The distance between the destructive interference and the
> constructive interference is rather limited inside coax. It certainly does NOT
> extend from the source to the load as your explanations would have them do.
>
> > Cecil, this has been fun but I'm going to leave the discussion because we
> > have now reached the endless circulating loop. Take care.

>
> I have come up with voltage equations that satisfy the superposition principle.
> I have come up with energy equations that satisfy the conservation of energy
> principle. You haven't. It seems that our only point of disagreement is whether
> the energy from destructive interference in a transmission line changes direction
> and becomes constructive interference in that new direction. I think I can prove
> my assertion but it will take a trip to the Texas A&M library.
> --
> cheers, CAM http://www.qsl.net/w5dxp

2868. Re: A closer look (conservation of energy)

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-14 06:07:12 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <3D59F390.7020301@eznec.com>
Source record: 136908

You can get more voltage out of transmission lines than you can
tranformers? Huh? Tesla is surely rolling over in his grave.

Isn't smoking that stuff still a felony in Texas?

Roy Lewallen, W7EL

CAM wrote:
>
> Aren't you even curious as to why you can send two identical waves
> into a transmission line and double the voltages while doubling the
> currents and you cannot do that with a transformer? Shouldn't we
> replace all the transformers with transmission lines since we can
> get more voltage and more current out of the transmission lines than
> we can get out of transformers?

2869. Re: Amateur CB Radio

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-14 06:16:00 UTC
From: Walt Davidson <walt99@tiscali.co.uk>
Message-ID: <mbtjlucei6qlk8aktjlo0546cvvoe9egma@4ax.com>
Source record: 136909
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.dx,rec.radio.amateur.equipment

Bwaaaahahahaha! I knew that would bring Chuck out of the woodwork!

:-)))
73 de G3NYY

--
Walt Davidson Email: g3nyy @freeuk.com

2870. Re: A closer look

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-14 06:32:34 UTC
From: "Ian White, G3SEK" <G3SEK@ifwtech.co.uk>
Message-ID: <N1DpCbCCmfW9EA+f@ifwtech.co.uk>
Source record: 136913

Richard Harrison wrote:
>"You cannot take two transmitters, each putting out 70.7 v at 1.414 a
>and sum the outputs to get 141.4 v out at 2.828 a. That`s getting 400
>watts from two 100 watt transmitters."
>
>Cecil is right, of course, because the transmitters are incapable of
>more than 100 watts each.

Sure you can - it's a classic two-tone test setup. With equal RF levels at say 1kHz apart, you get a composite waveform that shows the beat between the two carriers. The apparent 1kHz modulation comes from strictly linear addition of two sine-waves (which you can easily prove if you look at the waveform in detail, or with a spectrum analyser).

Vector addition gives 400W peak envelope power - defined as the power in the largest complete RF cycle, in this case at the peak of the 1kHz waveform - and tending towards zero in the smallest RF cycle at the trough.

Looked at in the frequency domain, you still have two independent 100W carriers, so certainly you get 200W average. But in order to get the correct average from the time-domain waveform, you have to average over the whole period of the composite waveform (in this example, 1 millisecond).

--
73 from Ian G3SEK 'In Practice' columnist for RadCom (RSGB)
Editor, 'The VHF/UHF DX Book'
http://www.ifwtech.co.uk/g3sek

2871. Help: I need a broadband low noise amplifier to amplify the signal from antenna(500KHz-30M)

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-14 06:46:37 UTC
From: yz_chen@hotmail.com
Message-ID: <aaeeb403.0208132246.39a66db8@posting.google.com>
Source record: 136910
Cross-posted to: rec.radio.amateur.antenna,comp.home.automation,sci.electronics.basics

Dear all,
I need a broadband low noise amplifier to amplify very small
signal(several uVpp) from antenna(1MHz-30MHz). Have you any solution
or suggestion on that? IC solution is prefered.
Thanks
Best Regards

2872. Re: BACK TO BASICS - EM waves, E and H fields, in phase orinquadr...

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-14 09:03:47 UTC
From: Bill Nelson <billn@spock.peak.org>
Message-ID: <ajd6djlmv8@quark.scn.rain.com>
Source record: 136911

William E. Sabin <sabinw@mwci-news> wrote:
>>>
>>> Because no electrons leave the wire (true!), the rms electron current
>>> arriving AT THE SHIELD from the left side of the dipole *must* be
>>> exactly equal to the rms current that goes into the right side of the
>>> dipole.

> This is an obviously true statement. It says "the
> electron current that arrives at the shield
> connection from the left side *MUST* be exactly
> equal to the current that enters the right side
> from the center lead". Since no electrons leave
> the system, this has to be true, and symmetry has
> nothing to do with it.

It is true, but misleading. The current can arrive at the shield
connection via two paths - the leg of the dipole and the shield.

You can show this by removing the dipole leg. The outside of the
shield then functions (as well as possible) as the second leg of
the dipole. The two currents inside the coax must still be equal.

> This statement is a logical conclusion to the fact
> that the mag fields cancel at the inner surface,
> therefore the inner surface current *has* to be
> identical to the center wire current. The outer
> surface current does not contribute to the
> cancellation at the inner surface.

See above.

--
Bill Nelson (billn@peak.org)

2873. Re: A closer look

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-14 09:20:07 UTC
From: Bill Nelson <billn@spock.peak.org>
Message-ID: <ajd7c7lmv9@quark.scn.rain.com>
Source record: 136912

CAM <w5dxp@hotmail.com> wrote:

> You cannot take two 100w transmitters, each putting out 70.7v at 1.414a and
> sum the outputs to get 141.4v at 2.828a. That's getting 400 watts out of
> two 100 watt transmitters. All I am saying is that Steve left some energy
> out of his energy equation.

Ignoring impedance matching problems, try looking at it by using batteries instead of transmitters. If you connect the batteries in parallel, you have twice the current at the original voltage. If you connect the batteries in series, you have twice the voltage at the original current.

In both cases, you get double the power available than what is available with one battery.

Shouldn't the same analysis be valid for RF transmitters?

--
Bill Nelson (billn@peak.org)

2874. Re: Help: I need a broadband low noise amplifier to amplify the signal from antenna(500KHz-30M)

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-14 10:15:14 UTC
From: dhouston1@fuse.net
Message-ID: <3d5b2c1e.133292828@nntp.fuse.net>
Source record: 136914
Cross-posted to: rec.radio.amateur.antenna,comp.home.automation,sci.electronics.basics

yz_chen@hotmail.com (YZ CHEN) wrote:

>Dear all,
> I need a broadband low noise amplifier to amplify very small
>signal(several uVpp) from antenna(1MHz-30MHz). Have you any solution
>or suggestion on that? IC solution is prefered.
>Thanks
>Best Regards

TenTec kit #1001 is DC-1GHz and sells for $9. You can cascade them if you need more gain (~18dB). The price is excellent. They have dealers around the world. See...

http://www.tentec.com/amaccyKit.htm

---
http://www.laser.com/dhouston/bx24-pcb.htm

2875. Re: Amateur CB Radio

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-14 10:36:28 UTC
From: peter@strg-alt-entf.org
Message-ID: <ajdbrc$1ab8hm$2@ID-31.news.dfncis.de>
Source record: 136915
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.dx,rec.radio.amateur.equipment

In rec.radio.amateur.dx CJ <fantastic@sex.edu> wrote:
^^^^^^^
OK, here we go again.

Massive, unwarranted crossposting. Use of nonexistent domains. No Reply-To.
Header. Abusive name calling.

Have a Prozac and say goodbye to your supernews account, Charlyboy.

Peter Lemken
DF5JT
Berlin

--
Das Priester-Zoelibat ist das erfolgreichste Eugenik-Projekt der
Menschheit. Es besticht auch in Momenten scheinbaren Versagens mit der
Eleganz seines Entwurfs.
-- Mirko Liss in d.a.s.r

2876. Re: Help: I need a broadband low noise amplifier to amplify the signal from antenna(500KHz-30M)

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-14 10:41:02 UTC
From: Joe McElvenney <ximac@btinternet.com>
Message-ID: <VA.000001a7.00ab660d@btinternet.com>
Source record: 136916
Cross-posted to: rec.radio.amateur.antenna,comp.home.automation,sci.electronics.basics

Hi,

Try one of the MAR-n MMIC's from Mini Circuits. They
come with a variety of frequency spreads, gains and IP3
figures. If you can get the input circuit right, they are
easy to use and freely available. A search using
'amplifier' and 'mar-6' should bring up a PDF data sheet.

Cheers - Joe

2877. Re: Help: I need a broadband low noise amplifier to amplify the signal from antenna(500KHz-30M)

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-14 10:43:01 UTC
From: Joe McElvenney <ximac@btinternet.com>
Message-ID: <VA.000001a8.00ad38bd@btinternet.com>
Source record: 136917
Cross-posted to: rec.radio.amateur.antenna,comp.home.automation,sci.electronics.basics

Hi,

OOPS! - I should have said that the noise figures are
not that hot at about 5dB but generally at HF that is not a
limiting factor.

Cheers - Joe

2878. Re: how to deal with limited antenna space?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-14 10:49:22 UTC
From: 'Doc <w5lz@icok.net>
Message-ID: <3D5A35A9.FDF52C4E@icok.net>
Source record: 136918

Tony,
I don't think I'd go there! Using a mobile home
for the counterpoise isn't just asking for RFI problems,
it's begging for them. Not just for your self, but for
all your neighbors who also live in mobile homes close
to you. The 'shell' of a mobile home is rarely grounded.
'Doc

2879. Re: Help: I need a broadband low noise amplifier to amplify the signal from antenna(500KHz-30M)

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-14 11:24:10 UTC
From: "Harold E. Johnson" <W4ZCB@mchsi.com>
Message-ID: <u5r69.130241$uj.189569@rwcrnsc51.ops.asp.att.net>
Source record: 136819
Cross-posted to: rec.radio.amateur.antenna,comp.home.automation,sci.electronics.basics

> OOPS! - I should have said that the noise figures are
> not that hot at about 5dB but generally at HF that is not a
> limiting factor.
>
>
> Cheers - Joe
>
> MMIC's are readily available with noise figures of under 2 dB. A major problem with them is their load isolation which is near nothing . A problem shared with all Norton amplifiers.

W4ZCB

2880. Re: A closer look

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-14 12:10:40 UTC
From: CAM <w5dxp@hotmail.com>
Message-ID: <3D5A48C0.6E650F0D@hotmail.com>
Source record: 136821

"George, W5YR" wrote:
> Steve has in past discussions with Walt Maxwell pooh-poohed the concept of
> a virtual short or open as a reflection generator. While Walt's terminology
> might not be realistic or appealing to some, his analysis of the currents
> and voltages associated with the incoming forward wave and the reflected
> wave that has passed through the tuner, or stub or whatever, does indeed
> confirm that "something" takes place at the tuner input plane when the two
> wave fronts meet. And that "something" is the mechanism for re-reflecting
> the original reflected wave from the load.

Steve is right about one thing. The reflected power is technically not 100%
re-reflected. The reflected power is 100% *re-directed* through two processes.
The first process is normal re-reflection at a physical impedance discontinuity.
The second process is wave cancellation (destructive interference) of two
out-of-phase waves through the process of superposition. Walt lumped
those two phenomena into the same bag, called it "100% re-reflection", and
wrote "virtual short" on the bag. Obsessing on the difference between
"re-reflected" and "re-directed" may seem like picking a nit. But on the
single point that reflected power is, technically speaking, not 100% re-
reflected, I would have to side with Steve. Surprise! That doesn't mean
that I will ever accept Steve's equation: 75w + 8.33w = 133.33w
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

2881. Re: A closer look (conservation of energy)

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-14 12:15:43 UTC
From: CAM <w5dxp@hotmail.com>
Message-ID: <3D5A49EF.5B2FA13C@hotmail.com>
Source record: 136822

Roy Lewallen wrote:
>
> You can get more voltage out of transmission lines than you can
> tranformers? Huh? Tesla is surely rolling over in his grave.
>
> Isn't smoking that stuff still a felony in Texas?

I didn't simply say you can get more voltage out of a transmission line,
Roy. I said you cannot double the voltage in a transformer WHILE
AT THE SAME TIME doubling the current without supplying more power
to the inputs. Steve can double the voltage in a transmission line
WHILE AT THE SAME TIME doubling the current without supplying more
power to the line. That makes a transmission line extremely superior
to a transformer and means that, for the sake of efficiency, all
transformers should immediately be replaced with transmission lines.
Doing so would solve all our energy problems with energy to spare.

> CAM wrote:
> > Aren't you even curious as to why you can send two identical waves
> > into a transmission line and double the voltages while doubling the
> > currents and you cannot do that with a transformer? Shouldn't we
> > replace all the transformers with transmission lines since we can
> > get more voltage and more current out of the transmission lines than
> > we can get out of transformers?

--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
------== Over 80,000 Newsgroups - 16 Different Servers! =-----

2882. Re: A closer look (conservation of energy)

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-14 13:14:55 UTC
From: richardharrison@webtv.net
Message-ID: <5154-3D5A57CF-21@storefull-2394.public.lawson.webtv.net>
Source record: 136823

CAM, W5DXP wrote:
"I don`t agree with Walt`s "virtual short"---."

I have never seen a copy of "Reflections", but I have a question. Would you agree that a series resonant circuit is a virtual short?

Best regards, Richard Harrison, KB5WZI

2883. Re: Is Lithium Grease good for assembling antenna mating sections?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-14 13:53:02 UTC
From: David Ornee <daveornee@mindspring.com>
Message-ID: <ajdni4$b0p$1@slb3.atl.mindspring.net>
Source record: 136824

Lithium grease isn't good for this application.
The following is a list of paste and grease-like products for the prevention
of oxidation of aluminum in electrical connections and antenna
installations: (Prices could be out of date)

Manufacturer:
Butternut Electronics Company
831 North Central Avenue
Wood Dale, IL 60191
Tel: (708) 238-1854
Fax: (708) 238-1186
Product Name: Butter-It's-Not
Source: Direct if not stocked by local authorized dealer.
Price: $3.50/ Envelope
NOTES: Contains copper dust in a molybdemum suspension.
LOCAL NOTE: This one gets really good press from those who have used it.

Manufacturer:
GB Electrical
6101 N. Baker Road
Milwaukee, WI 53209
Tel: 1-800-558-4311
Product Name: OX-GARD
Source: Available from many electrical supply houses and retail
outlets such as Sears, Home Depot, Ace and True Value
Hardware stores. No Factory direct sales.
GB catalog number OX-100B.
Price: Approximately 3.00/ 1-oz tube

Manufacturer:
Ideal Industries, Inc.
Becker Place
Sycamore, IL 60178
Tel: 1-800-435-0705
and: 1-815-895-5181
Fax: 1-800-533-4483
Product Name: NOALOX
Source: Distributors (Call 800 number for nearest one)
Price: Ideal list price $2.58/ half oz tube (#30-024) and
$8.64/8oz bottle (#30-030).
NOTES: Also available from many electrical wholesale supply houses.
No factory direct sales. Contains zinc particles suspended
in a carrier.

Manufacturer:
KLM Antennas Inc.
PO Box 694
Monroe, WA 98272
Tel: 1-360-794-2923
Fax: 1-360-794-0294
Product Name: Conductive Paste
Source: Factory direct and larger dealers.
Price: $3.50 plus shipping & handling/ 1 ounce containers
NOTES: Anti-seize thread compound Hi-Temperature MIL-A-907E.
Contains copper and graphite flakes suspended in a petroleum
base. Manufactured for Mirage/KLM by Chemical Commodities
Agency, Inc. of Highland, CA per MIL-A-907E.

Manufacturer:
Sanchem, Inc.
1600 S. Canal Street
Chicago, IL 60616
Tel: 1-800-621-1603
Out of State: 1-312-733-6111
Fax: 1-312-733-7432
Product Name: NO-OX-ID
Source: Direct from Manufacturer
Price: $11/16oz can or $8.80/8oz tube (plus shipping)
Minimum order - $35
NOTES: NO-OX-ID comes in several consistencies. NO-OX-ID "A" and
NO-OX-ID "A-Special" are suitable for most antenna installations.
NO-OX-ID "A-Special" is similar to NO-OX-ID "A" but has a small
amount of solvent added for ease of application.

Manufacturer:
Thomas & Betts Company
1555 Lynnfield Road
Memphis, TN 38119
Tel: 1-800-888-0211
Fax: 1-800-888-0790
Product Name: Aluma-Shield
Source: No direct factory sales. Available from many electrical
supply distributors.
Price: Approximately $11.44/ 8oz can.
NOTES: Customer may call 800 number for location of nearest distributor.
Contains zinc particles suspended in a petroleum base.

Manufacturer:
Burndy Electrical
101 E. Industrial Park Dr.
Manchester, NH, 03108
Tel: 1-800-346-4175
Fax: 1-800-346-9826
Product Name: Penetrox (PEN-A)
Source: Electrical wholesalers
Price: Approx. $6/ 3oz tube

NOTES: Zinc particles suspended in a natural based compound.
LOCAL NOTE: Loaded with metal, needs a lot of stirring before use with a stick etc., seems to work well on sliding, telescoping aluminum elements.

Manufacturer:
Ilsco Corporation
4730 Madison Road
Cincinnati, Ohio 45227
Tel: 1-513-533-6200
Fax: 1-513-533-6274
Product Name: DE-OX
Source: No factory direct sales. Available from electrical supply wholesalers and distributors. Customer may call for nearest distributor.
Price: Approximately $2.90/ 1oz, $4.90/ 4oz and $7.30/ 8oz squeeze bottle.
NOTES: Used in the electrical trade for Al/Cu and Al/Al connections. Green colored grease with no noticeable particles in suspension.

Manufacturer:
Antennas West
PO Box 50062
Provo, Utah 84605
Tel: 1-801-373-8425
Fax: 1-801-373-8426
Product Name: Goose Grease
Source: Factory direct sales only.
Price: $1.00/ 1oz + and $1.00 p&h.
NOTES: Transparent silicone grease. Antennas West also recommends this product for ground rod clamp connections.

Manufacturer:
Mosley Electronics, Inc.
10812 Ambassador Blvd.
St. Louis, MO 63132
Tel: 1-800-966-7539
and: 1-800-325-4016
and: 1-314-994-7872
Fax: 1-314-994-7873
Product Name: 1) Mosley Penatrox (Conductive Grease)
2) Weather Guard (Clear spray coating)
Source: Factory direct sales only.
Price: Mosley Penatrox- $4.45 / packet + postage.
Weather Guard- $12.75/ 8oz spray can + shipping
NOTES: Mosley Penatrox is a grease-like product. Weather Guard is a clear spray especially recommended for marine and coastal environments. Weather Guard cannot be shipped via the post office; UPS required.

Manufacturer:
Loctite Corporation
1001 Troutbrook Crossing
Rocky Hill, CT 06067-3910
Tele: 800-842-0041
Product Name: Permatex ANTI-SEIZE LUBRICANT
Source: Many Automotive Supply Distributors
Price: N/A
NOTES: Comes in 1 oz squeeze tube, 8 fluid oz brush top container,
and a 12 oz aerosol can. Can be used on the threads of
U-bolts to prevent "seizing, galling, and corrosion."
It aids in the disassembly of the the antenna's hardware.
Not for use on electrical connections. The part no. on
a 1 oz tube is 133A.

ICE of Indianapolis also makes conductive paste for this application.
73, KQ9W, David Ornee, Western Springs, IL

"StarGazer" <pti@capnet.com> wrote in message
news:3D59C4DA.3E49CAF4@capnet.com...
> dfgh
>

2884. Re: A closer look

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-14 13:55:37 UTC
From: richardharrison@webtv.net
Message-ID: <24561-3D5A6159-9@storefull-2396.public.lawson.webtv.net>
Source record: 136826

Ian, G3SEK wrote:
"Sure you can - it`s a classic two tone test setup. (I had
said---transmitters are incapable of more than 100 watts each)"

Yes, but I was using average power in my statement. You don`t have to
modulate to make a peak power observation. In a single sinewave the peak
power is exactly 2x the average because 1.414 times the volts multiplied
by 1.414 tines the volts produce twice the average power as a peak
power. It`s already there if you would like to make a peak power
observation.
Average power is half the peak power, as everyone should already know..

Best regards, Richard Harrison, KB5WZI

2885. Re: Amateur CB Radio

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-14 14:01:44 UTC
From: JB <ac6tk@nospamcybertime.net>
Message-ID: <ajdns9$5h8$1@madmax.keyway.net>
Source record: 136825
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.dx,rec.radio.amateur.equipment

"Hank Oredson" <horedson@att.net> wrote in message
news:8Kh69.10512$Ke2.915522@bgtnsc04-news.ops.worldnet.att.net...
:
:
: Didn't you mean "... drunken lunacy."?
: Not far from here is a large truck stop.
: It's kinda fun listening to the ladies on their way to service the truckers.
:
I think they do that out in a dirty corner around here too, but they are
all skanky ho's all wacked out on drugs. All the bitches want to do is
sit on the john banging themselves with needles, what do they really
need a man for? For safe sex, just piss on it. I've had better in third
world countries.

Jim, ac6tk

2886. Re: A closer look

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-14 14:02:14 UTC
From: richardharrison@webtv.net
Message-ID: <24560-3D5A62E6-23@storefull-2396.public.lawson.webtv.net>
Source record: 136827

Bill Nelson wrote:
"If you connect the batteries in parallel, you have twice the current at
the original voltage."

Not if you don`t chop the resistance in half.

Best regards, Richard Harrison, KB5WZI

2887. Re: A closer look

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-14 14:25:33 UTC
From: richardharrison@webtv.net
Message-ID: <24560-3D5A685D-25@storefull-2396.public.lawson.webtv.net>
Source record: 136828

Obviously I wrote volts when i intended to write amps in a previous posting. Power is volts times amps in-phase.
Best regards, Richard Harrison, KB5WZI

2888. Re: A closer look

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-14 14:57:05 UTC
From: CAM <w5dxp@hotmail.com>
Message-ID: <3D5A6FC1.F029FEFC@hotmail.com>
Source record: 136829

"Ian White, G3SEK" wrote:
> Vector addition gives 400W peak envelope power ...

In all of our discussions, Ian, we have been discussing
average power.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

2889. Re: A closer look (conservation of energy)

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-14 15:04:02 UTC
From: CAM <w5dxp@hotmail.com>
Message-ID: <3D5A7162.E156CDAB@hotmail.com>
Source record: 136830

Richard Harrison wrote:
>
> CAM, W5DXP wrote:
> "I don`t agree with Walt`s "virtual short"---."
>
> I have never seen a copy of "Reflections", but I have a question. Would
> you agree that a series resonant circuit is a virtual short?

Nope, it's a short (assuming perfect components) but it's not virtual.
A virtual impedance is when you look into a 1/2WL piece of 50 ohm
line and detect the conditions existing at the load, 1/2WL away.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

2890. Re: A closer look (conservation of energy)

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-14 15:14:06 UTC
From: CAM <w5dxp@hotmail.com>
Message-ID: <3D5A73BE.DCA44CC0@hotmail.com>
Source record: 136831

Roy Lewallen wrote:
>
> You can get more voltage out of transmission lines than you can
> tranformers? Huh? Tesla is surely rolling over in his grave.
>
> Isn't smoking that stuff still a felony in Texas?

I do believe you have misunderstood what I said.

In the transmission line, Steve adds 106.066v at 0.707a (75w) to
35.355v at 0.236a (8.33w) and obtains 141.4v at 0.943a (133.33w)
without any additional energy.

It is impossible to do that with a transformer. That's makes the
transmission line much, much more efficient than a transformer.
The efficiency of a perfect transformer is only 100%. The efficiency
of Steve's transmission line is 160%. We need to convert all of
our transformers over to transmission lines as soon as possible.
That would be much more effective than solar power or wind power.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

2891. Ladder-line Orientation?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-14 16:18:23 UTC
From: wa2si@arrl.net
Message-ID: <b7d1465c.0208140818.4532f9a0@posting.google.com>
Source record: 136832

I have a 40-meter doublet fed with approx. 40 ft. of 600 Ohm ladder-line. The antenna crosses my roof and the ladder line slopes down to the edge, where it then drops down to a 4:1 balun suspended just outside my shack window. I'd like to raise the balun up approx. 7 or so ft. so the ladder-line no longer rests on the roof's edge. This would cause the ladder-line to kinda run horizontal over to the side of the house and only require approx. 30 ft. to reach the balun. My question is whether or not the horizontal vs. vertical orientation of the ladder-line adversely affects the antenna system's performance in any way? To be honest, the ladder-line from the antenna to the roof's edge is at a pretty shallow angle as it stands now. I thought I'd ask anyway. Thanks in advance.

73 de Bert
WA2SI

2892. Re: Ladder-line Orientation?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-14 16:25:49 UTC
From: Bibby <bibby@attbi.com>
Message-ID: <hwv69.134856$uj.190776@rwcrnsc51.ops.asp.att.net>
Source record: 136833

Bert, if it does make a difference, you will never know it!

Malcolm

"Bert Craig" <wa2si@arrl.net> wrote in message
news:b7d1465c.0208140818.4532f9a0@posting.google.com...
> I have a 40-meter doublet fed with approx. 40 ft. of 600 Ohm
> ladder-line. The antenna crosses my roof and the ladder line slopes
> down to the edge, where it then drops down to a 4:1 balun suspended
> just outside my shack window. I'd like to raise the balun up approx. 7
> or so ft. so the ladder-line no longer rests on the roof's edge. This
> would cause the ladder-line to kinda run horizontal over to the side
> of the house and only require approx. 30 ft. to reach the balun. My
> question is whether or not the horizontal vs. vertical orientation of
> the ladder-line adversely affects the antenna system's performance in
> any way? To be honest, the ladder-line from the antenna to the roof's
> edge is at a pretty shallow angle as it stands now. I thought I'd ask
> anyway. Thanks in advance.
>
> 73 de Bert
> WA2SI

2893. Re: A closer look (conservation of energy)

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-14 16:31:45 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <am1llusmoeuhllov6vne3b76vjg2h4eer3@4ax.com>
Source record: 136834

On Wed, 14 Aug 2002 10:14:06 -0500, CAM <w5dxp@hotmail.com> wrote:

>Roy Lewallen wrote:
>>
>> You can get more voltage out of transmission lines than you can
>> tranformers? Huh? Tesla is surely rolling over in his grave.
>>
>> Isn't smoking that stuff still a felony in Texas?
>
>I do believe you have misunderstood what I said.
>

:-)

2894. Email to Doug Smith, kf6dx, QEX Editor

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-14 16:38:05 UTC
From: CAM <w5dxp@hotmail.com>
Message-ID: <3D5A876D.B9100406@hotmail.com>
Source record: 136835

Here's an email that I just sent to Doug Smith.

Attn: Doug Smith

Hi Doug, I'm Cecil Moore, W5DXP, ex-W6RCA. It seems that the reflected power debate has gone to unnecessary lengths in time and verbiage. Both sides of the two arguments being presented are flawed. My ideas are somewhere in between and are perfectly consistent with transmission line theory and the conservation of energy principle.

Here's the example that we have been using:

100w XMTR---50 ohm feedline---+---1/2WL of 150 ohm feedline---50 ohm load

The reflection coefficient at the 50/150 ohm junction is 0.5.

Attached is a phasor diagram of what happens at the match point. That same phasor diagram can be viewed on the web at:

http://www.qsl.net/w5dxp/Z0MATCH.GIF

The components on the phasor diagram are as follows:

1. (100 watts) forward power on the 50 ohm line coming from the generator. These two voltage and current phasors are drawn at 90 degrees because it is easy to draw. Thus that 90 degrees becomes our reference for all the other voltage and current phasors.

2. In accordance with accepted wave reflection mechanics, (25 watts) of the source 100 watts is reflected back toward the source at the match point.

3. In accordance with accepted wave reflection mechanics, (75 watts) of the source 100 watts flows through the match point and joins the forward wave, in phase, on the 150 ohm line.

4. The steady-state power reflected from the load is (33.33 watts).

5. (8.33 watts) of that 33.33 watts is re-reflected at the match point in accordance with accepted wave reflection physics.

6. (25 watts) of that 33.33 watts flows through the 150/50 junction in accordance with accepted wave reflection mechanics.

Component number 2 and component number 6 are out of phase. Their voltages are 180 degrees out of phase and their currents are 180 degrees out of phase (see phasor diagram). When these two waves encounter each other, they cancel, or more correctly they engage in destructive interference.

According to the principle of the conservation of energy, when there is a destructive interference pattern established, there must also be a constructive interference pattern established somewhere else. Since the destructive interference is completely confined to a piece of coax, the constructive interference must be established at essentially the same point as the destructive interference.

The destructive interference pattern involving the two 25 watt waves cancels any energy flowing back toward the source. We can verify this with a wattmeter. The 50 joules/sec (watts) involved in the destructive interference pattern MUST appear somewhere as it cannot disappear from the universe. It is not traveling back toward the source. That leaves only one direction that it can take. The 50 joules/sec involved in the destructive interference changes direction and heads back toward the load (it has no other choice). It thus becomes constructive interference and joins the forward wave on the 150 ohm line.

The appropriate voltage equation is:

106.066v + 35.355v + 35.355v - 35.355v = 141.4v

The last two terms in the sum are the voltages involved in the destructive interference.

The appropriate current equation is:

0.707a + 0.236a + 0.707a - 0.707a = 0.943a

The last two terms in the sum are the currents involved in the destructive interference.

Multiplying voltages by currents yields the power equation:

75w + 8.33w + 25w + 25w = 133.33w

And there you have it. Everything is perfectly consistent with transmission line theory and the conservation of energy principle.

At the match point, all the reflected power is re-directed back toward the load through two processes, one of re-reflection and the other of cancellation (destructive/constructive interference).
--
73, Cecil, w5dxp@arrl.net

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
------== Over 80,000 Newsgroups - 16 Different Servers! =-----

2895. Re: Email to Doug Smith, kf6dx, QEX Editor

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-14 16:54:47 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <5q2llukrseqr60af37sbor1nu77prfn098@4ax.com>
Source record: 136836

On Wed, 14 Aug 2002 11:38:05 -0500, CAM <w5dxp@hotmail.com> wrote:

>The appropriate current equation is:
>
>0.707a + 0.236a + 0.707a - 0.707a = 0.943a
>

Hi Cecil,

How do you know the correct current equation isn't:
0.707a + 0.236a + 0.707a - 0.707a + 0.707a - 0.707a + 0.707a -
...
0.707a + 0.707a - 0.707a + 0.707a - 0.707a + 0.707a - 0.707a +
0.707a - 0.707a + 0.707a - 0.707a + 0.707a - 0.707a = 0.943a

Both sides of the equation balance and make as much sense as yours.
Can you prove otherwise? I didn't think so.

73's
Richard Clark, KB7QHC

2896. What is Lithium grease good for?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-14 16:58:32 UTC
From: StarGazer <pti@capnet.com>
Message-ID: <3D5A8C38.7D018C38@capnet.com>
Source record: 136839

....as

2897. Re: Email to Doug Smith, kf6dx, QEX Editor

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-14 16:59:57 UTC
From: CJ <fantastic@sex.edu>
Message-ID: <ull34g4abdg1a@corp.supernews.com>
Source record: 136837
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.equipment

Holy shit....the lengths some butt-holes will go to "prove themselves
right"
1. http://www.ab7sl.com/index.html?row1col2=lets-argue.html
--
73 / DX de AB7SL - Charles
AB7SL - Ham Radio Pages
Prescott, Arizona - USA
www.ab7sl.com

2898. Re: Email to Doug Smith, kf6dx, QEX Editor

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-14 17:14:58 UTC
From: CAM <w5dxp@hotmail.com>
Message-ID: <3D5A9012.DC7ABE0C@hotmail.com>
Source record: 136838

Richard Clark wrote:
>
> On Wed, 14 Aug 2002 11:38:05 -0500, CAM <w5dxp@hotmail.com> wrote:
>
> >The appropriate current equation is:
> >
> >0.707a + 0.236a + 0.707a - 0.707a = 0.943a
> >
>
> Hi Cecil,
>
> How do you know the correct current equation isn't:
> 0.707a + 0.236a + 0.707a - 0.707a + 0.707a - 0.707a + 0.707a -
> 0.707a + 0.707a - 0.707a + 0.707a - 0.707a + 0.707a - 0.707a +
> 0.707a - 0.707a + 0.707a - 0.707a + 0.707a - 0.707a = 0.943a

Because there are no component waves to support all those currents.
I have only shown the currents of the actual component waves that
exist in reality. The forward energy wave on the 150 ohm line is
the combination of four and only four wave components.

> Both sides of the equation balance and make as much sense as yours.
> Can you prove otherwise? I didn't think so.

You know one cannot prove a negative, Richard. I have made assertions.
If you choose, it is up to you to disprove my assertions. Your above
diversion doesn't disprove anything. It just means you have fantasized
a bunch of currents into existence in your mind that don't exist in
reality. I have not done that.

One rule you need to adopt for yourself is don't add in more currents
than exist in reality.

Each EM wave component in a transmission line has an associated voltage,
current, characteristic impedance, and energy (power). These wave components
can be identified separately. Don't make up currents for non-existent wave
components and you will keep yourself out of trouble.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

2899. Re: Email to Doug Smith, kf6dx, QEX Editor

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-14 17:18:35 UTC
From: CAM <w5dxp@hotmail.com>
Message-ID: <3D5A90EB.28FF1C6E@hotmail.com>
Source record: 136840
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.equipment

CJ wrote:
> Holy shit....the lengths some butt-holes will go to "prove themselves
> right"

The goal is to prove myself right. I apparently haven't done that yet.
Thus, the continuing effort toward achieving that goal. Einstein thought
he was right and persevered against his detractors. You think he
was wrong for doing so?
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
------== Over 80,000 Newsgroups - 16 Different Servers! =-----

2900. Re: What is Lithium grease good for?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-14 17:36:52 UTC
From: KB9TMP <kb9tmp@juno.com>
Message-ID: <ull57f6mmp7j3e@corp.supernews.com>
Source record: 136841

"StarGazer" <pti@capnet.com> wrote in message
news:3D5A8C38.7D018C38@capnet.com...
> ....as
>

I keeps your Lithium lubricated!
Kind of like axle grease only different.
;^)

The real answer is just about any thing that
you would grease like rack & pinion steering
gears, tie rod ends, CV joints, and the such.
It's just a good quality grease.
--

'73' From KB9TMP
"The secret of life is honesty and fair dealing,
if you can fake that, you've got it made."
-Groucho Marx

2901. Re: Email to Doug Smith, kf6dx, QEX Editor

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-14 17:40:18 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <al5llusfm1hc4l29519amder7849tb0s6e@4ax.com>
Source record: 136842

On Wed, 14 Aug 2002 12:14:58 -0500, CAM <w5dxp@hotmail.com> wrote:

> It just means you have fantasized
>a bunch of currents into existence in your mind that don't exist in
>reality. I have not done that.

Ah! There in lies the difference, I was aware of my fantasy :-)

73's
Richard Clark, KB7QHC

2902. Superposition quiz

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-14 17:48:05 UTC
From: CAM <w5dxp@hotmail.com>
Message-ID: <3D5A97D5.569F7582@hotmail.com>
Source record: 136843

Here's a quiz for all you superposition gurus. The Superposition Theorem states that energy waves can be superposed at one end and de-superposed (decomposed) at the other end of, for instance, a transmission line.

Steve superposes (106.066v at 0.707a) and (35.355v at 0.236a) to obtain a superposed wave of (141.4v at 0.943a).

The superposition theorem says these same components can be de-superposed (decomposed) back into the original components. So we should be able to obtain (106.066v at 0.707a) and (35.355v at 0.236a) at the output end of the circuit.

Can anyone show me how to decompose (141.4v at 0.943a) into the original two (and only two) signals?

From the IEEE Dictionary: "superposition theorem - States that the current that flows in a linear network distributed in any manner whatsoever throughout the network is the sum of the component currents at the first point." The same holds true for voltages.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
------== Over 80,000 Newsgroups - 16 Different Servers! =-----

2903. Re: Email to Doug Smith, kf6dx, QEX Editor

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-14 17:50:16 UTC
From: CAM <w5dxp@hotmail.com>
Message-ID: <3D5A9858.D362D5F4@hotmail.com>
Source record: 136844

Richard Clark wrote:
>
> CAM <w5dxp@hotmail.com> wrote:
> > It just means you have fantasized
> >a bunch of currents into existence in your mind that don't exist in
> >reality. I have not done that.
>
> Ah! There in lies the difference, I was aware of my fantasy :-)

Richard, my current components are the same ones that Bill Klocko
originated in his posting. Do you not trust Bill?
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
------== Over 80,000 Newsgroups - 16 Different Servers! =-----

2904. Re: Email to Doug Smith, kf6dx, QEX Editor

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-14 18:06:19 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <v37lluo11b64a8akgb2el3s6me4636fgcu@4ax.com>
Source record: 136845

On Wed, 14 Aug 2002 12:50:16 -0500, CAM <w5dxp@hotmail.com> wrote:

>Richard Clark wrote:
>>
>> CAM <w5dxp@hotmail.com> wrote:
>> > It just means you have fantasized
>> >a bunch of currents into existence in your mind that don't exist in
>> >reality. I have not done that.
>>
>> Ah! There in lies the difference, I was aware of my fantasy :-)
>
>Richard, my current components are the same ones that Bill Klocko
>originated in his posting. Do you not trust Bill?

Hi Cecil,

Really, I find it hard to - uh - debate when trust and fantasy are
commingled with technical discussion. Hence I prefer to appreciate
your writing as fiction and leave the debate behind. ;-)

73's
Richard Clark, KB7QHC

2905. Re: Superposition quiz

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-14 18:08:48 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <m87llukqssc6omv6sc6hjitrplffptl89m@4ax.com>
Source record: 136846

On Wed, 14 Aug 2002 12:48:05 -0500, CAM <w5dxp@hotmail.com> wrote:

> The Superposition Theorem
>states

Hi Cecil,

Please offer a citation of an authority otherwise this is simply a
hearsay evidence.

73's
Richard Clark, KB7QHC

2906. Re: Superposition quiz

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-14 18:11:48 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <3f7llu4m1tppqqrt794u1eu5j1qi3usk6s@4ax.com>
Source record: 136847

On Wed, 14 Aug 2002 18:08:48 GMT, Richard Clark <kb7qhc@attbi.com>
wrote:

>On Wed, 14 Aug 2002 12:48:05 -0500, CAM <w5dxp@hotmail.com> wrote:
>
>> The Superposition Theorem
>>states
>
>Hi Cecil,
>
>Please offer a citation of an authority otherwise this is simply a
>hearsay evidence.
>
>73's
>Richard Clark, KB7QHC

yes, your IEEE dictionary is nothing more than hearsay

Show us a citation to the application of this novel explanation you
offer for what you found in your IEEE dictionary.

73's
Richard Clark, KB7QHC

2907. Re: Email to Doug Smith, kf6dx, QEX Editor

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-14 18:23:49 UTC
From: VE9SRB <srbest@att.net>
Message-ID: <Vex69.12196$Ep6.969726@bgtnsc05-news.ops.worldnet.att.net>
Source record: 136848

"CAM" <w5dxp@hotmail.com> wrote in message
news:3D5A9858.D362D5F4@hotmail.com...
> Richard Clark wrote:
> >
> > CAM <w5dxp@hotmail.com> wrote:
> > > It just means you have fantasized
> > >a bunch of currents into existence in your mind that don't exist in
> > >reality. I have not done that.
> >
> > Ah! There in lies the difference, I was aware of my fantasy :-)
>
> Richard, my current components are the same ones that Bill Klocko
> originated in his posting. Do you not trust Bill?
> --
> cheers, CAM http://www.qsl.net/w5dxp

We all agree on the voltage and current components. We need to move beyond that point. The disagreements arise from our interpretation of how forward voltages and currents combine and how the resulting forward power is determined from that combining.

Independent of *any* specific example conditions, two forward voltages of 106.06 V and 35.34 V in a transmission line, added in phase, will always result in a total voltage of 141.1 V and the total forward power in a 150 ohm line will always be 133.3 W. Nothing will ever change that, regardless of how the example is set up.

Steve VE9SRB

2908. Re: Superposition quiz

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-14 18:30:32 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <3D5AA1C8.20202@eznec.com>
Source record: 136849

What textbooks are you reading?

In _Network Analysis_, Van Valkenburg says that:

". . .we observe that we may consider each of the transform sources [in a network] one at a time and then add the partial responses to get I2(s) [the total transform current]. This is, in essense, the superposition principle. . . A given response in a network resulting from a number of independent sources (including initial-condition sources) may be computed by summing the response to each individual source with all other sources made inoperative (reduced to zero voltage or zero current). This statement describes the additivity property of linear networks."

A more succinct definition can be found in _Introductory Circuit Analysis_, where Pearson & Maler write:

"Superposition applies to these [driving function/response] equations. This means that if x1 is the response to f1(t) and x2 is the response to f2(t) then (x1 + x2) is the response to f1(t) + f2(t)."

Specifically speaking of the superposition of fields, Kraus writes in _Electromagnetics_:

"The Electric Field of Several Point Charges and the Principle of Superposition of Fields. Since the electric field of a point charge is a linear function of the value of the charge, it follows that the fields of more than one point charge are linearly superposable by vector addition. As a generalization, this fact may be stated as the principle of superposition applied to electric fields as follows: The total or resultant field at a point is the vector sum of the individual component fields at the point."

No mention is made in any of these texts of a requirement or method to "de-superpose" voltages, currents, responses, waves, or fields.

Roy Lewallen, W7EL

CAM wrote:
> Here's a quiz for all you superposition gurus. The Superposition Theorem
> states that energy waves can be superposed at one end and de-superposed
> (decomposed) at the other end of, for instance, a transmission line.
>
> Steve superposes (106.066v at 0.707a) and (35.355v at 0.236a) to
> obtain a superposed wave of (141.4v at 0.943a).
>
> The superposition theorem says these same components can be de-

> superposed (decomposed) back into the original components. So
> we should be able to obtain (106.066v at 0.707a) and (35.355v
> at 0.236a) at the output end of the circuit.
>
> Can anyone show me how to decompose (141.4v at 0.943a) into the
> original two (and only two) signals?
>
> From the IEEE Dictionary: "superposition theorem - States that the
> current that flows in a linear network distributed in any manner
> whatsoever throughout the network is the sum of the component
> currents at the first point." The same holds true for voltages.

2909. Supergain of monopole

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-14 18:57:48 UTC
From: fractenna@aol.com
Message-ID: <20020814145748.07534.00000399@mb-ba.aol.com>
Source record: 136850

Hi,

Am looking for information on supergain monopoles.

I have Bob Haviland's (very nice) article; instead I am looking for published techniques to get a small (less than 1/15 wave) omni-azimuthal monopole to have gain over a quarter wave. (I know that a 1/8 wave, for example, is 'supergaining'; I am looking for known techniques that have been used beyond merely shortening to meet the definition of 'supergaining'.)

I know about bandwidth/impedance issues; mutual coupling; yadayada:-)

I also know how to make a Yagi-Uda supergain. That's not the issue here:-)

Basically I am looking for published techniques to get a short monopole to be gain-ful. My literature search turned up nothing.

E-mail reply is fine.

Thanks,
Chip N1IR

2910. ISOPOLE

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-14 19:13:17 UTC
From: Tarmo Tammaru <t-tammaru@home.com>
Message-ID: <hZx69.4077$SS.67829@bin3.nnrp.aus1.giganews.com>
Source record: 136852

I have a disassembled Isopole 2 M antenna that I want to give to somebody, but lost the instruction sheet. Does anybody know what the spacing between the two cones is ? I think it was 1/4 wavelength.

Tam/WB2TT

2911. Re: Superposition quiz

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-14 19:13:34 UTC
From: VE9SRB <srbest@att.net>
Message-ID: <yZx69.12258$Ep6.971335@bgtnsc05-news.ops.worldnet.att.net>
Source record: 136851

"Roy Lewallen" <w7el@eznec.com> wrote in message
news:3D5AA1C8.20202@eznec.com...

Hi Roy,

>. As a generalization, this fact may be stated as the principle
> of superposition applied to electric fields as follows: The total or
> resultant field at a point is the vector sum of the individual component
> fields at the point."
>

Which is why 106.06 V added in phase with 35.34 V equals 141.4 V for which the total power is 133.3 W in a 150 transmission line. It appears that Cecil does not like to apply superposition to the "fields" themselves (V and I) because the associated powers don't add up correctly. Superposition of power does not work because of the "loss" of the vector information "contained" within the fields themselves. Dr. L. J. Chu, summarized it nicely in the text, Electromagnetic Energy Transmission and Radiation, "it is rare that the powers produced by two separate causes acting individually upon even a linear system can simply be added algebraically to determine the total power when both causes act together." Another fine reference on the subject is Chu's other text Electromagnetic Fields, Energy and Forces.

Steve VE9SRB

2912. Re: Email to Doug Smith, kf6dx, QEX Editor

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-14 19:19:37 UTC
From: tdonaly@aol.com
Message-ID: <20020814151937.25416.00000357@mb-fz.aol.com>
Source record: 136853

Cecil wrote,
>According to the principle of the conservation of energy, when there
>is a destructive interference pattern established, there must also
>be a constructive interference pattern established somewhere else.
>Since the destructive interference is completely confined to a piece
>of coax, the constructive interference must be established at
>essentially the same point as the destructive interference.
>
Cecil,
Uh, don't you think you should run that by a reputable physicist, somewhere?
Or,
better yet, think it through yourself, make a mathematical model, and then
describe
an experiment that anyone can do that supports your model. If you don't take
extraordinary steps to prove the above you run the danger of being labelled a
crackpot, and then no one will listen to anything you say.

Tom Donaly KA6RUH

2913. Re: Email to Doug Smith, kf6dx, QEX Editor

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-14 19:27:25 UTC
From: CAM <w5dxp@hotmail.com>
Message-ID: <3D5AAF1D.3C3C3FA7@hotmail.com>
Source record: 136854

Richard Clark wrote:
> Really, I find it hard to - uh - debate when trust and fantasy are
> commingled with technical discussion. Hence I prefer to appreciate
> your writing as fiction and leave the debate behind. ;-)

Have you taken my superposition quiz?
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

2914. Re: Superposition quiz

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-14 19:28:41 UTC
From: CAM <w5dxp@hotmail.com>
Message-ID: <3D5AAF69.3EDA89CF@hotmail.com>
Source record: 136855

Richard Clark wrote:
>
> On Wed, 14 Aug 2002 12:48:05 -0500, CAM <w5dxp@hotmail.com> wrote:
>
> > The Superposition Theorem
> >states
>
> Hi Cecil,
>
> Please offer a citation of an authority otherwise this is simply a
> hearsay evidence.

Richard, if you don't accept a quote from the IEEE Dictionary as
a "citation of an authority", what would you accept?
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
------== Over 80,000 Newsgroups - 16 Different Servers! =-----

2915. Re: How far away: HF Dipole and tri-bander vertical?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-14 19:34:39 UTC
From: Tarmo Tammaru <t-tammaru@home.com>
Message-ID: <jhy69.2168$Fw3.81639@bin2.nnrp.aus1.giganews.com>
Source record: 136856

Ken,

Be sure you have an external lowpass filter on the HF rig, and it might work OK. Might also cure your TVI. Aug QSL tested LPFs. There were only two that looked any good. One was the Bencher, don't remember the other one. If you don't care about 10 m, any of them would be OK. If it still won't work, you also neeed a high pass filter on the VHF antenna. Since the filters would go in the shack, try it first as is.

Tam/WB2TT
"Ken" <cprstn54zz@att.net> wrote in message
news:3d58121b.340125@news-server.optonline.net...
> I can put my triband antenna (50/144/440 MFJ-1536 just reduced to
> $119) 3 ft above the center insulator of my multi-band HF dipole 60 ft
> from my shack (where it will out of sight = XYL happy), or over my
> shack (where it will be in the view = XYL unhappy). If I put it near
> the dipole, will 600 watts of HF de-sense the tribander on RX,
> assuming I am using a VX-5R or similar?
>
> I suspect it will since a mere 100 watts of CW on HF makes the TV's
> within 20 ft of the dipole blink. Will things be satisfactory even if
> the antennas are 60 ft apart? Should I just resign myself to doing HF
> or VHF but not both at the same time and put the antennas close?
>
> Ken KC2JDY
> Ken
> (to reply via email
> remove "zz" from address)

2916. Re: Superposition quiz

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-14 19:53:27 UTC
From: CAM <w5dxp@hotmail.com>
Message-ID: <3D5AB537.70A19813@hotmail.com>
Source record: 136857

Richard Clark wrote:
>
> On Wed, 14 Aug 2002 18:08:48 GMT, Richard Clark <kb7qhc@attbi.com>
> wrote:
>
> >CAM <w5dxp@hotmail.com> wrote:
> >> The Superposition Theorem states
> > >
> > >Please offer a citation of an authority otherwise this is simply a
> > >hearsay evidence.
> >
> > yes, your IEEE dictionary is nothing more than hearsay

You reject everything that proves that Steve has not only violated the conservation of energy principle but has also violated the superposition principle?

> Show us a citation to the application of this novel explanation you
> offer for what you found in your IEEE dictionary.

Egads Richard, are you saying the effects of superposition are irreversible? If so, you and Steve have jointly discovered perpetual motion.

From Johnson: "The principle of Superposition: If a number of electrical sources exist in a linear network, the resulting current *OR* voltage in any part of the system is equal to the sum of the currents *OR* voltages that would be caused by each source acting separately." Note the emphasis on '*OR*' is mine but relevant in the extreme.

Please note that it does NOT say: ... the resulting current
AND voltage in any part of the system is equal to the sum of the currents
AND voltages that would be caused by each source acting separately.

You have your choice of putting the voltages in parallel *OR* putting the currents in series. You are not allowed to do both at the same time.

Steve is adding the voltages AND currents at the same time. That is a violation of the principle of superposition. I got to wondering why the superposition principle allowed violation of the conservation of energy principle. Turns out, it doesn't.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
------== Over 80,000 Newsgroups - 16 Different Servers! =-----

2917. Re: Superposition quiz

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-14 19:58:02 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <3D5AB64A.1060408@eznec.com>
Source record: 136858

Or, as you know and as I mentioned in a posting a short while ago, if P1 = V1 * I1 and P2 = V2 * I2, then the power in the two superimposed voltage and current waves (V1 + V2) * (I1 * I2) isn't equal to P1 + P2. That's simple algebra.

Roy Lewallen, W7EL

VE9SRB wrote:
> "Roy Lewallen" <w7el@eznec.com> wrote in message
> news:3D5AA1C8.20202@eznec.com...
>
> Hi Roy,
>
>
>>. As a generalization, this fact may be stated as the principle
>>of superposition applied to electric fields as follows: The total or
>>resultant field at a point is the vector sum of the individual component
>>fields at the point."
>>
>
>
> Which is why 106.06 V added in phase with 35.34 V equals 141.4 V for which
> the total power is 133.3 W in a 150 transmission line. It appears that
> Cecil does not like to apply superposition to the "fields" themselves (V and
> I) because the associated powers don't add up correctly. Superposition of
> power does not work because of the "loss" of the vector information
> "contained" within the fields themselves. Dr. L. J. Chu, summarized it
> nicely in the text, Electromagnetic Energy Transmission and Radiation, "it
> is rare that the powers produced by two separate causes acting individually
> upon even a linear system can simply be added algebraically to determine the
> total power when both causes act together." Another fine reference on the
> subject is Chu's other text Electromagnetic Fields, Energy and Forces.
>
> Steve VE9SRB
>
>
>

2918. Re: Email to Doug Smith, kf6dx, QEX Editor

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-14 19:59:59 UTC
From: Fred Hambrecht <w4jle@charter.net>
Message-ID: <ulldm4d33fhi6a@corp.supernews.com>
Source record: 136859
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.equipment

I am glad I am not you after looking at the link you posted.

INCOMING!

"CJ" <fantastic@sex.edu> wrote in message
news:ull34g4abdg1a@corp.supernews.com...
> Holy shit....the lengths some butt-holes will go to "prove themselves
> right"
> 1. http://www.ab7sl.com/index.html?row1col2=lets-argue.html
> --
> 73 / DX de AB7SL - Charles
> AB7SL - Ham Radio Pages
> Prescott, Arizona - USA
> www.ab7sl.com
>
>
>
>

2919. Re: Superposition quiz

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-14 20:03:27 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <rjcllu0s7n10oipn8og7n4rikjqdfe3t70@4ax.com>
Source record: 136860

On Wed, 14 Aug 2002 14:28:41 -0500, CAM <w5dxp@hotmail.com> wrote:

>Richard Clark wrote:
>>
>> On Wed, 14 Aug 2002 12:48:05 -0500, CAM <w5dxp@hotmail.com> wrote:
>>
>> > The Superposition Theorem
>> >states
>>
>> Hi Cecil,
>>
>> Please offer a citation of an authority otherwise this is simply a
>> hearsay evidence.
>
>Richard, if you don't accept a quote from the IEEE Dictionary as
>a "citation of an authority", what would you accept?

Hi Cecil,

"Network Analysis," Van Valkenburg
"Introductory Circuit Analysis," Pearson & Maler
"Electromagnetics," Kraus
"Fields and Waves in Communication Electronics," Ramo et al.
"The Theory of the Electromagnetic Field," Cook

Are fine by me. They ALL speak directly to the matter. I presume you
have at least one title to offer of your own?

73's
Richard Clark, KB7QHC

2920. Re: Superposition quiz

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-14 20:04:28 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <3D5AB7CC.9080503@eznec.com>
Source record: 136863

But Cecil, the quote from the IEEE Dictionary doesn't support what you said about superposition. You said:

"The Superposition Theorem
states that energy waves can be superposed at one end and de-superposed (decomposed) at the other end of, for instance, a transmission line."

Your IEEE Dictionary quote says:

"From the IEEE Dictionary: "superposition theorem - States that the current that flows in a linear network distributed in any manner whatsoever throughout the network is the sum of the component currents at the first point." The same holds true for voltages."

These aren't the same. If you want anyone to take your "quiz" seriously, you've got to support what you said the superposition theorem states. The IEEE Dictionary citation doesn't.

Roy Lewallen, W7EL

CAM wrote:
> Richard Clark wrote:
>
>>On Wed, 14 Aug 2002 12:48:05 -0500, CAM <w5dxp@hotmail.com> wrote:
>>
>>
>>>The Superposition Theorem
>>>states
>>
>>Hi Cecil,
>>
>>Please offer a citation of an authority otherwise this is simply a
>>hearsay evidence.
>
>
> Richard, if you don't accept a quote from the IEEE Dictionary as
> a "citation of an authority", what would you accept?

2921. Re: Email to Doug Smith, kf6dx, QEX Editor

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-14 20:04:36 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <c4ellugeq6inj71vo9t296ct81c8m5kqd1@4ax.com>
Source record: 136861

On Wed, 14 Aug 2002 14:27:25 -0500, CAM <w5dxp@hotmail.com> wrote:

>Richard Clark wrote:
>> Really, I find it hard to - uh - debate when trust and fantasy are
>> commingled with technical discussion. Hence I prefer to appreciate
>> your writing as fiction and leave the debate behind. ;-)
>
>Have you taken my superposition quiz?

I don't take Cosmo quizes either ;-)

73's
Richard Clark, KB7QHC

2922. Re: Superposition quiz

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-14 20:05:47 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <g7elluodq21fb70pgoebjr2qoa037d1kgi@4ax.com>
Source record: 136862

On Wed, 14 Aug 2002 14:53:27 -0500, CAM <w5dxp@hotmail.com> wrote:

>Egads Richard, are you saying

:-)

2923. Re: Email to Doug Smith, kf6dx, QEX Editor

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-14 20:07:56 UTC
From: CAM <w5dxp@hotmail.com>
Message-ID: <3D5AB89C.8E25AD79@hotmail.com>
Source record: 136864

VE9SRB wrote:
> We all agree on the voltage and current components. We need to move beyond
> that point.

See below.

> Independent of *any* specific example conditions, two forward voltages of
> 106.06 V and 35.34 V in a transmission line, added in phase, will always
> result in a total voltage of 141.1 V and the total forward power in a 150
> ohm line will always be 133.3 W. Nothing will ever change that, regardless
> of how the example is set up.

Steve, you left out that the current associated with the 106.066 volts is 0.707 amps (75 watts into 150 ohms). The current associated with the 35.355 volts is 0.236 amps (8.33 watts into 150 ohms). The current associated with the 133.33 volts is 0.943 amps (133.33 watts into 150 ohms). You are not only adding the voltages, you are AT THE SAME TIME adding the currents. That is a violation of the superposition principle and leads directly to your erroneous results.

106.9066 volts + 35.355 volts = 141.45 volts
0.707 amps + 0.236 amps = 0.943 amps

Adding the voltages while at the same time adding the currents is a violation of the superposition principle. You are only allowed to add the voltages *OR* add the currents, not both at the same time. Adding both voltages and currents at the same time violates both the superposition principle and the conservation of energy principle. I've been wondering why the superposition principle allowed you to violate the conservation of energy principle. Turns out it doesn't and you are using it incorrectly. That makes most of what you wrote for QEX invalid.

Reference Johnson: page 244 (I found my book, now I'm dangerous :-)
Reference IEEE Dictionary: definition of Superposition Principle
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
------== Over 80,000 Newsgroups - 16 Different Servers! =-----

2924. Re: Superposition quiz

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-14 20:09:38 UTC
From: CAM <w5dxp@hotmail.com>
Message-ID: <3D5AB902.1C13299E@hotmail.com>
Source record: 136865

Roy Lewallen wrote:
> No mention is made in any of these texts of a requirement or method to
> "de-superpose" voltages, currents, responses, waves, or fields.

Roy, the probably thought nobody would be ignorant enough to believe
that the conservation of energy principle could be violated. I guess
they were wrong about that, eh?
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

2925. Re: Superposition quiz

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-14 20:12:28 UTC
From: CAM <w5dxp@hotmail.com>
Message-ID: <3D5AB9AC.B0CE1B4F@hotmail.com>
Source record: 136866

VE9SRB wrote:
>
> "Roy Lewallen" <w7el@eznec.com> wrote in message
> news:3D5AA1C8.20202@eznec.com...
>
> Hi Roy,
>
> >. As a generalization, this fact may be stated as the principle
> > of superposition applied to electric fields as follows: The total or
> > resultant field at a point is the vector sum of the individual component
> > fields at the point."
> >
>
> Which is why 106.06 V added in phase with 35.34 V equals 141.4 V for which
> the total power is 133.3 W in a 150 transmission line. It appears that
> Cecil does not like to apply superposition to the "fields" themselves (V and
> I) because the associated powers don't add up correctly. Superposition of
> power does not work because of the "loss" of the vector information
> "contained" within the fields themselves. Dr. L. J. Chu, summarized it
> nicely in the text, Electromagnetic Energy Transmission and Radiation, "it
> is rare that the powers produced by two separate causes acting individually
> upon even a linear system can simply be added algebraically to determine the
> total power when both causes act together." Another fine reference on the
> subject is Chu's other text Electromagnetic Fields, Energy and Forces.

See my other posting on the subject. You are in violation of the superposition
principle which states (indirectly) that you are not allowed to add the voltages
and the currents at the same time. You are allowed to add the voltages OR add
the currents but not both at the same time. That makes most of what you wrote
for QEX invalid including your power arguments with Walter Maxwell.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
------== Over 80,000 Newsgroups - 16 Different Servers! =-----

2926. Re: Email to Doug Smith, kf6dx, QEX Editor

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-14 20:16:56 UTC
From: CAM <w5dxp@hotmail.com>
Message-ID: <3D5ABAB8.443D3C4A@hotmail.com>
Source record: 136868

Tdonaly wrote:
>
> Cecil wrote,
> >According to the principle of the conservation of energy, when there
> >is a destructive interference pattern established, there must also
> >be a constructive interference pattern established somewhere else.
> >Since the destructive interference is completely confined to a piece
> >of coax, the constructive interference must be established at
> >essentially the same point as the destructive interference.
> >
> Cecil,
> Uh, don't you think you should run that by a reputable physicist, somewhere?
> Or,
> better yet, think it through yourself, make a mathematical model, and then
> describe
> an experiment that anyone can do that supports your model. If you don't take
> extraordinary steps to prove the above you run the danger of being labelled a
> crackpot, and then no one will listen to anything you say.

Einstein was labeled a crackpot at first, Tom. I have a physics minor to go
with my EE degree. Maybe you can answer the question for me. If 50 joules
per second of wave cancellation (that's the definition of destructive interference)
occurs, where does the 50 joules/sec go? If there are only two directions for it
to go (in a transmission line) and it's not going one direction, in which direction
is it going?
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
------== Over 80,000 Newsgroups - 16 Different Servers! =-----

2927. Re: ISOPOLE

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-14 20:21:22 UTC
From: KA9CAR <nospam@nospam.usa>
Message-ID: <ajedv3$3tb$1@news1.tribune.com>
Source record: 136867

My recollection is...
The top of the lower cone should be inside the bottom of the top cone by
just a little, so that the taper of the lower cone starts at the same point
that the skirt of the upper cone ends.
KA9CAR

Tarmo Tammaru <t-tammaru@home.com> wrote in message
news:hZx69.4077$SS.67829@bin3.nnrp.aus1.giganews.com...
> I have a disassembled Isopole 2 M antenna that I want to give to somebody,
> but lost the instruction sheet. Does anybody know what the spacing between
> the two cones is ? I think it was 1/4 wavelength.
>
> Tam/WB2TT
>
>

2928. Re: Superposition quiz

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-14 20:48:39 UTC
From: CAM <w5dxp@hotmail.com>
Message-ID: <3D5AC227.C8EE9888@hotmail.com>
Source record: 136769

Roy Lewallen wrote:
> Or, as you know and as I mentioned in a posting a short while ago, if P1
> = V1 * I1 and P2 = V2 * I2, then the power in the two superimposed
> voltage and current waves (V1 + V2) * (I1 * I2) isn't equal to P1 + P2.
> That's simple algebra.

Assuming we are talking about average power, Roy, where do those extra (or lacking_ joules/sec go (come from)? The only way for average energy in two summed waves not to add up is to have reflected energy going the other way as an effect of the superposition process.

It is my understanding of the superposition principle as presented by Johnson, that the voltages AND the currents cannot be summed at the same time. Johnson says voltages OR currents not voltages AND currents.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
------== Over 80,000 Newsgroups - 16 Different Servers! =-----

2929. Re: Superposition quiz

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-14 20:51:39 UTC
From: CAM <w5dxp@hotmail.com>
Message-ID: <3D5AC2DB.C25A0A02@hotmail.com>
Source record: 136771

Richard Clark wrote:
>
> On Wed, 14 Aug 2002 14:28:41 -0500, CAM <w5dxp@hotmail.com> wrote:
>
> >Richard Clark wrote:
> >>
> >> On Wed, 14 Aug 2002 12:48:05 -0500, CAM <w5dxp@hotmail.com> wrote:
> >>
> >> > The Superposition Theorem
> >> >states
> >>
> >> Hi Cecil,
> >>
> >> Please offer a citation of an authority otherwise this is simply a
> >> hearsay evidence.
> >>
> >>Richard, if you don't accept a quote from the IEEE Dictionary as
> >>a "citation of an authority", what would you accept?
>
> Hi Cecil,
>
> "Network Analysis," Van Valkenburg
> "Introductory Circuit Analysis," Pearson & Maler
> "Electromagnetics," Kraus
> "Fields and Waves in Communication Electronics," Ramo et al.
> "The Theory of the Electromagnetic Field," Cook
>
> Are fine by me. They ALL speak directly to the matter. I presume you
> have at least one title to offer of your own?

Do any of your references say you can add two voltages AND two currents
at the same time when superposing waves? Johnson doesn't.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
------== Over 80,000 Newsgroups - 16 Different Servers! =-----

2930. Re: Email to Doug Smith, kf6dx, QEX Editor

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-14 20:52:51 UTC
From: VE9SRB <srbest@att.net>
Message-ID: <Dqz69.11675$Ke2.1009765@bgtnsc04-news.ops.worldnet.att.net>
Source record: 136770

"CAM" <w5dxp@hotmail.com> wrote in message
news:3D5AB89C.8E25AD79@hotmail.com...

>
> Adding the voltages while at the same time adding the currents is
> a violation of the superposition principle. You are only allowed to add
the
> voltages *OR* add the currents, not both at the same time. Adding both
> voltages and currents at the same time violates both the superposition
> principle and the conservation of energy principle.

Johnson said that "the resulting current or voltage in any part of the
system is equal to the sum of the currents or voltages that would be caused
by each source acting alone." I don't interpret the use of the word "or" to
mean that either the voltage OR the currents superimpose but NOT both.

I would suggest you run a few simple circuit analyses without considering
the transmission line problem we have been discussing. Here's one.

```
+ _________ 50 ohm R _________+
100 V 200 V
- _________________________-
```

"+" reference direction for V and I ===>

Total solution:

Vtotal across R = +100 V - 200 V = -100 V
I across R = -2 A (-100/50), means net current flow towards 100 V source.

Superposition solution at R

with 100 V source. V = +100 V and I = +2 A

with 200 V source. V=-200 V and I = -4 A

Superimpose both V and I. Vtotal = +100 + -200 = -100V. Itotal = +2 + -4
= -2A

By the way, Johnson himself superimposes both voltage and current in this
transmission line analysis in section 4.2, pages 98 - 101. Work through
that derivation of the steady state and it will be obvious to you.

>
>Reference Johnson: page 244 (I found my book, now I'm dangerous :-)
>

Yes you are.

Steve VE9SRB

2931. Re: Superposition quiz

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-14 20:54:14 UTC
From: CAM <w5dxp@hotmail.com>
Message-ID: <3D5AC376.A0A75779@hotmail.com>
Source record: 136772

Roy Lewallen wrote:
>
> But Cecil, the quote from the IEEE Dictionary doesn't support what you
> said about superposition. You said:
>
> "The Superposition Theorem
> states that energy waves can be superposed at one end and de-superposed
> (decomposed) at the other end of, for instance, a transmission line."
>
> Your IEEE Dictionary quote says:
>
> "From the IEEE Dictionary: "superposition theorem - States that the
> current that flows in a linear network distributed in any manner
> whatsoever throughout the network is the sum of the component
> currents at the first point." The same holds true for voltages."
>
> These aren't the same.

What do you think "distributed in any manner" means? "Distributed in
any manner" includes reconstruction of the original waves.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
------== Over 80,000 Newsgroups - 16 Different Servers! =-----

2932. Re: A closer look

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-14 20:59:30 UTC
From: CAM <w5dxp@hotmail.com>
Message-ID: <3D5AC4B2.53EB60CD@hotmail.com>
Source record: 136773

GW3NCT@ wrote:
>
> On Tue, 13 Aug 2002 19:50:56 -0500, CAM <w5dxp@hotmail.com> wrote:
>
> >:Richard Harrison wrote:
> >:> With power limited r-f transmitters the story is different. Take it from
> >:> me. I`ve paralleled two 50 KW transmitters and the most I could
> >:> reasonably get out was 100 KW.
> >:
> >:Well, you obviously haven't been paying attention to what Steve has been
> >:saying. He can take two signals of 1581v at 31.6a and "add" them to get 3162v
> >:at 63.2a. Your two 50 KW transmitters wind up outputting 200 KW. That's how
> >:he gets 133.33 watts out of adding 75 watt and 8.33 watt signals.
>
> Cam,
>
> Why waste your time on that idiot? I am no scholar, but even I can
> (just) grasp you cannot add those voltages to get something for
> nothing. I have seen dozens of posts on this subject now. How can
> you convince a fool of the error of their ways? Impossible.

Only a congenital fool would refuse to listen to valid proof which I
am in the process of providing.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

2933. Re: Superposition quiz

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-14 21:16:27 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <gvhllusagabgtiprb7no698rg6hciqjlj2@4ax.com>
Source record: 136774

On Wed, 14 Aug 2002 15:51:39 -0500, CAM <w5dxp@hotmail.com> wrote:

>Richard Clark wrote:
>>
>> On Wed, 14 Aug 2002 14:28:41 -0500, CAM <w5dxp@hotmail.com> wrote:
>>
>> >Richard Clark wrote:
>> >>
>> >> On Wed, 14 Aug 2002 12:48:05 -0500, CAM <w5dxp@hotmail.com> wrote:
>> >>
>> >> > The Superposition Theorem
>> >> >states
>> >>
>> >> Hi Cecil,
>> >>
>> >> Please offer a citation of an authority otherwise this is simply a
>> >> hearsay evidence.
>> >>
>> >Richard, if you don't accept a quote from the IEEE Dictionary as
>> >a "citation of an authority", what would you accept?
>>
>> Hi Cecil,
>>
>> "Network Analysis," Van Valkenburg
>> "Introductory Circuit Analysis," Pearson & Maler
>> "Electromagnetics," Kraus
>> "Fields and Waves in Communication Electronics," Ramo et al.
>> "The Theory of the Electromagnetic Field," Cook
>>
>> Are fine by me. They ALL speak directly to the matter. I presume you
>> have at least one title to offer of your own?
>
>Do any of your references say you can add two voltages AND two currents
>at the same time when superposing waves? Johnson doesn't.

Hi Cecil,

The matter of providing references is to allow the other side to offer
refutation or rebuttal based on their own review of the material.

73's
Richard Clark, KB7QHC

2934. Re: ISOPOLE

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-14 21:18:52 UTC
From: Steve <steve_lyon@prodigy.net>
Message-ID: <0Pz69.2864$311.47746200@newssvr15.news.prodigy.com>
Source record: 136775

"Tarmo Tammaru" <t-tammaru@home.com> wrote in message
news:hZx69.4077$SS.67829@bin3.nnrp.aus1.giganews.com...
> I have a disassembled Isopole 2 M antenna that I want to give to somebody,
> but lost the instruction sheet. Does anybody know what the spacing between
> the two cones is ? I think it was 1/4 wavelength.
>
> Tam/WB2TT
>
This information comes from the chart on the instruction sheet that came
with my Isopole.

For 146 MHz. the *top* of the lower cone should be 50 inches from the top of
the mast before you mount the upper element.

The *bottom* of the lower cone should be 75.5 inches from the top of the
mast.

The *top* of the upper element should be 100 inches from the *bottom* of the
upper cone.

It was an excellent antenna until the sun and smog weakened the insulator to
the point that it crumbled and the upper element got blown off in a wind
storm.

I hope this helps.

73, Steve
WB6RIB

2935. Re: Superposition quiz

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-14 21:27:20 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <3D5ACB38.3040901@eznec.com>
Source record: 136776

Who's talking about average power? And what does average power have to
do with travelling waves and superposition?

As for voltages and currents, the voltage at any point along a
transmission line is the vector sum of the forward travelling voltage
wave and the reverse travelling voltage wave at that point. The current
at any point is the vector sum of the forward and reverse travelling
current waves at that point. Any "principle" you invoke to prove
whatever it is you're trying to prove had better produce that result.
Otherwise, it's either incorrect or misapplied -- or both.

Roy Lewallen, W7EL

CAM wrote:
> Roy Lewallen wrote:
>
>>Or, as you know and as I mentioned in a posting a short while ago, if P1
>>= V1 * I1 and P2 = V2 * I2, then the power in the two superimposed
>>voltage and current waves (V1 + V2) * (I1 * I2) isn't equal to P1 + P2.
>>That's simple algebra.
>
>
> Assuming we are talking about average power, Roy, where do those extra (or
> lacking_ joules/sec go (come from)? The only way for average energy in two
> summed waves not to add up is to have reflected energy going the other way
> as an effect of the superposition process.
>
> It is my understanding of the superposition principle as presented by
> Johnson, that the voltages AND the currents cannot be summed at the
> same time. Johnson says voltages OR currents not voltages AND currents.

2936. Re: Email to Doug Smith, kf6dx, QEX Editor

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-14 21:32:43 UTC
From: CAM <w5dxp@hotmail.com>
Message-ID: <3D5ACC7B.5E806082@hotmail.com>
Source record: 136777

VE9SRB wrote:
>
> "CAM" <w5dxp@hotmail.com> wrote:
> Superposition solution at R
>
> with 100 V source. V = +100 V and I = +2 A

> with 200 V source. V=-200 V and I = -4 A

But Steve, you have increased the power input to the system from 200 watts to 800 watts. Are you saying a 100 watt ham transmitter magically starts putting out 400 watts because your theory demands it? A matched 100w ham radio transmitter is limited to 70.7v at 1.414a putting out 100w into 50 ohms. There just isn't any more voltage, current, or power available to the system. Where does the extra power demanded by your theory come from?

> By the way, Johnson himself superimposes both voltage and current in this
> transmission line analysis in section 4.2, pages 98 - 101. Work through
> that derivation of the steady state and it will be obvious to you.

If the sum of his total powers add up to the total power in the system, then this example is nothing like yours and is therefore irrelevant.
Does Johnson's total power add up to more power than exists in the system?
Where does Johnson say that 75 watts plus 8.33 watts equals 133.33 watts?
Section number? Page number?
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
------== Over 80,000 Newsgroups - 16 Different Servers! =-----

2937. Re: Superposition quiz

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-14 21:37:09 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <3D5ACD85.6000207@eznec.com>
Source record: 136778

CAM wrote:
>
> Do any of your references say you can add two voltages AND two currents
> at the same time when superposing waves? Johnson doesn't.

In Kraus' _Electromagnetics_, p. 430, given an incident wave V0, I0 and reflected wave V1, I1 (all vector quantities):

"The resultant voltage V at a point on the line is equal to the sum of the voltages V0 and V1 at the point. That is, V = V0 + V1. . . The resultant current I at a point on the line is equal to the sum of the currents I0 and I1 at the point. That is, I = I0 + I1."

Seems pretty clear to me. You'll also find this implicit in any equations dealing with waves on transmission lines, for example the ones in _Reference Data for Radio Engineers_. Those equations are all self-consistent and lead to verifiable results.

If whatever it is you're trying to prove depends on this not being true, then the conjecture is false and you don't need to waste any more time on it.

Roy Lewallen, W7EL

2938. Re: Amateur CB Radio

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-14 21:52:38 UTC
From: Roger Halstead <rdhalste@tm.net>
Message-ID: <GiA69.2934$tl4.1285271@monger.newsread.com>
Source record: 136779
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.dx,rec.radio.amateur.equipment

"CJ" <fantastic@sex.edu> wrote in message
news:ulielti83fuv6c@corp.supernews.com...
> Hello Walt,

> nomenclature of "Hobby Radio" be used. Too many Hams make radio a
> religion and a life's philosophy. Especially hard-core CW advocates and
> many DX'ers. It is a "hobby" and the UK has it nailed 100% correctly.

To me Amateur Radio is a hobby, but to the FCC it is listed as a service, just as broadcast radio. I chase severe storms and work the weather nets which is providing a service, but to me it's still a hobby as I do it for fun. (I've also seen 5 tornados) I don't care if the individual spends time on CW, digital, TV, shooting the breeze, better known as BSing, or just listening. I don't care if they can copy 40 WPM, or just recognize that afful sound is CW. However, I will confess to setting the rig out in the shop to W1AW and listening to high speed code practice while building an airplane.

The ones in here are set up with the computers for storm chasing, logging, and DXing.

However if you take the word Amateur which is derived from Latin meaning one who does something for the love of doing it and add a Noun such as Radio, then it becomes one who does radio for the love of doing it. (rough translation)

As long as the government keeps treating us as a service we are in a far better position to counter (protect our frequencies from) other groups who would like the frequencies for their own. I would not like to see the word hobby replace the word service as here in the states it would cost us dearly.

Calling the Amateur Radio Service a Hobby would set a dangerous precident in protecting our frequencies at a time when great strides are being made to protect our ability to erect antennas and stations.

BTW, the antenna system here was put up entirely by hand with me doing "all" the climbing. The only place machinery was used was in digging the guy anchor holes and setting the 300# plus guy anchors in those holes. And, yes they did deliver the concrete with a truck. <:-))
http://www.rogerhalstead.com/tower.htm Even with most of the pictures being small links, the page takes a while to load. There's a lot there.

Even though I did all the climbing for erecting the tower and antennas (at my age), my wife put her foot down and said no more climbing for the younger guys. Besides it's time I can devote to building that 335 MPH aerobatic

hotrod. <:-)) Yes, there is a page for it too.

BTW, I spend very little time on the air. Too many fun things to do. (and not enough money)

--
Roger Halstead (K8RI EN73)
www.rogerhalstead.com
N833R World's oldest Debonair? (S# CD-2)

2939. Re: Guerrilla.net collinear omni antenna build problems

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-14 21:57:53 UTC
From: Wayne <w>
Message-ID: <ullkj1bv8j2j9f@corp.supernews.com>
Source record: 136780

Didn't see any reply to your query.

To measure gain, you need to first take a 1/4 wave antenna in the exact
same location, and measure the field strength in various locations,
transmitting with the same power.
Do this with both antennas, remembering that all factors must be the same
for true results.
Also, one can test the incoming signal by receiving a signal that is the
same.
You may find very little, if any, difference between the brass and copper
antennas.

"inetquestion" <inetquestion@hotmail.com> wrote in message
news:d3cf151.0207211228.353a4a61@posting.google.com...
> First need to find out what kind of connector my access point has
> (linksys wap11) then order connectors from digikey, etc.
>
> I plan to build one using the brass elements, and another using copper
> wire & plumbing tubing. So how do you measure the gain of different
> antennas?
>
> Yes, I've got too much spare time...
>
> Thx,
>
> Inet

2940. Re: Email to Doug Smith, kf6dx, QEX Editor

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-14 22:01:05 UTC
From: VE9SRB <srbest@att.net>
Message-ID: <BqA69.12438$Ep6.985622@bgtnsc05-news.ops.worldnet.att.net>
Source record: 136781

"CAM" <w5dxp@hotmail.com> wrote in message
news:3D5ACC7B.5E806082@hotmail.com...

> But Steve, you have increased the power input to the system from 200 watts
> to 800 watts. Are you saying a 100 watt ham transmitter magically starts
> putting out 400 watts because your theory demands it? A matched 100w ham
> radio transmitter is limited to 70.7v at 1.414a putting out 100w into 50
> ohms. There just isn't any more voltage, current, or power available to
> the system. Where does the extra power demanded by your theory come from?
>

If you have a 12 V battery across a 1 ohm resistor you get 12 A of current and you get 144 W of power in the resistor. That does not mean that the battery is limited to 144 W output. It is not a 144 W limited power source. Add another 12 V battery in series you now have a 24 V (12 V + 12 V = 24 V) source producing 24 A of current (12 A + 12 A = 24A) and you have 576 W of power in the same resistor. Power superposition does not work. The total power in the resistor is not 144 W + 144 W. This is an accepted fact. This does not violate the law of conservation of energy. Superposition of V and I works fine. There is no need to explain where the "extra" power came from.

Read "Electromagnetic Energy Transmission and Radiation" by Chu. He explains and states it explicitly "it is rare that the powers produced by two separate causes acting individually upon even a linear system can simply be added algebraically to determine the total power when both causes act together." Another fine reference on the subject is Chu's other text electromagnetic Fields, Energy and Forces.

Cecil, this will be my last response to you. Stop with the two 100 W transmitters. That's a diversion to our discussion. I never said once that you could connect two 100 W transmitters and get 400 W total.

In our examples, you need to stop thinking about power superposition and work with voltages and currents. In the forward direction in the transmission line superposition of V and I always works and the total power is always right. There is no need of explaining superposition principles beyond this.

Steve VE9SRB

2941. Anyone else use OxGard for mating of antenna tubing?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-14 22:10:16 UTC
From: StarGazer <pti@capnet.com>
Message-ID: <3D5AD548.FB67CD99@capnet.com>
Source record: 136785

Is it good for ground rod clamp also?

Good for battery post anti-corrision too?

2942. Re: Is Lithium Grease good for assembling antenna mating sections?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-14 22:13:03 UTC
From: Crazy George <munschNO@attglobal.net.SPAM>
Message-ID: <3d5ad9f5_2@news1.prserv.net>
Source record: 136782

Be very careful in using anti-seize compounds on antennas. Many contain
Nickel, which is one of the metals which is known to be non-linear when
current is passed through it, producing intermodulation.

--
Crazy George
Remove NO and SPAM from return address
David Ornee <daveornee@mindspring.com> wrote in message
news:ajdni4$b0p$1@slb3.atl.mindspring.net...
> Lithium grease isn't good for this application.
> The following is a list of paste and grease-like products for the
prevention
> of oxidation of aluminum in electrical connections and antenna
> installations: (Prices could be out of date)
>
> Manufacturer:
> Butternut Electronics Company
> 831 North Central Avenue
> Wood Dale, IL 60191
> Tel: (708) 238-1854
> Fax: (708) 238-1186
> Product Name: Butter-It's-Not
> Source: Direct if not stocked by local authorized dealer.
> Price: $3.50/ Envelope
> NOTES: Contains copper dust in a molybdemum suspension.
> LOCAL NOTE: This one gets really good press from those who have used it.
>
> Manufacturer:
> GB Electrical
> 6101 N. Baker Road
> Milwaukee, WI 53209
> Tel: 1-800-558-4311
> Product Name: OX-GARD
> Source: Available from many electrical supply houses and retail
> outlets such as Sears, Home Depot, Ace and True Value
> Hardware stores. No Factory direct sales.
> GB catalog number OX-100B.
> Price: Approximately 3.00/ 1-oz tube
>
> Manufacturer:
> Ideal Industries, Inc.
> Becker Place
> Sycamore, IL 60178
> Tel: 1-800-435-0705

> and: 1-815-895-5181
> Fax: 1-800-533-4483
> Product Name: NOALOX
> Source: Distributors (Call 800 number for nearest one)
> Price: Ideal list price $2.58/ half oz tube (#30-024) and
> $8.64/8oz bottle (#30-030).
> NOTES: Also available from many electrical wholesale supply houses.
> No factory direct sales. Contains zinc particles suspended
> in a carrier.
>
> Manufacturer:
> KLM Antennas Inc.
> PO Box 694
> Monroe, WA 98272
> Tel: 1-360-794-2923
> Fax: 1-360-794-0294
> Product Name: Conductive Paste
> Source: Factory direct and larger dealers.
> Price: $3.50 plus shipping & handling/ 1 ounce containers
> NOTES: Anti-seize thread compound Hi-Temperature MIL-A-907E.
> Contains copper and graphite flakes suspended in a petroleum
> base. Manufactured for Mirage/KLM by Chemical Commodities
> Agency, Inc. of Highland, CA per MIL-A-907E.
>
> Manufacturer:
> Sanchem, Inc.
> 1600 S. Canal Street
> Chicago, IL 60616
> Tel: 1-800-621-1603
> Out of State: 1-312-733-6111
> Fax: 1-312-733-7432
> Product Name: NO-OX-ID
> Source: Direct from Manufacturer
> Price: $11/16oz can or $8.80/8oz tube (plus shipping)
> Minimum order - $35
> NOTES: NO-OX-ID comes in several consistencies. NO-OX-ID "A" and
> NO-OX-ID "A-Special" are suitable for most antenna installations.
> NO-OX-ID "A-Special" is similar to NO-OX-ID "A" but has a small
> amount of solvent added for ease of application.
>
> Manufacturer:
> Thomas & Betts Company
> 1555 Lynnfield Road
> Memphis, TN 38119
> Tel: 1-800-888-0211
> Fax: 1-800-888-0790
> Product Name: Aluma-Shield
> Source: No direct factory sales. Available from many electrical
> supply distributors.
> Price: Approximately $11.44/ 8oz can.

> NOTES: Customer may call 800 number for location of nearest distributor.
> Contains zinc particles suspended in a petroleum base.
>
> Manufacturer:
> Burndy Electrical
> 101 E. Industrial Park Dr.
> Manchester, NH, 03108
> Tel: 1-800-346-4175
> Fax: 1-800-346-9826
> Product Name: Penetrox (PEN-A)
> Source: Electrical wholesalers
> Price: Approx. $6/ 3oz tube
> NOTES: Zinc particles suspended in a natural based compound.
> LOCAL NOTE: Loaded with metal, needs a lot of stirring before use with
> a stick etc., seems to work well on sliding, telescoping
> aluminum elements.
>
> Manufacturer:
> Ilsco Corporation
> 4730 Madison Road
> Cincinnati, Ohio 45227
> Tel: 1-513-533-6200
> Fax: 1-513-533-6274
> Product Name: DE-OX
> Source: No factory direct sales. Available from electrical supply
> wholesalers and distributors. Customer may call for
> nearest distributor.
> Price: Approximately $2.90/ 1oz, $4.90/ 4oz and
> $7.30/ 8oz squeeze bottle.
> NOTES: Used in the electrical trade for Al/Cu and Al/Al connections.
> Green colored grease with no noticeable particles in suspension.
>
> Manufacturer:
> Antennas West
> PO Box 50062
> Provo, Utah 84605
> Tel: 1-801-373-8425
> Fax: 1-801-373-8426
> Product Name: Goose Grease
> Source: Factory direct sales only.
> Price: $1.00/ 1oz + and $1.00 p&h.
> NOTES: Transparent silicone grease. Antennas West also recommends
> this product for ground rod clamp connections.
>
> Manufacturer:
> Mosley Electronics, Inc.
> 10812 Ambassador Blvd.
> St. Louis, MO 63132
> Tel: 1-800-966-7539
> and: 1-800-325-4016

> and: 1-314-994-7872
> Fax: 1-314-994-7873
> Product Name: 1) Mosley Penatrox (Conductive Grease)
> 2) Weather Guard (Clear spray coating)
> Source: Factory direct sales only.
> Price: Mosley Penatrox- $4.45 / packet + postage.
> Weather Guard- $12.75/ 8oz spray can + shipping
> NOTES: Mosley Penatrox is a grease-like product. Weather Guard is a
> clear spray especially recommended for marine and coastal
> environments. Weather Guard cannot be shipped via the post
> office; UPS required.
>
> Manufacturer:
> Loctite Corporation
> 1001 Troutbrook Crossing
> Rocky Hill, CT 06067-3910
> Tele: 800-842-0041
> Product Name: Permatex ANTI-SEIZE LUBRICANT
> Source: Many Automotive Supply Distributors
> Price: N/A
> NOTES: Comes in 1 oz squeeze tube, 8 fluid oz brush top container,
> and a 12 oz aerosol can. Can be used on the threads of
> U-bolts to prevent "seizing, galling, and corrosion."
> It aids in the disassembly of the the antenna's hardware.
> Not for use on electrical connections. The part no. on
> a 1 oz tube is 133A.
>
> ICE of Indianapolis also makes conductive paste for this application.
> 73, KQ9W, David Ornee, Western Springs, IL
>
> "StarGazer" <pti@capnet.com> wrote in message
> news:3D59C4DA.3E49CAF4@capnet.com...
> > dfgh
> >
>
>

2943. Re: Superposition quiz

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-14 22:15:11 UTC
From: CAM <w5dxp@hotmail.com>
Message-ID: <3D5AD66F.3BCCD78A@hotmail.com>
Source record: 136783

Roy Lewallen wrote:
>
> Who's talking about average power? And what does average power have to
> do with travelling waves and superposition?

The 75w + 8.33w = 133.33w in Steve's energy equation are average powers.
75w of average power makes it past the 50/150 ohm junction.
8.33w of average power is re-reflected
133.33w of average power is the forward power on the 150 ohm line.

> As for voltages and currents, the voltage at any point along a
> transmission line is the vector sum of the forward travelling voltage
> wave and the reverse travelling voltage wave at that point. The current
> at any point is the vector sum of the forward and reverse travelling
> current waves at that point. Any "principle" you invoke to prove
> whatever it is you're trying to prove had better produce that result.
> Otherwise, it's either incorrect or misapplied -- or both.

Those results are produced exactly in my email to Doug Smith. In addition,
all the energy is consistent with the conservation of energy principle.

My complete voltage equation

106.066v + 35.355v + 35.355v - 35.355v = 141.4v

reduces to Steve's equation

106.066v + 35.355v = 141.4v

but since I have all the voltage components, my energy equation balances

75w + 8.33w + 25w + 25w = 133.33w

where Steve's energy equation is ridiculous and clearly violates the
conservation of energy principle.

75w + 8.33w = 133.33w
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

2944. Re: Superposition quiz

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-14 22:19:36 UTC
From: CAM <w5dxp@hotmail.com>
Message-ID: <3D5AD778.E1BA2F0F@hotmail.com>
Source record: 136784

Roy Lewallen wrote:
>
> CAM wrote:
> >
> > Do any of your references say you can add two voltages AND two currents
> > at the same time when superposing waves? Johnson doesn't.
>
> In Kraus' _Electromagnetics_, p. 430, given an incident wave V0, I0 and
> reflected wave V1, I1 (all vector quantities):
>
> "The resultant voltage V at a point on the line is equal to the sum of
> the voltages V0 and V1 at the point. That is, V = V0 + V1. . . The
> resultant current I at a point on the line is equal to the sum of the
> currents I0 and I1 at the point. That is, I = I0 + I1."

Sorry, I had a brain fart. But does it say there is more energy in the
sum of the two waves than there the sum of the individual waves.

I cannot believe you guys are allowing Steve to get away with getting
more energy out of the sum of the two waves than the two waves contain
individually. What is the reference for that claim?

> If whatever it is you're trying to prove depends on this not being true,
> then the conjecture is false and you don't need to waste any more time
> on it.

It was a brain fart, Roy. I superpose voltages and currents at the same
time on my phasor diagram.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

2945. Re: Is Lithium Grease good for assembling antenna mating sections?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-14 22:38:23 UTC
From: David Ornee <daveornee@mindspring.com>
Message-ID: <ajemif$7e8$1@slb5.atl.mindspring.net>
Source record: 136786

You are right.
You want to provide conductivity, anti-seize, prevention of corrosion, and
prevention of any non-linear conductivity (diode effect).
Stay away from Nickle in this application.
73, KQ9W, Western
Springs, IL
"Crazy George" <munschNO@attglobal.net.SPAM> wrote in message
news:3d5ad9f5_2@news1.prserv.net...
> Be very careful in using anti-seize compounds on antennas. Many contain
> Nickel, which is one of the metals which is known to be non-linear when
> current is passed through it, producing intermodulation.
>
> --
> Crazy George
> Remove NO and SPAM from return address
>

2946. Re: Email to Doug Smith, kf6dx, QEX Editor

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-14 22:41:51 UTC
From: CAM <w5dxp@hotmail.com>
Message-ID: <3D5ADCAF.A5EF1A3B@hotmail.com>
Source record: 136787

VE9SRB wrote:
>
> "CAM" <w5dxp@hotmail.com> wrote:
> If you have a 12 V battery across a 1 ohm resistor you get 12 A of current
> and you get 144 W of power in the resistor. That does not mean that the
> battery is limited to 144 W output.

A ham transmitter is NOT a battery. A 100w matched ham transmitter can deliver 70.7v at 1.414a into 50 ohms. That's all there is, Steve. There ain't no more. Where do you get a ham transmitter that acts like a battery? My IC-750pro sure doesn't.

> Power superposition does not work.

Nobody has even remotely tried to superpose power, Steve. That's just your attempt at obfuscation. Everything I have said about power is based on the conservation of energy principle which you violate willy-nilly.

> This is an accepted fact. This
> does not violate the law of conservation of energy. Superposition of V and
> I works fine. There is no need to explain where the "extra" power came
> from.

Your battery example does NOT even remotely resemble a 100w matched ham transmitter outputting 70.7v at 1.414a into 50 ohms. In your battery example, whatever current is needed is available. That is NOT true of a matched ham transmitter putting out 100w into a 50 ohm load. The battery has all the extra energy you might need. The ham transmitter does not.

A ham transmitter is more like a current-limited battery. So here's your new example. The 12v battery is current-limited to one amp. We put a 12 ohm resistor across it and the ammeter reads one amp. We put another 12 ohm resistor in parallel with the first one. What does the ammeter read now? This is the situation we face with a ham transmitter.

> Cecil, this will be my last response to you. Stop with the two 100 W
> transmitters. That's a diversion to our discussion.

Translation: I cannot answer those embarrassing questions. If I can get 133.33 watts out of adding 75 watt and 8.33 watt waves, why can't I do the same thing with two ham transmitters? Where does the extra power come from in the addition of the waves that is not available in the ham transmitters?

> I never said once that
> you could connect two 100 W transmitters and get 400 W total.

But you have said you can connect (superpose) two 100w waves to
get 400w total. If each of two waves contains 100w and you combine
them, how do you possibly get 400w out of them. The transmitter
is only supplying 100v at 2a into a 50 ohm load. Where does the
extra 200w come from?

> In our examples, you need to stop thinking about power superposition and
> work with voltages and currents.

You need to stop accusing me of something I wouldn't even consider doing.
Have you stopped beating your wife?

Steve, if two pure sine waves can be superposed into a single wave, then that
single wave must be able to be decomposed into the original two sine wave
components. Please tell us how to decompose a 133.3w wave into two waves of
75w and 8.33w.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

2947. Re: Email to Doug Smith, kf6dx, QEX Editor

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-14 22:51:15 UTC
From: tdonaly@aol.com
Message-ID: <20020814185115.07652.00000361@mb-ct.aol.com>
Source record: 136788

Cecil wrote,
>
>Tdonaly wrote:
>>
>> Cecil wrote,
>> >According to the principle of the conservation of energy, when there
>> >is a destructive interference pattern established, there must also
>> >be a constructive interference pattern established somewhere else.
>> >Since the destructive interference is completely confined to a piece
>> >of coax, the constructive interference must be established at
>> >essentially the same point as the destructive interference.
>> >
>> Cecil,
>> Uh, don't you think you should run that by a reputable physicist,
>somewhere?
>> Or,
>> better yet, think it through yourself, make a mathematical model, and then
>> describe
>> an experiment that anyone can do that supports your model. If you don't
>take
>> extraordinary steps to prove the above you run the danger of being labelled
>a
>> crackpot, and then no one will listen to anything you say.
>
>Einstein was labeled a crackpot at first, Tom. I have a physics minor to go
>with my EE degree. Maybe you can answer the question for me. If 50 joules
>per second of wave cancellation (that's the definition of destructive
>interference)
>occurs, where does the 50 joules/sec go? If there are only two directions for
>it
>to go (in a transmission line) and it's not going one direction, in which
>direction
>is it going?
>--
>cheers, CAM http://www.qsl.net/w5dxp
>
>
I'm still not convinced that dx/dt + dx/dt is equivalent to x + x, however,
let
me make two points: 1. You're not Einstein. 2. People had to believe Einstein
was right when his theory successfully predicted the results of verifiable
experiments. If you can come up with some experiments that will satisfy
your scientific peers, hey! I'll be the first to congratulate you. Be prepared
for

some scepticism, however.

Tom Donaly KA6RUH

2948. Re: What is Lithium grease good for?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-14 22:53:23 UTC
From: kelly@dvol.com
Message-ID: <d22b54c3.0208141453.10d24e3b@posting.google.com>
Source record: 136789

"KB9TMP" <kb9tmp@juno.com> wrote in message news:<ull57f6mmp7j3e@corp.supernews.com>...
> "StarGazer" <pti@capnet.com> wrote in message
> news:3D5A8C38.7D018C38@capnet.com...
> > ....as
> >
>
> I keeps your Lithium lubricated!
> Kind of like axle grease only different.
> ;^)
>
>
> The real answer is just about any thing that
> you would grease like rack & pinion steering
> gears, tie rod ends, CV joints, and the such.
> It's just a good quality grease.
>
>
It's a good quality grease in appropriate applications. Assuming the
context involves "antenna grease" the much better idea is graden
variety front wheel bearing grease which is specifically designed to
resist being washed out by rain, etc. If there is a lithium-based
grease compounded as a wheel bearing grease so much the better.

w3rv

2949. Re: j-pole

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-14 23:06:31 UTC
From: Wayne <w>
Message-ID: <ullojnp0lm6hb9@corp.supernews.com>
Source record: 136790

I'm well aware that the tests must be made under the exact same conditions.
Same location, elevation, power and so on.
A lot of hype going on about some antenna designs.

I did some testing, years ago, of 11 meter antennas (mobile whips).
Put my car on front of the shop, and had a combination test unit in the
window.
Test unit, Lafayette, had field strength meter, and signal generator in it.
By changing only the antenna, I tested both field strength and received
signal.
Antennas tested were a full 1/4 wave glass whip, a Francis (supposed 3/4
wave, 7'), and several other shortened whips.
Needless to say, the full length whip beat all the others in both TX and
RX.
I'm well aware that any shortened antenna simply cannot perform as well as
a longer antenna that is properly matched and fed with the same basic cable

For the record, I held a commercial 2nd class radiotelephone license at
that time.
Wayne WA2YNE

"Roy Lewallen" <w7el@eznec.com> wrote in message
news:3D465316.7070903@eznec.com...
> Wayne wrote:
> >. . .
>
> > Nobody seems to come up with true gain factor for this type.
> > Is it that nobody actually knows?
>
> >. . .
>
> A J-pole has just about exactly the same gain and pattern as a ground
> plane or a vertical dipole. In absolute terms for an antenna in free
> space, this is about 2.15 dBi.
>
> For any of these antenna types, current can be induced on the feedline
> by coupling to the antenna, which can skew the pattern somewhat. The
> amount of induced current depends on feedline length and placement, but
> it can be minimized if necessary with a couple of current baluns, one at
> the feedpoint and one about a quarter wavelength below.
>
> Now you can count yourself among the many people who know. Tell your
> friends.
>
> Roy Lewallen, W7EL

>

2950. Re: Ladder-line Orientation?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-14 23:10:46 UTC
From: Tad Danley <tdanley@nospamatearthlink.net>
Message-ID: <3D5AE385.8E5EE928@earthlink.net>
Source record: 136791

Bert Craig wrote:

> My question is whether or not the horizontal vs. vertical orientation of
>
> the ladder-line adversely affects the antenna system's performance in
> any way? To be honest, the ladder-line from the antenna to the roof's
> edge is at a pretty shallow angle as it stands now. I thought I'd ask
> anyway. Thanks in advance.

Go for it!

73 and good luck,

--
Tad Danley, K3TD
mailto:tdanley@earthlink.net

Caution!
Anti-SPAM e-mail return address in use.

2951. Re: search for diagram qubical quad

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-14 23:15:01 UTC
From: Wayne <w>
Message-ID: <ullp3n12gn79f@corp.supernews.com>
Source record: 136792

Dave,
Have not seen many designs for more than a 3 or 4 element quad, but here is a suggestion.
Take the 4 element, and add more directors.
make each new director a bit smaller in dimension as the preceding. Smaller towards the front.
Some may say to increase the spacing as you extend the unit.
This, as I understand, makes it more directive, and rejects more off the sides.
And I saw one design that added a second reflector on the rear. Increases front to back rejection ratio.
A bit of a search on the internet should show the basic designs.
Don't forget, the longer the boom, the more it needs added support.
While PVC is cheap, it has a limited life.
Sunlight deteriorates it. Heat deteriorates it.
It's advantage is that it is non conductive and adds no reactance of any kind to the elements.

"Dave ON1DSQ" <davyvanloon@pandora.be> wrote in message news:4cS_8.22578$8o4.2912@afrodite.telenet-ops.be...
> Hi my name is Dave (on1dsq) and I'am looking for a diagram of a 8 or 10 or
> 12 el qubical quad for 144 Mhz.
> Who can help my please??
> Also if you can copy it from a book no problem everything is welcome.
>
> 73's vy Dave
>
> on1dsq@pandora.be
>
>
>
>
>

2952. Re: Anyone else use OxGard for mating of antenna tubing?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-14 23:19:18 UTC
From: WA6LZH <tangeram@lucent.com>
Message-ID: <3D5AE576.5000907@lucent.com>
Source record: 136793

There's a type of anti-oxidant grease sold in hardware stores for electrical work. One for copper and another for aluminum. I used the one for aluminum on a ta-33 and it's been good for 6 years.

Tony

2953. Re: DESPERATELY NEED HELP FROM HY-TOWER USERS!!!!!!!

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-14 23:28:01 UTC
From: w9gb <gregory.beat@attbi.com>
Message-ID: <5IB69.140170$uj.193239@rwcrnsc51.ops.asp.att.net>
Source record: 136794

I thought I would let the rest of the newsgroup "in on the events of the last 24 hours" .

G. Beat
w9gb

Greg -

I have been assigned the job of getting Ed Juge W5EJ any information or documents that he needs to install (and receive building permits) for our Hy-Gain Hy-Tower Vertical antenna product. (The core is actually a Rohn tower product). This data contains all specifications such as, windloading, stress testing, materials used, tolerances, etc.

I do not know why we (MFJ) have not included this data with the Hy-Tower product when reintroduced, but we get a copy to Ed. I am talking to management (MFJ) to see if we can get this data on our MFJ / Hy-Gain website in PDF format ASAP.

Thanks,

Jim Shurden

Hygain Customer Service

MFJ CUSTOMER SERVICES
MFJ ENTERPRISES, INC.
300 Industrial Park Road
Starkville, MS 39759 USA

TEL: 662-323-5869
FAX: 662-323-6551
SALES: 800-647-1800
WEB: http://www.mfjenterprises.com

HYGAIN
e-mail: hy-gain@mfjenterprises.com

"Ed Juge/NM" <ed@juge.org> wrote in message
news:3d59a5c4.0@oracle.zianet.com...
> Hey, guys, I appreciate your good intentions. However, only three out of
a
> dozen or more responses were what I asked for in the message below. The
> majority of others were telling me why this won't do any good or to
contact
> Hy-Gain, etc. We've already tried Hy-Gain and MFJ.
>

> Our P&Z is in a small mountain village, not a big, sophisticated city. We
> have already had the "what's relevant?" conversation with the planning
> director and the village attorney. TESTAMONIALS ABOUT HY-TOWERS THAT HAVE
> SURVIVED STRONG WINDS IS QUITE ADEQUATE FOR THEM AND WILL CARRY A LOT OF
> WEIGHT.
>
> So, with all due respect... please save your opinions as to why this
> information is useless.
>
> Thanks... Ed, W5EJ
>
>
> > "Ed Juge/NM" <ed@juge.org> wrote in message
> > news:3d513665.0@oracle.zianet.com...
> > > I am in negotiations with my local planning and zoning commission for
> > > authority to install a pair of Hy-Gain Hy-Towers. There are a dozen
> > > residents of the area opposing them. Their main point now, other than
> > > aesthetics, is that Hy-Gain's specs say 75mph wind survival and we
will
> be
> > > in an area that gets 60-70 mph winds every few years. One of my
> Hy-Towers
> > > has survived 110 mph winds, twice, but I can't prove it.
> > >
> > > If you own a Hy-Tower, and it has been through very high winds... in
> > excess
> > > of 75 mph, PLEASE send me an email with details. It will need to
> include
> > > your name, address and phone number in case they want to verify that I
> > > didn't dummy up the email.
> > >
> > > Thanks... Ed, W5EJ
> > > Ruidoso, NM
> > > Phone: 505-258-1721
> > >
> > >
> >
> >
>
>

2954. Re: Email to Doug Smith, kf6dx, QEX Editor

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-14 23:29:19 UTC
From: CAM <w5dxp@hotmail.com>
Message-ID: <3D5AE7CF.B793A284@hotmail.com>
Source record: 136796

Tdonaly wrote:
> I'm still not convinced that dx/dt + dx/dt is equivalent to x + x, however,

The fact that dx/dt + dx/dt is not equal to x + x supports my side of
the argument, Tom. I thought my transformer example would shed some
light on why 75w + 8.33w is not equal to 133.33w.

Transformer primary input #1, 106.066v at 0.707a
Transformer primary input #2, 35.355v at 0.236a
Transformer output into 50 ohms, 64.55v at 1.67a

Whoops, why isn't it the same as Steve's result of adding those same
two waves? Because Steve is ignoring 50 watts of power sourced from
the interference pattern.

Transformer primary input #1, 106.066v at 0.707a (75 watts)
Transformer primary input #2, 35.355v at 0.236a (8.33 watts)
Transformer primary input #3, 86.6v at 0.577a (50 watts)
Transformer output into 50 ohms, 141.4v at 0.943a (133.33 watts)

What do you know. These results match Steve's (except for that
pesky extra 50 watts on input #3)

> let me make two points: 1. You're not Einstein.

I've got approximately the same equipment as Einstein. Want to know
why the Red Shift is not all Doppler Effect?
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

2955. Re: Email to Doug Smith, kf6dx, QEX Editor

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-14 23:32:58 UTC
From: CAM <w5dxp@hotmail.com>
Message-ID: <3D5AE8AA.926762A6@hotmail.com>
Source record: 136797

CAM wrote:
>
> Tdonaly wrote:
> > I'm still not convinced that dx/dt + dx/dt is equivalent to x + x, however,
>
> The fact that dx/dt + dx/dt is not equal to x + x supports my side of
> the argument, Tom. I thought my transformer example would shed some
> light on why 75w + 8.33w is not equal to 133.33w.

I forgot to ask. Doesn't anyone find it strange that Steve's superposing
of two waves is 160% efficient?

100 x 133.33w/(75w+8.33w) = 160%
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

2956. Quad antenna spreaders

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-14 23:32:59 UTC
From: Dan/W4NTI <w4nti@mindspringnospam.com>
Message-ID: <ajep9t$v3$1@slb7.atl.mindspring.net>
Source record: 136795

Other than fiberglass, does anyone have any recomendations of what to use for spreaders on a HF quad? Last one I built I used bamboo.

Dan/W4NTI

2957. Re: Superposition quiz

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-14 23:53:14 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <3D5AED6A.6030604@eznec.com>
Source record: 136798

CAM wrote:
>
> Sorry, I had a brain fart. But does it say there is more energy in the
> sum of the two waves than there the sum of the individual waves.

Perhaps. But who says you can sum the powers in the waves to get the total power? You can't. The fields, voltages, and currents superpose, *but the powers of the individual waves don't*. Here's a challenge for you. Find a single reference, anywhere, that talks of the superposition of power waves, or the power in waves.

> I cannot believe you guys are allowing Steve to get away with getting
> more energy out of the sum of the two waves than the two waves contain
> individually. What is the reference for that claim?

What's the justification for your assuming that you can simply add the powers in the individual waves to get the total power? You can't, as simple algebra shows. This is not D.C., and the waves are moving through space. All that we have to guarantee at the end of the day is that, if the line is lossless, our calculations had better show that the the power out equals the power in. Conventional transmission line formulas do that just fine.

>. . .

>>If whatever it is you're trying to prove depends on this not being true,
>>then the conjecture is false and you don't need to waste any more time
>>on it.
>
>
> It was a brain fart, Roy. I superpose voltages and currents at the same
> time on my phasor diagram.

By the way, when you add up voltages and currents, be careful how you define the direction of current. If the positive direction is defined as being in the direction of travel, then the superposition of a forward travelling wave with voltage and current V1, I1 at a given point and reverse travelling wave V2, I2 at the same point is V1 + V2, I1 - I2.

Do your calculations with the voltage and current waves. When you're done, you can calculate the power from the source and into the load, and you'll get the right answer. If you declare that the power in the forward wave plus the power in the reverse wave have to add up to the power in the superimposed V and I waves, you'll get the wrong answer more often than not.

Roy Lewallen, W7EL

2958. Re: Oil in dummy loads vs. SWR.

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-15 00:08:32 UTC
From: Wayne <w>
Message-ID: <ullsucacfsn41e@corp.supernews.com>
Source record: 136800
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.equipment

Originally, heath suggested transformer oil, with mineral oil as a
substitute.
Lower rating with mineral oil.
In fact, it showed the rating curves for both on the side of the can.

"john price" <jm.price@worldnet.att.net> wrote in message
news:3D3C96BC.677DBB7D@worldnet.att.net...
> I have an old Cantenna which I've used up to 432 MHz... It
> wasn't shipped with oil, but the recommendation was to
> use mineral oil from the drugstore...
>
> John
>
> jeff wrote:
> >
> > I feel that I am once again going to open the old debate which oil to
> > use in a dummy load for heat conduction.
> >
> > But, that is not my question. Mine has do with the oil's effect on SWR
> > vs. frequency.
> > The reason I ask this I have a Dentron Big Dummy I bought at a hamfest
> > many years ago and have seldom used it, then only on HF, do to being
> > "out" of ham radio for a while. I have now been using it to check out
> > several old club rigs and I have noticed a big difference between it and
> > the club's Heath Cantenna.
> >
> > The SWR increases as frequency increases. At 80 thru 15 meters there is
> > no SWR indication with just a little at 10 meters. No problem. But, at 2
> > meters the SWR is 3:1. The Cantenna has no indicated SWR at 2 meters.
> > Infact, it states on the can SWR <1.5 up to 300 mc.
> >
> > The Dentron has no frequency range on it.
> >
> > I took the lids off and both had an identical looking carbon resistor.
> > But, their oil was definatly different. The Cantenna was perfectly clear
> > while the Dentron was much darker.
> >
> > So, does anybody know anything about the Dentron Big Dummy and it's
> > frequency range? What kind of oil it shipped with?
> >
> > I started to take the lid from each, drain and clean them and swap them
> > to see if the range follows the oil or the resistor. But, that is to
> > much work.

> >
> > --
> > Jeff, wd4nmq
> > wd4nmq@earthlink.net
> > http://home.earthlink.net/~wd4nmq
> > iLink client node #10438, iLink sysop link node #14746

2959. Re: white coax?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-15 00:20:26 UTC
From: Wayne <w>
Message-ID: <ullsud4c8vel20@corp.supernews.com>
Source record: 136801

Some people just cannot tell the bloody difference.
I have some white RG6 type that I use with a part of my DTV system.
But it's not ideal for replacing any 50 ohm cable, though some might not
notice the difference.

":-) Bill" <therealexray@netscape.net> wrote in message
news:3D3E116E.FE126BC5@netscape.net...
> Pete wrote:
> >
> > Direct TV & Dish Network all use RG8.
>
> Ya mean 6, dontcha?
>
> -Bill

2960. FS: Belden 9913....

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-15 00:20:29 UTC
From: Nadine Hamon <nhpd@sympatico.ca>
Message-ID: <PsC69.4389$%R5.1133941@news20.bellglobal.com>
Source record: 136804
Cross-posted to: fr.rec.radio.amateur,rec.radio.amateur.antenna

I have a lots of cable for sale

Belden 9913
Equivalent to belden 9913
RG8X
All kind of other coax cables and much more....

In Montreal, Canada, can ship anywhere in North America

Email me with any request you have, I have access to anything at a very very
low price

Thanks
Nad

2961. Re: Radioshack DiscOne Base Antenna vs 6 meter dipole

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-15 00:32:33 UTC
From: Wayne <w>
Message-ID: <ulltl1aab7vl1a@corp.supernews.com>
Source record: 136802

I'm using that RS discone antenna.
Change I made is using a 6 meter ham Stick on a bayonet mount.
Worked well enough last night with an opening to Montana.
And the two meter and up still has nice low SWR...
Will work for 10 meters by changing whip.
Mine is offset slightly, till I can find or make a better adapter.
I love experimenting.

Ham Stick is easier to tune, and I can just reach the antenna to change
whips.
YMMV

"discone" <nospam@aol.com> wrote in message
news:f05tjucahh63fdie252s7m8oi99gojb151@4ax.com...
> The RS discone is only going to cover about 1 MHz bandwidth on 6
> meters because on 6, because it is using the base-loaded vertical
> radiator part of the antenna. Your signal will be omni-directional
> and vertically polarized.
>
> As far as 6 meters is concerned, you would be just as well off with a
> vertical dipole, vertical coaxial, or even a base loaded 5/8 wave 2
> meter antenna..... which would be a 1/4 on 6m.
>
> A discone will cover a 10 : 1 frequency range. The lower cutoff
> frequency is determined by the length of the "skirt". The length of
> the skirt is 1/4 wavelength at the lowest frequency. The diameter of
> the disk is 70% of that length. This RS model is probably designed
> to cover 130 - 1300 MHz. The reported coverage outside this range is
> due to the base-loaded vertical section.
>
> hope this helps.............
>
>
> On Tue, 23 Jul 2002 23:18:50 -0500, "Ed Laughery"
> <laughery@bellsouth.net> wrote:
>
> >Hi
> >
> >I would appreciate any info regarding the Radioshack Discone base antenna
> >for 6 meters. How does it compare in performance to a simple 6 meter
> >dipole? Same questions but for Discone antennas in general for 6 meter
> >ops.
> >
> >73s
> >Ed AD5JV

> >
> >
>

2962. Re: Radioshack DiscOne Base Antenna vs 6 meter dipole

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-15 00:38:15 UTC
From: Wayne <w>
Message-ID: <ulltvnlllcc6ff@corp.supernews.com>
Source record: 136803

The RS discone is not a gain antenna, but is broad banded as all heck on 2 meters and up.
Roughly equivalent to a 1/4 wave ground plane (with drooping radials) on all but 6 meters.
I find you can, by using an adapter (may need to make one) use a 3/8-24 whip for six, or even ten meters on this item.
No problems with radials yet, but only a few months so far...

Wayne WA2YNE

"Clueless Moron" <Bill.Gates@Microsoft.com> wrote in message news:3d45a523@news.eol.ca...
> I'm a bit surprised to hear all these complaints.
> I've had a Radio Shack discone up for the past TEN YEARS
> and not one element has gotten loose or broken off.
>
> I'm in Canada, so it's not like the weather has been
> particularly kind to it. Maybe the older discones were tougher.
>
> Anyway, that said, they're still not very good antennas RF-wise.
> I replaced it with a triband vertical a few months ago,
> and all repeaters got several S-units stronger...
>

2963. Re: What is Ballon ?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-15 01:19:13 UTC
From: Wayne <w>
Message-ID: <ulm0ch57pqe981@corp.supernews.com>
Source record: 136805

Ballon appears to be Dutch or German for balloon...

"Reg Edwards" <g4fgq.regp@btinternet.com> wrote in message
news:ahm98cdbo1@knossos.btinternet.com...
> > >What is a Ballon ?
> >
> ==========
>
> A Ballon is gadget suspended between a feedline and an aerial. Its
purpose
> is to weigh down the aerial to stop it flopping about in the wind.
> ---
>
> (FAQ from a UK newsgroup.)
> ---
> ==========
> Regards from Reg G4FGQ
> Free Radio Design Software
> Go to http://www.g4fgq.com
> ==========
>
>

2964. Re: Anyone else use OxGard for mating of antenna tubing?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-15 01:32:42 UTC
From: Steve Robbins <srobbinsNoSpAmDUdes@netacc.net>
Message-ID: <3q0mlusc6se37libg38ulfue4nd82mt24t@4ax.com>
Source record: 136806

On Wed, 14 Aug 2002 15:10:16 -0700, StarGazer <pti@capnet.com> wrote:

>Is it good for ground rod clamp also?
>
>Good for battery post anti-corrision too?
>
>

It's real strength is in it's makeup that stops the galvanic effect between two dissimiliar metals. It it this galvanic effect that leads to quite a bit of corrosion. So for battery posts (lead post/brass clamp) it is ideal. Your ground rod clamp is also usually a different metal than the actual ground rod so again, it would be useful. In household wiring, it is a must between aluminum conductors and copper terminals. Without the compound, the junction can become red hot and burn the house down. Aluminum wiring was the cause of many fires and they almost pulled it from the market until they figured the paste would solve the problem. Now it is codified in the NEC.

Steve

2965. Re: Superposition quiz

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-15 01:37:45 UTC
From: richardharrison@webtv.net
Message-ID: <13205-3D5B05E9-113@storefull-2392.public.lawson.webtv.net>
Source record: 136808

Roy Lewallen, W7EL wrote:
"What`s the justification for your assuming that you can simply add the powers in the individual waves to get the total power?"

Bird Electronic Corporation, "Bird Technical Series #1": VSWR paper---"A simple algebraic subtraction (Pfwd - Prefl) yields the net power delivered to the load."

Best regards, Richard Harrison, KB5WZI

2966. Re: Quad antenna spreaders

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-15 01:38:11 UTC
From: Dennis Kaylor <k4oxg@tampabay.rr.com>
Message-ID: <3D5B060E.260E05CE@tampabay.rr.com>
Source record: 136807

hey don
try bamboo fishing poles they are cheap and light and work well for spreaders

Dan/W4NTI wrote:

> Other than fiberglass, does anyone have any recomendations of what to use
> for spreaders on a HF quad? Last one I built I used bamboo.
>
> Dan/W4NTI

2967. Re: DESPERATELY NEED HELP FROM HY-TOWER USERS!!!!!!!

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-15 01:54:54 UTC
From: Ed Juge/NM <ed@juge.org>
Message-ID: <3d5b0a7d.0@oracle.zianet.com>
Source record: 136809

Thanks, Mac...

Ed

"J. McLaughlin" <JCM@Power-Net.Net> wrote in message
news:uljmei1eikh2ee@corp.supernews.com...
> Dear Ed:
> OK. The fix is in.
> However, if those-who-do-not-wish-for-you-to-do-what-you-wish-to-do
> retain a good old country lawyer, things will change on a dime. I guess
> it all depends on the other people because NM sure has some smart
> lawyers.
> We all have our fingers crossed for you. Mac N8TT
>
> --
> J. Mc Laughlin - Michigan USA
> Home: JCM@Power-Net.Net
>
>

2968. Re: Supergain of monopole

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-15 01:55:25 UTC
From: k3bu@aol.com
Message-ID: <20020814215525.01880.00000548@mb-mq.aol.com>
Source record: 136810

>
>Basically I am looking for published techniques to get a short monopole to be
>gain-ful. My literature search turned up nothing.
>

Looky at Fractenna, CFA and EH super gain-fool antennas.
Little miracles :=)

2969. Re: Quad antenna spreaders

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-15 01:59:26 UTC
From: k3bu@aol.com
Message-ID: <20020814215926.01880.00000551@mb-mq.aol.com>
Source record: 136811

>
>hey don
>try bamboo fishing poles they are cheap and light and work well for spreaders
>
>Dan/W4NTI wrote:
>
>> Other than fiberglass, does anyone have any recomendations of what to use
>> for spreaders on a HF quad? Last one I built I used bamboo.
>>
>> Dan/W4NTI
>
>
>

Excellent preservative for the bamboo poles is the latex based driveway sealer.
Found out by accident, bamboo stays "young" will not crack.

Yuri, K3BU

2970. Re: ? Value of 12m capacitor on HF5B Butternut beam?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-15 02:03:09 UTC
From: w9gb <gregory.beat@attbi.com>
Message-ID: <xZD69.121207$sA3.215715@rwcrnsc52.ops.asp.att.net>
Source record: 136812
Cross-posted to: rec.radio.amateur.antenna,uk.radio.amateur

Here is the Bencher web site (Mfg. of Butterfly):
http://www.bencher.com/hf5b.html

Here is the HF5B parts list
http://www.bencher.com/pdfs/00809ZZV.pdf

Here is their technical contact web page:
http://www.bencher.com/contact.html

There were a few "revisions" of this particular beam antenna
Here is the Beam Antennas documentation web page:
http://www.bencher.com/pdf_download.html

This is the "current" HF5B revision being manufactured in Woodale, IL
http://www.bencher.com/pdfs/00159IZV.pdf

73 de w9gb
Greg

"MW0CDO" <gw7lhi@hotmail.com> wrote in message
news:aip5t4$169l9j$1@ID-117699.news.dfncis.de...
> Thanks for reading.
>
> I'm trying to find out the value of the 12m capacitor on a Butternut HF5B
> "Butterfly" beam.
>
> If you happen to have this info, I'd be grateful if you could pass it on!
>
>
> Paul MW0CDO.
>
>

2971. Re: What is Ballon ?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-15 02:05:37 UTC
From: tim english <te@usol.com>
Message-ID: <m23mluof6vad6oqvu161rsoaj9kbc88rnp@4ax.com>
Source record: 136813

Isn't that a ballum ??? :)
--
Tim, K8TJ

On Wed, 14 Aug 2002 18:19:13 -0700, "Wayne" <w> wrote:

> Ballon appears to be Dutch or German for balloon...
>
>"Reg Edwards" <g4fgq.regp@btinternet.com> wrote in message
>news:ahm98cdbo1@knossos.btinternet.com...
>> > >What is a Ballon ?
>> >
>> ========================
>>
>> A Ballon is gadget suspended between a feedline and an aerial. Its
>purpose
>> is to weigh down the aerial to stop it flopping about in the wind.
>> ---
>>
>> (FAQ from a UK newsgroup.)
>> ---
>> ========================
>> Regards from Reg G4FGQ
>> Free Radio Design Software
>> Go to http://www.g4fgq.com
>> ========================
>>
>>
>

2972. Re: What is Lithium grease good for?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-15 02:06:30 UTC
From: tim english <te@usol.com>
Message-ID: <143mluo8ls8pblk96d0qc04rcfkeso91s5@4ax.com>
Source record: 136814

It's good for Ten Tec PTO rebuild/relube !
--
Tim, K8TJ

On Wed, 14 Aug 2002 09:58:32 -0700, StarGazer <pti@capnet.com> wrote:

>....as

2973. Re: Where buy a 5/8 HF all-band vertical ?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-15 02:08:01 UTC
From: tim english <te@usol.com>
Message-ID: <f63mlukj3gcttrl39gpadhvg2q3lcna5mb@4ax.com>
Source record: 136815

Maco ??? Isn't that the outfit that makes those LEGAL 10 meter
mono-band amps ?
--
Tim, K8TJ

On 11 Aug 2002 21:36:03 -0700, lombryt@hotmail.com (Thierry) wrote:

>Hi,
>
>Since a few weeks I try to find on several websites technical data
>about 5/8 vertical for the 80/40-10m (and possible WARC) but I can no
>more find any antenna of this type (Ushler, Maco, etc). Have they all
>been discontinued ?
>It is a pity as height enough and with their radian they give a
>appreciate gain vs the isotropic (2 lobes)...
>
>Where can I buy a good 5/8 vertical nowadays ? Have you some
>brands/models ?
>
>Thanks
>
>Thierry
>ON5183

2974. Re: Stay away from the MFJ-1764 and 1762

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-15 02:09:47 UTC
From: tim english <te@usol.com>
Message-ID: <q93mlusqvefod69sfctvrhe4s34bpm00c9@4ax.com>
Source record: 136816

Well to avoid future problems I would be considering some nylon or
polypropylene guys.
--
Tim, K8TJ

On 13 Aug 2002 21:08:11 GMT, vhfradiobuff@aol.comspamsux
(VHFRadioBuff) wrote:

>>What other things were destroyed, i.e. tree branches, TV antennas etc.?
>
>Well, there were lots of small branches, nothing major.. MFJ replied to an
>email that I sent to them about the antennas. They have offered to replace any
>parts that may have been damaged, so it may work out well for me.
>=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-
>73! de Andy KC2SSB (ex: KF4KHC/HL9HCT)
>Beachwood, NJ USA! Grid FM29vw
>http://vhfradiobuff.tripod.com

2975. Re: RFI problem witho Security System

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-15 02:19:57 UTC
From: tim english <te@usol.com>
Message-ID: <vf3mlucp13semk88vfp9tnsffbkslr011f@4ax.com>
Source record: 136817

I work in the alarm industry and deal with this type of problem all
the time and the answer is simple. Change the length of the loop for
the zone that is going into alarm when your tuning up. The easiest
method is to break the loop near the control add say 75 feet of wire
to the loop. What's happening is the wire length of the alarm loop is
somewhere near a multiple of 1/4 wave on 20 meters. You may have to
experiment with some different lengths but at some point you should
find a length that will work. Take all those nasty toroids and crap
and throw them in the trash, they are worthless for this kind of
problem. You also should be very careful because you are feeding RF
into your alarm panel and I have seen plenty of controls fried from
high amounts of RF induced through zone protection loops. The other
problem you may be having is that your antenna is a vertical and this
wire between floors is mostly a vertical run. This can be a major
problem especially if the radiated RF is within say 75 feet of the
loop wiring. Another solution is to move the vertical farther away
from the house or go to horizontal antennas. Too much messing around
in the control and you will be replacing it and they are NOT cheap.
--
Tim, K8TJ
Audio Central Alarm
Saginaw, MI.

On Sat, 10 Aug 2002 12:29:59 -0500, "Terry Sellick"
<tsellic@attglobal.net> wrote:

>Hi all,
>
>I am looking for some help in solving an RFI problem.
>
>I have an ADT security system that sounds the alarm when I tune
>up on 20m. It has 2 digital control stations. The alarm indicates
>a "tamper alarm" on the control station closest to my GAP Challenger
>antenna. I have disconnected the coax at the antenna, and connected
>it to a dummy load at the antenna location. I can tune up without
>causing any alarm. So it's the antenna radiation being picked up
>in the house by one of the long security sensor cables, not a coax
>problem, and not RF getting into the 110vac. The cables are 4
>conductor unshielded.
>
>ADT has been NO help in solving this. I have tried placing toroids
>on both control panel cables, the security system power connection,
>the security telephone connection, and all cables entering the security
>panel box. I have grounded the security system box, and pcb to
>the electrical ground which has an outside ground rod. I have

>done all this one at a time to see if anything makes a difference. So far
>no luck.
>
>I don't know a lot about the control panels except that they feed back
>digital signals to a security system box in the basement. Somehow,
>RF is affecting the digital signal.
>
>Has anyone solved this problem before? Any suggestions? My next plan
>of attack is to get an RF Field Strength meter, and see if that will help
>narrow down the location of the problem.
>
>Thanks
>Terry
>

2976. Re: Need ways to hide my antenna from my neighbors.

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-15 02:22:51 UTC
From: tim english <te@usol.com>
Message-ID: <534mlugt6g2hphol4vbcead9v8bkoi6tpe@4ax.com>
Source record: 136818

Consider MOVING.... sheesh !
--
Tim, K8TJ

On Mon, 12 Aug 2002 05:57:17 -0500, Scott <acepilot@bloomer.net>
wrote:

>I've seen a company that produced a giant cellphone antenna that was
>formed into a cross and placed next to a church. Nobody ever complains
>when a church "supposedly" puts up a huge cross ;)
>
>Scott
>N0EDV
>
>
>CAM wrote:
>>
>> VE3TMT wrote:
>> > Hiding the antenna is the easy part, put it inside or paint it green and
>> > stick itin a tree. I'm afraid you're going to have a harder time hiding
>> > your tower. But if you do find a way, please let the rest of us know.
>>
>> I've seen cellphone towers disguised as trees. Unfortunately, they were
>> 20 feet taller than any of the other trees.
>> --
>> cheers, CAM http://www.qsl.net/w5dxp
>>
>> -----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
>> http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
>> -----== Over 80,000 Newsgroups - 16 Different Servers! =-----

2977. Re: Email to Doug Smith, kf6dx, QEX Editor

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-15 02:22:53 UTC
From: klocko@toad.net
Message-ID: <224d9cd4.0208141822.591a6edd@posting.google.com>
Source record: 136719

CAM <w5dxp@hotmail.com> wrote in message news:<3D5A876D.B9100406@hotmail.com>...
> Here's an email that I just sent to Doug Smith.
>
> Attn: Doug Smith
>
> Hi Doug, I'm Cecil Moore, W5DXP, ex-W6RCA. It seems that the reflected
> power debate has gone to unnecessary lengths in time and verbiage. Both
> sides of the two arguments being presented are flawed. My ideas are
> somewhere in between and are perfectly consistent with transmission line
> theory and the conservation of energy principle.
>
> Here's the example that we have been using:
>
> 100w XMTR---50 ohm feedline---+---1/2WL of 150 ohm feedline---50 ohm load
>
> The reflection coefficient at the 50/150 ohm junction is 0.5.
>
> Attached is a phasor diagram of what happens at the match point. That
> same phasor diagram can be viewed on the web at:
>
> http://www.qsl.net/w5dxp/Z0MATCH.GIF
>
> The components on the phasor diagram are as follows:
>
> 1. (100 watts) forward power on the 50 ohm line coming from the generator.

> These two voltage and current phasors are drawn at 90 degrees because
> it is easy to draw. Thus that 90 degrees becomes our reference for
> all the other voltage and current phasors.
>
> 2. In accordance with accepted wave reflection mechanics, (25 watts) of
> the source 100 watts is reflected back toward the source at the match
> point.
>
> 3. In accordance with accepted wave reflection mechanics, (75 watts)
> of the source 100 watts flows through the match point and joins the
> forward wave, in phase, on the 150 ohm line.
>
> 4. The steady-state power reflected from the load is (33.33 watts).
>
> 5. (8.33 watts) of that 33.33 watts is re-reflected at the match
> point in accordance with accepted wave reflection physics.
>
> 6. (25 watts) of that 33.33 watts flows through the 150/50 junction in

> accordance with accepted wave reflection mechanics.
>
> Component number 2 and component number 6 are out of phase. Their
> voltages are 180 degrees out of phase and their currents are 180
> degrees out of phase (see phasor diagram). When these two waves
> encounter each other, they cancel, or more correctly they engage
> in destructive interference.
>
> According to the principle of the conservation of energy, when there
> is a destructive interference pattern established, there must also
> be a constructive interference pattern established somewhere else.
> Since the destructive interference is completely confined to a piece
> of coax, the constructive interference must be established at
> essentially the same point as the destructive interference.

Jeez, give it a break for a couple of days. Go for a walk. Go out for
a good dinner. Rent some old classic comedies and have a good laugh.

73,
Bill N3WK

2978. Re: Email to Doug Smith, kf6dx, QEX Editor

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-15 02:31:46 UTC
From: Gene Fuller <W4SZzzzzz@att.net>
Message-ID: <3D5B1295.57EE4EC5@att.net>
Source record: 136720

Cecil,

Actually, "Steve's model" is not nearly as efficient as yours.

The mysterious waves that carry the missing 50 watts are stated to be traveling in the same (forward) direction on the 150 ohm section of line. They have the same magnitudes of both voltages and currents. However, there is a phase reversal on one wave so that the waves exactly cancel (or annihilate, or destructively interfere, or any other such description you like) along the entire length of the 150 ohm line. In other words, these supplemental waves simply to not exist; they are gone. They certainly are not "observable", meaning they cannot be *measured*. (It is not fair to add circulators or other non-linear devices, since the circuit is significantly changed by the insertion of such devices. Any measurements would be meaningless for the issue at hand.)

So in effect we now have the CAM model in which 50 watts is somehow transported with no carrier at all. This is extraordinarily efficient. Why not just go for a megawatt? It should transport just fine over 30 gauge twinlead since there is no current. No voltage either, so the wire does not even need to be insulated.

It is silly to argue that somehow the waves still exist and can later be "reconstructed". This is not the same as the example you gave some time ago about waves reflecting off the beach. Your 50 W waves are not just passing by; they completely cancel. In classical physics you cannot create light and anti-light out of darkness.

You set up an ideal system with no losses, completely linear, no dispersion, zero-width spectrum, etc., etc. What "action at a distance" allows the purported waves to know how to reconstruct when their essential power balancing task is done?

There are many times in math and physics when it is convenient to add auxiliary functions to aid in the analytic solution of a problem. However, one must be careful about ascribing physical reality to these auxiliaries unless the physical characteristics can actually be observed in some manner.

A model is most useful when it correctly describes physical reality for any input conditions within the range allowed for that model. In this regard there is no difference between Steve's model, your model, or W2DU's model. You can input any appropriate physical conditions into any of these models, and the physical output is the same.

What goes on inside the model is only an issue for philosophers, not for technologists.

73,
Gene, W4SZ

CAM wrote:
>
[snip]
>
> I forgot to ask. Doesn't anyone find it strange that Steve's superposing
> of two waves is 160% efficient?
>
> 100 x 133.33w/(75w+8.33w) = 160%
> --
> cheers, CAM http://www.qsl.net/w5dxp

2979. Re: Email to Doug Smith, kf6dx, QEX Editor

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-15 02:45:04 UTC
From: tdonaly@aol.com
Message-ID: <20020814224504.08750.00000346@mb-mw.aol.com>
Source record: 136721

Cecil wrote,
>
>I've got approximately the same equipment as Einstein. Want to know
>why the Red Shift is not all Doppler Effect?
>--
>cheers, CAM http://www.qsl.net/w5dxp
>
Yes, actually, I would like to know.

Tom Donaly KA6RUH

2980. Re: Supergain of monopole

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-15 02:50:34 UTC
From: richardharrison@webtv.net
Message-ID: <5155-3D5B16FA-35@storefull-2394.public.lawson.webtv.net>
Source record: 136723

Yuri, K3BU wrote:
"Looky at Fractenna, CFA and EH super gain-fool antennas."

Chip graciously offered to help me find a copy of Ed LaPort`s Antenna Engineering when I expressed the need of a copy. If I had any lead at all on gainful short monopoles I`d forward it to Chip. Like most of us, Chip has a good side too.

Best regards, Richard Harrison, KB5WZI

2981. Re: Superposition quiz

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-15 03:03:37 UTC
From: tdonaly@aol.com
Message-ID: <20020814230337.08750.00000351@mb-mw.aol.com>
Source record: 136722

Richard Harrison wrote,
>
>Roy Lewallen, W7EL wrote:
>"What`s the justification for your assuming that you can simply add the
>powers in the individual waves to get the total power?"
>
>Bird Electronic Corporation, "Bird Technical Series #1": VSWR paper---"A
>simple algebraic subtraction (Pfwd - Prefl) yields the net power
>delivered to the load."
>
>Best regards, Richard Harrison, KB5WZI
>
(V + V*Gamma)(I - I*Gamma) = VI - VI*Gamma^2. This is a special case.

Now try this: (V1 + V2)(I1 + I2). Also, if V1 = V2 = V and I1 = I2 = I, P1 =
P2 = P. (2V)(2I) =
4VI, so P + P = 4P. Many people have a hard time believing 1 + 1 = 4,
especially Cecil, but
when you're dealing with adding powers you have to get used to it.

73

Tom Donaly KA6RUH

2982. Re: Anyone else use OxGard for mating of antenna tubing?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-15 03:11:01 UTC
From: Eskay <Nospamve3jua@rac.ca>
Message-ID: <3D5B1BC5.9C230D00@rac.ca>
Source record: 136799

Look for Noa Lox and others of similar,it's grey in color and sold to stop aluminum wire from oxidizing.....VE3JUA...

WA6LZH wrote:

> There's a type of anti-oxidant grease sold in hardware stores for
> electrical work. One for copper and another for aluminum. I used the one
> for aluminum on a ta-33 and it's been good for 6 years.
>
> Tony

2983. Re: Email to Doug Smith, kf6dx, QEX Editor

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-15 03:32:28 UTC
From: CAM <w5dxp@hotmail.com>
Message-ID: <3D5B20CC.E1300F22@hotmail.com>
Source record: 136724

Gene Fuller wrote:
> So in effect we now have the CAM model in which 50 watts is somehow
> transported with no carrier at all.

That's not true, Gene. That 50 watts is carried by the forward wave.
Where do you think the light goes in a non-reflective picture glass?
It suffers destructive interference in the coating and goes the other
way. Light is an EM wave. RF waves are EM waves. Destructive interference
happens with light and RF waves. There's just usually not enough energy
in light to burn your fingers. 50 watts is just too much to sweep under
the rug.

> It is silly to argue that somehow the waves still exist and can later be
> "reconstructed". This is not the same as the example you gave some time
> ago about waves reflecting off the beach. Your 50 W waves are not just
> passing by; they completely cancel.

They completely cancel toward the source through constructive interference.
The energy in the canceled wave heads the only other direction possible.
It joins the forward wave in the 150 ohm line. You somehow have it backwards.
The two waves that are canceled are flowing toward the source. They only
flow an infinitesimal distance before they are canceled.

Water waves can completely cancel also. It's just more difficult to control.

> You set up an ideal system with no losses, completely linear, no
> dispersion, zero-width spectrum, etc., etc. What "action at a distance"
> allows the purported waves to know how to reconstruct when their
> essential power balancing task is done?

All waves moving in one direction superpose. All waves moving in the other
direction superpose. After superposition, we are left only with our old
friends, forward power and reflected power.

> What goes on inside the model is only an issue for philosophers, not for
> technologists.

What goes on at an impedance discontinuity is only an issue for philosophers?
Maybe your and my existence is only an issue for philosophers.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
------== Over 80,000 Newsgroups - 16 Different Servers! =-----

2984. Re: Superposition quiz

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-15 03:34:01 UTC
From: "J. Harvey" <JM002.Harvey_ANTI*SPAM_@Sympatico.ca>
Message-ID: <JiF69.6607$2T2.1141913@news20.bellglobal.com>
Source record: 136727

Here's my quiz (don't worry, it's trivial):

Take two '100 watt transmitters' and phase lock them out-of-phase. Connect the two transmitter outputs directly using a *very very short* jumper coaxial cable. How much power is in the cable ? In theory, according to my assumptions, net V is zero due to cancellation .: P is zero. Hmmm...
Where did the 200 watts go?

2985. Re: Email to Doug Smith, kf6dx, QEX Editor

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-15 03:36:37 UTC
From: CAM <w5dxp@hotmail.com>
Message-ID: <3D5B21C5.BCCD77EA@hotmail.com>
Source record: 136725

Tdonaly wrote:
>
> Cecil wrote,
> >
> >I've got approximately the same equipment as Einstein. Want to know
> >why the Red Shift is not all Doppler Effect?
> >
> Yes, actually, I would like to know.

Because space itself is expanding. That's a little different from things moving apart. With an expanding space, things can stand still and get farther apart. The same thing that is causing the expansion of space is causing seconds to get shorter which also looks like a Red Shift to people who are measuring cycles/second.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
------== Over 80,000 Newsgroups - 16 Different Servers! =-----

2986. Re: Superposition quiz

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-15 03:42:21 UTC
From: CAM <w5dxp@hotmail.com>
Message-ID: <3D5B231D.D37BE623@hotmail.com>
Source record: 136726

Tdonaly wrote:
> (V + V*Gamma)(I - I*Gamma) = VI - VI*Gamma^2. This is a special case.
>
> Now try this: (V1 + V2)(I1 + I2). Also, if V1 = V2 = V and I1 = I2 = I, P1 =
> P2 = P. (2V)(2I) =
> 4VI, so P + P = 4P. Many people have a hard time believing 1 + 1 = 4,
> especially Cecil, but
> when you're dealing with adding powers you have to get used to it.

Have you objected to your power company for adding up your watt-hours
each month?
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
------== Over 80,000 Newsgroups - 16 Different Servers! =-----

2987. Re: Email to Doug Smith, kf6dx, QEX Editor

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-15 03:50:02 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <kt8mlu8vrj4q0djbsj96mv668j3blpecta@4ax.com>
Source record: 136728

On Wed, 14 Aug 2002 22:32:28 -0500, CAM <w5dxp@hotmail.com> wrote:

>It suffers destructive interference in the coating and goes the other
>way. Light is an EM wave.

Hi Cecil,

No, coating on lenses work just like any other tuner, they shift the phase such that AFTER the transmission THROUGH the lens, the combination of waves cancel. In fact the coating provides a resonant chamber that re-reflects to accomplish this phase shift. Basically it employs the same mechanics that serve the relationship between Director and Reflector in a yagi.

>There's just usually not enough energy
>in light to burn your fingers.

has absolutely nothing to do with anything.

>The two waves that are canceled are flowing toward the source.

You've been staring into the sun too long with your special coated sunglass lenses.

73's
Richard Clark, KB7QHC

2988. Re: Email to Doug Smith, kf6dx, QEX Editor

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-15 03:50:39 UTC
From: "J. Harvey" <JM002.Harvey_ANTI*SPAM_@Sympatico.ca>
Message-ID: <jyF69.6621$2T2.1147774@news20.bellglobal.com>
Source record: 136731

"CAM"
> The same thing that is causing the expansion of space
> is causing **seconds to get shorter**...

Life really is getting more hectic - I thought it was just me...

2989. Re: Email to Doug Smith, kf6dx, QEX Editor

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-15 03:57:24 UTC
From: CAM <w5dxp@hotmail.com>
Message-ID: <3D5B26A4.C613BB9@hotmail.com>
Source record: 136729

Richard Clark wrote:
>
> On Wed, 14 Aug 2002 22:32:28 -0500, CAM <w5dxp@hotmail.com> wrote:
>
> >It suffers destructive interference in the coating and goes the other
> >way. Light is an EM wave.
>
> Hi Cecil,
>
> No, coating on lenses work just like any other tuner, they shift the
> phase such that AFTER the transmission THROUGH the lens, the
> combination of waves cancel. In fact the coating provides a resonant
> chamber that re-reflects to accomplish this phase shift.

How is that different from what I said? Cancellation is destructive
interference. The resonant chamber of coating is "in" the coating.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
------== Over 80,000 Newsgroups - 16 Different Servers! =-----

2990. Re: Superposition quiz

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-15 03:58:05 UTC
From: richardharrison@webtv.net
Message-ID: <2784-3D5B26CD-112@storefull-2395.public.lawson.webtv.net>
Source record: 136733

Tom, KA6RUH wrote:
"Many people have a hard time believing 1+1=4----."

Transmission lines are conduits for work or energy units
(joules=wattseconds).

You can`t get more energy out of the conduit than you put in. Nor, can
you get it out any faster than you put it in because there is too little
storage to allow store and forward of energy. So, there is no energy
bunching anywhere in the conduit. A power meter shows a constant power
throughout the transmission line. 1+1=4 in this case is crazy.

Best regards, Richard Harrison, KB5WZI

2991. FAQS

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-15 04:03:22 UTC
From: sampett456@yahoo.co.uk
Message-ID: <d8f8142b.0208142003.7d64b4bc@posting.google.com>
Source record: 136730

Where can I find the FAQs for this newsgroup or some good websites
about antennas ?

2992. Re: Stay away from the MFJ-1764 and 1762

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-15 04:07:09 UTC
From: vhfradiobuff@aol.comspamsux
Message-ID: <20020815000709.04948.00000598@mb-ca.aol.com>
Source record: 136732

>Well to avoid future problems I would be considering some nylon or
>polypropylene guys.

The vertical is mounted right at roof level, with the masts going from the ground up, bolted to the side of the house. I fail to see how a guy would have helped. The yagi is also close to the roof (mounted on a 3' roof tripod) with very little play. Guys would not have done anything to stop these antennas from being bent.
=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-
73! de Andy KC2SSB (ex: KF4KHC/HL9HCT)
Beachwood, NJ USA! Grid FM29vw
http://vhfradiobuff.tripod.com

2993. Re: Email to Doug Smith, kf6dx, QEX Editor

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-15 04:20:58 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <d4bmlu4r2ms12i0f1b3pm6v2k8vlkc27c8@4ax.com>
Source record: 136734

On Wed, 14 Aug 2002 22:57:24 -0500, CAM <w5dxp@hotmail.com> wrote:

>Richard Clark wrote:
>>
>> On Wed, 14 Aug 2002 22:32:28 -0500, CAM <w5dxp@hotmail.com> wrote:
>>
>> >It suffers destructive interference in the coating and goes the other
>> >way. Light is an EM wave.
>>
>> Hi Cecil,
>>
>> No, coating on lenses work just like any other tuner, they shift the
>> phase such that AFTER the transmission THROUGH the lens, the
>> combination of waves cancel. In fact the coating provides a resonant
>> chamber that re-reflects to accomplish this phase shift.
>
>How is that different from what I said? Cancellation is destructive
>interference. The resonant chamber of coating is "in" the coating.

You got it wrong in which direction it cancels. Now your task is to
come up with a reference for your new Optix.

73's
Richard Clark, KB7QHC

2994. Re: Ladder-line Orientation?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-15 04:33:48 UTC
From: 'Doc <w5lz@icok.net>
Message-ID: <3D5B2F20.31056936@icok.net>
Source record: 136735

Bert,
I'm not sure I understand your description of
how the ladder-line runs. The feed line's route,
along with it's length can affect the whole antenna
system's impedance matching requirements and so the
antenna system's performance. So, the quick and
dirty answer is that yes, it will affect how well
your antenna system works. I can't say if the change
will be for the better or worse 'cuz I just don't
understand your description (it's late, and any other
applicable excuses).
'Doc

2995. Balanced line to coax

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-15 04:41:43 UTC
From: Rezster <dbm@[remove]>
Message-ID: <Xns926AE6EE18EF8dbmremovefisinet@148.78.248.75>
Source record: 136736

I want to connect my 450 ohm ladderline to my Yaesu FT-757GX which has a FC-757AT automatic antenna tuner. The tuner has only a 50 ohm coax connection. I don't have a balun trans. but am looking for one. (I live in a very small community.)

I also have an MFJ Versa Tuner II which does accept the ladderline.

Would there be too much radiation in my shack if I use the MFJ for the time being?

Can I just replace the balanced line with coax?

What would be my best options?

When/if I get the balun, how long should my coax be?

Thanx!

2996. Re: Superposition quiz

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-15 04:45:27 UTC
From: richardharrison@webtv.net
Message-ID: <161-3D5B31E7-45@storefull-2393.public.lawson.webtv.net>
Source record: 136740

J. Harvey wrote:
"Take two "100 watt transmitters" and phase lock them out-of-phase. Connect the two transmitter outputs directly using a very very short jumper coaxial cable."

This connection and phasing is equivalent in many ways to a d-c circuit using two batteries in series. Without load resistance, the voltage generated by each transmitter is effectively driving all the current it can into its own internal resistance, or 100 watts worth.

Total power is 200 watts generated and dissipated and equally divided between identical transmitters. Current in the cable connecting the transmitters is the same as either transmitter produces at 100 watts because that is their maximum production and they are effectively connected in series.

This example assumes a current constrained transmitter where a matched load causes 100 watts transmitter dissipation. In other words, when the transmitter delivers 100 watts to an external load it normally dissipates 100 watts internally.

Best regards, Richard Harrison, KB5WZI

2997. Re: Help with 20 meter 1/2 wave Vert

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-15 04:56:00 UTC
From: nm5k@wt.net
Message-ID: <25eb70d7.0208142056.4ef7dcf5@posting.google.com>
Source record: 136737

"WD4LVO" <wd4lvo@bellsouth.net> wrote in message
news:<09r69.20685$g47.1136925@e3500-atl1.usenetserver.com>...
> I have some sections of a vertical antenna that I was hoping I can make a
> 14.000 - 14.060 MHz 1/2 wave antenna out of. The pieces I have are as
> follows:
>
> 1 section is a 1inch dia 6ft long
> 2nd section is a 3/4 dia 6ft long
> 3rd section is a 13inch piece of 1/2 pvc pipe that I could wind a loading
> coil on
> 4th section is a 9ft long whip
>
> I have randomly tried to wind some wire on the short 13inch piece after the
> first two sections that are 12ft high and have not been able to match around
> 14 mhz. I might have to make the loading coil longer?
> I only plan to deploy the antenna at
> the destination, more like a field station ant so lenght is not a problem. I
> have a 1/4 wave now and
> was looking to make a 1/2 if possible out of the pieces. I only need it to
> cover the cw portion of 20 meters. I was wondering if it was possible to
> make one out of my existing pieces, need some dimensions and loading coil
> windings.
> Need some help in figuring the number of turns for the loading coil and
> gauge of
> wire. I have the whole thing mounted ontop of a pickup truck. removable of
> course, I would like to achieve at least a 1/2 wave with this setup or 5/8
> wave.
> I don't know if it will help over a quarter wave when all will be using is a
> QRP rig.
>
> Thanks Ozzy -WD4LVO.

Easiest way to make a 1/2 wave on 20m is to use a single piece 32 ft
radiator and a single turn loop and cap at the base. IE: ringo.. You
would want a single turn loop of appx 18 or so inches diameter. The
cap would be appx 100 pf or so, and can be made from coax. MK

2998. motor driven vacuum variable question

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-15 05:12:17 UTC
From: rb <rbigg@seii.net>
Message-ID: <ajfcg4$5lg$1@news.chatlink.com>
Source record: 136738

I have one of those modularized vertical pull 0-3000pfd variable capacitors that have a 28vdc motor drive. It has limit/stop/reversing circuits that terminate in a small D ring 15 pin socket. Looks like it could have been made by Collins. The vacuum variable is a Jennings.

A few years back, some nice ham sent me a circuit diagram of this thing, and I somehow (foolishly?) lost it.

If anyone has the wiring diagram, I'd sure like to get a copy. All help

73 de Ron, K5BDJ

2999. Re: Balanced line to coax

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-15 05:13:59 UTC
From: Fred Hambrecht <w4jle@charter.net>
Message-ID: <ulme4rtacq0ba6@corp.supernews.com>
Source record: 136739

May I ask, why don't you just try it? You can learn a heck of a lot more from trying something than asking opinions on a newsgroup. To answer your question, a tuner is a tuner some work better than others, your versa tuner should work just fine. For that matter, connect a short piece of coax directly to the ladder line and use the other tuner. Is it perfect? Nope! but it will darn sure work, the tuner will make up for the mismatch and do you care if the mismatch is because of non resonance, impedance, or bird crap on the antenna?

"Rezster" <dbm@[remove]fisi.net> wrote in message
news:Xns926AE6EE18EF8dbmremovefisinet@148.78.248.75...
> I want to connect my 450 ohm ladderline to my Yaesu FT-757GX which has a
> FC-757AT automatic antenna tuner. The tuner has only a 50 ohm coax
> connection. I don't have a balun trans. but am looking for one. (I live
> in a very small community.)
>
> I also have an MFJ Versa Tuner II which does accept the ladderline.
>
> Would there be too much radiation in my shack if I use the MFJ for the
> time being?
>
> Can I just replace the balanced line with coax?
>
> What would be my best options?
>
> When/if I get the balun, how long should my coax be?
>
> Thanx!

3000. Re: EVERY THING IS NOW KNOWN ON ANTENNAS.

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-15 06:06:37 UTC
From: Will White <googlyelmo@earthlink.net>
Message-ID: <3D5B44DA.53BD7C39@earthlink.net>
Source record: 136741

Well illustrated point! It sort of reminds me of the pointed exchange an auto company executive is reputed to have had with Bill Gates at a dinner party, to the effect that Gates bragged that if automobiles had kept pace with the advancements, lower costs, and leaps in perfomance over the past 20 years that computers have made, you would have new cars that cost $1000, did 0-60 in 3 seconds, and got 100 MPG! The auto exec replied: "Yeah, but who the hell wants a car that crashes twice a day?!"

Richard Harrison wrote:

> Art Unwin wrote:
> "---a tired comment was made that such an antenna (a new multiband
> antenna) was badly needed in ham radio and then left the subject as if
> such a thing was impossible---."
>
> If antenna development had kept pace with electronics during the past 50
> years, a near d-c to daylight radiator would fit in the palm of your
> hand, have continuously selectable directivity from a 2-degree spot to
> isotropic, have 95% efficiency, accept a kilowatt continuous power
> without degradation, and present a flat 50-ohm resistance to the source
> over the entire spectrum. It would readily radiate, of course.
>
> Antenna performance is far short of ideal, so don`t close the patent
> office just yet.
>
> Best regards, Richard Harrison, KB5WZI

--
Will White, KD7BFX
Seattle WA US
King County, Grid CN87tq
ITU Zone 6, CQ Zone 3
****
"The wireless telegraph is not difficult to understand.
The ordinary telegraph is like a very long cat.
You pull the tail in New York, and it meows in Los Angeles.
The wireless is the same, only without the cat."
- Albert Einstein
****

3001. Re: How far away: HF Dipole and tri-bander vertical?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-15 06:12:26 UTC
From: Paul N3EOP <n3eop@arrl.or.callsign.net>
Message-ID: <Xns926AEC1353BA4n3eophotmailcom@64.164.98.6>
Source record: 136742

cprstn54zz@att.net (Ken) wrote:

> Well, its cable TV and I am seeing big RF off the cable sheathing
> itself, as I am seeing from all grounded conductors in the part of the
> house near the dipole. I have yet to test whether it affects a TV
> playing a videotape. My plan is to put ferrite toroid chokes where I
> must.

A big ol' toroid with several turns of RG-6 right before it goes into the TV should do a lot for you.

A buddy of mine had a real TVI problem. The cable type high pass filters didn't help one bit. What worked for him was a 75-300 ohm transformer, a 300 ohm HPF, then another 300-75 ohm transformer. The problem is that the RF simply flows down the shield of the coax, right around the 75 ohm HPF, and into the TV. By going to 300 ohm first, the RF on the shield is converted into simple "common mode" noise, which the 300 ohm HPF easily got rid of.

3002. Re: Superposition quiz

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-15 06:22:00 UTC
From: "Ian White, G3SEK" <G3SEK@ifwtech.co.uk>
Message-ID: <E+RbgvCIi0W9EAP9@ifwtech.co.uk>
Source record: 136744

Richard Harrison wrote:
>Roy Lewallen, W7EL wrote:
>"What`s the justification for your assuming that you can simply add the
>powers in the individual waves to get the total power?"
>
>Bird Electronic Corporation, "Bird Technical Series #1": VSWR paper---"A
>simple algebraic subtraction (Pfwd - Prefl) yields the net power
>delivered to the load."

The subtraction is misleadingly simple... and I'm afraid you have been misled.

The theory is explained in 'Reflections 1', and it depends only on superposition of forward and reverse voltage and current waves - *not* superposition of power.

--
73 from Ian G3SEK 'In Practice' columnist for RadCom (RSGB)
Editor, 'The VHF/UHF DX Book'
http://www.ifwtech.co.uk/g3sek

3003. Re: Ladder-line Orientation?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-15 06:53:46 UTC
From: Paul N3EOP <n3eop@arrl.or.callsign.net>
Message-ID: <Xns926AF315E234Cn3eophotmailcom@64.164.98.29>
Source record: 136743

wa2si@arrl.net (Bert Craig) asked:

> I'd like to raise the balun up approx. 7 or so ft. so the ladder-line
> no longer rests on the roof's edge.

> My question is whether or not the horizontal vs. vertical orientation
> of the ladder-line adversely affects the antenna system's performance
> in any way?

Since you are running a balanced antenna, the feedline should not be radiating (i.e., the currents on each side are equal). So, from that respect, it should not make a difference.

However, getting the ladder line away from the roof edge should improve the performance of your system. It may not be detectable, but there is an impedance "bump" where the ladder line gets close to the roof edge, especially if there is metal there (which there normally is).

Also, raising the feedpoint of your antenna should also make a slight improvement.

3004. Re: Ladder-line Orientation?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-15 08:26:17 UTC
From: "Ian White, G3SEK" <G3SEK@ifwtech.co.uk>
Message-ID: <Hsp7kxBpW2W9EAvY@ifwtech.co.uk>
Source record: 136745

Paul N3EOP wrote:
>
>Since you are running a balanced antenna, the feedline should not be
>radiating (i.e., the currents on each side are equal).

Sorry, but that's wishful thinking. The reality is exactly the opposite:
"If you want to run a balanced system, the feedline must be prevented
from radiating (i.e., *you* must make sure that the currents on each
side are equal)."

As well as carrying differential-mode "balanced" current, parallel-line
will quite happily support common-mode "antenna" currents at the same
time. In other words, so-called "balanced" feedline is only *capable* of
being balanced - nothing more.

It's up to the user to *make* it balanced, mainly by using the most
symmetrical layout possible.

--
73 from Ian G3SEK 'In Practice' columnist for RadCom (RSGB)
Editor, 'The VHF/UHF DX Book'
http://www.ifwtech.co.uk/g3sek

3005. Re: Stay away from the MFJ-1764 and 1762

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-15 10:35:23 UTC
From: Owen Duffy <owen@oda.com.au>
Message-ID: <3D5B83EB.4212972F@oda.com.au>
Source record: 136746

VHFRadioBuff wrote:
>
> I've been using the MFJ-1764 and MFJ-172 for a while and they've performed
> fine, but after a night of high winds, rain, lightning and thunder, I awoke to
> two bent antennas. The wind speed that night (August 2nd) was 21 mph with the
> highest gust being 42 mph. The 1764 was bent in half and the 1762's reflector

Your antennas could have experienced higher wind speeds than recorded at the weather station.

One would hope that you wouldn't experience damage to the antennas unless the winds were strong enough to damage some other substantial structures in the area. So, if your two antennas were the only things damaged and no one lost roof tiles, gutters, tv antennas, satellite dishes, etc, the designs may be a bit weak.

MFJ's online specs don't include a wind survival rating.

I note that Cushcraft's online specs have wind survival ratings for those "commercial" products that I sampled, but not for any of the "amateur" products that I looked at.

Perhaps that indicates what type of buyers we tend to be! We seem to expect wind survival ratings for towers, but not the antennas.

Nice that MFJ replaced the parts. How often will you experience winds like that... the weather station reports were not especially high velocity?

Owen

3006. Re: Supergain of monopole

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-15 10:37:29 UTC
From: fractenna@aol.com
Message-ID: <20020815063729.10517.00000540@mb-cr.aol.com>
Source record: 136747

>
>Yuri, K3BU wrote:
>"Looky at Fractenna, CFA and EH super gain-fool antennas."
>
>Chip graciously offered to help me find a copy of Ed LaPort`s Antenna
>Engineering when I expressed the need of a copy. If I had any lead at
>all on gainful short monopoles I`d forward it to Chip. Like most of us,
>Chip has a good side too.
>
>Best regards, Richard Harrison, KB5WZI
>

Thank you Richard. I am not aware of any other side, FYI. Happy to dig out anything from Laporte for you.

I have the info I need (I had requested e-mail). Thanks to all for looking at my request.

73,
Chip N1IR

3007. Re: Balanced line to coax

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-15 12:11:50 UTC
From: 'Doc <w5lz@icok.net>
Message-ID: <3D5B9A78.8A72611A@icok.net>
Source record: 136748

Rezster,
What are you using for an antenna?
'Doc

3008. Twin Lead 300 Ohm. and J antenna for UHF

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-15 12:12:07 UTC
From: Pedro Motilla <pedro.motilla.QUITAESTO@ono.com>
Message-ID: <rUM69.3461$8K.226510@news.ono.com>
Source record: 136749

Does anybody has a practical experience in a J for UHF using Twin Lead.

I have experimented wiht 2m version and works very well. But i can not
adjust swr for UHF

Mesures:
Long part: 45.5 Cms
Short part: 15 Cms
Feeding point: 1.3 Cms from the end
End shorcircuited.

Any help will be wellcome.

Thanks
EB5FLS
Op. Pedro

3009. Re: FAQS

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-15 12:12:38 UTC
From: Plop <tony.winnen@skynet.be>
Message-ID: <3d5b9a95$0$284$ba620e4c@news.skynet.be>
Source record: 136750

Hello,
Look here for antenna-links :
http://www.vicon.net/~aketner/antlinks.htm
http://www.antennex.com/
http://www.packetradio.com/ant.htm
or try "Google"...he has the answer faster than you can ask
...
73 Tonny on1dnf

"sampetten" <sampett456@yahoo.co.uk> schreef in bericht
news:d8f8142b.0208142003.7d64b4bc@posting.google.com...
> Where can I find the FAQs for this newsgroup or some good
websites
> about antennas ?

3010. Re: Superposition quiz

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-15 12:13:15 UTC
From: richardharrison@webtv.net
Message-ID: <26605-3D5B9ADB-139@storefull-2397.public.lawson.webtv.net>
Source record: 136751

Ian, G3SEK wrote:
"The subtraction is misleadingly simple."

There are two directions of transmission in a coax, toward the load and away from the load.

Bird`s slug responds to in-phase power in each direction, one direction at a time. Power flowing away from the load is a reflection. Power flowing toward the load contains power accepted by the load plus the reflection. Subtract the reflection from the total forward power and you have the power delivered to the load.

As the transmitter has only to deliver energy at the rate it`s taken by the load, the power delivered by the transmitter is the same power taken by the load, assuming insignificant loss in the coax.

These power measurements may be made anywhere along the length of the coax and the power indications are the same at any place unless loss is significant. If the coax is lossy, the Bird can be used to measure power into the cable and out of the cable and the difference is the cable loss.

This is simple and it works.

Best regards, Richard Harrison, KB5WZI

3011. Re: Superposition quiz

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-15 12:48:29 UTC
From: CAM <w5dxp@hotmail.com>
Message-ID: <3D5BA31D.563117FA@hotmail.com>
Source record: 136752

Richard Harrison wrote:
>
> Tom, KA6RUH wrote:
> "Many people have a hard time believing 1+1=4----."
>
> Transmission lines are conduits for work or energy units
> (joules=wattseconds).
>
> You can`t get more energy out of the conduit than you put in. Nor, can
> you get it out any faster than you put it in because there is too little
> storage to allow store and forward of energy. So, there is no energy
> bunching anywhere in the conduit. A power meter shows a constant power
> throughout the transmission line. 1+1=4 in this case is crazy.

There is some average energy "stored" dynamically in the forward wave
and reflected wave and it must remain constant during steady-state.

But you are right. During steady-state conditions, we cannot get more
average power out of the transmission line than we put in.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
------== Over 80,000 Newsgroups - 16 Different Servers! =-----

3012. Re: Email to Doug Smith, kf6dx, QEX Editor

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-15 12:57:33 UTC
From: CAM <w5dxp@hotmail.com>
Message-ID: <3D5BA53D.F3F505A6@hotmail.com>
Source record: 136753

Richard Clark wrote:
>
> On Wed, 14 Aug 2002 22:57:24 -0500, CAM <w5dxp@hotmail.com> wrote:

> >> CAM <w5dxp@hotmail.com> wrote:
> >> >It suffers destructive interference in the coating and goes the other
> >> >way. Light is an EM wave.
> >>
> >How is that different from what I said? Cancellation is destructive
> >interference. The resonant chamber of coating is "in" the coating.
>
> You got it wrong in which direction it cancels. Now your task is to
> come up with a reference for your new Optix.

Richard, I didn't say in my posting above in which direction it cancels.
It obviously cancels in the direction of the viewer. That's the entire
purpose of the reflectionless glass - to cancel the reflections in the
direction of the viewer.

Let me expand my above statement to include direction. "It suffers
destructive interference in the coating and goes the other way"
toward the picture instead of toward the viewer. I thought that
would be self evident.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
------== Over 80,000 Newsgroups - 16 Different Servers! =-----

3013. Re: Stay away from the MFJ-1764 and 1762

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-15 13:01:04 UTC
From: vhfradiobuff@aol.comspamsux
Message-ID: <20020815090104.24794.00000449@mb-ft.aol.com>
Source record: 136754

>We seem to
>expect wind survival ratings for towers, but not the antennas.
>
>Nice that MFJ replaced the parts. How often will you experience winds
>like that... the weather station reports were not especially high
>velocity?

You are correct about towers suviving.. as a matter of fact, MFJ stated that if my two antennas lasted a year, that's good... apparently they don't expect their antennas to last more than a year. They've offered to replace radials, but not much else. They don't want to replace the whole antenna. The winds that night were one of those storms you might get once a year... very severe storms, but a rare occurance. We had storms like that about a year ago and the antennas survived fine at my old QTH, only a couple miles northeast of my current QTH.
=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-
73! de Andy KC2SSB (ex: KF4KHC/HL9HCT)
Beachwood, NJ USA! Grid FM29vw
http://vhfradiobuff.tripod.com

3014. Re: Superposition quiz

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-15 13:41:02 UTC
From: richardharrison@webtv.net
Message-ID: <5155-3D5BAF6E-47@storefull-2394.public.lawson.webtv.net>
Source record: 136756

CAM, W6DXP wrote:
"There is some average energy "stored" dynamically in the forward and reflected waves and it must remain constant during steady state."

The coax fills at almost 125,000 miles per second. How many miles of coax do you have? We are measuring energy flows in joules per second. How many joules are stored in a coax in the tiny fraction of a second that elapses in the time it takes to fill the coax?

It isn`t worth mentioning.

Best regards, Richard Harrison, KB5WZI

3015. Re: Radioshack DiscOne Base Antenna vs 6 meter dipole

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-15 13:51:24 UTC
From: Mike <rmwomble@bellsouth.net>
Message-ID: <%8O69.10718$dr.2105687@e3500-atl1.usenetserver.com>
Source record: 136755

I've been using a RS discone for several years and love it for receiving on a wide assortment of bands. I also transmit on 2 meters on the antenna. I've also had the problem with ground plain radials because of the small screw threads working their way loose and falling off and they are easily broken off during handling if you're not careful. Maybe some bonding agent would work holding the radials in. Next time I take the antenna down I'm going to try something like that. My discone is about 5 years old I guess.

"Wayne" <w> wrote in message news:ulltvnlllcc6ff@corp.supernews.com...
> The RS discone is not a gain antenna, but is broad banded as all heck on 2
> meters and up.
> Roughly equivalent to a 1/4 wave ground plane (with drooping radials) on
> all but 6 meters.
> I find you can, by using an adapter (may need to make one) use a 3/8-24
> whip for six, or even ten meters on this item.
> No problems with radials yet, but only a few months so far...
>
> Wayne WA2YNE

3016. Re: How far away: HF Dipole and tri-bander vertical?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-15 14:10:14 UTC
From: richardharrison@webtv.net
Message-ID: <5155-3D5BB646-48@storefull-2394.public.lawson.webtv.net>
Source record: 136758

Ken, KC2JDY wrote:
"---will 600 watts of HF de-sense the tribander (VHF) on RX---?"

Cross-polarization loss may be only about 20 db. Receiver gain is usually more than 100 db. Simple answer is yes, you will have de-sense unless powerful preselection is used with the receiver and added harmonic suppression may be needed at the h-f transmitter, too.

My experience includes reception of 100 MHz signals at a shortwave broadcasting station. This required moving the corner reflector receiving antennas 1/2-mile from the transmitting plant with the backs of the reflectors facing the plant. These were cross-polarized with the shortwave antennas. The shortwave antennas were also a 1/2 mile or so away in the opposite direction from the plant and the plant was on the back side of their reflectors.

Best regards, Richard Harrison, KB5WZI

3017. Re: Best Homebrew Antenna For 2 Metres?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-15 14:31:12 UTC
From: Olivier Gindensperger <o.gindensperger@free.fr>
Message-ID: <3d5bbb7b$0$10496$626a54ce@news.free.fr>
Source record: 136757

```
The not so common double-bazooka antenna in vertical polarization:
- 2.5 ft RG-58/CU coaxial cable
- 1.5 ft 12 or 10 GA wire
- 1 BNC socket
- some plastic or PVC tubing
- glue
- a 25 watts solderer
- a good knife or scissors
- the right formula to calculate the lengths of your antenna (ARRL antenna
handbook)
- 30 minutes of hard work
- noise bridge or antenna analyzer
```

et voil&#65533; your unexpensive 2m/70cm home brewed, broad-band antenna!

```
73 de F8BOE Olivier ...-.-
```

3018. Re: Balanced line to coax

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-15 14:43:07 UTC
From: Rezster <dbm@[remove]>
Message-ID: <Xns926B58C98D8C3dbmremovefisinet@148.78.248.75>
Source record: 136760

"Fred Hambrecht" <w4jle@charter.net> wrote in
news:ulme4rtacq0ba6@corp.supernews.com:

> May I ask, why don't you just try it? You can learn a heck of a lot
> more from trying something than asking opinions on a newsgroup.

While that's probably true, I'm relatively new at this and don't mind
asking those of you who have more experience. I could probably benefit
more from your experience than my mistakes...and it could be less costly.

> To answer your question, a tuner is a tuner some work better than
> others,
> your versa tuner should work just fine. For that matter, connect a
> short piece of coax directly to the ladder line and use the other
> tuner. Is it perfect? Nope! but it will darn sure work, the tuner will
> make up for the mismatch and do you care if the mismatch is because of
> non resonance, impedance, or bird crap on the antenna?

That's what I was needing information on. Connecting a 450 ohm line to a
tuner that calls for a 50 ohm coax didn't seem like a good idea...one
that I HAD thought of. I wasn't sure if the tuner would make up for the
difference or not. I appreciate your input.

> "Rezster" <dbm@[remove]fisi.net> wrote in message
> news:Xns926AE6EE18EF8dbmremovefisinet@148.78.248.75...
>> I want to connect my 450 ohm ladderline to my Yaesu FT-757GX which
>> has a FC-757AT automatic antenna tuner. The tuner has only a 50 ohm
>> coax connection. I don't have a balun trans. but am looking for one.
>> (I live in a very small community.)
>>
>> I also have an MFJ Versa Tuner II which does accept the ladderline.
>>
>> Would there be too much radiation in my shack if I use the MFJ for
>> the time being?
>>
>> Can I just replace the balanced line with coax?
>>
>> What would be my best options?
>>
>> When/if I get the balun, how long should my coax be?
>>
>> Thanx!
>
>

3019. Re: Balanced line to coax

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-15 14:44:55 UTC
From: Rezster <dbm@[remove]>
Message-ID: <Xns926B591848177dbmremovefisinet@148.78.248.75>
Source record: 136759

'Doc <w5lz@icok.net> wrote in news:3D5B9A78.8A72611A@icok.net:

>
>
> Rezster,
> What are you using for an antenna?
> 'Doc

It's an AS-2 Dipole, all band with loads. Kinda like the G5RV.

3020. Superposition: was Re: Email to ...

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-15 14:51:25 UTC
From: CAM <w5dxp@hotmail.com>
Message-ID: <3D5BBFED.EB5A02B7@hotmail.com>
Source record: 136761

Bill Klocko wrote:
> Jeez, give it a break for a couple of days. Go for a walk. Go out for
> a good dinner. Rent some old classic comedies and have a good laugh.

I'm retired, Bill. I do all of the above plus much more. I use this newsgroup as a learning experience. I have learned a lot. I often toss something out so the newsgroup can, in its collective wisdom, perform the scientific method on it. I recently received a helpful email about superposition.

The superposition theorem states that the system involved must be linear. If the power source is linear, when we superpose 100v at 2a in phase with 100v at 2a, we do indeed get 200v at 4a and the power output of the source has supplied the extra 400 watts needed for the superposition. If the constant voltage power source is current limited to 400w, then the signals cannot be superposed to 200v at 4a. If they are confined to a 50 ohm environment and power limited to 400w, the best possible result of losslessly combining them in phase will be 141.4v at 2.828a. This is what happens with a transformer.

The emailer said that the hole in my argument is that a ham transmitter is not a linear device. Seems that might also be a hole in Steve's argument. If a ham transmitter is not a linear device, then Steve is not allowed to use the superposition theorem on a ham system. But that's what we have all been doing.

A source doesn't have to be linear under all conditions to satisfy the requirements of the superposition theorem. It only has to be linear over the conditions that are encountered in reality. A 100w ham transmitter looking into 50 ohms at the input of an antenna tuner certainly satisfies the linearity requirement. It is putting out a constant 70.7v at a constant 1.414a.

The energy needed for Steve's superposing is indeed supplied by the system. The extra 50 joules/sec required is supplied by the superposing of two complimentary waves whose voltages and currents cancel but whose energy is delivered to another set of superposed waves. I will head over to Texas A&M next week and try to find references for all that I have been asserting. But the aliens assured me that all of this is true.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
------== Over 80,000 Newsgroups - 16 Different Servers! =-----

3021. Re: Superposition quiz

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-15 14:56:16 UTC
From: CAM <w5dxp@hotmail.com>
Message-ID: <3D5BC110.ACAE583F@hotmail.com>
Source record: 136765

Richard Harrison wrote:
>
> CAM, W6DXP wrote:
> "There is some average energy "stored" dynamically in the forward and
> reflected waves and it must remain constant during steady state."
>
> The coax fills at almost 125,000 miles per second. How many miles of
> coax do you have? We are measuring energy flows in joules per second.
> How many joules are stored in a coax in the tiny fraction of a second
> that elapses in the time it takes to fill the coax?

For 100ft of transmission line, 200w of forward power, and 100w of
reflected power, I calculate it to be 0.0453 joules. :-)
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

3022. Re: Superposition quiz

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-15 14:57:13 UTC
From: tdonaly@aol.com
Message-ID: <20020815105713.07589.00000620@mb-ct.aol.com>
Source record: 136762

Richard Harrison wrote,
>
>Tom, KA6RUH wrote:
>"Many people have a hard time believing 1+1=4----."
>
>Transmission lines are conduits for work or energy units
>(joules=wattseconds).
>
>You can`t get more energy out of the conduit than you put in. Nor, can
>you get it out any faster than you put it in because there is too little
>storage to allow store and forward of energy. So, there is no energy
>bunching anywhere in the conduit. A power meter shows a constant power
>throughout the transmission line. 1+1=4 in this case is crazy.
>
>Best regards, Richard Harrison, KB5WZI
>
You're absolutely right about the constant power in an ideal transmission line,

Richard, but transmission lines are complicated devices where voltages and currents add and subtract in ways that have to preserve that constant power. Moreover, the voltages and currents themselves are the results of superposition of
reflections (except in the case of a transmission line terminated in its characteristic impedance, of course).
Let's take a simpler case, a resistor. Put one volt across a resistor of your choice.
Calculate the power. Now double the voltage and calculate the power. Here's a simple
example: 1 volt across 1 ohm is 1 amp. Add a volt. 2 volts across 1 ohm is 2 amps. The
power in the first instance is 1v*1amp=1watt. if you add another volt
(1v+1v)(1amp+1amp)=4watts.
So one watt plus one watt = 4watts, which, as you can see is a fact hard to live with, and the reason you should add up your volts and amps _before_ you calculate your power if you don't want to end up making a fool of yourself in public.

73

Tom Donaly KA6RUH

3023. Re: A closer look (conservation of energy)

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-15 14:58:44 UTC
From: Walter Maxwell <w2du@iag.net>
Message-ID: <EkP69.4091$I6.328639@newsread1.prod.itd.earthlink.net>
Source record: 136763

Hello all,

I just now latched onto the barking contest between Cecil and Steve on this subject. I haven't read each post, but loaded them onto the hard drive for future review. However, I noted one comment from Cecil that really bothers me, when he said that Steve has proven me wrong concerning total re-reflection at a matching point. Not true. Steve may have persuaded a few that he is correct on this point, but he still has me and many others yet to persuade--lotsa luck.

So let's first discuss virtual open and circuits that achieve the re-reflection, circuits Steve says don't exist. Perhaps my definition of the circuits is in order to ensure the disagreement isn't over terminology. My definition of virtual short and open circuits are those established by wave interference between two rearward-traveling waves generated by two mismatches encountered by a forward traveling wave. By whatever device necessary to achieve it, the two rearward traveling waves are of equal voltage magnitude and of opposite phase (180 degrees), with currents equal and in phase at the matching point. This condition establishes a short circuit to the rearward traveling waves, but Zo to the source waves. Thus the direction of energy in the reflected waves is totally reversed. OTH, some may consider real the circuits I call virtual. My use of virtual is to differentiate from physical short and open circuits. Perhaps my calling these circuits 'virtual' is the problem.

The point overlooked when denying that the short circuit exists is that the voltages and currents in the two rearward-traveling waves represent real power. These voltages and currents at any point on a line, such as at the matching point, can be replaced analytically by two separate generators at that point delivering equal out-of-phase voltages. The result is zero voltage and maximum current--a short circuit. (The current does NOT go to zero.) At the short circuit the electric fields collapse and their energy is transferred into the magnetic field, enlarging it to double its original value, thus the current also doubles at that instant. But the changing magnetic field generates a new electric field equal to the original, but traveling in the opposite direction according to the Poynting theorem. The energies in the reversed electric and magnetic fields now traveling in the forward direction merge with the corresponding fields of the source waves, with the result that the power in the former reflected waves adds to the source power. For emphasis, the energies in the fields merge, not the voltages. Adding the voltages produces absurd answers.

This leads directly to another point where I've been erroneously contradicted. Contrary to Steve, source and reflected voltages do NOT add to establish the forward voltage, and ultimately the forward power. The forward

voltage is determined from the forward power flowing in Zo, which is constant except for attenuation. The reflected voltage alternately adds to and subtracts from the forward voltage to establish the standing wave.

Walt Maxwell, W2DU

3024. Re: Ladder-line Orientation?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-15 14:59:26 UTC
From: Dick Carroll <dixie@townsqr.com>
Message-ID: <ajgfkedut0@208.206.142.76>
Source record: 136764

Bert Craig wrote:
>
> I have a 40-meter doublet fed with approx. 40 ft. of 600 Ohm
> ladder-line. The antenna crosses my roof and the ladder line slopes
> down to the edge, where it then drops down to a 4:1 balun suspended
> just outside my shack window. I'd like to raise the balun up approx. 7
> or so ft. so the ladder-line no longer rests on the roof's edge. This
> would cause the ladder-line to kinda run horizontal over to the side
> of the house and only require approx. 30 ft. to reach the balun. My
> question is whether or not the horizontal vs. vertical orientation of
> the ladder-line adversely affects the antenna system's performance in
> any way? To be honest, the ladder-line from the antenna to the roof's
> edge is at a pretty shallow angle as it stands now. I thought I'd ask
> anyway. Thanks in advance.

Bert, when the ladderline comes away from the dipole at any other than a 90 degree angle you begin to change it to a unbalance situation, the more the angle the more the unbalance. Radiated RF from the side of the antenna where the feedline runs closest will be induced onto the feedline. Whether or not the effects are serious is best determined by trying it. If thats what you need to do to, go ahead and see how it works out. It probably won't be a problem.

Dick

3025. Re: Superposition quiz

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-15 15:13:24 UTC
From: tdonaly@aol.com
Message-ID: <20020815111324.07589.00000623@mb-ct.aol.com>
Source record: 136766

>
>Tdonaly wrote:
>> (V + V*Gamma)(I - I*Gamma) = VI - VI*Gamma^2. This is a special case.
>>
>> Now try this: (V1 + V2)(I1 + I2). Also, if V1 = V2 = V and I1 = I2 = I, P1
>=
>> P2 = P. (2V)(2I) =
>> 4VI, so P + P = 4P. Many people have a hard time believing 1 + 1 = 4,
>> especially Cecil, but
>> when you're dealing with adding powers you have to get used to it.
>
>Have you objected to your power company for adding up your watt-hours
>each month?
>--
>cheers, CAM http://www.qsl.net/w5dxp
>
I live in California, Cecil. The power companies do stranger things with
their arithmetic than I could ever imagine.
Watts and watt-hours are two different things. Watts are the rate of
doing work and watt-hours are the total amount of work itself. I would
be delighted to see the power company add powers the way you do;
(1v+1v)(1a+1a)=2w. Unfortunately, the power company doesn't have a
sense of humor.
73
Tom Donaly KA6RUH

3026. Tower resrtictions near an airport

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-15 15:26:02 UTC
From: Jim <yoda581@msn.com>
Message-ID: <ajfrtl$19li$1@feed.centurytel.net>
Source record: 136767

I used to have an address for the rules on tower heights within so many feet of an airport, but I can 't find it now. I tried the faa web site, but got lost in there. I also remember an on-line calculator where I could enter my coordinates and it would tell me how high I could go, I think.

Does anyone have a link to any of this info?

Thanks! & 73

Jim
AA0JG

3027. Re: Email to Doug Smith, kf6dx, QEX Editor

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-15 15:49:26 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <5pinluo2bruuerpri4v438shjhc7591484@4ax.com>
Source record: 136768

On Thu, 15 Aug 2002 07:57:33 -0500, CAM <w5dxp@hotmail.com> wrote:

>Richard, I didn't say in my posting above in which direction it cancels.

Hi Cecil,

Really? Perhaps you should read your own writing:
>They completely cancel toward the source through constructive interference.
>The energy in the canceled wave heads the only other direction possible.

This hardly matches the howler:
>They only
>flow an infinitesimal distance before they are canceled.
which sounds like a "hail mary" characteristic to CYA. Why any
distance at all? Again, another unique attribute of wave mechanics
that has to be invented from whole cloth to support a failed argument.

Sorry Cecil, you not only said it, you underlined it and promoted it
as a new entry in your physix of the cosmos.

73's
Richard Clark, KB7QHC

3028. Re: Superposition quiz

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-15 15:56:49 UTC
From: tdonaly@aol.com
Message-ID: <20020815115649.07589.00000625@mb-ct.aol.com>
Source record: 136669

>
>Ian, G3SEK wrote:
>"The subtraction is misleadingly simple."
>
>There are two directions of transmission in a coax, toward the load and
>away from the load.
>
>Bird`s slug responds to in-phase power in each direction, one direction
>at a time. Power flowing away from the load is a reflection. Power
>flowing toward the load contains power accepted by the load plus the
>reflection. Subtract the reflection from the total forward power and you
>have the power delivered to the load.
>
>As the transmitter has only to deliver energy at the rate it`s taken by
>the load, the power delivered by the transmitter is the same power taken
>by the load, assuming insignificant loss in the coax.
>
>These power measurements may be made anywhere along the length of the
>coax and the power indications are the same at any place unless loss is
>significant. If the coax is lossy, the Bird can be used to measure power
>into the cable and out of the cable and the difference is the cable
>loss.
>
>This is simple and it works.
>
>Best regards, Richard Harrison, KB5WZI
>
Mr. White is right, it is misleadingly simple, and doesn't prove superposition
of
power in any case. There is absolutely no mathematical justification for the
concept of superposition of power, whatsoever. No textbook author would
espouse
it, and no course teach it, because it is fundamentally, and irrevocably wrong.
If
it were true, the superposition theorem of voltages and currents wouldn't work,
and
all network analysis would be little more than a hoax foisted on unsuspecting
EE students by cruel and intellectually dishonest professors.
73,
Tom Donaly KA6RUH

3029. Re: Mobile Hamstick

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-15 16:15:32 UTC
From: Jerry Oxendine <joxendi@bellsouth.net>
Message-ID: <r2R69.7242$EP2.592863@e3500-atl2.usenetserver.com>
Source record: 136676

Sasquatch Roadkill <sasquatch_roadkill@NO*SPAMhotmail.com> wrote in message
news:ajgl00svq1@nnrp.atgi.net...
> All,
> I've been thinking of putting my Kenwwood TS-690 in my car, and have
looked
> at the Hamstick antennas.
> I would hate to be limited to only one band, and yet don't want to buy
more
> than one of these (I am on a limited budget).
> Since I have an internal antenna tuner in my radio, could I use one of
these
> antennas on different bands? Is it possible to use the 80m antenna, and
then
> still get adequate results on 10, 15, and 20 meters? Or should I just be
> satisfied with operating on one band?
>
> Thanks for any insight!
> --
> -----
> Sasq
> I Cor 15:58

I am afraid you would be disappointed with the performance with both the
hamstick and a so-called tuner. I know some people turn pale at the thought
of putting a "Big, Ugly" HF antenna on
their cars, but the real "skinny" is You Can Have Pretty, or You Can Have
Performance. Unfortu-nately, on the lower HF bands, the two do not go
together. If you want multi-band and the best
performance, your best bet is a screwdriver (Carolina Cyclone LOL!). If you
are willing to forego
80 and 40, you can do pretty well on 20 meters up with hamsticks (fair) and
maybe even use your
"tuner". It truly depends on what you are willing to sacrifice. With low
frequency HF, there are
no effective shortcuts.

73

Jerry
K4KWH

>
>

3030. Re: Mobile Hamstick/OOOPS!

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-15 16:16:23 UTC
From: Jerry Oxendine <joxendi@bellsouth.net>
Message-ID: <d3R69.7249$EP2.593458@e3500-atl2.usenetserver.com>
Source record: 136677

Forgot to provide "nice" link www.qsl.net/k4kwh

Jerry
Sasquatch Roadkill <sasquatch_roadkill@NO*SPAMhotmail.com> wrote in message
news:ajgl00svq1@nnrp.atgi.net...
> All,
> I've been thinking of putting my Kenwwood TS-690 in my car, and have
looked
> at the Hamstick antennas.
> I would hate to be limited to only one band, and yet don't want to buy
more
> than one of these (I am on a limited budget).
> Since I have an internal antenna tuner in my radio, could I use one of
these
> antennas on different bands? Is it possible to use the 80m antenna, and
then
> still get adequate results on 10, 15, and 20 meters? Or should I just be
> satisfied with operating on one band?
>
> Thanks for any insight!
> --
> -----
> Sasq
> I Cor 15:58
>
>

3031. Re: motor driven vacuum variable question

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-15 16:18:37 UTC
From: rb <rbigg@seii.net>
Message-ID: <ajgjj7$4up$1@news.chatlink.com>
Source record: 136670

Woops----just had a typo called to my attention. The vacuum variable is a
0-1000pfd vice a 0-3000pfd. Sorry about that. Fat fingers.............

3032. Re: What is Ballon ?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-15 16:19:29 UTC
From: Jerry Oxendine <joxendi@bellsouth.net>
Message-ID: <86R69.7274$EP2.594143@e3500-atl2.usenetserver.com>
Source record: 136678

And what, might I ask, is a "ballum"? I know what a "balun" is, but not the
other thingy.

Jerry
tim english <te@usol.com> wrote in message
news:m23mluof6vad6oqvu161rsoaj9kbc88rnp@4ax.com...
> Isn't that a ballum ??? :)
> --
> Tim, K8TJ
>
> On Wed, 14 Aug 2002 18:19:13 -0700, "Wayne" <w> wrote:
>
> > Ballon appears to be Dutch or German for balloon...
> >
> >"Reg Edwards" <g4fgq.regp@btinternet.com> wrote in message
> >news:ahm98cdbo1@knossos.btinternet.com...
> >> > >What is a Ballon ?
> >> >
> >> ========================
> >>
> >> A Ballon is gadget suspended between a feedline and an aerial. Its
> >purpose
> >> is to weigh down the aerial to stop it flopping about in the wind.
> >> ---
> >>
> >> (FAQ from a UK newsgroup.)
> >> ---
> >> ========================
> >> Regards from Reg G4FGQ
> >> Free Radio Design Software
> >> Go to http://www.g4fgq.com
> >> ========================
> >>
> >>
> > >
>

3033. Re: Superposition quiz

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-15 16:23:28 UTC
From: richardharrison@webtv.net
Message-ID: <5154-3D5BD580-171@storefull-2394.public.lawson.webtv.net>
Source record: 136675

Tom, KA6RUH wrote:
"The power in the first instance is 1v times 1a = 1watt---."

All that math and no mistakes!

Ohm says power is E squared over R. So, if you double the voltage across a resistor, of course you quadruple the power.

One reason the communications industry uses power to express signal levels, the milliwatt is a power, is to avoid impedance related arithmetic.

If you know the power at a point with respect to a milliwatt, it makes no difference if the impedance is 50 ohms, 75 ohms, 300 ohms, 600 ohms or 377 ohms, until you need to determine the voltage or current at that particular point. Otherwise, you may happily add and subtract db`s until you are ready for specific volts and amps.

Best regards, Richard Harrison, KB5WZI

3034. Mobile Hamstick

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-15 16:30:59 UTC
From: Sasquatch Roadkill <sasquatch_roadkill@NO*SPAMhotmail.com>
Message-ID: <ajgl00svq1@nnrp.atgi.net>
Source record: 136671

All,
I've been thinking of putting my Kenwwood TS-690 in my car, and have looked at the Hamstick antennas.
I would hate to be limited to only one band, and yet don't want to buy more than one of these (I am on a limited budget).
Since I have an internal antenna tuner in my radio, could I use one of these antennas on different bands? Is it possible to use the 80m antenna, and then still get adequate results on 10, 15, and 20 meters? Or should I just be satisfied with operating on one band?

Thanks for any insight!
--

Sasq
I Cor 15:58

3035. Re: Tower resrtictions near an airport

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-15 16:34:29 UTC
From: Fulano de Tal <therealexray@netscape.net>
Message-ID: <3D5BD815.3E2DEC09@netscape.net>
Source record: 136672

Dick Hughes wrote:
>
> It's in Part 97, Para 97.15.
> http://www.access.gpo.gov/nara/cfr/waisidx_01/47cfr97_01.html
>
> Dick - W6CCD

That rule doesn't give the whole picture by any means. There are additional regs dependent on proximity and bearing to the various classes of runways.
I went thru the search about a year ago and it was a real maze. Check via FAA sites, not FCC, if you are anywhere close to an airport.

-Bill

3036. Re: Tower resrtictions near an airport

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-15 16:41:04 UTC
From: Fulano de Tal <therealexray@netscape.net>
Message-ID: <3D5BD9A0.D106F71B@netscape.net>
Source record: 136673

Fulano de Tal wrote:

> That rule doesn't give the whole picture by any means. There are
> additional regs dependent on proximity and bearing to the various
> classes of runways.
> I went thru the search about a year ago and it was a real maze. Check
> via FAA sites, not FCC, if you are anywhere close to an airport.
>
> -Bill

Here, try this. This site has a convenient search engine, btw.
<http://frwebgate4.access.gpo.gov/cgi-bin/waisgate.cgi?WAISdocID=4294756321+19+0+0&WAISaction=retrieve>

-BM

3037. Re: Quad antenna spreaders

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-15 16:45:00 UTC
From: Dan/W4NTI <w4nti@mindspringnospam.com>
Message-ID: <ajglor$a0k$1@slb0.atl.mindspring.net>
Source record: 136674

Thanks to Denis and Yuri. I hadn't thought of that source at all. Good deal on the sealer.

Dan/W4NTI

"Yuri Blanarovich" <k3bu@aol.com> wrote in message news:20020814215926.01880.00000551@mb-mq.aol.com...
> >
> >hey don
> >try bamboo fishing poles they are cheap and light and work well for spreaders
> >
> >Dan/W4NTI wrote:
> >
> >> Other than fiberglass, does anyone have any recomendations of what to use
> >> for spreaders on a HF quad? Last one I built I used bamboo.
> >>
> >> Dan/W4NTI
> >
> >
> >
>
> Excellent preservative for the bamboo poles is the latex based driveway sealer.
> Found out by accident, bamboo stays "young" will not crack.
>
> Yuri, K3BU

3038. Re: Superposition: was Re: Email to ...

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-15 17:04:35 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <j6knlugcq6pqamao8erbejk2qpbire8o54@4ax.com>
Source record: 136679

On Thu, 15 Aug 2002 09:51:25 -0500, CAM <w5dxp@hotmail.com> wrote:

>
>The emailer said that the hole in my argument is that a ham transmitter
>is not a linear device. Seems that might also be a hole in Steve's
>argument. If a ham transmitter is not a linear device, then Steve is
>not allowed to use the superposition theorem on a ham system. But
>that's what we have all been doing.

Hi Cecil,

I see you now understand how both sides of an argument are affected if one side is when a common point of intersection fails. This was how you failed with the transformer argument.

It is the system that must be linear, not any particular component as you've allowed:
>A source doesn't have to be linear under all conditions to satisfy
>the requirements of the superposition theorem. It only has to be
>linear over the conditions that are encountered in reality.
Of course, if a non-linear component is a principle of the system, it may impart its non-linearity into the system. I have designed innumerable amplifiers that contained many non-linear elements to only produce a fully linear response. As such, the inclusion of non-linear elements did not impart their characteristic and this was accomplished through the agencies of my design (H.W. Bode instructed this matter 60 years ago).

This is not to say that a ham transmitter, or any transmitter serves to illustrate these issues under discussion - that is, not without sufficient qualification. You took care of that when you offered the use of a laboratory grade source. I have calibrated many of those too, most of them suitable for use as transmitters.

The only problem of the transmitter application is that preconceived notions of what it is and what it can do pollute the discussion with unstated boundaries. This, then, returns us to the duality of the source being linear/non-linear. To this point we arrive by the common boundary condition stating that wave X is thus and wave Y is another. We then combine them and ask what has happened. The unstated tenet (from you Cecil, and embraced by you as a common understanding - another failure of logic) is that the sources will not allow such combining on the terms offered. This is a failure of the model, not the theory.

The original topic concerned waves, not sources. Cecil, you have argued a source limited argument against Steve's wave descriptions. The same goes for your transformer argument that collapsed on just those same terms (and you failed even to notice how). Thus your model revealed a non-linearity to the issue at hand - it did not cope when the wave combined. Bluntly put, any appeal to the source for the action of a wave at a distance must implicate the entire model. Your arguments clearly lean heavily on the source offering some restriction, Steve's argument did not.

Now, when you lean on this as being a common experience - certainly, of course it is; it adds nothing to your argument about waves. You did not offer this restriction originally, in fact you never offered it at all. It is simply a prejudice - not a necessity. Richard Harrison has weighed in with practical correlatives. Even to combining two hefty transmitters and guess what? the powers added according to your prejudices - the practical sources were obviously power limited.

Again, I would point out that Bart's thought example anticipates all these considerations and employs exactly the style of discussion you prefer. Bart's model completely divorces the sources from the mechanics of the waves. Bart's model is clearly superior.

73's
Richard Clark, KB7QHC

3039. Re: Mobile Hamstick

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-15 17:11:28 UTC
From: Larry Bratcher <lbratche@swbell.net>
Message-ID: <4hR69.1272$7F6.341195917@newssvr12.news.prodigy.com>
Source record: 136680

I use an LDG RT-11 tuner and Hustler antennas with my IC-706. I can tune about one band either side of the band the antenna is designed for. For example, I use the 17 meter antenna and tune 15 and 20. I can use the 10 meter one and get 10 and 12. However, 40 and 80 (which is about useless) require the correct antenna. I can't say for sure, but I believe the LDG tuner is a bit better than most internal tuners.

"Sasquatch Roadkill" <sasquatch_roadkill@NO*SPAMhotmail.com> wrote in message news:ajgl00svq1@nnrp.atgi.net...
> All,
> I've been thinking of putting my Kenwwood TS-690 in my car, and have looked
> at the Hamstick antennas.
> I would hate to be limited to only one band, and yet don't want to buy more
> than one of these (I am on a limited budget).
> Since I have an internal antenna tuner in my radio, could I use one of these
> antennas on different bands? Is it possible to use the 80m antenna, and then
> still get adequate results on 10, 15, and 20 meters? Or should I just be
> satisfied with operating on one band?
>
> Thanks for any insight!
> --
> -----
> Sasq
> I Cor 15:58
>
>

3040. Re: Superposition: was Re: Email to ...

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-15 17:15:29 UTC
From: Walter Maxwell <w2du@iag.net>
Message-ID: <RkR69.4247$I6.348503@newsread1.prod.itd.earthlink.net>
Source record: 136682

A few posts back Steve referenced Johnson's Pages 98-101, where Steve says the derivation in the steady state shows voltages and currents adding to determine the forward voltage and current.

Unfortunately, Steve misconstrued the purpose of Johnson's derivation, because instead of deriving forward voltage and current it derives the standing wave of voltage and current. Big'a differencia'. I pointed this out to Steve many, many months ago. Didn't take, did it?

Walt Maxwell, W2DU

3041. Re: Quad antenna spreaders

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-15 17:15:51 UTC
From: t_ashland@yahoo.com
Message-ID: <6e6aeba9.0208150915.546d784f@posting.google.com>
Source record: 136681

Dennis Kaylor <k4oxg@tampabay.rr.com> wrote in message
news:<3D5B060E.260E05CE@tampabay.rr.com>...
> hey don
> try bamboo fishing poles they are cheap and light and work well for spreaders
>
> Dan/W4NTI wrote:
>
> > Other than fiberglass, does anyone have any recomendations of what to use
> > for spreaders on a HF quad? Last one I built I used bamboo.
> >
> > Dan/W4NTI

Where do you find bamboo fishing poles? What kind of price are you
looking at for a 13 - 14 foot pole?
73,
WK0F

3042. Re: Is Lithium Grease good for assembling antenna mating sections?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-15 17:22:33 UTC
From: raiar@bbs.galilei.com.nospam
Message-ID: <3d5be204.41381187@news.galilei.com>
Source record: 136683

Hi Crazy George

You just answered a puzzling antenna problem I had in the past,
without even realizing it. Thanks!

I had used some nickel plated copper to build a small 440 yagi. It
was identical to one I had made of all brass that worked perfectly.
Yet it put out harmonics all over the place and had very little punch.
I took it down and trash canned it, but never knew why it didn't work.
I guess the nickel coating was the culprit.

TTUL
Gary

3043. Re: Balanced line to coax

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-15 17:31:37 UTC
From: 'Doc <w5lz@icok.net>
Message-ID: <3D5BE563.B34DE994@icok.net>
Source record: 136684

Rezster,
I'm not familiar with an 'AS-2' antenna, but, if it is simular to the G5RV in that it uses a section of 450 ohm ladder line in impedance matching, then I think you could do away with the coax completely, then run the ladder line to the MFJ tuner (by-pass the Yaesu auto-tuner completely).
Will this mean there would be 'too much' radiation in the shack? I very much doubt it. If you mean RFI from the ladder line coming into the shack, well, that just depends. I use ladder line feed line coming into the shack with no problems. The computer is less than 4 feet from the ladder line and doesn't have a problem with the RF. Others have had problems, though, so I think it's one of those "try it and see" things.
Good luck...
'Doc

3044. Re: Mobile Hamstick

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-15 17:32:53 UTC
From: Sasquatch Roadkill <sasquatch_roadkill@NO*SPAMhotmail.com>
Message-ID: <ajgok3$11$1@nnrp.atgi.net>
Source record: 136685

Thanks for the info!
I guess the best thing to do is just try it out. It looks like I'll stay away from the 40/80m versions and try something that will give me results on 10/15/20 meters.
I was planning on either mounting the antenna to my rear bumper or possibly the front hood area. It'll be mounted on an older Isuzu trooper, so the ugly factor isn't really a consideration. The real factor was primarily low investment. These antennas seem inexspensive enough to experiment. I just don't want to buy 4 different antennas, when one will do the trick.
Most of my operating has been in the 10/15/20 meter bands.
Thanks once again.

3045. Re: Superposition quiz

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-15 17:39:13 UTC
From: richardharrison@webtv.net
Message-ID: <2784-3D5BE741-186@storefull-2395.public.lawson.webtv.net>
Source record: 136686

Tom, KA6RUH wrote:
"If it were true, the superposition theorem of voltages and currents wouldn`t work---."

If your theorem doesn`t work, you had better change theorems or find how the theorem is being misapplied. It is silly to argue the Bird wattmeter doesn`t work. It gives good accuracy within its specifications. It is the standard by which other field instruments are judged.

There is no fraud in the Bird`s operation. You may violate civil or criminal laws, but you don`t violate the laws of physics. The Bird is legal.

Best regards, Richard Harrison, KB5WZI

3046. Re: A closer look (conservation of energy)

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-15 17:42:59 UTC
From: CAM <w5dxp@hotmail.com>
Message-ID: <3D5BE823.510D1229@hotmail.com>
Source record: 136687

Walter Maxwell wrote:
>
> Hello all,
>
> I just now latched onto the barking contest between Cecil and Steve on this
> subject. I haven't read each post, but loaded them onto the hard drive for
> future review. However, I noted one comment from Cecil that really bothers
> me, when he said that Steve has proven me wrong concerning total
> re-reflection at a matching point. Not true. Steve may have persuaded a few
> that he is correct on this point, but he still has me and many others yet to
> persuade--lotsa luck.

In order to prove your point, Walt, you are going to have to prove that
wave cancellation is technically the same thing as re-reflection. That's
a tough argument but let me give it a go.

When a wave of 1 volt at 1 amp in phase at +90 degrees is superposed with
a wave of 1 volt at 1 amp in phase at -30 degrees traveling in the same
direction, the result is a wave of 1 volt at 1 amp in phase at +30 degrees.
Each of these waves has an associated intrinsic energy of one joule/sec. So
has two joules/sec magically transformed to one joule/sec. Nope, there is no
way to superpose those two waves, assuming no other waves exist, without
generating another wave of 1 volt at 1 amp. The superposing of those two
waves results in three waves. The third wave is a wave traveling
in the opposite direction to the other two. Thus the partial destructive
interference between the first two waves creates not only a forward wave
but a reverse wave. The question is: Is that reverse wave a "reflected"
wave since it was generated by wave interference. Are all waves traveling
in the direction opposite to the forward wave defined as reflected waves?
If so, Walt is correct. If not, Steve is correct.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

3047. Re: Superposition quiz

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-15 17:49:24 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <6kqnlu4ju9fkb5bc980sl4tijb8jsjkv3c@4ax.com>
Source record: 136688

On Thu, 15 Aug 2002 11:23:28 -0500 (CDT), richardharrison@webtv.net (Richard Harrison) wrote:

>One reason the communications industry uses power to express signal >levels, the milliwatt is a power, is to avoid impedance related >arithmetic.

Hi Richard,

Such avoidance only occurs for the lineman in the telephone industry. Design and production engineering have much more to contend with. Even within the telephone industry, there are several power scales and ALL are specifically enumerated by nomenclature:
dBWre600
dBspl
dBrnC
dBm0

The purpose of such nomenclature is to allow for the impedance transformation from one system to another - not all sources/loads are 600 Ohms - not all sources/loads are electronic for that matter. All may be expressed in decibel power relationships - when qualified.

Academics and Amateurs do not often employ these full terms, industry knows better.

73's
Richard Clark, KB7QHC

3048. Re: Is Lithium Grease good for assembling antenna mating sections?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-15 18:39:10 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <3D5BF54E.4060304@eznec.com>
Source record: 136689

Why should nickel be any worse than steel at producing harmonics? Should everyone with steel antennas be worried, too?

Roy Lewallen, W7EL

3049. Re: Superposition quiz

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-15 18:40:39 UTC
From: CAM <w5dxp@hotmail.com>
Message-ID: <3D5BF5A7.FAE821E8@hotmail.com>
Source record: 136691

Tdonaly wrote:
> Let's take a simpler case, a resistor. Put one volt across a resistor of
> your choice.
> Calculate the power. Now double the voltage and calculate the power. Here's a
> simple
> example: 1 volt across 1 ohm is 1 amp. Add a volt. 2 volts across 1 ohm is 2
> amps. The
> power in the first instance is 1v*1amp=1watt. if you add another volt
> (1v+1v)(1amp+1amp)=4watts.
> So one watt plus one watt = 4watts, which, as you can see is a fact hard to
> live with, and the reason you should add up your volts and amps _before_ you
> calculate your power if you don't want to end up making a fool of yourself in
> public.

Let's take a ham transmitter case. A 100w IC-706 is outputting 70.7v at 1.414a into a 50 ohm dummy load. Now double the voltage ... whoops, the power control circuitry won't allow it. No problem, just reduce the dummy load to 25 ohms. Calculate the power. Hmmmmmm, what's wrong with this picture?

A very helpful ham emailed me with the fact that a ham transmitter is not a linear device as required by the superposition theorem. Steve's superposing of his two voltages requires an extra energy source. Is the ham transmitter capable of supplying that additional energy? The answer is no, so if Steve is even allowed to use the superposition theorem, he must locate that source of extra energy. No problem, we've already located it. The energy to support Steve's superposing waves comes from the cancellation of two other waves, the two waves involved in the interference pattern at the match point.

I'll be making a trip over to Texas A&M next week to research this subject. I studied the superposition theorem in depth at Texas A&M a number of years ago but it was from the perspective of a 60 Hz power engineer. Since frequency is scalable, the same principles apply. But it is interesting to note that, from a power engineer's standpoint, he only cares if the powers add up. That is not to say that he superposes powers but is to say that each EM wave has an intrinsic scalar energy that is what the power engineer is selling. No energy means no income for the power company.
--
cheers, CAM, W5DXP

----------== Posted via Newsfeed.Com - Uncensored Usenet News ==----------
http://www.newsfeed.com The #1 Newsgroup Service in the World!
-----= Over 100,000 Newsgroups - Unlimited Fast Downloads - 19 Servers =-----

3050. Re: Superposition quiz

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-15 18:46:06 UTC
From: CAM <w5dxp@hotmail.com>
Message-ID: <3D5BF6EE.666A4BB8@hotmail.com>
Source record: 136692

Tdonaly wrote:
> I would
> be delighted to see the power company add powers the way you do;
> (1v+1v)(1a+1a)=2w. Unfortunately, the power company doesn't have a
> sense of humor.

Hey Tom, I don't add powers that way. That's Steve's technique.
He adds 75w plus 8.33w and gets 133.33w. I know better than to
add the voltages and currents and expect to obtain more energy
than exists.

Please show us how you can deliver 1v at 1a to each of two primaries
on a transformer and come up with 2v at 2a on the output. The power
companies would be very interested in that information.
--
cheers, CAM, W5DXP

----------== Posted via Newsfeed.Com - Uncensored Usenet News ==----------
http://www.newsfeed.com The #1 Newsgroup Service in the World!
-----= Over 100,000 Newsgroups - Unlimited Fast Downloads - 19 Servers =-----

3051. Re: Mobile Hamstick

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-15 18:47:00 UTC
From: WA6LZH <tangeram@lucent.com>
Message-ID: <3D5BF724.2050000@lucent.com>
Source record: 136690

Sasquatch,

I think that the SGC people did a bit of research on this with their QVC (Or whatever) multiband system. You might want to visit their site for the details but I think they found that a 10 mhz whip was the best compromise using their automatic tuner for an all band setup.

3052. Re: Email to Doug Smith, kf6dx, QEX Editor

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-15 18:54:22 UTC
From: CAM <w5dxp@hotmail.com>
Message-ID: <3D5BF8DE.705A9B03@hotmail.com>
Source record: 136694

Richard Clark wrote:
>
> On Thu, 15 Aug 2002 07:57:33 -0500, CAM <w5dxp@hotmail.com> wrote:
>
> >Richard, I didn't say in my posting above in which direction it cancels.
>
> Hi Cecil,
>
> Really? Perhaps you should read your own writing:
> >They completely cancel toward the source through constructive interference.
> >The energy in the canceled wave heads the only other direction possible.
>
> This hardly matches the howler:
> >They only
> >flow an infinitesimal distance before they are canceled.
> which sounds like a "hail mary" characteristic to CYA. Why any
> distance at all? Again, another unique attribute of wave mechanics
> that has to be invented from whole cloth to support a failed argument.

Richard, are you unfamiliar with the foundations of differential calculus?
Traveling an infinitesimal distance is perfectly consistent with the
math involved. Saying they only flow an infinitesimal distance is the
same thing as saying they are cancelled at a point because that distance
shrinks to zero in the limit. Look it up.

> Sorry Cecil, you not only said it, you underlined it and promoted it
> as a new entry in your physix of the cosmos.

What is it that you think I said? I'm not perfect in conveying my meanings.
Perhaps, you misunderstood what I meant. How about some detailed objections?
Something sounding like a "hail mary" is hard to defend against.
--
cheers, CAM, W5DXP

------------== Posted via Newsfeed.Com - Uncensored Usenet News ==----------
http://www.newsfeed.com The #1 Newsgroup Service in the World!
-----= Over 100,000 Newsgroups - Unlimited Fast Downloads - 19 Servers =-----

3053. Re: Balanced line to coax

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-15 18:54:35 UTC
From: Rezster <dbm@[remove]>
Message-ID: <Xns926B836F61489dbmremovefisinet@148.78.248.75>
Source record: 136693

'Doc <w5lz@icok.net> wrote in news:3D5BE563.B34DE994@icok.net:

>
>
> Rezster,
> I'm not familiar with an 'AS-2' antenna, so I
> think it's one of those "try it and see" things.

OK, Doc. I suppose I'll give it a try. I really like the automatic antenna tuner so I imagine I'll find a Balun in the near future...just wanting to get on the air...NOW! ;-)

Thanx!

3054. Re: Superposition: was Re: Email to ...

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-15 18:56:41 UTC
From: richardharrison@webtv.net
Message-ID: <26605-3D5BF969-186@storefull-2397.public.lawson.webtv.net>
Source record: 136696

Richard Clark wrote:
"The original topic concerned waves not sources."

That was long ago and the topic has evolved to include SWR which is of most interest as it affects the load presented to the source. This change from Zo as the load on the source only happens when a reflection returns.

Waves as a topic without tnteraction with their source may cause confusion because waves radiated in all directions can be focused in ever smaller beams. So effective radiated power in a small beam can almost be as large as you like.

Not so with a transmission line. It is restricted to only two directions of travel. You can only double the voltage into an open circuit and this is repeated every half wave back from the open. The only power to draw upon comes from the source via the line.

Best regards, Richard Harrison, KB5WZI

3055. Re: Superposition quiz

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-15 19:01:10 UTC
From: CAM <w5dxp@hotmail.com>
Message-ID: <3D5BFA76.8A72CA61@hotmail.com>
Source record: 136695

Tdonaly wrote:
> There is absolutely no mathematical justification for the
> concept of superposition of power, whatsoever.

Who is it who has advocated the application of superposition
to power? Perhaps you are confusing the superposition theorem
with the principle of conservation of energy. Energy is a
scalar without phase so the superposition theorem doesn't apply.
It's unique property is that it can be added as a scalar, like
buckets of water, but it cannot be destroyed. That's an important
feature in keeping RF engineers from constructing a wave containing
more average energy than exists in the system.
--
cheers, CAM, W5DXP

----------== Posted via Newsfeed.Com - Uncensored Usenet News ==----------
http://www.newsfeed.com The #1 Newsgroup Service in the World!
-----= Over 100,000 Newsgroups - Unlimited Fast Downloads - 19 Servers =-----

3056. Re: Tower resrtictions near an airport

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-15 19:14:15 UTC
From: Jim <yoda581@msn.com>
Message-ID: <ajg99h$1mj0$1@feed.centurytel.net>
Source record: 136697

Sorry, I should have explained myself more, but this won't be for an amateur antenna and I will be close to a small airport.

As I recall, the last time I did this, there were issues with the size of the closest runway and heighth of the proposed structure. I probably will need the complete details in all it's ugliness.

You're right about the maze on the faa site. I know it's in there, but awful tough to find.

btw, the link you offered, Bill, didn't work.

Thanks for your help.

Jim

3057. Re: Superposition quiz

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-15 19:19:40 UTC
From: richardharrison@webtv.net
Message-ID: <13595-3D5BFECC-161@storefull-2398.public.lawson.webtv.net>
Source record: 136699

Richard Clark wrote:
"The purpose of such nomenclature is to allow for the impedance transformation from one system to another."

Usually that is false. We have decibels referenced to a watt instead of a milliwatt, or to a volt in a particular system, or to a "C-weighting curve" for frequency response, or dBm0 which is the level at a specified point in the system, etc. My previous posting was correct.

Best regards, Richard Harrison, KB5WZI

3058. Re: Superposition: was Re: Email to ...

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-15 19:36:47 UTC
From: CAM <w5dxp@hotmail.com>
Message-ID: <3D5C02CF.A72EA91F@hotmail.com>
Source record: 136698

Richard Clark wrote:
> This was how
> you failed with the transformer argument.

Please tell me what my transformer argument failed to prove, Richard.
You posted the impossible transformer configuration, not me.

> The unstated tenet
> (from you Cecil, and embraced by you as a common understanding -
> another failure of logic) is that the sources will not allow such
> combining on the terms offered. This is a failure of the model, not
> the theory.

Boy, are you mistaken. I never, never said that at all. I never said
that the sources will not allow such combining. I said that some of
the sources necessary to the combining were being ignored. Please
correct your beliefs about what I said.

> The original topic concerned waves, not sources. Cecil, you have
> argued a source limited argument against Steve's wave descriptions.

The source is there, Richard. Steve just won't admit it. The source
of energy that allows his voltages to add up to the proper value
is the energy involved in the wave cancellation.

> The same goes for your transformer argument that collapsed on just
> those same terms (and you failed even to notice how). Thus your model
> revealed a non-linearity to the issue at hand - it did not cope when
> the wave combined. Bluntly put, any appeal to the source for the
> action of a wave at a distance must implicate the entire model. Your
> arguments clearly lean heavily on the source offering some
> restriction, Steve's argument did not.

That's absolutely false, Richard. Both arguments assumed a 100w ham transmitter
driving a 50 ohm "load". The power is fixed, the voltage is fixed, the current
is fixed, and the load is fixed. Isn't that about as linear as we can get?

> Again, I would point out that Bart's thought example anticipates all
> these considerations and employs exactly the style of discussion you
> prefer. Bart's model completely divorces the sources from the
> mechanics of the waves. Bart's model is clearly superior.

If Bart's model completely divorces the sources from the mechanics of
the waves, then it risks violating the conservation of energy principle.
You can't get blood out of a turnip. If any source energy doesn't exist,
it doesn't exist. Even Bart cannot create energy out of the ether (or
is that aether?).

--
cheers, CAM, W5DXP

------------== Posted via Newsfeed.Com - Uncensored Usenet News ==----------
http://www.newsfeed.com The #1 Newsgroup Service in the World!
-----= Over 100,000 Newsgroups - Unlimited Fast Downloads - 19 Servers =-----

3059. Re: Email to Doug Smith, kf6dx, QEX Editor

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-15 20:00:14 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <d92olu0tdtrkanobtm7pn5931s5btfsns3@4ax.com>
Source record: 136700

On Thu, 15 Aug 2002 11:54:22 -0700, CAM <w5dxp@hotmail.com> wrote:

>Perhaps, you misunderstood what I meant.

:-)

3060. Re: Superposition: was Re: Email to ...

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-15 20:09:18 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <9q2olussid3icaclkgatb1237cm8cfb1bu@4ax.com>
Source record: 136701

On Thu, 15 Aug 2002 12:36:47 -0700, CAM <w5dxp@hotmail.com> wrote:

>Boy, are you mistaken.

:-)

3061. Re: Superposition: was Re: Email to ...

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-15 20:14:45 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <av2oluo51p3safdms9h5kmu36p0knshvq4@4ax.com>
Source record: 136702

On Thu, 15 Aug 2002 13:56:41 -0500 (CDT), richardharrison@webtv.net
(Richard Harrison) wrote:

>Waves as a topic without tnteraction with their source may cause
>confusion

Hi Richard,

That seems most evident; but for the quality of debate offered, it
hardly resolves with the introduction of the source.

73's
Richard Clark, KB7QHC

3062. Re: Email to Doug Smith, kf6dx, QEX Editor

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-15 20:15:04 UTC
From: CAM <w5dxp@hotmail.com>
Message-ID: <3D5C0BC8.A4D1C110@hotmail.com>
Source record: 136703

Richard Clark wrote:
>
> On Thu, 15 Aug 2002 11:54:22 -0700, CAM <w5dxp@hotmail.com> wrote:
>
> >Perhaps, you misunderstood what I meant.
>
> :-)

Richard, you and I don't communicate very well for some reason.
Sometimes, I read your relatively basic statements and have no
idea what you mean. To set the record straight about what I said
about Steve's treatment of power:

If there is not enough energy available to support superposition
of two waves, the resulting voltage will not be the sum of the
two voltages in the waves. We have seen that demonstrated with
the transformer examples.

"If" is the beginning of a conditional statement. If the "if"
portion of an if/then statement is false, the statement is true.
If there is enough energy available to support superposition,
the above statement is true. If there is not enough energy to
support superposition, the above statement is true. It is a
true statement, Richard. What I said was that *IF* Steve provides
ONLY 75 joules/sec + 8.33 joules/sec to his two superposing waves,
the voltages will not add up. We know the voltages do add up.
Therefore, he is providing more than 83.33 joules/sec to the
superposing process and just does not realize it. The extra 50
joules/sec is being supplied from the wave cancellation process.
--
cheers, CAM, W5DXP

----------== Posted via Newsfeed.Com - Uncensored Usenet News ==----------
http://www.newsfeed.com The #1 Newsgroup Service in the World!
-----= Over 100,000 Newsgroups - Unlimited Fast Downloads - 19 Servers =-----

3063. Re: Superposition: was Re: Email to ...

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-15 20:16:34 UTC
From: CAM <w5dxp@hotmail.com>
Message-ID: <3D5C0C22.3D2DA1E1@hotmail.com>
Source record: 136704

Richard Clark wrote:
>
> On Thu, 15 Aug 2002 12:36:47 -0700, CAM <w5dxp@hotmail.com> wrote:
>
> >Boy, are you mistaken.
>
> :-)

Not about your concepts, Richard, about what you think I said. I'm
afraid what you inferred is not what I intended to imply.
--
cheers, CAM, W5DXP

----------== Posted via Newsfeed.Com - Uncensored Usenet News ==----------
http://www.newsfeed.com The #1 Newsgroup Service in the World!
-----= Over 100,000 Newsgroups - Unlimited Fast Downloads - 19 Servers =-----

3064. Re: Tower resrtictions near an airport

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-15 20:27:13 UTC
From: Fulano de Tal <therealexray@netscape.net>
Message-ID: <3D5C0EA1.1D9D435D@netscape.net>
Source record: 136705

Jim wrote:
>

> You're right about the maze on the faa site. I know it's in there, but awful
> tough to find.
>
> btw, the link you offered, Bill, didn't work.
>
> Thanks for your help.
>
> Jim

The site is very slow and apparently bogged down with users. It gives
you the exact information you are looking for. I just brought it up
again...it took about 30 seconds to connect.
-BM

3065. Re: Tower resrtictions near an airport

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-15 20:34:19 UTC
From: Fulano de Tal <therealexray@netscape.net>
Message-ID: <3D5C104B.1D19AD4@netscape.net>
Source record: 136706

Dick Hughes wrote:
>
> Why complicate things? The average person would need a lawyer to
> interpret the FAA regulations anyway. Part 97, Para. 97.15 states
> that if you live near an airport, AND your antenna will be more than
> 200 feet above ground level, you must notify the FAA and register with
> the FCC. Let the FAA figure it out. Few amateur antennas are that
> tall anyway, unless you are on a hill near the airport.

Why complicate things? For starters, 97.15 deals only with amateur
installations, and vaguely at best, and doesn't say how near "near" is
which is what the poster was asking.

-BM

3066. Re: Tower resrtictions near an airport

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-15 20:45:13 UTC
From: Fulano de Tal <therealexray@netscape.net>
Message-ID: <3D5C12D9.5BA780DF@netscape.net>
Source record: 136707

Jim wrote:
>
> Sorry, I should have explained myself more, but this won't be for an amateur
> antenna and I will be close to a small airport.
>
> As I recall, the last time I did this, there were issues with the size of
> the closest runway and heighth of the proposed structure. I probably will
> need the complete details in all it's ugliness.
>
> You're right about the maze on the faa site. I know it's in there, but awful
> tough to find.
>
> btw, the link you offered, Bill, didn't work.
>
> Thanks for your help.
>
> Jim

Here it is. 47 CFR 17.7 Apparently my link was only giving my cache
from the previous search.

Sec. 17.7 Antenna structures requiring notification to the FAA.

A notification to the Federal Aviation Administration is required,
except as set forth in Sec. 17.14, for any of the following construction
or alteration:
(a) Any construction or alteration of more than 60.96 meters (200
feet) in height above ground level at its site.
(b) Any construction or alteration of greater height than an
imaginary surface extending outward and upward at one of the following
slopes:
(1) 100 to 1 for a horizontal distance of 6.10 kilometers (20,000
feet) from the nearest point of the nearest runway of each airport
specified in paragraph (d) of this section with at least one runway more
than 0.98 kilometers (3,200 feet) in actual length, excluding heliports.
(2) 50 to 1 for a horizontal distance of 3.05 kilometers (10,000
feet) from the nearest point of the nearest runway of each airport
specified in paragraph (d) of this section with its longest runway no
more than 0.98 kilometers (3,200 feet) in actual length, excluding
heliports.
(3) 25 to 1 for a horizontal distance of 1.52 kilometers (5,000
feet) from the nearest point of the nearest landing and takeoff area of
each heliport specified in paragraph (d) of this section.
(c) When requested by the FAA, any construction or alteration that
would be in an instrument approach area (defined in the FAA standards

governing instrument approach procedures) and available information indicates it might exceed an obstruction standard of the FAA.
(d) Any construction or alteration on any of the following airports (including heliports):
(1) An airport that is available for public use and is listed in the Airport Directory of the current Airman's Information Manual or in either the Alaska or Pacific Airman's Guide and Chart Supplement.
(2) An airport under construction, that is the subject of a notice or proposal on file with the Federal Aviation

3067. Re: Mobile Hamstick

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-15 20:53:34 UTC
From: Fred Hambrecht <w4jle@charter.net>
Message-ID: <ulo56hr9593ob7@corp.supernews.com>
Source record: 136708

If ugly dosn't bother you, use a Hustler with the adapter that will allow you to put 3 resonators on it. I run 80, 40, and 20 on mine. I run a 706 sans tuner.

"Sasquatch Roadkill" <sasquatch_roadkill@NO*SPAMhotmail.com> wrote in message news:ajgl00svq1@nnrp.atgi.net...
> All,
> I've been thinking of putting my Kenwwood TS-690 in my car, and have looked
> at the Hamstick antennas.
> I would hate to be limited to only one band, and yet don't want to buy more
> than one of these (I am on a limited budget).
> Since I have an internal antenna tuner in my radio, could I use one of these
> antennas on different bands? Is it possible to use the 80m antenna, and then
> still get adequate results on 10, 15, and 20 meters? Or should I just be
> satisfied with operating on one band?
>
> Thanks for any insight!
> --
> -----
> Sasq
> I Cor 15:58
>
>

3068. Washington DC Visit/Antenna Infos.

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-15 20:56:07 UTC
From: pgenenv@eircom.net
Message-ID: <3d5c1483.12813489@news1.eircom.net>
Source record: 136709

Hi
I expect to be in Washington DC in early September for about 1 weekand would appreciate some information on stores in that general area. In particular I would like to source parts for a butternut HF6VX antenna while there. Any info gratefully received.

Gerry
EI9FV

3069. Re: Tower resrtictions near an airport

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-15 21:05:55 UTC
From: Crazy George <munschNO@attglobal.net.SPAM>
Message-ID: <3d5c1db4_1@news1.prserv.net>
Source record: 136712

The information you want is in FAA Advisory Circular AC 70/7460.2k, where k is the latest revision, whatever letter it is. Deals with the whole issue in 6 easy to read and understand pages with numerous figures illustrating the text.

The full rules are in 14 CFR part 77.

--
Crazy George
Remove NO and SPAM from return address
Jim <yoda581@msn.com> wrote in message
news:ajfrtl$19li$1@feed.centurytel.net...
> I used to have an address for the rules on tower heights within so many
feet
> of an airport, but I can 't find it now. I tried the faa web site, but got
> lost in there. I also remember an on-line calculator where I could enter
my
> coordinates and it would tell me how high I could go, I think.
>
> Does anyone have a link to any of this info?
>
> Thanks! & 73
>
> Jim
> AA0JG
>
>

3070. Re: Tower resrtictions near an airport

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-15 21:06:41 UTC
From: Fulano de Tal <therealexray@netscape.net>
Message-ID: <3D5C17E1.F4DEAC0A@netscape.net>
Source record: 136710

Dick Hughes wrote:
>
> Well the poster is an amateur radio operator so you have to assume
> when he posts in an amateur radio newsgroup he was talking about an
> amateur radio tower. It turns out he wasn't, so he will have to
> search further into the FAA regs. I don't know what it costs to
> submit an application to the FAA, so if the cost isn't prohibitive,
> might as well submit the application and see if it gets approved.
> That will answer the question officially.
>
> Dick - W6CCD

I don't want to beat this to death, but the information stated applies to any antennas including amateur radio antennas. The Part 97.15 200 foot rule simply doesn't say anything. Read 47CFR 17.7 and you'll see what I mean.

-Bill

3071. Re: Superposition quiz

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-15 21:11:12 UTC
From: tdonaly@aol.com
Message-ID: <20020815171112.28522.00000543@mb-mr.aol.com>
Source record: 136711

>
>Tdonaly wrote:
>> There is absolutely no mathematical justification for the
>> concept of superposition of power, whatsoever.
>
>Who is it who has advocated the application of superposition
>to power? Perhaps you are confusing the superposition theorem
>with the principle of conservation of energy. Energy is a
>scalar without phase so the superposition theorem doesn't apply.
>It's unique property is that it can be added as a scalar, like
>buckets of water, but it cannot be destroyed. That's an important
>feature in keeping RF engineers from constructing a wave containing
>more average energy than exists in the system.
>--
>cheers, CAM, W5DXP
>
>
You're slippery as a greased eel, Cecil, but that remark was aimed
more at Richard Harrison than at you. I know yooouuu wouldn't
advocate superposition of power, oh no. You know full well that
you can't add powers the way you do tomatoes or radishes. How
silly of anyone to think you might think otherwise.
73,
Tom Donaly KA6RUH

3072. Re: Is Lithium Grease good for assembling antenna mating sections?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-15 21:13:27 UTC
From: Crazy George <munschNO@attglobal.net.SPAM>
Message-ID: <3d5c1db5_1@news1.prserv.net>
Source record: 136713

Roy:
I don't remember the physics anymore, (para-magnetic, dia-magnetic?) but when cellular got pervasive, there was an unexpected amount of intermod found in passive transmitting hardware. Andrew Corp. among others, did some extensive testing on some of the materials, specifically those used in the center conductors of connectors, and found that the choice of metal was critical. They produced a couple of papers back in the early 90s, and I thought we had this discussion before? If not, I'll try a Google search for my original post, as my filing system is momentarily inaccessible.

--
Crazy George
Remove NO and SPAM from return address
Roy Lewallen <w7el@eznec.com> wrote in message
news:3D5BF54E.4060304@eznec.com...
> Why should nickel be any worse than steel at producing harmonics? Should
> everyone with steel antennas be worried, too?
>
> Roy Lewallen, W7EL
>

3073. Re: Balanced line to coax

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-15 21:16:22 UTC
From: Rezster <dbm@[remove]>
Message-ID: <Xns926B9B69AC8B7dbmremovefisinet@148.78.248.75>
Source record: 136714

Rezster <dbm@[remove]fisi.net> wrote in
news:Xns926B836F61489dbmremovefisinet@148.78.248.75:

> 'Doc <w5lz@icok.net> wrote in news:3D5BE563.B34DE994@icok.net:
>
>>
>>
>> Rezster,
>> I'm not familiar with an 'AS-2' antenna, so I
>> think it's one of those "try it and see" things.
>
>
> OK, Doc. I suppose I'll give it a try. I really like the automatic
> antenna tuner so I imagine I'll find a Balun in the near future...just
> wanting to get on the air...NOW! ;-)

Hmmm...no luck up to this point. i can only get my antenna 10-12 feet off
the ground. Looks like I Could hear something but I'm not picking up
anything but static. Not even the SW stations. One problem...I've got a
100 ft of ladderline and it's only about 20 feet into my shack. What to do
with all the extra?

3074. Re: Superposition quiz

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-15 21:31:14 UTC
From: CAM <w5dxp@hotmail.com>
Message-ID: <3D5C1DA2.5B30B4A9@hotmail.com>
Source record: 136715

Tdonaly wrote:
> You know full well that
> you can't add powers the way you do tomatoes or radishes.

Why can't you add power (energy) like you do tomatoes
and radishes? Power engineers do it all the time. They
don't throw the switch until the voltages have the same
phase and eureka, they've just added two powers together.
But they don't add 75 watts and 8.33 watts and get 133.33
watts.
--
cheers, CAM, W5DXP

----------== Posted via Newsfeed.Com - Uncensored Usenet News ==----------
http://www.newsfeed.com The #1 Newsgroup Service in the World!
-----= Over 100,000 Newsgroups - Unlimited Fast Downloads - 19 Servers =-----

3075. Re: Superposition quiz

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-15 21:54:42 UTC
From: Gene Fuller <W4SZzzzzz@att.net>
Message-ID: <3D5C2324.6B392943@att.net>
Source record: 136716

Cecil,

This brings up some additional questions.

When the power engineers add, say, 10 megawatts to an existing 10 megawatts what happens to all the extra power?

Am I required to turn on more lights in my house to absorb some of the extra power that is being forced into the line?

Unless there is a very unusual situation I would expect the power "forced" into the line under your scenario to be exactly equal to the demand.

It is likely that the sum of powers delivered by your generators is about the same after the switch is thrown as it was before. Paralleling the generators adds capacity, but it does not immediately change the actual delivered power unless the single generator was already overloaded. (But we know that overloads are *never* allowed in ham radio.)

72, (low on power)
Gene, W4SZ

CAM wrote:
>
> Tdonaly wrote:
> > You know full well that
> > you can't add powers the way you do tomatoes or radishes.
>
> Why can't you add power (energy) like you do tomatoes
> and radishes? Power engineers do it all the time. They
> don't throw the switch until the voltages have the same
> phase and eureka, they've just added two powers together.
> But they don't add 75 watts and 8.33 watts and get 133.33
> watts.
> --
> cheers, CAM, W5DXP
>
> ----------== Posted via Newsfeed.Com - Uncensored Usenet News ==----------
> http://www.newsfeed.com The #1 Newsgroup Service in the World!
> -----= Over 100,000 Newsgroups - Unlimited Fast Downloads - 19 Servers =-----

3076. Re: Superposition quiz

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-15 22:01:37 UTC
From: CAM <w5dxp@hotmail.com>
Message-ID: <3D5C24C1.D88C13D9@hotmail.com>
Source record: 136717

Gene Fuller wrote:
> Unless there is a very unusual situation I would expect the power
> "forced" into the line under your scenario to be exactly equal to the
> demand.

That's true but the point was that the total power is equal to the
sum of the two powers delivered by the two generators just like the
total of the tomatoes is equal to the sum of the two shipments of
tomatoes from two farmers. Power is a scalar. Tomatoes is a scalar.
There is no way to add tomatoes out of phase. There is no way to
add power out of phase.
--
cheers, CAM, W5DXP

----------== Posted via Newsfeed.Com - Uncensored Usenet News ==----------
http://www.newsfeed.com The #1 Newsgroup Service in the World!
-----= Over 100,000 Newsgroups - Unlimited Fast Downloads - 19 Servers =-----

3077. Re: Superposition quiz

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-15 22:18:21 UTC
From: richardharrison@webtv.net
Message-ID: <2784-3D5C28AD-212@storefull-2395.public.lawson.webtv.net>
Source record: 136622

Tom, KA6RUH wrote:
"There is absolutely no mathematical justification for the concept of superposition of power whatsoever."

I don`t think you will find "superposition" in any of my postings.

As Cecil says: "Energy is a scalar without phase---."

The power factor of line impedance varies according to the standing wave situation. That`s because you are taking a summation.

When you examine the energy in one direction at a time, there is no opposite direction wave to consider and the power factor angle is zero, corresponding to a resistive impedance. That`s the basis of the Bird wattmeter. It works and only damn fools say it doesn`t.

Best regards, Richard Harrison, KB5WZI

3078. Re: Superposition quiz

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-15 22:23:40 UTC
From: n7ws_at_yahoo.com
Message-ID: <3d5c2907.2182106@news.triconet.org>
Source record: 136718

On 15 Aug 2002 21:11:12 GMT, tdonaly@aol.com (Tdonaly) wrote:
[snip]

|You know full well that
|you can't add powers the way you do tomatoes or radishes.

Why would you add radishes to tomatoes?

Maybe a few green chilies, jalapenos, some diced onion and a sprig of
cilantro; but radishes? I don't think so.

3079. Re: What is Ballon ?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-15 22:30:12 UTC
From: StarGazer <pti@capnet.com>
Message-ID: <3D5C2B74.5221A5A5@capnet.com>
Source record: 136626

He didn't type ballum... he typed ballon.

Jerry Oxendine wrote:

> And what, might I ask, is a "ballum"? I know what a "balun" is, but not the
> other thingy.
>
> Jerry
> tim english <te@usol.com> wrote in message
> news:m23mluof6vad6oqvu161rsoaj9kbc88rnp@4ax.com...
> > Isn't that a ballum ??? :)
> > --
> > Tim, K8TJ
> >
> > On Wed, 14 Aug 2002 18:19:13 -0700, "Wayne" <w> wrote:
> >
> > > Ballon appears to be Dutch or German for balloon...
> > >
> > >"Reg Edwards" <g4fgq.regp@btinternet.com> wrote in message
> > >news:ahm98cdbo1@knossos.btinternet.com...
> > >> > >What is a Ballon ?
> > >> >
> > >> ==========
> > >>
> > >> A Ballon is gadget suspended between a feedline and an aerial. Its
> > >purpose
> > >> is to weigh down the aerial to stop it flopping about in the wind.
> > >> ---
> > >>
> > >> (FAQ from a UK newsgroup.)
> > >> ---
> > >> ==========
> > >> Regards from Reg G4FGQ
> > >> Free Radio Design Software
> > >> Go to http://www.g4fgq.com
> > >> ==========
> > >>
> > >>
> > > >
> >

3080. Re: Is Lithium Grease good for assembling antenna mating sections?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-15 22:31:14 UTC
From: StarGazer <pti@capnet.com>
Message-ID: <3D5C2BB2.7B14099@capnet.com>
Source record: 136625

how do you know it had harmonics all over the place.

"Gary V. Deutschmann, Sr." wrote:

> Hi Crazy George
>
> You just answered a puzzling antenna problem I had in the past,
> without even realizing it. Thanks!
>
> I had used some nickel plated copper to build a small 440 yagi. It
> was identical to one I had made of all brass that worked perfectly.
> Yet it put out harmonics all over the place and had very little punch.
> I took it down and trash canned it, but never knew why it didn't work.
> I guess the nickel coating was the culprit.
>
> TTUL
> Gary

3081. Re: Email to Doug Smith, kf6dx, QEX Editor

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-15 22:37:25 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <s9bolu8tb60tol6c0m2blgtcujcugujnpo@4ax.com>
Source record: 136619

On Thu, 15 Aug 2002 13:15:04 -0700, CAM <w5dxp@hotmail.com> wrote:

> I have no idea what you mean.

;-)

3082. Re: Superposition: was Re: Email to ...

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-15 22:40:02 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <mkbolu8snfisulivpt8uhmn47khcjbbcq3@4ax.com>
Source record: 136620

On Thu, 15 Aug 2002 13:16:34 -0700, CAM <w5dxp@hotmail.com> wrote:

>what you inferred is not what I intended to imply

:-)

3083. Re: Is Lithium Grease good for assembling antenna mating sections?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-15 22:43:47 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <3D5C2EA3.6060401@eznec.com>
Source record: 136621

I recall a discussion regarding problems caused by nickel plating on connectors, but the present discussion got me thinking about antenna materials.

Nickel is ferromagnetic, like iron, steel, and the stainless steel that most mobile whips are made from. So I'm curious as to whether the problem is due to having a thin coating of the material, whether the magnetic properties of nickel are particularly nonlinear compared to steel or other structural materials, or whether there might also be a problem with some steel antennas.

I've never had to deal with high power and/or low distortion RF systems, so don't have any first hand experience with this. The only trouble I've encountered with nickel plating is in its common use as a barrier metal between copper and gold plating on microstrip conductors. When the gold is too thin, allowing current to penetrate to the nickel at the frequencies of use, excessive loss occurs. Like other ferromagnetic materials, nickel is exceptionally lossy at high frequencies (and it's a frequency dependent loss) because the skin depth, being inversely proportional to the permeability, is very shallow. This isn't a problem with most steel antennas like whips and towers because the surface area is so big to begin with. But I don't think this has anything to do with the harmonic generation problem.

Roy Lewallen, W7EL

Crazy George wrote:
> Roy:
> I don't remember the physics anymore, (para-magnetic, dia-magnetic?) but
> when cellular got pervasive, there was an unexpected amount of intermod
> found in passive transmitting hardware. Andrew Corp. among others, did some
> extensive testing on some of the materials, specifically those used in the
> center conductors of connectors, and found that the choice of metal was
> critical. They produced a couple of papers back in the early 90s, and I
> thought we had this discussion before? If not, I'll try a Google search for
> my original post, as my filing system is momentarily inaccessible.
>
> --
> Crazy George
> Remove NO and SPAM from return address
> Roy Lewallen <w7el@eznec.com> wrote in message
> news:3D5BF54E.4060304@eznec.com...
>
>>Why should nickel be any worse than steel at producing harmonics? Should
>>everyone with steel antennas be worried, too?

>>
>>Roy Lewallen, W7EL
>>
>
>
>

3084. Re: Quad antenna spreaders

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-15 22:48:51 UTC
From: kelly@dvol.com
Message-ID: <d22b54c3.0208151448.4a6b2a2f@posting.google.com>
Source record: 136623

"Dan/W4NTI" <w4nti@mindspringnospam.com> wrote in message
news:<ajglor$a0k$1@slb0.atl.mindspring.net>...
> Thanks to Denis and Yuri. I hadn't thought of that source at all. Good
> deal on the sealer.
>
> Dan/W4NTI
>
> "Yuri Blanarovich" <k3bu@aol.com> wrote in message
> news:20020814215926.01880.00000551@mb-mq.aol.com...
> > >
> > >hey don
> > >try bamboo fishing poles they are cheap and light and work well for
> spreaders
> > >
>
>
If you go back into the ham antenna literature of the 50s when quads
first started to get attention quads all had bamboo spreaders. They
did a good job and they were free. Carpet manufacturer's wound their
rugs around long bamboo poles and neighborhood carpet dealers were
glad to get rid of the things.
>
>
The stuff is still out there.
http://www.tonkincane.com/bamprice.html
>
>
$225 for a bale of 50 18 foot poles is almost free but look out for
the shipping charges.

w3rv

3085. Re: Superposition quiz

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-15 22:50:09 UTC
From: richardharrison@webtv.net
Message-ID: <29638-3D5C3021-80@storefull-2391.public.lawson.webtv.net>
Source record: 136629

Gene Fuller wrote:
"When the power engineers add say 10 megawatts to an existing 10 megawatts what happens to all that extra power?"

As Gene knows, the consumption of the added 10 megawatts is not an event, it`s a growth of consumption which happens in the combined loads on the system. What the power engineers added was increased generating capacity.

With two machines in parallel, you can be sure the sum of the powers they generate equals the sum of the combined loads.

Power is not necessarily equally divided. It almost certainly isn`t immediately upon making the parallel connection. Excitation controls on each machine allow voltage adjustment to shift loads back and forth between machines as desired.

Best regards, Richard Harrison, KB5WZI

3086. Re: ? Value of 12m capacitor on HF5B Butternut beam?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-15 22:50:21 UTC
From: MW0CDO <gw7lhi@hotmail.com>
Message-ID: <ajhb77$1b0rpk$1@ID-117699.news.dfncis.de>
Source record: 136624
Cross-posted to: rec.radio.amateur.antenna,uk.radio.amateur

Thanks for the links Greg!

Paul MW0CDO

"w9gb" <gregory.beat@attbi.com> wrote in message
news:xZD69.121207$sA3.215715@rwcrnsc52.ops.asp.att.net...
> Here is the Bencher web site (Mfg. of Butterfly):
> http://www.bencher.com/hf5b.html
>
> Here is the HF5B parts list
> http://www.bencher.com/pdfs/00809ZZV.pdf
>
> Here is their technical contact web page:
> http://www.bencher.com/contact.html
>
> There were a few "revisions" of this particular beam antenna
> Here is the Beam Antennas documentation web page:
> http://www.bencher.com/pdf_download.html
>
> This is the "current" HF5B revision being manufactured in Woodale, IL
> http://www.bencher.com/pdfs/00159IZV.pdf
>
> 73 de w9gb
> Greg
>
> "MW0CDO" <gw7lhi@hotmail.com> wrote in message
> news:aip5t4$169l9j$1@ID-117699.news.dfncis.de...
> > Thanks for reading.
> >
> > I'm trying to find out the value of the 12m capacitor on a Butternut
HF5B
> > "Butterfly" beam.
> >
> > If you happen to have this info, I'd be grateful if you could pass it
on!
> >
> >
> > Paul MW0CDO.
> >
> >
>
>

3087. Re: Mobile Hamstick

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-15 23:04:34 UTC
From: 'Doc <w5lz@icok.net>
Message-ID: <3D5C337A.5D4BB097@icok.net>
Source record: 136627

WA6LZH wrote:
>
> Sasquatch,
>
> I think that the SGC people did a bit of research on this with their
> QVC (Or whatever) multiband system. You might want to visit their site
> for the details but I think they found that a 10 mhz whip was the best
> compromise using their automatic tuner for an all band setup.

The only problem with the SGC system is that for any band
lower in frequency than 10 Mhz, the 'too short' whip performed
terribly.
'Doc

3088. Re: Washington DC Visit/Antenna Infos.

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-15 23:14:40 UTC
From: w9gb <gregory.beat@attbi.com>
Message-ID: <ABW69.42645$ZI2.8574@sccrnsc02>
Source record: 136628

Gerry -

Bencher is just west of O'Hare airport (western Chicago, IL suburb).

If you contact them, before you arrive in Washington DC, they may be able to
make arrangements for you to pick up at a dealer/distributor in the
Washington D.C. area OR where you may be staying.

Here is the Bencher web site (Mfg. of Butternut):
http://www.bencher.com

HF6V-X HF Vertical Antenna (produced 1987 - 1997)
Assembly Instructions & Parts List
http://www.bencher.com/pdfs/00233IZV.pdf

Here is their technical contact web page:
http://www.bencher.com/contact.html

Download section for a Butternut On-line Documentation
http://www.bencher.com/pdf_download.html

73 de w9gb
Greg

"Gerry Lawlor EI9FV" <pgenenv@eircom.net> wrote in message
news:3d5c1483.12813489@news1.eircom.net...
> Hi
> I expect to be in Washington DC in early September for about 1 weekand
> would appreciate some information on stores in that general area. In
> particular I would like to source parts for a butternut HF6VX antenna
> while there. Any info gratefully received.
>
> Gerry
> EI9FV

3089. Re: Is Lithium Grease good for assembling antenna mating sections?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-15 23:58:34 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <3D5C402A.10905@eznec.com>
Source record: 136630

Roy Lewallen wrote:

>. . .
> frequency dependent loss) because the skin depth, being inversely
> proportional to the permeability, is very shallow. . .

Correction: The skin depth is inversely proportional to the square root
of the permeability.

Roy Lewallen, W7EL

3090. Free 17m Raibeam-Island of Hawaii

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-16 00:35:42 UTC
From: lemwnash@aol.com
Message-ID: <20020815203542.19250.00000943@mb-mg.aol.com>
Source record: 136631

just come and take it down off a 20 ft mast

kh6lem

3091. Re: Superposition quiz

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-16 00:40:42 UTC
From: tdonaly@aol.com
Message-ID: <20020815204042.08826.00000370@mb-mw.aol.com>
Source record: 136632

>
>On 15 Aug 2002 21:11:12 GMT, tdonaly@aol.com (Tdonaly) wrote:
>[snip]
>
>|You know full well that
>|you can't add powers the way you do tomatoes or radishes.
>
>Why would you add radishes to tomatoes?
>
>Maybe a few green chilies, jalapenos, some diced onion and a sprig of
>cilantro; but radishes? I don't think so.
>

Don't knock it 'til you've tried it.

Tom Donaly KA6RUH

3092. Re: What is Lithium grease good for?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-16 00:40:55 UTC
From: ab528@FreeNet.Carleton.CA
Message-ID: <ajhhmn$f5u$1@freenet9.carleton.ca>
Source record: 136633

StarGazer (pti@capnet.com) writes:
> ....as

Always put a dab on each stud when you change a tire.
(Here in Ottawa, that happens twice a year when we change
snow tires.) At the garage, it's sometimes called anti-
sieze grease.

Why? Try to change a tire when the nuts are rust welded!

3093. Re: Balanced line to coax

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-16 00:48:06 UTC
From: Rezster <dbm@[remove]>
Message-ID: <Xns926BBF4FAB291dbmremovefisinet@148.78.248.75>
Source record: 136634

Rezster <dbm@[remove]fisi.net> wrote in
news:Xns926B9B69AC8B7dbmremovefisinet@148.78.248.75:

> Rezster <dbm@[remove]fisi.net> wrote in
> news:Xns926B836F61489dbmremovefisinet@148.78.248.75:
>
>> 'Doc <w5lz@icok.net> wrote in news:3D5BE563.B34DE994@icok.net:
>>
>>>
>>>
>>> Rezster,
>>> I'm not familiar with an 'AS-2' antenna, so I
>>> think it's one of those "try it and see" things.

>
> Hmmm...no luck up to this point. i can only get my antenna 10-12 feet
> off the ground.

Well, I suppose you oughta read the instructions. The Versa Tuner requires a jumper from the 'Wire' post to the Balanced Line post when you're using a balanced line. Now it's working like it should. Apparently, I need to get the antenna higher in the air but I'll have to make do for the time being. Also using a 10amp power supply so I can't use too much power. Got another power supply coming, probably next week.

Thanx for your input!

3094. Highest Gain on 10M Mobile Monopole

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-16 00:55:01 UTC
From: fractenna@aol.com
Message-ID: <20020815205501.19432.00000618@mb-mf.aol.com>
Source record: 136635

Looking for highest gains practically measured on a 2 foot--or other very electrically small--10M monopole, vehicular mounted.

E-mail response works fine for me.

73,
Chip N1IR

3095. Re: Superposition quiz

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-16 01:00:40 UTC
From: tdonaly@aol.com
Message-ID: <20020815210040.08826.00000371@mb-mw.aol.com>
Source record: 136636

Richard Harrison wrote,
>
>Tom, KA6RUH wrote:
>"There is absolutely no mathematical justification for the concept of
>superposition of power whatsoever."
>
>I don`t think you will find "superposition" in any of my postings.
>
>As Cecil says: "Energy is a scalar without phase---."
>
>The power factor of line impedance varies according to the standing wave
>situation. That`s because you are taking a summation.
>
>When you examine the energy in one direction at a time, there is no
>opposite direction wave to consider and the power factor angle is zero,
>corresponding to a resistive impedance. That`s the basis of the Bird
>wattmeter. It works and only damn fools say it doesn`t.
>
>Best regards, Richard Harrison, KB5WZI
>

You're absolutely right about the Bird wattmeter. It works.
It looks as if Cecil is going to start in on energy fields, now. This
should be interesting. Tomatoes and jalapenos... with cilantro.
73,
Tom Donaly KA6RUH

(P.S. to Cecil. What does the gradient of a joule field signify?)

3096. Re: What is Lithium grease good for?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-16 01:25:13 UTC
From: Wayne Faris <ke0bz@arrl.net>
Message-ID: <3D5C5479.C4E5428@arrl.net>
Source record: 136637

I use it for lubing the ball bearings when I rebuild a rotor. Not too many other ham radio uses that I can think of.

Wayne L. Faris, KEï¿½BZ

3097. Re: Chip's dark side

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-16 01:30:11 UTC
From: Fulano de Tal <therealexray@netscape.net>
Message-ID: <3D5C55A3.EDE97115@netscape.net>
Source record: 136638

"O. Epstein" wrote:
>
> --
>
> You need to speak to an attorney.

You need to speak to a shrink. What kind of nut are you anyway?

-BM

3098. Re: Twin Lead 300 Ohm. and J antenna for UHF

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-16 01:32:48 UTC
From: Ken <hanksk1@attbi.com>
Message-ID: <4DY69.154579$uj.220086@rwcrnsc51.ops.asp.att.net>
Source record: 136639

Found a site for you on how to build any roll up antenna:

http://www.vcars.org/CARL/J_Pole2M.html

--
73's,
Kenneth Hanks, W7GMC
Great Falls, Montana
IRLP Node #567
w7gmc@attbi.com

"Pedro Motilla" <pedro.motilla.QUITAESTO@ono.com> wrote in message
news:rUM69.3461$8K.226510@news.ono.com...
> Does anybody has a practical experience in a J for UHF using Twin Lead.
>
> I have experimented wiht 2m version and works very well. But i can not
> adjust swr for UHF
>
> Mesures:
> Long part: 45.5 Cms
> Short part: 15 Cms
> Feeding point: 1.3 Cms from the end
> End shorcircuited.
>
> Any help will be wellcome.
>
> Thanks
> EB5FLS
> Op. Pedro
>
>

3099. Re: Superposition quiz

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-16 02:25:46 UTC
From: klocko@toad.net
Message-ID: <224d9cd4.0208151825.153d2858@posting.google.com>
Source record: 136640

richardharrison@webtv.net (Richard Harrison) wrote in message news:<5154-3D5BD580-171@storefull-2394.public.lawson.webtv.net>...
> Tom, KA6RUH wrote:
> "The power in the first instance is 1v times 1a = 1watt---."
>
> All that math and no mistakes!
>
> Ohm says power is E squared over R. So, if you double the voltage across
> a resistor, of course you quadruple the power.
>
> One reason the communications industry uses power to express signal
> levels, the milliwatt is a power, is to avoid impedance related
> arithmetic.
>
> If you know the power at a point with respect to a milliwatt, it makes
> no difference if the impedance is 50 ohms, 75 ohms, 300 ohms, 600 ohms
> or 377 ohms, until you need to determine the voltage or current at that
> particular point. Otherwise, you may happily add and subtract db`s
> until you are ready for specific volts and amps.
>
> Best regards, Richard Harrison, KB5WZI

If you're actually trying to say that you can add 3 dBm to 3 dBm and get 6 dBm, that's non-sensical. In non-log terms, that sum is equivalent to (2 mw) x (2 mw), or some quantity that is milliwatts squared. Absolutely no sense.

If you're trying to say that adding 3 dB and 3 dBm is a justification for adding powers, keep in mind that the sum is equivalent to (2) x (2 mw) or 4 mw. A simple multiplication.

73,
Bill N3WK

3100. metallic IMD generators

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-16 02:53:01 UTC
From: Crazy George <munschNO@attglobal.net.SPAM>
Message-ID: <3d5c6d02_1@news1.prserv.net>
Source record: 136641

I have privately emailed a JPG of a page of the document to Roy. It is:
"Intermodulation in RF Coaxial Connectors" by M/A-Com, not Andrew.

Non-linear materials like Nickel anywhere RF current is flowing will cause intermod. The higher the current (connector center pins, half-wave element centers, and the like) the worse the problem. I suspect that a yagi with a nickel plated boom and only the element tips plated might be OK, but I wouldn't chance it. As far as stainless steel is concerned, I had the opportunity to compare some various metal rods on 150 MHz mobile antennas about 40 years ago, and the stainless were fractional dB poorer antennas than copper plated ones. Trouble was, no one could reliably keep the plating on over long term flexing. I suspect that mobiles may well be bad IMD sources, but the poor radiation characteristics and the mobility may limit the problem. Good area for some further investigation.

--
Crazy George
Remove NO and SPAM from return address
Roy Lewallen <w7el@eznec.com> wrote in message
news:3D5C402A.10905@eznec.com...
> Roy Lewallen wrote:
>
> >. . .
> > > frequency dependent loss) because the skin depth, being inversely
> > > proportional to the permeability, is very shallow. . .
>
> Correction: The skin depth is inversely proportional to the square root
> of the permeability.
>
> Roy Lewallen, W7EL
>

3101. Re: Superposition: was Re: Email to ...

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-16 02:58:57 UTC
From: klocko@toad.net
Message-ID: <224d9cd4.0208151858.35d5f741@posting.google.com>
Source record: 136642

CAM <w5dxp@hotmail.com> wrote in message news:<3D5BBFED.EB5A02B7@hotmail.com>...
> Bill Klocko wrote:
> > Jeez, give it a break for a couple of days. Go for a walk. Go out for
> > a good dinner. Rent some old classic comedies and have a good laugh.
>
> I'm retired, Bill. I do all of the above plus much more. I use this
> newsgroup as a learning experience. I have learned a lot. I often
> toss something out so the newsgroup can, in its collective wisdom,
> perform the scientific method on it. I recently received a helpful
> email about superposition.

Your post seemed to be thrown together without any supporting
calculations or evidence. It appeared to be written either by someone
under stress or someone who didn't want to spend a lot of time on it.
Maybe because of the way you've been beaten up on this NG the last
week or so.

> The superposition theorem states that the system involved must be
> linear. If the power source is linear, when we superpose 100v at 2a
> in phase with 100v at 2a, we do indeed get 200v at 4a and the power
> output of the source has supplied the extra 400 watts needed for
> the superposition. If the constant voltage power source is current
> limited to 400w, then the signals cannot be superposed to 200v at 4a.
> If they are confined to a 50 ohm environment and power limited to 400w,
> the best possible result of losslessly combining them in phase will be
> 141.4v at 2.828a. This is what happens with a transformer.
>
> The emailer said that the hole in my argument is that a ham transmitter
> is not a linear device. Seems that might also be a hole in Steve's
> argument. If a ham transmitter is not a linear device, then Steve is
> not allowed to use the superposition theorem on a ham system. But
> that's what we have all been doing.

I won't comment on what you and Steve have been doing. Your simple
problems involve ideal theoretical transmitters, not real ones, so
that's not an issue. Sections of transmission lines are all linear, so
that's not an issue either.

> A source doesn't have to be linear under all conditions to satisfy
> the requirements of the superposition theorem. It only has to be
> linear over the conditions that are encountered in reality. A 100w
> ham transmitter looking into 50 ohms at the input of an antenna tuner
> certainly satisfies the linearity requirement. It is putting out
> a constant 70.7v at a constant 1.414a.

I'd agree, it's constant. Sounds like you talked yourself out of the emailer's concern. You might have to worry about source non-linearity if you were taking measurements at different frequencies or different drive levels.

> The energy needed for Steve's superposing is indeed supplied by the
> system. The extra 50 joules/sec required is supplied by the superposing
> of two complimentary waves whose voltages and currents cancel but
> whose energy is delivered to another set of superposed waves. I will
> head over to Texas A&M next week and try to find references for all
> that I have been asserting. But the aliens assured me that all of
> this is true.

Well, I hope you're not listening to their Morse code signals rattling through your fillings that says wave cancellation leads to jack-rabbit waves that jump in another direction because of conservation of energy.
73,
Bill N3WK

3102. Re: Superposition quiz

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-16 03:05:25 UTC
From: richardharrison@webtv.net
Message-ID: <2784-3D5C6BF5-250@storefull-2395.public.lawson.webtv.net>
Source record: 136644

Richard Clark wrote:
"Academics and amateurs do not often employ these full terms, industry knows better."

Well "debrinkos", etc are somewhat arcane. That`s dbrnc, or that`s db referenced to to noise at a level of -90 dbm with "C"-message level weighting. This is worked this way so the numbers will always be positive in value and relate to the transmission characteristics of certain telephone equipment.

Ever since Richard Clark questioned dBm0, etc, and I responded off the top off my head, I`ve been looking for the November 1961 edition of "The Lenkurt Demodulator" which was itself an update of a similar article from 1954 written by A.N. Seymour, the then Editor of the Demodulator. The Bell System adopted the 1954 article without change as an official "Bell System Practice". I found it and I was on target. The issue title is: "dba and Other Logarithmic Units". The intro says: In this article dba, dbrn, and vu are explained in detail. Shorter explanations of other units are also included.

I wish everyone could get reprints of all the Demodulators. They were the best little doses of technical information ever written. The quotations inclluded here are atypical as some wording is copied from official organizational definitions.

For dbm0: "The term dbm0 is a measure of power with reference to zero dbm at the reference transmission level point (RTLP). Power measured at any transmission level point can be expressed in dbm0 by correcting the power measured for the difference in level between the point of measurement and the Reference Transmission Level Point."

Best regards, Richard Harrison, KB5WZI

3103. Re: Mobile Hamstick

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-16 03:08:24 UTC
From: JWheeler <kd5bcu@yahoo.com>
Message-ID: <ulor514tr4mj1f@corp.supernews.com>
Source record: 136643

I run the same set up, but I did what the directions say not to... I added a 4th resonator. I have 10, 15, 20, and 40 mounted. Works like a charm. They say it will cause interaction between them, but I can still work Europe on 20 with no problems. I have an Icom IC-730.

JWheeler

"Fred Hambrecht" <w4jle@charter.net> wrote in message news:ulo56hr9593ob7@corp.supernews.com...
> If ugly dosn't bother you, use a Hustler with the adapter that will allow
> you to put 3 resonators on it. I run 80, 40, and 20 on mine. I run a 706
> sans tuner.
>
> "Sasquatch Roadkill" <sasquatch_roadkill@NO*SPAMhotmail.com> wrote in
> message news:ajgl00svq1@nnrp.atgi.net...
> > All,
> > I've been thinking of putting my Kenwwood TS-690 in my car, and have
> looked
> > at the Hamstick antennas.
> > I would hate to be limited to only one band, and yet don't want to buy
> more
> > than one of these (I am on a limited budget).
> > Since I have an internal antenna tuner in my radio, could I use one of
> these
> > antennas on different bands? Is it possible to use the 80m antenna, and
> then
> > still get adequate results on 10, 15, and 20 meters? Or should I just be
> > satisfied with operating on one band?
> >
> > Thanks for any insight!
> > --
> > -----
> > Sasq
> > I Cor 15:58
> >
> >
>
>

3104. Tuning Traps

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-16 03:30:57 UTC
From: Kevin Nathan <k7rx@attbi.com>
Message-ID: <RI_69.156382$uj.225209@rwcrnsc51.ops.asp.att.net>
Source record: 136645

Hello All,

I am totally blind and despite being a ham for many years and possessing a pretty good knowledge of antennas, I am sometimes short of actual experience working with test equipment and the like. I am in the process of building a Battle Creek Trapper for which I want to wind coax traps for 80 and 40 meters. I do not have a grid dipper but do have access to the local dx club's MFJ 259B antenna analyzer. However, it does not have the add on to allow it to function as a grid dipper. Would some of you please suggest the best method for me to determine the exact resonant frequency of these traps using only the 259B? I have received some suggestions but would like to get a couple more before I tackle this project.

Thanks much for your suggestions and 73.

--
Kevin, K7RX :)

3105. Tuning Traps

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-16 03:30:58 UTC
From: Kevin Nathan <k7rx@attbi.com>
Message-ID: <SI_69.132644$sA3.223229@rwcrnsc52.ops.asp.att.net>
Source record: 136646

Hello All,

I am totally blind and despite being a ham for many years and possessing a pretty good knowledge of antennas, I am sometimes short of actual experience working with test equipment and the like. I am in the process of building a Battle Creek Trapper for which I want to wind coax traps for 80 and 40 meters. I do not have a grid dipper but do have access to the local dx club's MFJ 259B antenna analyzer. However, it does not have the add on to allow it to function as a grid dipper. Would some of you please suggest the best method for me to determine the exact resonant frequency of these traps using only the 259B? I have received some suggestions but would like to get a couple more before I tackle this project.

Thanks much for your suggestions and 73.

--
Kevin, K7RX :)

3106. Tuning Traps

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-16 03:31:19 UTC
From: Kevin Nathan <k7rx@attbi.com>
Message-ID: <bm_69.35621$983.53098@rwcrnsc53>
Source record: 136647

Hello All,

I am totally blind and despite being a ham for many years and possessing a pretty good knowledge of antennas, I am sometimes short of actual experience working with test equipment and the like. I am in the process of building a Battle Creek Trapper for which I want to wind coax traps for 80 and 40 meters. I do not have a grid dipper but do have access to the local dx club's MFJ 259B antenna analyzer. However, it does not have the add on to allow it to function as a grid dipper. Would some of you please suggest the best method for me to determine the exact resonant frequency of these traps using only the 259B? I have received some suggestions but would like to get a couple more before I tackle this project.

Thanks much for your suggestions and 73.

--
Kevin, K7RX :)

3107. Tuning Traps

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-16 03:32:23 UTC
From: Kevin Nathan <k7rx@attbi.com>
Message-ID: <bn_69.156396$uj.225157@rwcrnsc51.ops.asp.att.net>
Source record: 136648

Hello All,

I am totally blind and despite being a ham for many years and possessing a pretty good knowledge of antennas, I am sometimes short of actual experience working with test equipment and the like. I am in the process of building a Battle Creek Trapper for which I want to wind coax traps for 80 and 40 meters. I do not have a grid dipper but do have access to the local dx club's MFJ 259B antenna analyzer. However, it does not have the add on to allow it to function as a grid dipper. Would some of you please suggest the best method for me to determine the exact resonant frequency of these traps using only the 259B? I have received some suggestions but would like to get a couple more before I tackle this project.

Thanks much for your suggestions and 73.

--
Kevin, K7RX :)

3108. Re: Superposition quiz

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-16 03:59:00 UTC
From: richardharrison@webtv.net
Message-ID: <160-3D5C7884-229@storefull-2393.public.lawson.webtv.net>
Source record: 136649

Bill Klocko wrote:
"If you`re trying to say that you can add 3 dbm to 3 dbm and get 6 dbm, that`s non-sensical."

3 dbm is twice the power of the 1 milliwatt reference, or 2 milliwatts. It`s a power, plain and simple. When 2 milliwatts is added to 2 milliwatts the only way I`ve succeeded in doing it, the sum is 4 milliwatts which is +6 dbm.

3 db is about a power ratio of (2).
6 db is about a power ratio of (4).
This works just fine and that`s all there is to it.

I`ve calculated the gains and losses for hundreds of microwave paths then gone out and measured a great number of them. You start with a transmitter power output of so many dbm, subtract waveguide and other losses, add the antenna gain, subtract the path loss in space, add another antenna gain, subtract another waveguide and misc. loss figures, and you have the received carrier power. The difference between the received carrier power and the receiver sensitivity is the fade margin. I`m not even going to check to see what I left out, but when I do the calculation carefully and test under the ordinary propagation conditions, I am usually on the nose plus or minus one db when the antennas are properly aligned. All you have to do is add and subtract db, know the microwave business and have system parts that meet their specifications. That is the normal, not the exception in my experience.

Best regards, Richard Harrison, KB5WZI

3109. Re: Superposition: was Re: Email to ...

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-16 05:30:48 UTC
From: CAM <w5dxp@hotmail.com>
Message-ID: <3D5C8E08.48713C1E@hotmail.com>
Source record: 136650

Bill Klocko wrote:
>
> CAM <w5dxp@hotmail.com> wrote:
> Your post seemed to be thrown together without any supporting
> calculations or evidence.

It was a letter to the editor, Bill, not a technical article.

> > A source doesn't have to be linear under all conditions to satisfy
> > the requirements of the superposition theorem. It only has to be
> > linear over the conditions that are encountered in reality. A 100w
> > ham transmitter looking into 50 ohms at the input of an antenna tuner
> > certainly satisfies the linearity requirement. It is putting out
> > a constant 70.7v at a constant 1.414a.
>
> I'd agree, it's constant. Sounds like you talked yourself out of the
> emailer's concern. You might have to worry about source non-linearity
> if you were taking measurements at different frequencies or different
> drive levels.

Well, after all, we are talking about a conceptual ham transmitter
putting out a pure sine wave.

> Well, I hope you're not listening to their Morse code signals rattling
> through your fillings that says wave cancellation leads to jack-rabbit
> waves that jump in another direction because of conservation of
> energy.

Where do you think the light goes that doesn't reflect from a non-
reflective picture frame? Seems to me if it is not coming at you
it is going away from you.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

3110. Re: Mobile Hamstick

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-16 05:47:44 UTC
From: Mark Keith <nm5k@wt.net>
Message-ID: <3D5C918A.2F6@wt.net>
Source record: 136651

Sasquatch Roadkill wrote:
>
> All,
> I've been thinking of putting my Kenwwood TS-690 in my car, and have looked
> at the Hamstick antennas.
> I would hate to be limited to only one band, and yet don't want to buy more
> than one of these (I am on a limited budget).
> Since I have an internal antenna tuner in my radio, could I use one of these
> antennas on different bands? Is it possible to use the 80m antenna, and then
> still get adequate results on 10, 15, and 20 meters? Or should I just be
> satisfied with operating on one band?
>
> Thanks for any insight!

Just get a single 10m hamstick. You can use it as is on 10m. Add longer
stinger whips to the top to work other bands. It depends on the design
of the hamstick, and how much whip they use for 10m, as to how much you
will need to tune 20m. Probably about 2 extra feet or so. If there is no
way to add whips to the top of the hamstick, you can use very small hose
clamps. Some sticks have a machined top to accept whips. Some don't.
Cheapest way to go 20-10 I know of. And it will work well if you mount
up on your hood. That would be better than the bumper. BTW, this would
cover the warc bands also if you had all the stingers. You will need a
matching device most likely for the lower of those bands. My present
mobile antenna works this way from 30-10 meters. I keep a collection of
stingers precut for each band. Also, the 10m hamstick on 20m, will
outperform most 20m hamsticks on 20m. It uses more whip and less coil.
MK

--
http://web.wt.net/~nm5k

3111. Re: Feeding an Inv-L at the bottom?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-16 06:10:42 UTC
From: jbirving@ticon.net
Message-ID: <3d5c902e.2791067@news.ticon.net>
Source record: 136652

On Mon, 12 Aug 2002 21:41:49 -0400, "Fred Hambrecht"
<w4jle@charter.net> wrote:

>Whoops, forgot I was in a conference that parses every word like Clinton...
>
>WARNING - This suggestion may not work in the following conditions:
>
>1. Your yard is paved in concrete, asphalt, or because of local soil or
>environmental conditions the insertion of the coathanger pieces is
>precluded.
>
>2. Any other conditions that I may not have thought of in presenting a
>solution not tested for every variable encountered at every likely users
>location.
>
>3. Upon reflection, I hereby withdraw my suggestion pending a 5 year study
>of feasibility and apologize to the group that I was so bold as to offer any
>solution.
>
>73 Fred W4JLE
>

Fred, you can't withdraw the suggestion or apologize without forming a
committee of at least five people to provide you wiith a feasibilty
study. If you think that the committee will form subcommittees, then
it best to have at least a dozen people involved. Give them at least
a year to report back; they may be eligible for a federal grant.

73 Jim KB9JFK

3112. Re: Chip's dark side

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-16 06:27:49 UTC
From: 'Doc <w5lz@icok.net>
Message-ID: <3D5C9B4E.3F70606C@icok.net>
Source record: 136653

Epstein,
Are you finished? The current crop of crap
is bad enough without you digging up all the old
crap.
'Doc

3113. Re: Tuning Traps

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-16 07:22:37 UTC
From: Reg Edwards <g4fgq.regp@btinternet.com>
Message-ID: <aji97t$7ka$1@helle.btinternet.com>
Source record: 136654

To accurately check resonant frequency of an antenna trap, place a
single-turn link of thin wire around the centre of the trap coil and take it
via an 8" pair of loosely-twisted thin wires to the antenna analyser.

Slowly vary frequency and search on the meter's Z-range for a VERY sharp
peak in impedance.

It's much better and satisfying than a dip oscillator.

========================
Regards from Reg G4FGQ
Free Radio Design Software
Go to http://www.g4fgq.com
========================
"Kevin Nathan" <k7rx@attbi.com> wrote in message
news:Rl_69.156382$uj.225209@rwcrnsc51.ops.asp.att.net...
> Hello All,
>
> I am totally blind and despite being a ham for many years and possessing a
> pretty good knowledge of antennas, I am sometimes short of actual
experience
> working with test equipment and the like. I am in the process of building
a
> Battle Creek Trapper for which I want to wind coax traps for 80 and 40
> meters. I do not have a grid dipper but do have access to the local dx
> club's MFJ 259B antenna analyzer. However, it does not have the add on to
> allow it to function as a grid dipper. Would some of you please suggest
the
> best method for me to determine the exact resonant frequency of these
traps
> using only the 259B? I have received some suggestions but would like to
get
> a couple more before I tackle this project.
>
> Thanks much for your suggestions and 73.
>
> --
> Kevin, K7RX :)
>
>
>

3114. Re: EVERY THING IS NOW KNOWN ON ANTENNAS.

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-16 07:22:39 UTC
From: Reg Edwards <g4fgq.regp@btinternet.com>
Message-ID: <aji97u$7ka$3@helle.btinternet.com>
Source record: 136655

> Heck I can't even get it past this group

==========

Nothing, absolutely nothing, gets past the shoal of piranas who frequent
this newsgroup.

3115. Re: Chip's dark side

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-16 10:38:47 UTC
From: k1bqt@aol.com
Message-ID: <20020816063847.10550.00000639@mb-cr.aol.com>
Source record: 136656

Hi Doc--

What's your diagnosis, Epstein spending too much time at the bar? Chronically fatiguing, at any rate.

Rick K1BQT

3116. HF Vertical Antenna Installation

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-16 11:38:48 UTC
From: VK2IPD <vk2ipd@hotmail.com>
Message-ID: <ah579.7511$g9.25309@newsfeeds.bigpond.com>
Source record: 136657

I am about to install a Cushcraft R7 Vertical (a no-radial antenna). I intend to mount it on a mast, a metal pipe, driven about 4 to 5 feet into the ground. Would it be a good idea to do this or should I wall mount it? If ground mounting, what precautions should be taken for lightning? Is a seperate ground connection required in this case? What should be the minimum height of the antenna above ground? Any suggestions/ tips from your experience will be much appreciated. - 73's Raj

3117. Re: Washington DC Visit/Antenna Infos.

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-16 11:50:31 UTC
From: "Ken Coghill III, WB4ZOH" <wb4zoh@arrl.net>
Message-ID: <3D5CE6E8.1090004@arrl.net>
Source record: 136658

Gerry Lawlor EI9FV wrote:
> Hi
> I expect to be in Washington DC in early September for about 1 weekand
> would appreciate some information on stores in that general area. In
> particular I would like to source parts for a butternut HF6VX antenna
> while there. Any info gratefully received.
>
> Gerry
> EI9FV

You might also try HRO:
800-444-4799 703-643-1063 24 HOUR FAX 703-494-3679
virginia@hamradio.com
14803 Build America Dr, Woodbridge VA 22191
73
--
Ken, WB4ZOH

3118. Re: HF Vertical Antenna Installation

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-16 12:38:26 UTC
From: Bob Miller <bamiller@texas.net>
Message-ID: <D=BcPZV2=cAs9wDgKARw1omMCkuM@4ax.com>
Source record: 136659

"VK2IPD" <vk2ipd@hotmail.com> wrote:

>I am about to install a Cushcraft R7 Vertical (a no-radial antenna). I
>intend to mount it on a mast, a metal pipe, driven about 4 to 5 feet into
>the ground. Would it be a good idea to do this or should I wall mount it? If
>ground mounting, what precautions should be taken for lightning? Is a
>seperate ground connection required in this case? What should be the minimum
>height of the antenna above ground? Any suggestions/ tips from your
>experience will be much appreciated. - 73's Raj
>

It may be difficult to wall-mount it because, if I remember correctly, there are several metal extensions at the base that stick out -- they look kind of like mini-radials. I know the R-7 works well when roof-mounted. Not sure how it would perform 4' above ground. It is a so-called 1/2-wave vertical; at least, electrically it is so.

As for grounding, I used to have an R-5, and there was no provision for grounding. I suspect the R-7 may be similarly configured. There's really no "ground-side" for this antenna, as there is for 1/4-wave verticals.

Good luck...

Bob
k5qwg

3119. Re: Chip's dark side

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-16 12:58:51 UTC
From: newsguy <harpoon32@yahoo.com>
Message-ID: <ajisuj0vn9@enews3.newsguy.com>
Source record: 136660

Well its nice to know even a group on such a dry subject as antenna's has its own local nut case. Hey 'O' if you decide to sue me too let me know, I will give you my address so you can serve me. :)

"O. Epstein" <o_epstein@att.net> wrote in message news:a713f3e.0208151640.2b00abff@posting.google.com...
> I asked Yuri why he was sentenced to 5 years of prison--a fact that he publicly
> stated but did not say why.
>
> I also stated that appears to be compelled to attack people associated with
> authority, this based purely on his recent attacks on me as an authority on
> antennas, and extant US politicians, for reasons that make no sense.
>
> That 'authority' issue is an inescapable impression.
>
> As a result of this, Yuri now says he is leaving this NG,(something he claims
> to have done in the best, but then returns in a matter of days.)
>
> He first did this in 1998 when he made the major transgression--one of many--
> of referring to me work as "fucktennas". I am appalled and seriously injured by
> this and other characterizations byYuri-- ESPECIALLY as he has never built,
> tested, modeled or had anything to do with my work or the independent
> assessment of it.
>
> The difference this time is one of litigation. Yuri has finally gone over the
> top. I will not tolerate ANY more of his libel and other claims of injury
> against me.
>
> If he is a citizen of NJ, as claimed, then he will be served with a cease and
> desist order in the new year, followed by more serious civil litigation should
> he not heed the requests stated.
>
> Yuri is correct in that his personal attacks and malicious libel WILL, repeat

> WILL stop in the new millenium, or the issue of litigation will become a
> dominant one in the New Year for him.
>
> If he wishes to try to beat me in a contest--a healthy competitive and
> measurable activity--I would welcome that. However false assertions about
my
> lack of ability; lack of credibility; lack of antenna peformance; and
pure,
> malicious libel just will NOT be acceptable in a public forum in the
coming
> year.
>
> It is up to him whether he can function on a public NG without focusing on
me
> and others in a malicious and personal way.
>
> Cordially,
>
> Nathan Cohen, Ph.D.
>
>
> --

3120. Re: metallic IMD generators

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-16 13:54:12 UTC
From: richardharrison@webtv.net
Message-ID: <5698-3D5D0404-48@storefull-2393.public.lawson.webtv.net>
Source record: 136661

Crazy George wrote:
"Non-linear metals like Nickel anywhere RF current is flowing will cause intermod."

I guess lead, zinc, and mercury are not magnetically challenged and don`t distort a waveform. We solder and have mercury wetted relays and switches.

When I was a kid, we would amalgamate copper pennies with mercury to make them look more valuable. On gold it does the opposite.

I recently read a suggested method for joining copper tubes by cold soldering them with mercury. The tubing is cleaned as for soldering. The pieces to be joined are coated with mercury. Then, part (A) is inserted into part (B). After a few minutes the parts are immobile and after a few hours the parts are inseparable.

Has anyone made a cactus J-pole using mercury as the solder to join the pipes?

Best regards, Richard Harrison, KB5WZI

3121. Re: metallic IMD generators

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-16 13:57:10 UTC
From: richardharrison@webtv.net
Message-ID: <9025-3D5D04B6-26@storefull-2395.public.lawson.webtv.net>
Source record: 136662

Crazy George wrote:
"Non-linear metals like Nickel anywhere RF current is flowing will cause intermod."

I guess lead, zinc, and mercury are not magnetically challenged and don`t distort a waveform. We solder and have mercury wetted relays and switches.

When I was a kid, we would amalgamate copper pennies with mercury to make them look more valuable. On gold it does the opposite.

I recently read a suggested method for joining copper tubes by cold soldering them with mercury. The tubing is cleaned as for soldering. The pieces to be joined are coated with mercury. Then, part (A) is inserted into part (B). After a few minutes the parts are immobile and after a few hours the parts are inseparable.

Has anyone made a cactus J-pole using mercury as the solder to join the pipes?

Best regards, Richard Harrison, KB5WZI

3122. Map assistance required please - which type of projection for direction finding?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-16 14:17:03 UTC
From: Z <post@imaZZZZris.demon.co.uk>
Message-ID: <EOVwLKCflQX9EwUc@imaris.demon.co.uk>
Source record: 136578

Which type of topographical (or is it topological?) projection of map is it than can be used to plot the actual direction to somewhere?

Or how would I calculate the direction given the map co-ordinates (degN/S, degE/W) of two places. Normal plane geometry Pythagoras wouldn't work, no?

Any internet web based tools for determining positional co-ordinates and direction would be useful as well.

It's for directional aerials.

--
Z
Remove Zeds in e-mail address to reply.

3123. Re: Superposition quiz

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-16 15:14:35 UTC
From: CAM <w5dxp@hotmail.com>
Message-ID: <3D5D16DB.9F854A3D@hotmail.com>
Source record: 136663

Richard Harrison wrote:
> When you examine the energy in one direction at a time, there is no
> opposite direction wave to consider and the power factor angle is zero,
> corresponding to a resistive impedance. That`s the basis of the Bird
> wattmeter. It works and only damn fools say it doesn`t.

A couple of quotes from Johnson: Section 6.3, page 150

"The power transmitted by a line can be expressed in a number of
equivalent ways. ...

P = E+^2/Z0 - E-^2/Z0

We can regard the first term in this expression as the power associated
with the forward-traveling wave, and the second term as the reflected
power."

Section 7.6, page 188

"A directional coupler, on the other hand, retains the advantages of
simplicity and small size, but, by responding only to the forward-
traveling wave, it gives an indication that is independent of its
position along the standing-wave pattern. The reflected power should,
of course, be subtracted from the incident power to obtain the correct
power absorbed by the load, but the error introduced by simply metering
the incident power does not increase very rapidly with the standing-
wave ratio."

And, finally, this goodie. Example 2: Lossless Line, page 137

"The over-all losses are small (al << 1), and so we can use the
principle of the conservation of power."

How's that for a reference?
--
cheers, CAM, W5DXP

----------== Posted via Newsfeed.Com - Uncensored Usenet News ==----------
http://www.newsfeed.com The #1 Newsgroup Service in the World!
-----= Over 100,000 Newsgroups - Unlimited Fast Downloads - 19 Servers =-----

3124. Re: Superposition quiz

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-16 15:38:19 UTC
From: gaschafer@attbi.com
Message-ID: <3d5d1c60.5446337@netnews.attbi.com>
Source record: 136664

On Thu, 15 Aug 2002 22:59:00 -0500 (CDT), richardharrison@webtv.net (Richard Harrison) wrote:

>Bill Klocko wrote:
>"If you`re trying to say that you can add 3 dbm to 3 dbm and get 6 dbm,
>that`s non-sensical."
>
>3 dbm is twice the power of the 1 milliwatt reference, or 2 milliwatts.
>It`s a power, plain and simple. When 2 milliwatts is added to 2
>milliwatts the only way I`ve succeeded in doing it, the sum is 4
>milliwatts which is +6 dbm.

Hi Richard,

I think that you are forgetting that "adding" two powers together is different from "increasing" a
power level by 3 db.
As you say, 1 milliwatt increased by 3 db is 2 milliwatts. But two 2 milliwatt sources added
together will not give you 4 milliwatts.

A good example is when combining two VHF transmitters into one antenna. Each transmitter
has an isolator followed by a cavity filter. The output of each cavity filter is connected to a
common "T" connector via a 1/4 wave cable. The third port on the "T" goes to the antenna. If a
watt meter is placed at the output of each transmitter and a third watt meter is placed after the T
we can see what happens. If each transmitter puts out around 120 watts and assume about 20
watts loss in the isloator and cavity, then about 100 watts from each transmitter will reach the
antenna watt meter.

Key each transmitter individually and you will see 100 watts from either on the antenna
watt meter. Key them both at the same time and you will see something greater than 200 watts.
What you see will depend on the phase relationship of the two waves at any given time. It may
show higher or lower the next time both are keyed up.

You must first add the voltages together before figuring power when two or more signals are
involved. You can not directly add two powers together. This is

important to do to make sure
that the peak voltage ratting of components are not exceeded.
Connectors cables etc.

100 watts into 50 ohms is 70.7 volts RMS That is approximately 100
volts peak which is also
200 watts peak with one transmitter. (E squared divided by R)

With 2 transmitters the voltage can be as much as 141.4 RMS or
approximately 200 volts peak
which is also 800 watts peak Depending on the phase relationship of
the two signals.

800 watts peak would be 400 watts average power if it were a steady
sine wave but when the
two signals are combined we do not get a pure sine wave out. It is a
complex wave.

Regards
Gary K4FMX

3125. Re: Quad antenna spreaders

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-16 15:50:51 UTC
From: Sasquatch Roadkill <sasquatch_roadkill@NO*SPAMhotmail.com>
Message-ID: <ajj70n$d58$1@nnrp.atgi.net>
Source record: 136665

How about PVC pipe used for lawn irrigation?
Just a thought, fairly inexpensive and widely available.

"Dan/W4NTI" <w4nti@mindspringnospam.com> wrote in message
news:ajep9t$v3$1@slb7.atl.mindspring.net...
> Other than fiberglass, does anyone have any recomendations of what to use
> for spreaders on a HF quad? Last one I built I used bamboo.
>
> Dan/W4NTI
>
>
>

3126. Re: Superposition quiz

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-16 15:53:52 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <g78qluso1po108btddnov4rnq259j0vjk7@4ax.com>
Source record: 136666

On Thu, 15 Aug 2002 22:59:00 -0500 (CDT), richardharrison@webtv.net
(Richard Harrison) wrote:

>Bill Klocko wrote:
>"If you`re trying to say that you can add 3 dbm to 3 dbm and get 6 dbm,
>that`s non-sensical."
>
>3 dbm is twice the power of the 1 milliwatt reference, or 2 milliwatts.
>It`s a power, plain and simple. When 2 milliwatts is added to 2
>milliwatts the only way I`ve succeeded in doing it, the sum is 4
>milliwatts which is +6 dbm.
>
>3 db is about a power ratio of (2).
>6 db is about a power ratio of (4).
>This works just fine and that`s all there is to it.

Hi Richard,

It is only an accident that your response is correct to the literal
question. Bill made a poor choice in his example to illustrate a very
real possibility of error.

I will quote from an authority you will immediately accept without
qualification on this matter:
"Radio Propagation Handbook," Peter N. Saveskie, Appenidix 5,
DB POWER ADDITION:
Example 1: Add 6dBw and 2dBw (answer NOT 8dBW)....
Example 2: Add 10dBm and 10dBm (answer NOT 20dBm)....

And more examples following in the tedious thumping of nails into that
casket of adding power.

73's
Richard Clark, KB7QHC

3127. Re: Quad antenna spreaders

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-16 16:15:58 UTC
From: Dan/W4NTI <w4nti@mindspringnospam.com>
Message-ID: <ajj8e7$t24$1@slb2.atl.mindspring.net>
Source record: 136667

Somewhere down the line I heard/read/dreamed that PVC had some sort of a problem in quad spreaders. But I can't remember what it was.

Dan/W4NTI

"Sasquatch Roadkill" <sasquatch_roadkill@NO*SPAMhotmail.com> wrote in message news:ajj70n$d58$1@nnrp.atgi.net...
> How about PVC pipe used for lawn irrigation?
> Just a thought, fairly inexpensive and widely available.
>
> "Dan/W4NTI" <w4nti@mindspringnospam.com> wrote in message
> news:ajep9t$v3$1@slb7.atl.mindspring.net...
> > Other than fiberglass, does anyone have any recomendations of what to use
> > for spreaders on a HF quad? Last one I built I used bamboo.
> >
> > Dan/W4NTI
> >
> >
> >
>
>

3128. Re: Feeding an Inv-L at the bottom?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-16 16:21:08 UTC
From: Dan/W4NTI <w4nti@mindspringnospam.com>
Message-ID: <ajj8o1$tf4$1@nntp9.atl.mindspring.net>
Source record: 136668

Just hang up 180 to 185 foot of wire. Raise the vertical part as high as ya
can. 50' seems a good spot. Tie the other end off ina tree somewhere down
the line.

Wrap 8 to 10 turns of coax in a 6 to 8" coil. Hook shield to ground rod and
a single 140 or so foot radial under the top wire if possible. And the
center of the coax coil to the radiating wire.

Adjuse length of "L" to resonance where you want it.

Stick a standard PI-Net tuner in line and work all bands with it.

Works for me.

Dan/W4NTI

<jbirving@ticon.net> wrote in message
news:3d5c902e.2791067@news.ticon.net...
> On Mon, 12 Aug 2002 21:41:49 -0400, "Fred Hambrecht"
> <w4jle@charter.net> wrote:
>
> >Whoops, forgot I was in a conference that parses every word like
Clinton...
> >
> >WARNING - This suggestion may not work in the following conditions:
> >
> >1. Your yard is paved in concrete, asphalt, or because of local soil or
> >environmental conditions the insertion of the coathanger pieces is
> >precluded.
> >
> >2. Any other conditions that I may not have thought of in presenting a
> >solution not tested for every variable encountered at every likely users
> >location.
> >
> >3. Upon reflection, I hereby withdraw my suggestion pending a 5 year
study
> >of feasibility and apologize to the group that I was so bold as to offer
any
> >solution.
> >
> >73 Fred W4JLE
> >
>
> Fred, you can't withdraw the suggestion or apologize without forming a
> committee of at least five people to provide you wiith a feasibilty
> study. If you think that the committee will form subcommittees, then

> it best to have at least a dozen people involved. Give them at least
> a year to report back; they may be eligible for a federal grant.
>
> 73 Jim KB9JFK

3129. Re: Superposition quiz

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-16 16:22:23 UTC
From: gaschafer@attbi.com
Message-ID: <3d5d26ad.8083876@netnews.attbi.com>
Source record: 136569

On Fri, 16 Aug 2002 08:14:35 -0700, CAM <w5dxp@hotmail.com> wrote:

>Richard Harrison wrote:
>> When you examine the energy in one direction at a time, there is no
>> opposite direction wave to consider and the power factor angle is zero,
>> corresponding to a resistive impedance. That`s the basis of the Bird
>> wattmeter. It works and only damn fools say it doesn`t.
>
>A couple of quotes from Johnson: Section 6.3, page 150
>
>"The power transmitted by a line can be expressed in a number of
>equivalent ways. ...
>
>P = E+^2/Z0 - E-^2/Z0
>
>We can regard the first term in this expression as the power associated
>with the forward-traveling wave, and the second term as the reflected
>power."
>
>Section 7.6, page 188
>
>"A directional coupler, on the other hand, retains the advantages of
>simplicity and small size, but, by responding only to the forward-
>traveling wave, it gives an indication that is independent of its
>position along the standing-wave pattern. The reflected power should,
>of course, be subtracted from the incident power to obtain the correct
>power absorbed by the load, but the error introduced by simply metering
>the incident power does not increase very rapidly with the standing-
>wave ratio."
>
>And, finally, this goodie. Example 2: Lossless Line, page 137
>
>"The over-all losses are small (al << 1), and so we can use the
>principle of the conservation of power."
>
>How's that for a reference?
>--
>cheers, CAM, W5DXP

The Bird watt meter works but not always the way we might think it
does.
The forward and reflected power that it shows may not really be there!

Try this: put a watt meter between your transmitter and antenna tuner.
Put a second watt meter

between your tuner and a large resistor load, say 1000 ohms. Put a small amount of power out
of the transmitter and adjust the tuner for zero reflected power on the first watt meter. Adjust
the power so the first watt meter reads about 15 to 20 watts. The second watt meter, after the
tuner, will read around 100 watts. The reverse power on this meter will be 80 to 85 watts.
Subtracting the two gives the 15 to 20 watts delivered to the load.

But the forward reading of 100 watts can fool you into thinking that you have 100 watts going
forward with 85 watts reflected when in fact there is only 15 to 20 watts in the circuit as shown
by the first watt meter that is in a flat line!

The reason is because of the way the Bird watt meter measures power. (It really does not
measure power at all as others have shown.) It is only measuring the difference in two voltages
developed in the meters slug. The meter has no discrimination between voltages only current.
When the voltage is much higher than the current in the meter circuit it will dominate the
reading.

These are extreme conditions but is a good way to see what errors can be introduced.

73
Gary K4FMX

3130. Re: Quad antenna spreaders

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-16 16:25:16 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <pl9qlucco7qibu29jvou39nmbpo2d6572p@4ax.com>
Source record: 136570

On Fri, 16 Aug 2002 11:15:58 -0500, "Dan/W4NTI"
<w4nti@mindspringnospam.com> wrote:

>Somewhere down the line I heard/read/dreamed that PVC had some sort of a
>problem in quad spreaders. But I can't remember what it was.
>
>Dan/W4NTI
>

Hi Dan,

I would imagine its noodle-like quality of strength would be a give
away. Simple test: hold the prospective element out horizontal
(holding it at one end). How much does it bend? I've had thick wall
aluminum tubing that folded like a kimono sash.

Now, only you knows how much bend is too much (or you will shortly
find out when you put it up - take notes).

73's
Richard Clark, KB7QHC

3131. Re: Superposition quiz

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-16 16:43:06 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <t3bqlu0h9mpcitrdilbc0ualgo7e33f43v@4ax.com>
Source record: 136571

On Fri, 16 Aug 2002 16:22:23 GMT, gaschafer@attbi.com (Gary Schafer)
wrote:

>Try this: put a watt meter between your transmitter and antenna tuner.
>Put a second watt meter
>between your tuner and a large resistor load, say 1000 ohms.

OK [presumed to be a Bird meter]

>Put a
>small amount of power out
>of the transmitter and adjust the tuner for zero reflected power on
>the first watt meter.

OK [presumed to have used a Bird meter to confirm incident and
reflected power]

>Adjust
>the power so the first watt meter reads about 15 to 20 watts.

OK [presumed to be the difference of the incident and reflected power]

>The
>second watt meter, after the
>tuner,

OK [presumed to have used a Bird meter]

>will read around 100 watts. The reverse power on this meter
>will be 80 to 85 watts.

OK [presumed to have used a Bird meter to confirm incident and
reflected power]

>Subtracting the two gives the 15 to 20 watts delivered to the load.

OK [presumed to be the difference of the incident and reflected
power]

>
>But the forward reading of 100 watts can fool you into thinking that
>you have 100 watts going
>forward with 85 watts reflected when in fact there is only 15 to 20
>watts in the circuit as shown
>by the first watt meter that is in a flat line!

Huh? I've made the 100W reading AND the 80-85W readings. Why would I
be fooled especially when I just finished confirming the 15-20W
delivered?

>
>The reason is because of the way the Bird watt meter measures power.
>(It really does not
>measure power at all as others have shown.) It is only measuring the
>difference in two voltages
>developed in the meters slug. The meter has no discrimination between
>voltages only current.
>When the voltage is much higher than the current in the meter circuit
>it will dominate the
>reading.
>
>These are extreme conditions but is a good way to see what errors can
>be introduced.
>
>73
>Gary K4FMX

Hi Gary,

Reason? Reason for what? I was not fooled and the power as indicated by BOTH meters is, as you put it and show it and demonstrate it, 15-20W.

You have shown nothing with a dependance upon discrimination in voltages. The statement that there is some value at which
> the voltage is much higher than the current
begs the question: how much is too much? Put a number to it and let's see.

73's
Richard Clark, KB7QHC

3132. Re: Superposition quiz

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-16 16:48:44 UTC
From: CAM <Cecil.A.Moore@ieee.org>
Message-ID: <3D5D2CEC.372086F7@ieee.org>
Source record: 136572

Gary Schafer wrote:
> 800 watts peak would be 400 watts average power if it were a steady
> sine wave but when the
> two signals are combined we do not get a pure sine wave out. It is a
> complex wave.

Does the assertion that "we do not get a pure sine wave out" mean
that the sources are non-linear?
--
cheers, CAM, W5DXP

----------== Posted via Newsfeed.Com - Uncensored Usenet News ==----------
http://www.newsfeed.com The #1 Newsgroup Service in the World!
-----= Over 100,000 Newsgroups - Unlimited Fast Downloads - 19 Servers =-----

3133. Re: Quad antenna spreaders

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-16 16:49:53 UTC
From: CAM <Cecil.A.Moore@ieee.org>
Message-ID: <3D5D2D31.EBD9FCF9@ieee.org>
Source record: 136573

Sasquatch Roadkill wrote:
> How about PVC pipe used for lawn irrigation?
> Just a thought, fairly inexpensive and widely available.

That's what the guy who sells open-wire line uses.
--
cheers, CAM, W5DXP

----------== Posted via Newsfeed.Com - Uncensored Usenet News ==----------
http://www.newsfeed.com The #1 Newsgroup Service in the World!
-----= Over 100,000 Newsgroups - Unlimited Fast Downloads - 19 Servers =-----

3134. Re: Superposition quiz

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-16 16:55:17 UTC
From: CAM <Cecil.A.Moore@ieee.org>
Message-ID: <3D5D2E75.BA07AB09@ieee.org>
Source record: 136574

Gary Schafer wrote:
>
> The Bird watt meter works but not always the way we might think it
> does.

It always works the way I think it does, Gary. :-) It works if the
necessary boundary conditions are met, i.e. it must be used in a
50 ohm environment (for a meter calibrated at 50 ohms) e.g. a 50
ohm transmission line where V+/I+ = 50 ohms and V-/I- = 50 ohms.
--
cheers, CAM, W5DXP

----------== Posted via Newsfeed.Com - Uncensored Usenet News ==----------
http://www.newsfeed.com The #1 Newsgroup Service in the World!
-----= Over 100,000 Newsgroups - Unlimited Fast Downloads - 19 Servers =-----

3135. Re: Superposition quiz

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-16 17:28:31 UTC
From: gaschafer@attbi.com
Message-ID: <3d5d3654.12091911@netnews.attbi.com>
Source record: 136575

On Fri, 16 Aug 2002 16:43:06 GMT, Richard Clark <kb7qhc@attbi.com>
wrote:

>On Fri, 16 Aug 2002 16:22:23 GMT, gaschafer@attbi.com (Gary Schafer)
>wrote:
>
>>Try this: put a watt meter between your transmitter and antenna tuner.
>>Put a second watt meter
>>between your tuner and a large resistor load, say 1000 ohms.
>
>OK [presumed to be a Bird meter]
>
>>Put a
>>small amount of power out
>>of the transmitter and adjust the tuner for zero reflected power on
>>the first watt meter.
>
>OK [presumed to have used a Bird meter to confirm incident and
>reflected power]
>
>>Adjust
>>the power so the first watt meter reads about 15 to 20 watts.
>
>OK [presumed to be the difference of the incident and reflected power]
>
>>The
>>second watt meter, after the
>>tuner,
>
>OK [presumed to have used a Bird meter]
>
>>will read around 100 watts. The reverse power on this meter
>>will be 80 to 85 watts.
>
>OK [presumed to have used a Bird meter to confirm incident and
>reflected power]
>
>>Subtracting the two gives the 15 to 20 watts delivered to the load.
>
>OK [presumed to be the difference of the incident and reflected
>power]
>
>>
>>But the forward reading of 100 watts can fool you into thinking that

>>you have 100 watts going
>>forward with 85 watts reflected when in fact there is only 15 to 20
>>watts in the circuit as shown
>>by the first watt meter that is in a flat line!
>
>Huh? I've made the 100W reading AND the 80-85W readings. Why would I
>be fooled especially when I just finished confirming the 15-20W
>delivered?
>>
>>The reason is because of the way the Bird watt meter measures power.
>>(It really does not
>>measure power at all as others have shown.) It is only measuring the
>>difference in two voltages
>>developed in the meters slug. The meter has no discrimination between
>>voltages only current.
>>When the voltage is much higher than the current in the meter circuit
>>it will dominate the
>>reading.
>>
>>These are extreme conditions but is a good way to see what errors can
>>be introduced.
>>
>>73
>>Gary K4FMX
>
>Hi Gary,
>
>Reason? Reason for what? I was not fooled and the power as indicated
>by BOTH meters is, as you put it and show it and demonstrate it,
>15-20W.
>
>You have shown nothing with a dependance upon discrimination in
>voltages. The statement that there is some value at which
>> the voltage is much higher than the current
>begs the question: how much is too much? Put a number to it and let's
>see.
>
>73's
>Richard Clark, KB7QHC

Hi Richard,

How much real reflected power is the second meter telling you is in
the circuit?

73
Gary K4FMX

3136. Re: HF Vertical Antenna Installation

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-16 17:32:27 UTC
From: Irv Finkleman <finkirv@shaw.ca>
Message-ID: <3D5D371D.6D3E1373@shaw.ca>
Source record: 136576

VK2IPD wrote:
>
> I am about to install a Cushcraft R7 Vertical (a no-radial antenna). I
> intend to mount it on a mast, a metal pipe, driven about 4 to 5 feet into
> the ground. Would it be a good idea to do this or should I wall mount it?

I have mine sitting on a 12 foot pipe beside the garage. It
works
like a hot damn! The coax runs down the pipe and along the
ground
into my shack basement window. I don't take any special
lightning
precautions because (1) a direct hit doesn't care what
precautions
you take, (2) I should be able to repair any damage in the
black
box as there is good info on the net on the box contents,
and
(3) I only paid $100 Canadian for it! A lovely antenna in
my
opinion. It has withstood numerous high winds and ice here
in
the cold Alberta winter!
--
Diagnosed Type II Diabetes March 5 2001
Beating it with diet and exercise!
297/215/210 (to be revised lower)
58"/43"(!)/44" (already lower too!)

Visit my FINALLY UPDATED website at
http://members.shaw.ca/finkirv/

Irv Finkleman,
Grampa/Ex-Navy/Old Fart/Ham Radio VE6BP
Calgary, Alberta, Canada

3137. Re: Superposition quiz

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-16 17:49:55 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <poeqlucojg4kharke2j8mrne05h3459nu2@4ax.com>
Source record: 136577

On Fri, 16 Aug 2002 17:28:31 GMT, gaschafer@attbi.com (Gary Schafer)
wrote:

>
>
>Hi Richard,
>
>How much real reflected power is the second meter telling you is in
>the circuit?
>
>73
>Gary K4FMX

Hi Gary,

This borders on belaboring the obvious to ask me to parrot back your
premise:
>>second watt meter, after the
>>tuner, will read around 100 watts. The reverse power on this meter
>>will be 80 to 85 watts.

Does this in some way progress us toward your answering my questions?
>
>You have shown nothing with a dependance upon discrimination in
>voltages. The statement that there is some value at which
>> the voltage is much higher than the current
>begs the question: how much is too much? Put a number to it and let's
>see.
>

73's
Richard Clark, KB7QHC

3138. Re: Map assistance required please - which type of projection for direction finding?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-16 18:38:54 UTC
From: Dan Richardson <k6mhe@mendolink.com>
Message-ID: <ijhqlusbedvn44p8ja5asvjons32sk52j3@4ax.com>
Source record: 136583

Do a search for "gcmwin23 download" and you find several sites where
you can download this fine program which does what you are looking
for.

Hope this helps.

73
Danny, K6MHE

On Fri, 16 Aug 2002 15:17:03 +0100, Z <post@imaZZZZris.demon.co.uk>
wrote:

>Which type of topographical (or is it topological?) projection of map is
>it than can be used to plot the actual direction to somewhere?
>
>Or how would I calculate the direction given the map co-ordinates
>(degN/S, degE/W) of two places. Normal plane geometry Pythagoras
>wouldn't work, no?
>
>Any internet web based tools for determining positional co-ordinates and
>direction would be useful as well.
>
>It's for directional aerials.

3139. Re: Chip's dark side

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-16 18:42:22 UTC
From: Mark Keith <nm5k@wt.net>
Message-ID: <3D5D478E.2966@wt.net>
Source record: 136579

O. Epstein wrote:
>

>
> Mr. Hafner: You are an annoying individual with a fixed and obsessive intent to
> descridit a professional scientist and an established hi tech firm.

So what? You are an annoying individual with a fixed and obsessive
intent to act like a total jackass. Which is worse? I think his behavior
is the less obnoxious of the two.

>
> Your fomentations are libelous and will lead to legal action with your
> continuation.

Does he fomentate at the mouth?
>
> If you have doubts as to the protection of intellectual property, you would do
> well to explore the situation with Mr. Lewallen--who will not have long to wait
> before his hubris and false sense becomes totally shattered and he is tied up
> in litigation.

Shit or get off the pot then. We have heard this for months. I suspect
he and many others will be waiting for a long, long, time. Do you and
your goofball lawyers "if you really have any" ever actually sue anyone?
Seems to me if they had a case, they would be jumping all over it.
I suspect after their evaluation of this ongoing dilemma, they informed
you that you have no case at all.

MK

--
http://web.wt.net/~nm5k

3140. Re: Superposition quiz

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-16 18:49:09 UTC
From: richardharrison@webtv.net
Message-ID: <2176-3D5D4925-58@storefull-2396.public.lawson.webtv.net>
Source record: 136587

Gary, K4FMX wrote:
"---adding two powers together is different from "increasing" a power by 3 db."

The two powers added together must be each the same as the original power considered.

Gary also wrote:
"Key each transmitter individually and you will see 100 watts from either transmitter on the wattmeter. Key them both and you will see something greater than 200 watts."

First, the wattmeter readings may not be accurate.

Second, the impedance seen by a transmitter is a big factor in power output. Two transmitters need to see a total output impedance of twice or half the impedance for a single transmitter depending upon their effective connection, series or parallel, so that each transmitter can deliver its maximum outpot.

Gary also wrote:
"You can not directly add two powers together."

Your electric power company is doing so as you read this. Multiple generators are directly paralleled supplying paralleled multiple loads. As the total resistance drops, they add generators to keep up with the demand. It works!

Gary also wrote:
"--when the two signals are combined we do not get a pure sine wave out. It is a complex wave."

Not if the two signals are pure sine waves of the same frequency. Such sine waves merge seamlessly into a single pure sine wave. A distorted wave has additional frequency components.

Best regards, Richard Harrison, KB5WZI

3141. Re: Chip's dark side

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-16 18:57:22 UTC
From: Mark Keith <nm5k@wt.net>
Message-ID: <3D5D4B12.290A@wt.net>
Source record: 136580

(_o_). Epstein wrote:
>
> --
>
> You need to speak to an attorney.

Thats a laugher...
>
> Ask him or her whether it is copyright infringement for you to type up a copy
> of Robert Frost's 'North of Boston' and publish and distribute it on your web
> site.
>
> Understand this clearly: YOU HAVE STOLEN this copyright material. You MUST
> remove it immediately. Litigation WILL occur and you will be continually
> presented to the public as in violation of copyright.

You have no say in this manner. It's not your material, you braying
jackass.
>
> Nothing.

Something.
>
> NOTHING.

Something.
>
> Nothing will stop this short of you removing the file.

Stop what? You braying like a jackass? Hell, if this is the case, I'll
pay him $$$$ to take it off.

>
> Nathan Cohen, Ph.Dipshit .This is great!:-)

Isn't life grand.
>
> You have now publicly admitted that you talked to the NYT REPORTER@!

I'll alert the rest of the media.
>
> I don't believe you realize what you have just done to yourself, but I will say
> that unless you stop your harassment RIGHT NOW, there is no question that I
> will proceed with a legal case against you for libel.

Proceed, proceed!!!
>

> This is not a threat: it is an offer to allow you to prevent litigation by
> termination of your destructive actions.

This means if you bend over for him at a steep angle, he won't sue you.
>
> Actions will decide.

Will they now?
>
> I will not have any further communication with you.

Thank gawd....
>
> Nathan Cohen, Ph.Dipshit.
>
> You continue to ascribe attitudes and motivations that have nothing to do with
> me.

Sounds like a personal problem.
>
> If you choose to continue your slander, defamation, and harassment there is no
> question that litigation will proceed.

Proceed, proceed!!! Hummmm, sounds like script for a Mel Brooks
movie...Blazing Jackasses...

>
> I intend to use my inheritance wisely and protecting my reputation is an
> important aspect of this.

Paying loads of money to lawyers when you have no case, is not wise
management of your inheritance.

>
> Every public post you write can, and wil,l be used as evidence when relevant.

Well ok then...
>
> I am proud of my degree and will use it in all future in which you are
> mentioned.

This statement does not compute...Did Phil slip over to the keyboard
while you weren't looking?
>
> This is a public notice.

So it this. So there...

>
> Nathan Cohen, Ph.D.

Is one sick puppy....

I see more thorazine in your future...

--
http://web.wt.net/~nm5k

3142. Re: Chip's dark side

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-16 18:59:17 UTC
From: JackR <JackRyan@aol.com>
Message-ID: <9Yb79.52088$Xb.7063238@twister.socal.rr.com>
Source record: 136582

ATTABOY! Keep 'em reeling! heh, heh.....

"Mark Keith" <nm5k@wt.net> wrote in message news:3D5D4B12.290A@wt.net...
> (_o_). Epstein wrote:
> >
> > --
> >
> > You need to speak to an attorney.
>
> Thats a laugher...
> >
> > Ask him or her whether it is copyright infringement for you to type up a
copy
> > of Robert Frost's 'North of Boston' and publish and distribute it on
your web
> > site.
> >
> > Understand this clearly: YOU HAVE STOLEN this copyright material. You
MUST
> > remove it immediately. Litigation WILL occur and you will be continually
> > presented to the public as in violation of copyright.
>
> You have no say in this manner. It's not your material, you braying
> jackass.
> >
> > Nothing.
>
> Something.
> >
> > NOTHING.
>
> Something.
> >
> > Nothing will stop this short of you removing the file.
>
> Stop what? You braying like a jackass? Hell, if this is the case, I'll
> pay him $$$$ to take it off.
>
> >
> > Nathan Cohen, Ph.Dipshit .This is great!:-)
>
> Isn't life grand.
> >
> > You have now publicly admitted that you talked to the NYT REPORTER@!

>
> I'll alert the rest of the media.
> >
> > I don't believe you realize what you have just done to yourself, but I
will say
> > that unless you stop your harassment RIGHT NOW, there is no question
that I
> > will proceed with a legal case against you for libel.
>
> Proceed, proceed!!!
> >
> > This is not a threat: it is an offer to allow you to prevent litigation
by
> > termination of your destructive actions.
>
> This means if you bend over for him at a steep angle, he won't sue you.
> >
> > Actions will decide.
>
> Will they now?
> >
> > I will not have any further communication with you.
>
> Thank gawd....
> >
> > Nathan Cohen, Ph.Dipshit.
> >
> > You continue to ascribe attitudes and motivations that have nothing to
do with
> > me.
>
> Sounds like a personal problem.
> >
> > If you choose to continue your slander, defamation, and harassment ther
e is no
> > question that litigation will proceed.
>
> Proceed, proceed!!! Hummmm, sounds like script for a Mel Brooks
> movie...Blazing Jackasses...
>
> >
> > I intend to use my inheritance wisely and protecting my reputation is an
> > important aspect of this.
>
> Paying loads of money to lawyers when you have no case, is not wise
> management of your inheritance.
>
> >
> > Every public post you write can, and wil,l be used as evidence when
relevant.

>
> Well ok then...
> >
> > I am proud of my degree and will use it in all future in which you are
> > mentioned.
>
> This statement does not compute...Did Phil slip over to the keyboard
> while you weren't looking?
> >
> > This is a public notice.
>
> So it this. So there...
>
> >
> > Nathan Cohen, Ph.D.
>
> Is one sick puppy....
>
> I see more thorazine in your future...
>
> --
> http://web.wt.net/~nm5k

3143. Re: Chip's dark side

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-16 18:59:57 UTC
From: Mark Keith <nm5k@wt.net>
Message-ID: <3D5D4BAD.731@wt.net>
Source record: 136581

O. Epstein wrote:

> When we get a new host set up, the ham page will be back up. In the meantime,
> articulate your concerns or be quiet. There are real people here and real
> science is being done.

Except when a certain jackass goes into the "Perry Mason" mode... MK

--
http://web.wt.net/~nm5k

3144. Re: Superposition quiz

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-16 19:07:00 UTC
From: richardharrison@webtv.net
Message-ID: <2176-3D5D4D54-62@storefull-2396.public.lawson.webtv.net>
Source record: 136586

Gary, K4FMX wrote:
"These are extreme conditions but it is a good way to see what errors can be introduced."

Bird will probably advise you to limit the reflected power to 0-10% of forward power for accuracy within their specified accuracy (without a look-up I believe it`s a respectable 5%). Beyond the limits, the "wattmeter" is an indicator of watts.

Best regards, Richard Harrison, KB5WZI

3145. Re: Superposition quiz

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-16 19:08:19 UTC
From: gaschafer@attbi.com
Message-ID: <3d5d4c8f.17783802@netnews.attbi.com>
Source record: 136584

On Fri, 16 Aug 2002 17:49:55 GMT, Richard Clark <kb7qhc@attbi.com>
wrote:

>On Fri, 16 Aug 2002 17:28:31 GMT, gaschafer@attbi.com (Gary Schafer)
>wrote:
>
>>
>>
>>Hi Richard,
>>
>>How much real reflected power is the second meter telling you is in
>>the circuit?
>>
>>73
>>Gary K4FMX
>
>
>Hi Gary,
>
>This borders on belaboring the obvious to ask me to parrot back your
>premise:
>>>second watt meter, after the
>>>tuner, will read around 100 watts. The reverse power on this meter
>>>will be 80 to 85 watts.
>

What is obvious? By only looking at the second meter can you tell me
directly from the meter reading how much power is being reflected
from the resistor to the tuner?

73
Gary K4FMX

3146. Re: HF Vertical Antenna Installation

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-16 19:10:33 UTC
From: 'Doc <w5lz@icok.net>
Message-ID: <3D5D4E23.DD1DFCCB@icok.net>
Source record: 136585

Raj,
If I recall correctly, the instruction that came
with my R-7 said that a mounting height of 4 feet was
recommended. electrically, the R-7 presents a short
to ground at frequencies below RF, the antenna is always
grounded (if ground mounted on a metalic support).
Despite what is claimed by Cushcraft, all antennas
benefit from a good ground system under them.
'Doc

3147. Re: Chip's dark side

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-16 19:16:23 UTC
From: 'Doc <w5lz@icok.net>
Message-ID: <3D5D4F81.EB8F6C7A@icok.net>
Source record: 136588

Actually, I think Mr. Epstein is a frustrated sports
or political commentator. Or, he may have just wanted to
remind everyone about ol'Frac's frustrated legal habits.
Who knowz...
'Doc

3148. Re: Chip's dark side

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-16 19:21:15 UTC
From: Mark Keith <nm5k@wt.net>
Message-ID: <3D5D50AB.73B7@wt.net>
Source record: 136589

(_zzz_. Epstein wrote:
>
> I asked Yuri why he was sentenced to 5 years of prison--a fact that he publicly
> stated but did not say why.

If this is true, it's none of your damn business, you braying jackass.
>
> I also stated that appears to be compelled to attack people associated with
> authority, this based purely on his recent attacks on me as an authority on
> antennas, and extant US politicians, for reasons that make no sense.

You art the one that make no sense.
>
> That 'authority' issue is an inescapable impression.
>
> As a result of this, Yuri now says he is leaving this NG,(something he claims
> to have done in the best, but then returns in a matter of days.)

I'll alert CNN.
>
> He first did this in 1998 when he made the major transgression--one of many--
> of referring to me work as "fucktennas". I am appalled and seriously injured by
> this and other characterizations byYuri-- ESPECIALLY as he has never built,
> tested, modeled or had anything to do with my work or the independent
> assessment of it.

Whats wrong with that? They are designed by a real $@%^head. Seems it
fits nicely to me.
>
> The difference this time is one of litigation. Yuri has finally gone over the
> top. I will not tolerate ANY more of his libel and other claims of injury
> against me.

Whaaaaaaaaaaa!!!!!!!!!!!!
>

>
> If he wishes to try to beat me in a contest--a healthy competitive and
> measurable activity--I would welcome that. However false assertions about my
> lack of ability; lack of credibility; lack of antenna peformance; and pure,
> malicious libel just will NOT be acceptable in a public forum in the coming
> year.

Arm wrestling match???
>
> It is up to him whether he can function on a public NG without focusing on me

> and others in a malicious and personal way.

What others? I know of only one realï¿½ jackass here on rraa...Have I missed others?

--
http://web.wt.net/~nm5k

3149. Re: Superposition quiz

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-16 19:42:02 UTC
From: richardharrison@webtv.net
Message-ID: <20819-3D5D558A-58@storefull-2392.public.lawson.webtv.net>
Source record: 136591

Richard Clark wrote:
"It is only an accident that your response is correct to the literal question."

OK. I found appendix 5 and my reaction was, What`s this? Think of what the electric company does and my analysis is correct.

Then it dawned! appendix 5 is a statistical summation of unrelated powers like busy-hour traffic loading. Haven`t confirmed that from other curves and tables. It`s been 20-30 yrs since I was usimg that sort of addition for equipment loading and level setting. Statistics aren`t fresh in my mind, but I`ve used curves just like those in Saveskie`s book and it`s essentially noise loading. It`s different from combining sinewaves of the same frequency.

Best regards, Richard Harrison, KB5WZI

3150. Re: Superposition quiz

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-16 20:11:37 UTC
From: klocko@toad.net
Message-ID: <224d9cd4.0208161211.450f87ca@posting.google.com>
Source record: 136590

richardharrison@webtv.net (Richard Harrison) wrote in message
news:<160-3D5C7884-229@storefull-2393.public.lawson.webtv.net>...
> Bill Klocko wrote:
> "If you`re trying to say that you can add 3 dbm to 3 dbm and get 6 dbm,
> that`s non-sensical."
>
> 3 dbm is twice the power of the 1 milliwatt reference, or 2 milliwatts.
> It`s a power, plain and simple. When 2 milliwatts is added to 2
> milliwatts the only way I`ve succeeded in doing it, the sum is 4
> milliwatts which is +6 dbm.
>
> 3 db is about a power ratio of (2).
> 6 db is about a power ratio of (4).
> This works just fine and that`s all there is to it.
>
> I`ve calculated the gains and losses for hundreds of microwave paths
> then gone out and measured a great number of them. You start with a
> transmitter power output of so many dbm, subtract waveguide and other
> losses, add the antenna gain, subtract the path loss in space, add
> another antenna gain, subtract another waveguide and misc. loss figures,
> and you have the received carrier power. The difference between the
> received carrier power and the receiver sensitivity is the fade margin.
> I`m not even going to check to see what I left out, but when I do the
> calculation carefully and test under the ordinary propagation
> conditions, I am usually on the nose plus or minus one db when the
> antennas are properly aligned. All you have to do is add and subtract
> db, know the microwave business and have system parts that meet their
> specifications. That is the normal, not the exception in my experience.

Sorry. I thought your comment about dB's was in response to a previous
message where the poster said you shouldn't add power values unless
you want to look foolish. It turns out you weren't responding to him.
73,
Bill N3WK

3151. 'Nother question about ladderline

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-16 20:42:14 UTC
From: Rezster <dbm@[remove]>
Message-ID: <Xns926C95B21BD7Bdbmremovefisinet@148.78.248.75>
Source record: 136592

I've got 60-70 feet of ladderline that is either going to be inside my shack or outside of it. Can you roll it up? Will that affect the swr? If I can't roll it up what to do with it?

3152. Re: Superposition: was Re: Email to ...

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-16 20:45:04 UTC
From: klocko@toad.net
Message-ID: <224d9cd4.0208161245.a439701@posting.google.com>
Source record: 136593

"Walter Maxwell" <w2du@iag.net> wrote in message
news:<RkR69.4247$I6.348503@newsread1.prod.itd.earthlink.net>...
> A few posts back Steve referenced Johnson's Pages 98-101, where Steve says
> the derivation in the steady state shows voltages and currents adding to
> determine the forward voltage and current.
>
> Unfortunately, Steve misconstrued the purpose of Johnson's derivation,
> because instead of deriving forward voltage and current it derives the
> standing wave of voltage and current. Big'a differencia'. I pointed this out
> to Steve many, many months ago. Didn't take, did it?
>
> Walt Maxwell, W2DU

Hi Walt,
The section on pages 98-101 has to do with the solution for E at some distance x from the generator given in terms of Eg, Zg, and Zr. Eqn 4.23 appears to be just a general expression for the voltage at an arbitrary distance from the generator. Johnson's comment (p. 100) with regard to Eqn 4.23 has to do with it being in the form (E+) + (E-), where E+ is the net incident (forward) wave consisting of the sum of all the individual waves traveling toward the load. E- is a similar term for the net wave representing the sum of the waves traveling (backward) toward the generator. The equation can be divided into 2 terms, one in e^(-gamma*X) which would be the forward voltage wave component, and the other one in e^(+gamma*X) which would be the backward voltage wave component.

73,
Bill N3WK

3153. Re: Is Lithium Grease good for assembling antenna mating sections?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-16 20:49:17 UTC
From: raiar@bbs.galilei.com.nospam
Message-ID: <3d5d618d.139562218@news.galilei.com>
Source record: 136594

StarGazer <pti@capnet.com> verbositized:

>how do you know it had harmonics all over the place.

Because I was running a packet station on that antenna and wiped out the whole net one night until I received a phone call telling me I was running packet on the wrong frequency. I was on the right frequency, but at the same time, I found out after some testing, I was on many frequencies.
At first I thought something was wrong with my transmitter and it went broadband on me, so I pulled it and used a different radio, again the same problem occurred.
Back then I didn't have a means to check much of anything. But switching back over to the brass antenna caused no problems.
Reconnecting back to the nickel plated antenna I could pick up my signal on many frequencies across the band and also on some bands I wasn't even on. It was so long ago that I don't remember the exact details anymore, but I did have quite a few people mad at me for months over that issue.

The particular pipe I had used was 3/8 inch hard copper, nickel plated. It was nickel plated for later chrome plating apparently, by the company I got it from, but they were supposed to have used soft copper rather than hard for the intended purpose. So to them, it was waste scrap taking up space and I got it for like 1/4th the price of new copper pipe.

I can't say with all honesty that the nickel coating is what truly caused the problem, because I don't really know for sure. But since it was identical in all aspects to another yagi I had built that worked perfectly, the antenna itself became suspect and was discarded.
I later used a piece of that same pipe as a stub on a J-Pole and we never could get the antenna antenna SWR down.
In both cases, received signal strength (at a listening station) was way down on the antennas with nickel plated components.
I do remember losing a lot of packets on that antenna before I got the phone call, but that is about all I remember about it. Other than it took solder real well, hi hi.....

TTUL
Gary

3154. Re: Superposition quiz

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-16 21:15:34 UTC
From: richardharrison@webtv.net
Message-ID: <4208-3D5D6B76-72@storefull-2397.public.lawson.webtv.net>
Source record: 136599

Bill, N3WK wrote:
"It turns out you weren`t responding to him."

Take a generating station in which two identical generators are equally sharing a 2-megawatt load. The incremental increase in power of one generator added to the other`s power is 3 db. The same is true of milliwatt generators.

Best regards, Richard Harrison, KB5WZI

3155. Re: 'Nother question about ladderline

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-16 21:17:41 UTC
From: jgboyles@aol.com
Message-ID: <20020816171741.05183.00001040@mb-bj.aol.com>
Source record: 136595

>I've got 60-70 feet of ladderline that is either going to be inside my
>shack or outside of it. Can you roll it up? Will that affect the swr? If
>I can't roll it up what to do with it?

No, you can't roll it up. If you have excess ladder line when you get from your antenna to your rig, you just cut the excess off.
Run ladder line from the antenna to the entrance to the shack. Transition to 50 ohm coax to your tuner. Put a 1:1 current balun on the coax. Try to keep the coax length as short as possible, say less than 10'.
In the coax vs. ladder line debate, that's one for coax, you can roll coax up.

73 Gary N4AST

3156. Re: 'Nother question about ladderline

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-16 21:21:24 UTC
From: Fulano de Tal <therealexray@netscape.net>
Message-ID: <3D5D6CD4.D2227944@netscape.net>
Source record: 136596

Rezster wrote:
>
> I've got 60-70 feet of ladderline that is either going to be inside my
> shack or outside of it. Can you roll it up? Will that affect the swr? If
> I can't roll it up what to do with it?

Is this still the AS-2 antenna? I suspect you can simply cut it to the
desired length. I don't see that it is a tuned feeder of any sort.
Can't roll it up.
-BM

3157. Re: Superposition quiz

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-16 21:28:00 UTC
From: gaschafer@attbi.com
Message-ID: <3d5d6e87.26481198@netnews.attbi.com>
Source record: 136597

On Fri, 16 Aug 2002 13:49:09 -0500 (CDT), richardharrison@webtv.net
(Richard Harrison) wrote:

>Gary, K4FMX wrote:
>"---adding two powers together is different from "increasing" a power by
>3 db."
>
>The two powers added together must be each the same as the original
>power considered.
>
>Gary also wrote:
>"Key each transmitter individually and you will see 100 watts from
>either transmitter on the wattmeter. Key them both and you will see
>something greater than 200 watts."
>
>First, the wattmeter readings may not be accurate.
>
>Second, the impedance seen by a transmitter is a big factor in power
>output. Two transmitters need to see a total output impedance of twice
>or half the impedance for a single transmitter depending upon their
>effective connection, series or parallel, so that each transmitter can
>deliver its maximum outpot.
>
>Gary also wrote:
>"You can not directly add two powers together."
>
>Your electric power company is doing so as you read this. Multiple
>generators are directly paralleled supplying paralleled multiple loads.
>As the total resistance drops, they add generators to keep up with the
>demand. It works!
>
>Gary also wrote:
>"--when the two signals are combined we do not get a pure sine wave out.
>It is a complex wave."
>
>Not if the two signals are pure sine waves of the same frequency. Such
>sine waves merge seamlessly into a single pure sine wave. A distorted
>wave has additional frequency components.
>
>Best regards, Richard Harrison, KB5WZI
>

Sorry, in the case of combining the two transmitters, for clarity I
should have said, that they are
on two separate frequencies. 1 mhz apart will do.

This is a real world situation as I described, it is done every day.
Usually with more than two
transmitters (Very common with cell sites and trunking systems) but
the same outcome applies.
The total power out on the antenna line watt meter reads more than the
sum of the power of all
transmitters.

Each transmitter sees an almost flat 50 ohm load as it goes directly
into an isolator before going
to the cavity and T junction. Measuring the power right out of the
transmitter before the isolator
will show the transmitters full power and almost zero reflected.

When I said "You can not directly add two powers together." I was
speaking of mathematically.
As in 1 plus 1 = 2

73
Gary K4FMX

3158. Re: Superposition quiz

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-16 21:30:08 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <4urqluc2jh7crl8kbv806qst3i90m8kr2q@4ax.com>
Source record: 136598

On Fri, 16 Aug 2002 14:42:02 -0500 (CDT), richardharrison@webtv.net
(Richard Harrison) wrote:

>Richard Clark wrote:
>"It is only an accident that your response is correct to the literal
>question."
>
>OK. I found appendix 5 and my reaction was, What`s this? Think of what
>the electric company does and my analysis is correct.
>
>Then it dawned! appendix 5 is a statistical summation of unrelated
>powers like busy-hour traffic loading. Haven`t confirmed that from other
>curves and tables. It`s been 20-30 yrs since I was usimg that sort of
>addition for equipment loading and level setting. Statistics aren`t
>fresh in my mind, but I`ve used curves just like those in Saveskie`s
>book and it`s essentially noise loading. It`s different from combining
>sinewaves of the same frequency.
>
>Best regards, Richard Harrison, KB5WZI

Hi Richard,

This is a little hard to take, you are dismissing the evidence of your
own man?

Read Appendix 5 again and tell me where it mutters even a centilla of
> statistical summation of unrelated
>powers like busy-hour traffic loading.
that is out of the blue! Mine is a first edition if that has any
bearing on the matter of Appendices being renumbered (look up "db
power, addition" in the table of contents).

There is nothing in his discussion that stands outside of the standard
usage of dBm, dBW or the like.

To simplify his examples and show the error of this addition consider:
0dBm + 0dBm = 3dBm
clearly
0 + 0
does not offer 3 as a choice in any system of mathematics (except by
virtue of being dBm and through the agencies of Saveskie's graph).

Saveskie merely offers a cautionary entry into the hazards of adding
dBm and he thus provides correction curves that are entirely derivable
from the math, no sophisticated statistics required.

Myself, I am convinced you are confused as to what is under
discussion.
0dBm + 0dB = 0dBm
0dBm + 0dBm = 3dBm
0dBm + 3dB = 3dBm
the only two that conform to simple math (Bill's concern and the
entire point of appendix 5) are those where powers are NOT added.

73's
Richard Clark, KB7QHC

3159. Re: Superposition quiz

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-16 21:47:53 UTC
From: CAM <Cecil.A.Moore@ieee.org>
Message-ID: <3D5D7309.7C556828@ieee.org>
Source record: 136600

Gary Schafer wrote:
> When I said "You can not directly add two powers together." I was
> speaking of mathematically. As in 1 plus 1 = 2

Hmmmmmm, you mean if a resistor is dissipating 1 watt and 1 watt is added to the dissipation, the result is not 2 watts? Hmmmmmmm
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
------== Over 80,000 Newsgroups - 16 Different Servers! =-----

3160. A few newbie questions please ?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-16 21:50:11 UTC
From: newsguy <harpoon32@yahoo.com>
Message-ID: <ajjs2u01sp6@enews4.newsguy.com>
Source record: 136601

#1 Can someone explain about 6 meter to me? On one hand I read its a great band for dx etc etc, then I read its almost impossible to even use it?
#2 I have looked at pattern plots till I am blue in the face and I understand what the degree points are for, but what about the db?
#3 What in the world is a 'gamma match' ?
#4 Doe I have to join a local club before I will be able to find an elmer? Is it kosher
to look (advertise) for one online?
#5 Has anyone ever gone nutso trying to assimilate all this info? :)

3161. Re: Chip's dark side

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-16 22:25:14 UTC
From: k1bqt@aol.com
Message-ID: <20020816182514.10507.00000844@mb-cr.aol.com>
Source record: 136602

> Or, he may have just wanted to remind everyone about ol'Frac's frustrated legal habits.<

If I wanted to draw attention to myself, I might conjure an "alter" to do it for me. Of course, nothing like this has ever happened on here, has it?

Rick K1BQT

3162. Re: Superposition quiz

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-16 22:26:28 UTC
From: tdonaly@aol.com
Message-ID: <20020816182628.21929.00000588@mb-cb.aol.com>
Source record: 136603

>
>Gary Schafer wrote:
>> When I said "You can not directly add two powers together." I was
>> speaking of mathematically. As in 1 plus 1 = 2
>
>Hmmmmmm, you mean if a resistor is dissipating 1 watt and 1 watt is
>added to the dissipation, the result is not 2 watts? Hmmmmmmm
>--
>cheers, CAM http://www.qsl.net/w5dxp
>
>
Hi Cecil,
Given 1 volt across 1 ohm dissipates 1
watt, how many volts across 1 ohm does it take to dissipate 2 watts?

Tom Donaly KA6RUH

3163. Re: Superposition quiz

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-16 22:37:06 UTC
From: CAM <Cecil.A.Moore@ieee.org>
Message-ID: <3D5D7E92.9F0BF3A6@ieee.org>
Source record: 136604

Tdonaly wrote:
>
> >
> >Gary Schafer wrote:
> >> When I said "You can not directly add two powers together." I was
> >> speaking of mathematically. As in 1 plus 1 = 2
> >
> >Hmmmmmm, you mean if a resistor is dissipating 1 watt and 1 watt is
> >added to the dissipation, the result is not 2 watts? Hmmmmmmm

> Given 1 volt across 1 ohm dissipates 1
> watt, how many volts across 1 ohm does it take to dissipate 2 watts?

If you raise the voltage from 1v to 1.414v, then the power dissipation doubles? 1^2 * 1 = 1? 1.414^2 * 1 = 2? 1w + 1w = 2w? Of all the things in the entire consideration, the energy is the single thing that must be conserved. You can add 100v to 100v and get anything between zero volts and 200 volts but you cannot fool Mother Nature as far as energy is concerned. If you add 100v to 100v and get zero volts, energy must be conserved. If you add 100v to 100v and get 200 volts, energy must be conserved. Mother Nature doesn't care about volts. Mother Nature cares about joules. She told me so Herself.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
------== Over 80,000 Newsgroups - 16 Different Servers! =-----

3164. Re: 'Nother question about ladderline

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-16 23:07:42 UTC
From: n7ws_at_yahoo.com
Message-ID: <3d5d85a1.31122929@news.triconet.org>
Source record: 136605

On Fri, 16 Aug 2002 20:42:14 GMT, Rezster <dbm@[remove]fisi.net>
wrote:

|I've got 60-70 feet of ladderline that is either going to be inside my
|shack or outside of it. Can you roll it up? Will that affect the swr? If
|I can't roll it up what to do with it?

Increase the antenna height by 60-70 feet.

3165. Re: Chip's dark side

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-16 23:09:40 UTC
From: n7ws_at_yahoo.com
Message-ID: <3d5d8601.31218493@news.triconet.org>
Source record: 136606

On 16 Aug 2002 22:25:14 GMT, k1bqt@aol.com (Rick Littlefield) wrote:

|> Or, he may have just wanted to remind everyone about ol'Frac's frustrated
|legal habits.<
|
|If I wanted to draw attention to myself, I might conjure an "alter" to do it
|for me. Of course, nothing like this has ever happened on here, has it?

You forgot the EGO part :)

3166. Re: Chip's dark side

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-16 23:45:15 UTC
From: fractenna@aol.com
Message-ID: <20020816194515.08156.00000835@mb-df.aol.com>
Source record: 136607

>> Or, he may have just wanted to remind everyone about ol'Frac's frustrated
>legal habits.<
>
>If I wanted to draw attention to myself, I might conjure an "alter" to do it
>for me. Of course, nothing like this has ever happened on here, has it?
>
>Rick K1BQT
>

Not me.

Its one of the opsyhopsy guys in NC.

I'm not biting gentlemen.

Have a nice weekend.

73,
Chip N1IR

3167. Re: Chip's dark side

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-17 00:18:44 UTC
From: k1bqt@aol.com
Message-ID: <20020816201844.15021.00000681@mb-cq.aol.com>
Source record: 136608

>I'm not biting gentlemen.<

Thank goodness for that. But what about the ladies?

Rick K1BQT

3168. Re: Chip's dark side

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-17 00:26:35 UTC
From: fractenna@aol.com
Message-ID: <20020816202635.10550.00000754@mb-cr.aol.com>
Source record: 136609

>>I'm not biting gentlemen.<
>
>Thank goodness for that. But what about the ladies?
>
>Rick K1BQT
>

Say Rick, to change the subject, I'm genuinely interested in your 12 foot vertical.

How are you loading it? Is ir broadband or multiband? Sounds interesting.

73,
Chip N1IR

3169. FA: modulation meter

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-17 00:29:04 UTC
From: Dave <jeronamo@REMOVEaol.com>
Message-ID: <kNg79.100$MV4.7859348@newssvr13.news.prodigy.com>
Source record: 136610

http://cgi.ebay.com/ws/eBayISAPI.dll?ViewItem&item=1374212505

3170. Re: A few newbie questions please ?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-17 00:34:41 UTC
From: Dan/W4NTI <w4nti@mindspringnospam.com>
Message-ID: <ajk5lbnnm1@slb2.atl.mindspring.net>
Source record: 136611

1. Six meters is a place in the Radio Spectrum that has the unique ability to act like HF (High Frequencies) and VHF (Very High Frequencies). In otherwords it can be wide open or totally dead.

For new comers the most exciting mode would be Sporadic E (E Skip). This is usually quite loud and easy to work with simple equipment, low power and small antenna's.

For the more exotic modes. Such as Meteor Showers, Trans-equatorial, F-layer skip more sophisticated equipment would be necessary most of the time.

It is refered to as 'the magic band'.

2. These antenna plots are for reference only. They can and do become quite different in 'real world' environs. Use them as a guide only. DB gain......use the figures given in DBd (Decible over a DIPOLE). That is the only realistic figure you can use. DBi (isotropic) is a fictious point in space, that does not actually exist. And can not actually be measured.

3. A 'gamma match' is a device used to transform the impedeance of the driven element of a yagi type antenna to properly match the coaxial line. It consists of a variable capacitor coupled in series with the center conductor of the coax line. This is then spaced from the driven element. The cold end of this capacitor (usually made from aluminum tubing) is connected at the proper point along the driven element. The space, the position of the tap, and the amount of capacitance all contribute to making the proper transformation.

4. There are several ELMER lists available on the internet. You might want to try looking it up under Google. Or probably someone here can direct you in the proper direction.

Joining a local club would probably be a good start. Since one on one help is usually more effective.

5. Of course....didn't you know that to be a ham required a certain amount of 'crazyness' ?? Just ask any hams wife.

Have fun

Dan/W4NTI

"newsguy" <harpoon32@yahoo.com> wrote in message news:ajjs2u01sp6@enews4.newsguy.com...
> #1 Can someone explain about 6 meter to me? On one hand I read its a great
> band for dx etc etc, then I read its almost impossible to even use it?

> #2 I have looked at pattern plots till I am blue in the face and I
> understand what the degree points are for, but what about the db?
> #3 What in the world is a 'gamma match' ?
> #4 Doe I have to join a local club before I will be able to find an
elmer?
> Is it kosher
> to look (advertise) for one online?
> #5 Has anyone ever gone nutso trying to assimilate all this info? :)
>
>

3171. Re: A few newbie questions please ?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-17 02:15:31 UTC
From: Fulano de Tal <therealexray@netscape.net>
Message-ID: <3D5DB1C3.A15B5ECF@netscape.net>
Source record: 136612

Dan/W4NTI wrote:
>
> 1. Six meters is a place in the Radio Spectrum that has the unique ability
> to act like HF (High Frequencies) and VHF (Very High Frequencies). In
> otherwords it can be wide open or totally dead.

98% of the time its the latter.
No offense to the 6 meter gang...I once worked Chile with a Heathkit
Sixer and a homemade dipole hanging in the window.
_BM

3172. Re: Chip's dark side

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-17 02:15:41 UTC
From: dan <danlx@execpc.com>
Message-ID: <3d5db1a8$0$3568$272ea4a1@news.execpc.com>
Source record: 136613

On 16 Aug 2002 23:45:15 GMT, fractenna@aol.com (Fractenna) wrote:

>>> Or, he may have just wanted to remind everyone about ol'Frac's frustrated
>>legal habits.<
>>
>>If I wanted to draw attention to myself, I might conjure an "alter" to do it
>>for me. Of course, nothing like this has ever happened on here, has it?
>>
>>Rick K1BQT
>>
>
>Not me.
>
>Its one of the opsyhopsy guys in NC.
>
>I'm not biting gentlemen.
Why, did they fit you with a muzzle?
>
>Have a nice weekend.
>
>73,
>Chip N1IR

Dan
N9JBF

I've rambled enough, back to the rocking chair. ZZZZZZZZZ
Remove left x for a e-mail reply.

3173. Re: 'Nother question about ladderline

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-17 02:27:43 UTC
From: Bob Miller <bamiller@texas.net>
Message-ID: <v7NdPW933LEL40FLpNKwt1zTNJjB@4ax.com>
Source record: 136614

Rezster <dbm@[remove]fisi.net> wrote:

>I've got 60-70 feet of ladderline that is either going to be inside my
>shack or outside of it. Can you roll it up? Will that affect the swr? If
>I can't roll it up what to do with it?

Cut the ladder line. So it is just long enough to reach from your antenna to
your shack equipment. You don't need all the excess.

Bob
k5qwg

3174. Re: Superposition quiz

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-17 02:38:23 UTC
From: tdonaly@aol.com
Message-ID: <20020816223823.24361.00000861@mb-cc.aol.com>
Source record: 136615

>
>Tdonaly wrote:
>>
>> >
>> >Gary Schafer wrote:
>> >> When I said "You can not directly add two powers together." I was
>> >> speaking of mathematically. As in 1 plus 1 = 2
>> >
>> >Hmmmmmm, you mean if a resistor is dissipating 1 watt and 1 watt is
>> >added to the dissipation, the result is not 2 watts? Hmmmmmmm
>
>> Given 1 volt across 1 ohm dissipates 1
>> watt, how many volts across 1 ohm does it take to dissipate 2 watts?
>
>If you raise the voltage from 1v to 1.414v, then the power dissipation
>doubles? 1^2 * 1 = 1? 1.414^2 * 1 = 2? 1w + 1w = 2w? Of all the things in
>the entire consideration, the energy is the single thing that must be
>conserved. You can add 100v to 100v and get anything between zero volts
>and 200 volts but you cannot fool Mother Nature as far as energy is
>concerned. If you add 100v to 100v and get zero volts, energy must be
>conserved. If you add 100v to 100v and get 200 volts, energy must be
>conserved. Mother Nature doesn't care about volts. Mother Nature cares
>about joules. She told me so Herself.
>--
>cheers, CAM http://www.qsl.net/w5dxp
>
>

She would.

Tom Donaly KA6RUH

3175. Ladderline wrapped around fiberglass?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-17 02:44:05 UTC
From: marvin rosen <raghead@worldnet.att.net>
Message-ID: <VLi79.16026$Ep6.1250846@bgtnsc05-news.ops.worldnet.att.net>
Source record: 136616

I'm constructing a dipole 100' long. The center of this dipole
will be held up by a 10' fiberglass 2" diameter pole. Can i wrap
the ladderline around the pole as long as there is seperation between
adjoining turns of ladderline? I then plan on connecting a 1:1
current balun at the base & then coax to a tuner in the shack.
Is there a minimum of ladderline i should use?

Outgoing mail is certified Virus Free.
Checked by AVG anti-virus system (http://www.grisoft.com).
Version: 6.0.381 / Virus Database: 214 - Release Date: 8/2/02

3176. Re: Cushcraft going out of business?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-17 02:48:54 UTC
From: A Ham? <ahamiam@spamham.org>
Message-ID: <qQi79.61413$me6.7649@sccrnsc01>
Source record: 136617

Thanks for the input. We all know that Cushcraft has been in the commercial antenna business so I should have stated previously that they appear to be getting out of the amateur market IN FAVOR of the commercial market.

"Rick Littlefield" <k1bqt@aol.com> wrote in message news:20020807180813.01345.00002147@mb-cr.aol.com...
> > Wonder if Lee, who used to work for HRO still works at Cushcraft?<
>
> Lee is still there.
>
> Rick K1BQT
>

3177. Re: Ladderline wrapped around fiberglass?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-17 03:07:30 UTC
From: Fulano de Tal <therealexray@netscape.net>
Message-ID: <3D5DBDF2.3ABCA3D6@netscape.net>
Source record: 136618

marvin rosen wrote:
>
> I'm constructing a dipole 100' long. The center of this dipole
> will be held up by a 10' fiberglass 2" diameter pole. Can i wrap
> the ladderline around the pole as long as there is seperation between
> adjoining turns of ladderline? I then plan on connecting a 1:1
> current balun at the base & then coax to a tuner in the shack.
> Is there a minimum of ladderline i should use?

The way I read this is that your ladder-line will only be about 10 feet
long. How long will the coax be?
-BM

3178. Re: Longwire antennas

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-17 03:10:06 UTC
From: jwalkermi@aol.com
Message-ID: <20020816231006.09125.00000902@mb-cs.aol.com>
Source record: 136519

My long wire antenna of about half that length and coupled through an automatic tuner works on all bands between 10 and 80.

Jack

3179. Re: Ladderline wrapped around fiberglass?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-17 03:10:44 UTC
From: CAM <Cecil.A.Moore@ieee.org>
Message-ID: <3D5DBEB4.87B7FCC2@ieee.org>
Source record: 136522

marvin rosen wrote:
> I'm constructing a dipole 100' long. The center of this dipole
> will be held up by a 10' fiberglass 2" diameter pole. Can i wrap
> the ladderline around the pole as long as there is seperation between
> adjoining turns of ladderline? I then plan on connecting a 1:1
> current balun at the base & then coax to a tuner in the shack.
> Is there a minimum of ladderline i should use?

That should be OK. Fiberglass makes a pretty good coil form. Keep
the turns at least 3 inches apart and the negative effect should be
relatively small.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

3180. Re: Chip's dark side

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-17 03:10:53 UTC
From: k3bu@aol.com
Message-ID: <20020816231053.25500.00001495@mb-fp.aol.com>
Source record: 136520

Hey o_Einpstein,

whats that, new (#6) personality? Nice to meet you!
Chipsky asked question about gain-fool antennas (sorry about my spelling no good) and as far as Yuri knows, only known shortening antennas that produce super gain are Fractennas (TM, R, patent pending, yadayada) CFA and EH. He kindly pointed that out, based on the claims he read in their scientwific propaganda, and we get this incoherent crap ?
Chipsky must have been constipated for so long that this pile of crapsky comes out of him now?

Bada BUm

HUH?

>
>I asked Yuri why he was sentenced to 5 years of prison--a fact that he
>publicly
>stated but did not say why.
>
>I also stated that appears to be compelled to attack people associated with
>authority, this based purely on his recent attacks on me as an authority on
>antennas, and extant US politicians, for reasons that make no sense.
>
>That 'authority' issue is an inescapable impression.
>
>As a result of this, Yuri now says he is leaving this NG,(something he
>claims
>to have done in the best, but then returns in a matter of days.)
>
>He first did this in 1998 when he made the major transgression--one of many--
>of referring to me work as "fucktennas". I am appalled and seriously injured
>by
>this and other characterizations byYuri-- ESPECIALLY as he has never built,
>tested, modeled or had anything to do with my work or the independent
>assessment of it.
>
>The difference this time is one of litigation. Yuri has finally gone over the
>top. I will not tolerate ANY more of his libel and other claims of injury
>against me.
>
>If he is a citizen of NJ, as claimed, then he will be served with a cease and
>desist order in the new year, followed by more serious civil litigation
>should
>he not heed the requests stated.

>
>Yuri is correct in that his personal attacks and malicious libel WILL, repeat
>WILL stop in the new millenium, or the issue of litigation will become a
>dominant one in the New Year for him.
>
>If he wishes to try to beat me in a contest--a healthy competitive and
>measurable activity--I would welcome that. However false assertions about my
>lack of ability; lack of credibility; lack of antenna peformance; and pure,
>malicious libel just will NOT be acceptable in a public forum in the coming
>year.
>
>It is up to him whether he can function on a public NG without focusing on me
>and others in a malicious and personal way.
>
>Cordially,
>
>Nathan Cohen, Ph.D.
>

3181. Re: 'Nother question about ladderline

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-17 03:12:57 UTC
From: Rezster <dbm@[remove]>
Message-ID: <Xns926CD7DEE628Cdbmremovefisinet@148.78.248.75>
Source record: 136521

jgboyles@aol.com (JGBOYLES) wrote in
news:20020816171741.05183.00001040@mb-bj.aol.com:

>>I've got 60-70 feet of ladderline that is either going to be inside my
>>shack or outside of it. Can you roll it up? Will that affect the
>>swr? If I can't roll it up what to do with it?
>
> Run ladder line from the antenna to the entrance to the shack.
> Transition to 50 ohm coax to your tuner. Put a 1:1 current balun on
> the coax.

I had understood I needed a 4:1 balun since my feedline is 450 ohm and the
coax is 50 ohm. ???

3182. Re: Ladderline wrapped around fiberglass?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-17 03:13:40 UTC
From: CAM <Cecil.A.Moore@ieee.org>
Message-ID: <3D5DBF64.8A9F7078@ieee.org>
Source record: 136523

```
CAM wrote:
>
> marvin rosen wrote:
> > I'm constructing a dipole 100' long. The center of this dipole
> > will be held up by a 10' fiberglass 2" diameter pole. Can i wrap
> > the ladderline around the pole as long as there is seperation between
> > adjoining turns of ladderline? I then plan on connecting a 1:1
> > current balun at the base & then coax to a tuner in the shack.
> > Is there a minimum of ladderline i should use?
>
> That should be OK. Fiberglass makes a pretty good coil form. Keep
> the turns at least 3 inches apart and the negative effect should be
> relatively small.

I hit the send button too soon. What are you trying to accomplish
with the ladder-line?
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
------== Over 80,000 Newsgroups - 16 Different Servers! =-----
```

3183. Re: 'Nother question about ladderline

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-17 03:21:39 UTC
From: CAM <Cecil.A.Moore@ieee.org>
Message-ID: <3D5DC143.A831F084@ieee.org>
Source record: 136524

Rezster wrote:
>
> jgboyles@aol.com (JGBOYLES) wrote in
> news:20020816171741.05183.00001040@mb-bj.aol.com:
>
> >>I've got 60-70 feet of ladderline that is either going to be inside my
> >>shack or outside of it. Can you roll it up? Will that affect the
> >>swr? If I can't roll it up what to do with it?
> >
> > Run ladder line from the antenna to the entrance to the shack.
> > Transition to 50 ohm coax to your tuner. Put a 1:1 current balun on
> > the coax.
>
> I had understood I needed a 4:1 balun since my feedline is 450 ohm and the
> coax is 50 ohm. ???

If the SWR on the ladder-line is not 1:1, you will never see 450 ohms.
For instance, if the SWR is 10:1 and you are feeding at a current maximum
point, the impedance looking into the ladder-line will be 45 ohms. Your
4:1 balun will try to take that impedance down to 11 ohms when it was
already near perfect at 45 ohms.

Check out the all-band-HF-antenna on my web page to see what can be done
by choosing a good length for the ladder-line.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

3184. more>>>

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-17 03:42:10 UTC
From: George Kinzer <horseflygk@worldnet.att.net>
Message-ID: <mCj79.16107$Ep6.1259869@bgtnsc05-news.ops.worldnet.att.net>
Source record: 136526

```
--
If first you don't suceed, do the same thing again...see what happens
```

3185. oops, more,....

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-17 03:42:32 UTC
From: George Kinzer <horseflygk@worldnet.att.net>
Message-ID: <ICj79.16110$Ep6.1259674@bgtnsc05-news.ops.worldnet.att.net>
Source record: 136525

to cbers everywhere
Ive just completed a very nice, easy to follow cd with plans to build 11 meter (CB) antennas, with MORE info on tune-ups, convertions, mic wiring, you name it...this thing is loaded with useful info on doing your own repairs and modifications. Explains how toos, and pdf file on home-kits and MORE...pictures are high quality, formulas, and do-nots that will get you up and sounding great...want to install your own talk-back, echo board, want to make your own swing-kit? well theres More, More, More (title of my cd) anyone interested, email me. Many hours and weekends compiling all this info in an easy to read format...Ive decided NOT to copyright this, as friends and 'Masters' have help write this/ you'll be amazed at how much you'll learn..
.'Golden Screwdriver' is a drop in the bucket.... email me at horseflygk@att.net I'm 10-7, later

--
If first you don't suceed, do the same thing again...see what happens

3186. Wireless cable?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-17 03:48:52 UTC
From: the_hailo@hotmail.com
Message-ID: <358e931c.0208161948.5c2d3c9d@posting.google.com>
Source record: 136527

I'm pretty new to antennas and wireless and all that good stuff, and I'm working on my first antenna right now (basic pringles can yagi antenna). Anyways I was thinking...I've got digital cable running downstairs, would it be possible somehow to broadcast that signal, receive it upstairs, and hook it up to a TV? I don't know too much about the signal inside the coaxil, ect. Anyone have any idea how/if this is possible?

3187. Re: Map assistance required please - which type of projection for direction finding?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-17 04:48:00 UTC
From: Fred Hambrecht <w4jle@charter.net>
Message-ID: <ulrlc4smesspe1@corp.supernews.com>
Source record: 136528

Lambert Conic projection.

"Z" <post@imaZZZZris.demon.co.uk> wrote in message
news:EOVwLKCflQX9EwUc@imaris.demon.co.uk...
> Which type of topographical (or is it topological?) projection of map is
> it than can be used to plot the actual direction to somewhere?
>
> Or how would I calculate the direction given the map co-ordinates
> (degN/S, degE/W) of two places. Normal plane geometry Pythagoras
> wouldn't work, no?
>
> Any internet web based tools for determining positional co-ordinates and
> direction would be useful as well.
>
> It's for directional aerials.
>
> --
> Z
> Remove Zeds in e-mail address to reply.

3188. Re: EVERY THING IS NOW KNOWN ON ANTENNAS.

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-17 04:59:58 UTC
From: aunwin@fgi.net
Message-ID: <c4becf19.0208162059.121510b5@posting.google.com>
Source record: 136529

Allow me to share some of my E mail. Yes I know you all probably got e
mail on Unwin antenna and it's previous thread.
#1 Surely all is known when you couple two simple antennas? The
experts have
given a 'thumbs down'.Accept it.
Well sir, on its face it seams clear and easy but it is more
complicated than it
appears. The experts come from a variety of backgrounds and it cannot
be expected that each on his own could give an intelligent response.
Where-as I
because of past medical problems had to re-educate myself. And where I
chose a task that was pertinent to my needs i.e. a deep but narrow
education to solve
multi frequency problems.I have no doubt in my mind that if two or
more entered into a debate on the apparently rediculous claims I made,
a firm resolution will be quickly found in my favour. Remember the
loop design is older than I am and is surrounded by myths. It was
displaced by the arrival of the Yagi and was then decimated by
A.J.Henk G4XVF. Not many really understand the nuances of the loop
design (no offence intended to members of the group)
#2 The drawing is so simple. What makes you think that you are on to
something
that has escaped others.
Well you can have all the experts and those with theories lined up to
talk about the posabilities of some thing new. comming from the other
side of the pond I am still tied to the old ways and until somebody
gets a piece of wire and proves it to himself, all the ideas fall to
the ground. I have made such an antenna and a ham friend made one for
himself without me being present and duplicated my results. I call
that compelling evidence.
#3 This one from overseas, call sign unknown and was more insightfull
than most.
It stated that at no time except for one person have shown
you(me)disrespect.
Clarke may be different but again no evidence of disrespect (hmmmmm).
'Doc' on
the other hand does not participate in any discussion that requires
interaction of depth. You do not have to go far into the archives to
determine what manner of person he is because he has trashed others.On
your side you started the thread expecting a problem since it is said
you have raised this subject before.
It would apear that all studied your claims and all deny the
plausability of your claims.
In defence I say that not one has come forward to state exactly what

happens when co-joining basic radiators Fact is that there is so many interlocking factors that my detractors have no idea of what could or could not happen and i mean no disrespect.As for 'Doc' I respected his presence because of credentials implied. Yes it would have been different if he signed off with hospital orderly,bed pan collector e.t.c..As far as him having a history I noted that others did not align themselves with him. I now note that that he states that is not a real doctor (he is a fraud) so I see no need to waste my time in the archives.
#4 The experts know what happens in the simple case you offered. Accept the verdict and go away. Sir I cannot because I believe in myself and it follows laws ennunciated by the likes of Maxwell.
Art Unwin KB9MZ.....XG.

3189. Re: EVERY THING IS NOW KNOWN ON ANTENNAS.

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-17 05:07:18 UTC
From: aunwin@fgi.net
Message-ID: <c4becf19.0208162107.5bae50a7@posting.google.com>
Source record: 136530

http://aith.sdsc.edu/MP/Art_Unwin/

is the first shot of what I promised.
It is work in progress and over time will be cleaned up

Art Unwin KB9MZ......XG

3190. Re: EVERY THING IS NOW KNOWN ON ANTENNAS.

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-17 05:25:35 UTC
From: aunwin@fgi.net
Message-ID: <c4becf19.0208162125.eb5d95@posting.google.com>
Source record: 136531

"Reg Edwards" <g4fgq.regp@btinternet.com> wrote in message
news:<aji97u$7ka$3@helle.btinternet.com>...
> > Heck I can't even get it past this group
>
> ==========
>
> Nothing, absolutely nothing, gets past the shoal of piranas who frequent
> this newsgroup.

Reg,
How come I have this feeling that you, who thrives on the basics
especially in regard to loop antennas, is sitting there with a smile
on your face and a computor program in hand just waiting for when the
time is ripe and when you will disclose your program to all?
I sure hope that is the case. As for me I am going fishing before I
replace this computor thing.
Have fun.
Art Unwin KB9MZ.....XG

3191. Re: Superposition quiz

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-17 06:59:12 UTC
From: richardharrison@webtv.net
Message-ID: <4208-3D5DF440-143@storefull-2397.public.lawson.webtv.net>
Source record: 136532

Richard Clark wrote:
"To simplify his examples and show the error of the addition consider:
0dBm + 0dBm = 3 dBm"

Yes, that`s right.

0 dbm is a power of 1 milliwatt.
Add another 0 dbm in-phase signal of the same frequency to the first and the total power is 2 milliwatts.
Doubling the power for practical purposes is an increase of 3 db over the 0 dbm level. The combined power is +3 dbm.

I`ve already posted the two ways to make this happen. One way is to cut the load impedance in half while keeping the voltage the same. That is what the power company is doing when the current demand doubles. When the voltage is fixed, doubling the current doubles the power.

The second way is to double the voltage and keep the current the same (double the load resistance for example).

0 dbm is not necessarily 0.775 volts in 600 ohms. 0 dbm is specified as a reference at many different impedances. Correction tables are published for use of 600-ohm db meters at other impedances. The standard is the power, not the voltage.

Best regards, Richard Harroison, KB5WZI

3192. Re: EVERY THING IS NOW KNOWN ON ANTENNAS.

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-17 07:28:01 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <8surlu0odpe4mi1ih1utm30vmsdifnllre@4ax.com>
Source record: 136533

On 16 Aug 2002 22:25:35 -0700, aunwin@fgi.net (Art Unwin KB9MZ) wrote:

> sitting there with a smile
>on your face and a computor program in hand just waiting

Hi Art,

How poetic. Sounds like he's the Cheshire cat of the web.

73's
Richard Clark, KB7QHC

3193. Re: Superposition quiz

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-17 07:32:37 UTC
From: richardharrison@webtv.net
Message-ID: <4208-3D5DFC15-145@storefull-2397.public.lawson.webtv.net>
Source record: 136534

Richard Clark wrote:
"Myself, I am convinced you are confused as to what is under discussion."

The Lenkurt Demodulator is an award winner for its clarity. I`ll quote from the September 1963 edition:
"Per channel power (in an analog carrier system) is normally stated in dbm. Because dbm is a logarithmic value, two powers expressed in dbm cannot be added to obtain to obtain the total power. Instead, each channel power must be converted to watts, added, and the total then reconverted to dbm.

Best regards, Richard Harrison, KB5WZI

3194. Re: Ladderline wrapped around fiberglass?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-17 08:15:27 UTC
From: 'Doc <w5lz@icok.net>
Message-ID: <3D5E0616.12641CC7@icok.net>
Source record: 136535

Marvin,
Sounds like a 'G5RV' that needs to be higher, and
no, wrapping the ladder line around a pole is not the
greatest idea. I think I would read up a bit on the
'G5RV' before going any further with your antenna.
'Doc

3195. Re: 'Nother question about ladderline

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-17 11:06:50 UTC
From: jgboyles@aol.com
Message-ID: <20020817070650.27216.00001072@mb-bh.aol.com>
Source record: 136536

>I had understood I needed a 4:1 balun since my feedline is 450 ohm and the
>coax is 50 ohm. ???

The Impedance that the coax "sees" at the end of the 450 ohm line will almost never be 450 ohms. So a 1:4 impedance transformation isn't necessary. But you probably do need a balun, so a 1:1 current balun is normally used.
73 Gary N4AST

3196. Re: Wireless cable?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-17 11:53:55 UTC
From: CAM <Cecil.A.Moore@ieee.org>
Message-ID: <3D5E3953.A3CB4317@ieee.org>
Source record: 136538

The Hailo wrote:
>
> I'm pretty new to antennas and wireless and all that good stuff, and
> I'm working on my first antenna right now (basic pringles can yagi
> antenna). Anyways I was thinking...I've got digital cable running
> downstairs, would it be possible somehow to broadcast that signal,
> receive it upstairs, and hook it up to a TV? I don't know too much
> about the signal inside the coaxil, ect. Anyone have any idea how/if
> this is possible?

Are there any frequencies legally available to hams or citizens that
can carry the required bandwidth? And the cost of such a system would
be prohibitive for most people.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

3197. Re: 'Nother question about ladderline

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-17 11:55:40 UTC
From: cprstn54zz@att.net
Message-ID: <3d5e387b.119540312@news-server.optonline.net>
Source record: 136537

On 16 Aug 2002 21:17:41 GMT, jgboyles@aol.com (JGBOYLES) wrote:
>No, you can't roll it up.

(1) If you need a little slack, Can you put some waves in it?

(2) If you can't roll it up, Can you put a few loops in it if you keep an inch or two between the turns (i.e. make a loose coil)? Seems to me I have seen this at more than one Field Day.

(3) What is an OK way to secure it to wood framing? A staple or tack in the middle of the plastic?

Ken KC2JDY

Ken
(to reply via email
remove "zz" from address)

3198. Re: Superposition quiz

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-17 11:58:14 UTC
From: CAM <Cecil.A.Moore@ieee.org>
Message-ID: <3D5E3A56.5EAFEFC5@ieee.org>
Source record: 136539

Richard Harrison wrote:
> Instead, each
> channel power must be converted to watts, added, and the total then
> reconverted to dbm.

Is adding power the same thing as superposition? Some say it is. :-)
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

3199. Voltage addition question

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-17 12:19:55 UTC
From: CAM <Cecil.A.Moore@ieee.org>
Message-ID: <3D5E3F6B.BF90A668@ieee.org>
Source record: 136540

I hope Steve will come back and answer this question but anyone
who understands Steve's approach is welcome to answer. I'm
having difficulty making the voltages consistently add up. For
the following two examples, we are using a signal generator (SG)
equipped with a circulator circuit that dissipates all the reflected
power incident upon the signal generator. Feedlines are lossless.

Here's the earlier example:

100w SG-----50 ohm-----+-----1/2WL 150 ohm-------50 ohm load
100w forward 133.33w forward 100w dissipated
0w reflected 33.33w reflected
(8.33w re-reflected per Steve)

Steve says 75w of the 100w being generated makes it through the
50/150 junction and equals 106.066 volts. He says the 8.33w of
re-reflected power equals 35.355 volts. He adds those two
voltages to obtain the total forward voltage of 141.4 volts.
These voltages do seem to add up.

New example:

100w SG-----50 ohm-----+-----1/4WL 150 ohm-------50 ohm load
100w forward 100w forward 75w dissipated
25w reflected 25w reflected
(6.25w re-reflected per Steve)

The same 75w of the 100w being generated makes it through the
50/150 junction and equals 106.066 volts. The new re-reflected
power of 6.25w equals 30.62v. We know the forward voltage is
122.47v. These voltages don't seem to add up. Anyone know why?
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

3200. Re: 'Nother question about ladderline

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-17 12:27:14 UTC
From: CAM <Cecil.A.Moore@ieee.org>
Message-ID: <3D5E4122.4AA36227@ieee.org>
Source record: 136541

Ken wrote:
>
> On 16 Aug 2002 21:17:41 GMT, jgboyles@aol.com (JGBOYLES) wrote:
> >No, you can't roll it up.
>
> (1) If you need a little slack, Can you put some waves in it?

As long as you don't allow the waves to get within about 6 inches
of each other. I hang my ladder-line, accordian-style, from the
eave of my house.

> (2) If you can't roll it up, Can you put a few loops in it if you keep
> an inch or two between the turns (i.e. make a loose coil)? Seems to
> me I have seen this at more than one Field Day.

As long as each turn is kept about 6 inches away from any other turn.
Why do you need to roll it up?

> (3) What is an OK way to secure it to wood framing? A staple or tack
> in the middle of the plastic?

How about: drill and thread the hole in the wood and use nylon screws?
Small tacks shouldn't have much effect.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

3201. Re: Chip's dark side

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-17 12:40:10 UTC
From: k1bqt@aol.com
Message-ID: <20020817084010.19482.00001017@mb-mf.aol.com>
Source record: 136542

>Say Rick, to change the subject, I'm genuinely interested in your 12 foot vertical.<

Take South Willow past the Mall of NH, end of the parking lot on your right.

Rick K1BQT

3202. Re: Ladderline wrapped around fiberglass?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-17 13:52:28 UTC
From: sjbeyers@trianglenet.net
Message-ID: <72befaab.0208170552.54ec6ac3@posting.google.com>
Source record: 136543

"marvin rosen" <raghead@worldnet.att.net> wrote in message
news:<VLi79.16026$Ep6.1250846@bgtnsc05-news.ops.worldnet.att.net>...
> I'm constructing a dipole 100' long. The center of this dipole
> will be held up by a 10' fiberglass 2" diameter pole. Can i wrap
> the ladderline around the pole as long as there is seperation between
> adjoining turns of ladderline? I then plan on connecting a 1:1
> current balun at the base & then coax to a tuner in the shack.
> Is there a minimum of ladderline i should use?

Wrap about ten turns around the pole (spacing about the same as the ladder line spacing - an inch or so) and it should act as a current balun for you. You may not need a separate balun to connect to the coax. Try more turns if you get excessive common mode current.

Steve W9HJW

3203. Re: Map assistance required please - which type of projection for direction finding?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-17 14:02:32 UTC
From: sjbeyers@trianglenet.net
Message-ID: <72befaab.0208170602.589552dc@posting.google.com>
Source record: 136544

Z <post@imaZZZZris.demon.co.uk> wrote in message
news:<EOVwLKCflQX9EwUc@imaris.demon.co.uk>...
> Which type of topographical (or is it topological?) projection of map is
> it than can be used to plot the actual direction to somewhere?
>
Azimuthal equidistant projection. Must be centered on your location.

Steve W9HJW

3204. Re: DESPERATELY NEED HELP FROM HY-TOWER USERS!!!!!!!

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-17 14:09:47 UTC
From: w9gb <gregory.beat@attbi.com>
Message-ID: <HOs79.63014$ZI2.13411@sccrnsc02>
Source record: 136545

Ed -

I double checked with a couple of other sources. Much of your supporting documentation is Rohn based (mfg. of tower) since it is their standard tower product that HyGain used as the core for this vertical.

http://www.rohnnet.com/

http://www.rohnnet.com/rohnnet2001/html/towersindex.html

Greg
w9gb

"Ed Juge/NM" <ed@juge.org> wrote in message
news:3d59a5c4.0@oracle.zianet.com...
> Hey, guys, I appreciate your good intentions. However, only three out of
a
> dozen or more responses were what I asked for in the message below. The
> majority of others were telling me why this won't do any good or to
contact
> Hy-Gain, etc. We've already tried Hy-Gain and MFJ.
>
> Our P&Z is in a small mountain village, not a big, sophisticated city. We
> have already had the "what's relevant?" conversation with the planning
> director and the village attorney. TESTAMONIALS ABOUT HY-TOWERS THAT HAVE
> SURVIVED STRONG WINDS IS QUITE ADEQUATE FOR THEM AND WILL CARRY A LOT OF
> WEIGHT.
>
> So, with all due respect... please save your opinions as to why this
> information is useless.
>
> Thanks... Ed, W5EJ
>
>
> > "Ed Juge/NM" <ed@juge.org> wrote in message
> > news:3d513665.0@oracle.zianet.com...
> > > I am in negotiations with my local planning and zoning commission for
> > > authority to install a pair of Hy-Gain Hy-Towers. There are a dozen
> > > residents of the area opposing them. Their main point now, other than
> > > aesthetics, is that Hy-Gain's specs say 75mph wind survival and we
will
> be
> > > in an area that gets 60-70 mph winds every few years. One of my
> Hy-Towers
> > > has survived 110 mph winds, twice, but I can't prove it.
> > >

> > > If you own a Hy-Tower, and it has been through very high winds... in
> > excess
> > > of 75 mph, PLEASE send me an email with details. It will need to
> include
> > > your name, address and phone number in case they want to verify that I
> > > didn't dummy up the email.
> > >
> > > Thanks... Ed, W5EJ
> > > Ruidoso, NM
> > > Phone: 505-258-1721
> > >
> > >
> >
> >
>
>

3205. Re: Wireless cable?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-17 14:18:30 UTC
From: Bill Crocker <billcrocker@ameritech.net>
Message-ID: <20020817101832055-0400@news.det.sbcglobal.net>
Source record: 136546

How about 2.4GHz?

Bill Crocker

In <3D5E3953.A3CB4317@ieee.org> CAM wrote:
> The Hailo wrote:
>>
>> I'm pretty new to antennas and wireless and all that good stuff, and
>> I'm working on my first antenna right now (basic pringles can yagi
>> antenna). Anyways I was thinking...I've got digital cable running
>> downstairs, would it be possible somehow to broadcast that signal,
>> receive it upstairs, and hook it up to a TV? I don't know too much
>> about the signal inside the coaxil, ect. Anyone have any idea how/if
>> this is possible?
>
> Are there any frequencies legally available to hams or citizens that
> can carry the required bandwidth? And the cost of such a system would
> be prohibitive for most people.

3206. Re: Chip's dark side

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-17 14:25:44 UTC
From: fractenna@aol.com
Message-ID: <20020817102544.10600.00000948@mb-cr.aol.com>
Source record: 136547

>
>>Say Rick, to change the subject, I'm genuinely interested in your 12 foot
>vertical.<
>
>Take South Willow past the Mall of NH, end of the parking lot on your right.
>
>
>
>Rick K1BQT
>

That's HRO, isn't it?

73,
Chip

3207. Re: DESPERATELY NEED HELP FROM HY-TOWER USERS!!!!!!!

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-17 14:35:38 UTC
From: fractenna@aol.com
Message-ID: <20020817103538.10600.00000951@mb-cr.aol.com>
Source record: 136548

>2>
>
>Ed -
>
>I double checked with a couple of other sources. Much of your supporting
>documentation is Rohn based (mfg. of tower) since it is their standard tower
>product that HyGain used as the core for this vertical.
>
>http://www.rohnnet.com/
>
>http://www.rohnnet.com/rohnnet2001/html/towersindex.html
>
>
>Greg
>w9gb
>
>"Ed Juge/NM" <ed@juge.org> wrote in message
>news:3d59a5c4.0@oracle.zianet.com...
>> Hey, guys, I appreciate your good intentions. However, only three out of
>a
>> dozen or more responses were what I asked for in the message below. The
>> majority of others were telling me why this won't do any good or to
>contact
>> Hy-Gain, etc. We've already tried Hy-Gain and MFJ.
>>
>> Our P&Z is in a small mountain village, not a big, sophisticated city. We
>> have already had the "what's relevant?" conversation with the planning
>> director and the village attorney. TESTAMONIALS ABOUT HY-TOWERS THAT HAVE
>> SURVIVED STRONG WINDS IS QUITE ADEQUATE FOR THEM AND WILL CARRY A LOT OF
>> WEIGHT.
>>
>> So, with all due respect... please save your opinions as to why this
>> information is useless.
>>
>> Thanks... Ed, W5EJ
>>
>>
>> > "Ed Juge/NM" <ed@juge.org> wrote in message
>> > news:3d513665.0@oracle.zianet.com...
>> > > I am in negotiations with my local planning and zoning commission for
>> > > authority to install a pair of Hy-Gain Hy-Towers. There are a dozen
>> > > residents of the area opposing them. Their main point now, other than
>> > > aesthetics, is that Hy-Gain's specs say 75mph wind survival and we
>will

>> be
>> > > in an area that gets 60-70 mph winds every few years. One of my
>> Hy-Towers
>> > > has survived 110 mph winds, twice, but I can't prove it.
>> > >
>> > > If you own a Hy-Tower, and it has been through very high winds... in
>> > excess
>> > > of 75 mph, PLEASE send me an email with details. It will need to
>> include
>> > > your name, address and phone number in case they want to verify that I
>> > > didn't dummy up the email.
>> > >
>> > > Thanks... Ed, W5EJ
>> > > Ruidoso, NM
>> > > Phone: 505-258-1721

Isn't the issue the wind load of the verticals? The tower seems straightforward.

The irony of all this is that its even an issue this OM has to address. After all, how many home TV reception towers are out there in that neck of the woods? Do they have to undergo the same scrutiny?(Not a rhetorical question: do hams have to meet a different, harder, standard?)

73,
Chip N1IR

3208. Tutorial #2

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-17 14:52:40 UTC
From: aunwin@fgi.net
Message-ID: <c4becf19.0208170652.79737773@posting.google.com>
Source record: 136549

For those who have followed the Unwin antenna threads(combination loop/dipole antenna) starting with" stagnating antennas, and have not been deterred by technical jargon and also have avoided looking for something complex ,it can now be seen from the drawingd provided, that there is a resemblance to the good old Loop antenna original operating basics.
The ONLY difference is that the small loop that is used to energise the main radiating loop is now replaced by a simple dipole which providess the original function of the smaller loop i.e. the efficient dipole is now the PRIMARY
radiator and the former loop antenna now provides the tuning mechanism.
The final antenna thus supplies much greater gain than either antenna alone.
The combination provides for a much superior radiator than previously known
purely by combining all the best features of the individual antennas and dropping the disadvantages by the wayside, plus ofcourse the provision for collinear gains. Now many will quickly jump to scaling techniques for 7 thru 14 and 3 thru 7 Mhz, which is fine, while I have to stay true to my original object to provide an all round or best anttenna that can be used in small areas by the average ham.
When working on the above antenna thru the provided ranges I did a sweep thru
other HF frequencies only to find that other spans of frequency towards what is termed as top band ,were useable. At the same time I could also generate or remove TVI !!!. It is then a small jump to realise that the transmission line was a factor that was now comming into play ,so what was originally termed an 'antenna' had now become a SYSTEM. My original coax length was around 200 feet long with the horizontal portion being buried, and with a little playing around with its length I was able to use the 40 and 80 bands. The final system shown
that directivity obtained by the antenna alone moved slowly fom a directive radiating pattern to an oval shape and then to a circular shape. All well and good. But a peculiar thing happened as I strolled thru these newly available
frequencies. That if a large enough capacitor was used that went beyond the
original anteena requirements I was still able to supply a modicom of frequency shift. At this point I may add, I had progressed to a 3 elemnt array.
So it appears that the antenna system changes to what appears to be a top driven vertical aided by a variable(very fine) capacity hat!

I have now achieved what I set out to do, a all round antenna that can be used on small lots, rotatable, frequency variable, high efficiancy with measurable gain over other antennas known today.
I will leave it to others to determine if the above aproach can be used update the old wire antennas in the ARRL so theirain a rejuvenated life.
I would caution those who literally swallow the technical explanation that I have given with respect to this antenna and I will leave that the the experts
to explain in detail. For myself as an ordinary run of the mill ham it is enough for me to say that it works and meets my original goal in a grand and unexpected way. Now I am going to buy a lottery ticket
Best ragards
Art Unwin..KB9MZ.....XG

Please do not e mail me directly unless known to me. Register in the group and participate that way. Thanks

Don't forget to click on
http://aith.sdsc.edu/MP/Art_Unwin/

It is work in progress but I am showing it anyway to fill in some gaps relating to my struggles. To those who gave wise suggestions as to what I should have done I thank you for your comments. As you can see I met with many challenges that I was not able to foresee as a layman and I made many mistakes along the way.

3209. Air-Wound Balun Design Info??

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-17 14:57:12 UTC
From: kelly@dvol.com
Message-ID: <d22b54c3.0208170657.11372751@posting.google.com>
Source record: 136550

Many years ago I had a Heath air-wound 1:1 balun attached to the boom
of my 20m Hy-Gain 204BA yagi which fed the Beta match. The Heath
enclosure was huge, about 10 x 10 x 4, the bifilar wound coils were
maybe 3 inches in diameter and could handle mutiple kilowattts over
the entire HF spectrum as I recall. Looked like they were custom-wound
by B&W. The antenna worked quite well. It seems to me I could wind a
balun with enameled copper wire around maybe 1 inch PVC pipe as a much
more compact "QRP version" of the Heath balun.
>
>
Questions: Do air-wound baluns inherently have lower losses than
ferrite core baluns particularly under high SWR conditions? Over what
bandwidths? Does anyone have a source for design info for homebrewed
1:1 and 4:1 air-wound baluns?
>
>
Thanks, Brian w3rv

3210. Re: Voltage addition question

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-17 15:11:47 UTC
From: CAM <Cecil.A.Moore@ieee.org>
Message-ID: <3D5E67B3.25CF8A13@ieee.org>
Source record: 136551

CAM wrote:
> The same 75w of the 100w being generated makes it through the
> 50/150 junction and equals 106.066 volts. The new re-reflected
> power of 6.25w equals 30.62v. We know the forward voltage is
> 122.47v.

Duuuuhhhhhhhhhhh - we don't know the forward voltage is 122.47v.
Sorry folks, I was up at 4am with leg cramps and wasn't awake.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

3211. Re: oops, more,....

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-17 15:33:06 UTC
From: raiar@bbs.galilei.com.nospam
Message-ID: <3d5e67f0.63721468@news.galilei.com>
Source record: 136552

Hi George

I sure hope you didn't leave out the most import installation procedure that should be utilized by all CBers.

We refer to this installation as the 'Band Cleaner' as it removes undesirable modulated signals and unwanted RF from the airwaves.

The installation procedure is simple and can be easily followed by anyone capable of pressing a mike key.

The required primary component can be readily found in most households, or it can be purchased quite cheaply almost anywhere.

Simple objects often create desirable results when nothing else is available. Take for example a cat's whisker and a razor blade, they can be utilized as a tuner for broadcast reception.

This device is just that simple and works flawlessly in most cases.

A common ordinary straight pin of any type, or even an opened safety pin will suffice for this 'band cleaning' installation.

The procedure is simple also, the pin is placed anywhere along the coaxial cable that is conveniently accessable to the installer. It is most desireable that the pin be installed such that it passes through the center of the coax and exits the other side of the casing.

The ends may then be clipped off with a pair of side-cutters as close as possible to the cable casing. A little dab of silicone over the clipped pin will prevent moisture from getting into the coax and keep the 'Band Cleaner' device from deteriorating due to weather.

This is a "MUST HAVE" device, that no CBer should ever be without!

TTUL
Gary

3212. Re: Superposition quiz

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-17 15:37:24 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <ojrslu85bii7df0oj2o3knj9qoftm6oo3o@4ax.com>
Source record: 136553

On Sat, 17 Aug 2002 06:58:14 -0500, CAM <Cecil.A.Moore@ieee.org>
wrote:

>Richard Harrison wrote:
>> Instead, each
>> channel power must be converted to watts, added, and the total then
>> reconverted to dbm.
>
>Is adding power the same thing as superposition? Some say it is. :-)

Only your hairdresser knows....

73's
Richard Clark, KB7QHC

3213. Ultimate 80/160m directional antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-17 15:38:59 UTC
From: angie1@rout.co.uk
Message-ID: <eceadf6b.0208170738.5b972291@posting.google.com>
Source record: 136554

Hi

I have access to 25 acres and want to erect the "ultimate" 160/80 directional antenna - either something physically rotatable or a phased array of wires trapsed around. Space not a problem and I have quite a few trees dotted about to use if need be.

I've considered buying four verticals and phasing them with one of those switch boxes (can you do a similar thing with horizontal antennae?). Ground systems would not be a problem. Have also seen those loops and beverage antennas.

What could you reccommend please for the ultimate?

73's.

3214. Re: Chip's dark side

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-17 15:41:28 UTC
From: k1bqt@aol.com
Message-ID: <20020817114128.14938.00000822@mb-cq.aol.com>
Source record: 136555

>That's HRO, isn't it?<

Mall of NH is in Manchester. Pass it and bear left onto Perimeter Road toward the airport. First industrial building on the left is the plant. Ain't no law against lookin'.

Rick K1BQT

3215. Re: Chip's dark side

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-17 15:43:18 UTC
From: k1bqt@aol.com
Message-ID: <20020817114318.14938.00000823@mb-cq.aol.com>
Source record: 136556

Make that, bear right--.

3216. Re: Superposition quiz

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-17 15:45:39 UTC
From: richardharrison@webtv.net
Message-ID: <4209-3D5E6FA3-79@storefull-2397.public.lawson.webtv.net>
Source record: 136559

Cam, W5DXP wrote:
"Is adding power the same thing as superposition?"

Superposition says: When a linear circuit is driven by several sources, the total response can be found by finding the individual response to each source separately and then algebraically combining them.

The sources can include different frequencies and d-c too. This thread has largely concerned combining sources of the same frequency.

The superposition principle works for the electric power company, so that`s the short answer to Cecil`s question.

I have only used the word "superposition" in this thread, so far, in quoting another`s posting. I gave an example using batteries connected in series aiding in response to a query about two transmitters with their outputs connected together. The question was: where does the power go?

With superposition, you short out all of the energy sources, except one at a time, and consider circuit response to that particular energy source. Total response comes from adding individual responses together. This means there is a voltage across a resistance in a circuit which is the sum of the voltage drops produced by the various currents produced by the vartious sources, Ohm says the power in this particular resistance is I squared R or E squared over R.

So, power is derived from superposition as are voltage and current. Ohm is not violated. Power from one source adds to or subtracts from power supplied from other sources. Proof is in the application or removal of other sources. The change can be monitored in the heat produced by the resistor. Remember some of these sources can be d-c as well as a-c with no violation of superposition.

Best regards, Richard Harrison, KB5WZI

3217. Re: Chip's dark side

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-17 15:56:54 UTC
From: fractenna@aol.com
Message-ID: <20020817115654.17933.00000905@mb-fx.aol.com>
Source record: 136557

>Mall of NH is in Manchester. Pass it and bear left onto Perimeter Road toward
>the airport. First industrial building on the left is the plant. Ain't no law
>against lookin'.
>
>Rick K1BQT
>

Ah!

Wrong mall..

Yes; I know where you mean. I use the Manchester airport all the time.

73,
Chip N1IR

3218. Re: EVERY THING IS NOW KNOWN ON ANTENNAS.

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-17 16:13:57 UTC
From: raiar@bbs.galilei.com.nospam
Message-ID: <3d5e6d00.65016953@news.galilei.com>
Source record: 136558

Hi Art

I missed the first part of the topic, so what I have to say will probably not be relevent. However, I have seen some fantastic new metals being produced that could at some time in the future be a real boon to how antennas operate.

I entered the hobby at a very young age, little to no money to spend, and even less knowledge about how to properly construct an antenna.

Needless to say, I did the unthinkable and installed dipoles for each band of HF operation all terminating on a connection block of my own design. To this the coaxial cable was affixed and I was on the air. A little trimming here and there and the SWR was almost flat across each band I was allowed to operate on.
If I had 5 bucks invested in my antenna, it would have been a miracle. Yet I quickly earned my WAS and several other awards.

As I aged and learned a little more about antennas, I made the changes that were obvious from what I was studying at the time.
The result of the changes was an antenna system that did not function as well as my original make-shift system, and trying to restore it to exactly the way it was originally set up turned out to be impossible. As once I fixed it, returning it to the original, caused all the problems that the original installation should have had, to appear.

That was 3 decades ago, yet I still try various things from time to time. On occassion, something will work perfectly for me, yet is rarely duplicateable by others with the same results. There are just so many factors related to the area where my antenna is situated that falls into play.

About 6 years ago I was working in a building that was constructed entirely of steel. Needless to say, my little HT would not get out of this massive SHIELD. I was up on the roof and noticed a rubber plug that was used to fill a hole where something used to exit the building. We just happen to have plenty of music wire in the shop, so I grabbed a piece and drove it through the rubber plug. A little math and I cut the antenna to about 1/4 inch longer than it should be for 2-meters, figuring I would have to trim some more off, if it worked. Inside at the ceiling I affixed the shield of the coax to the metal roof by sliding it under the steel plating and the ceiling joist and just wrapped the center conductor several times around the music where where it protruded from the rubber plug.
I had all intentions of making it permanent and adjusting the SWR after I gave it a test to see if it would work at all.

But it was Friday afternoon and time to leave work, so it was left with the coax just running down a support column to the shop.
When I arrived for work Monday morning, the inside of the shop, ceiling and all walls, was covered with some type of spray insulation foam. On Tuesday, a company was there installing drop ceiling track and by the end of the week, the ceiling was covered with heavy 5/8 inch thick fireproof panels, so there was no way I could get back at my antenna connection. I just let the coax dangle by the post for at least three weeks before I finally had the opportunity to see if it would work at all.

So on Friday I brought a little BNC connector and SWR meter, affixed the BNC to the coax and placed the SWR meter in-line. At first I thought my radio was not working because the SWR meter did not register anything at all. However, I heard the Repeater, so I rekeyed and IDed myself. One of the regulars came back to me, expecting me to be in my car. Their first statement was, you can turn your power down a little. OK, save batteries, but I was already on the lower 150MW setting, not on the 5 watt setting. The Repeater was like 20 miles away.
I used this antenna, without any adjustments for the 4 years I worked at this company, never once turning my HT above 150MW. Yet in my vehicle, to reach the repeater at all, I had to be at 25 watts, and to be full quieting had to kick it up to 50 watts and occasionally up to 100 watts, depending upon where I was parked in the parking lot.

On the 150MW setting, I could bring up Repeaters, some of which were 150 miles away and by kicking the little HT up to 5 watts, the receiving station could actually make out what I was saying. Albeit I was mostly covered with noise.
Shortly before I left the employ of that company, I brought in a mobile rig with 5 watt and 25 watt settings, that I used on my breaks and lunch hour. On the lowest 5 watt setting, I was continually asked to reduce my power, as I was bringing up neighboring Repeaters on the same repeater pair. It became necessary to go back to my 150MW HT to prevent this problem.

Although the coax has now been cut off at the ceiling, the little music wire was still sticking out of the rubber plug on the roof the last time I visited the place of my former employ some 6 years after the fact.

What is it that made this antenna outperform anything else?
Location, Height, distance between vertical and shield, or some other unknown factor we are not yet aware of?

I have tried to duplicate this effect by carefully reconstructing the simple antenna using the same type music wire and even the same brand and size of rubber plug on another steel building. However, in all attempts, a simple mag mount mobile would outperform the wire in the plug method.
So my determination is, there was something special about either the building itself, it's location, the placement of the antenna, or the

way it was connected to the coax. Perhaps even the foam insulation was a contributing factor. I don't know since I did not test it prior to the foam or ceiling being installed.
Many fellow club members came by to visit while I was working for that company, bringing their own HTs and connecting them to the antenna, and obtaining the same magnificant results. It was the talk of the group for more than a year. Their determination was it was exclusively due to the location and size of the building. Yet a mag mount placed on top of this same building, within a foot or two of the old antenna in any location did not produce any enhanced results.

So, just like my nickel plated yagi that wouldn't work, there are many things about antenna's we still do not know.

TTUL - 73+ de Gary - KG&#65533;ZP

3219. Re: Superposition quiz

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-17 16:24:13 UTC
From: Gene Fuller <W4SZzzzzz@att.net>
Message-ID: <3D5E78B6.23B1F537@att.net>
Source record: 136560

Cecil,

Your answer exhibits a major factor in the disagreement over these matters. Almost everyone starts with assumptions that include lossless, isolated-system, steady-state, and so on. In many cases, however, these assumed conditions actually confuse rather than simplify.

A classic paradox problem in elementary circuit theory is a simple capacitor problem.

SETUP

Start with single capacitor with capacitance "C", charge "Q1", and Voltage "V1". The energy stored in the capacitor is "W1".

The descriptive equations are:

Q1 = C * V1, and

W1 = 1/2 C * (V1)^2

Now add an identical, but uncharged, capacitor in parallel with the first. This is done by a simple wire and switch arrangement.

IMPORTANT ASSUMPTIONS

Assume all circuit elements are ideal. Everything is lossless, and there is no inductance in the wire. The capacitors do not interact directly, and there are no interactions with anything else in the world

QUESTION

What is the final configuration in terms of charge, voltage, and energy.

ANSWER

Charge is conserved, and it is shared equally between the capacitors. The final charge on each capacitor, Q2, is 1/2 Q1.

Voltage is equal in the two capacitors, and it is 1/2 of the initial value in the first capacitor, since V is proportional to Q. Therefore V2 = 1/2 V1.

Energy is still 1/2 C * V^2 in each capacitor, or in terms of the final variables,

W2 = 2 * 1/2 C * (V2)^2 = 1/2 * 1/2 C * (V1)^2 = 1/2 W1

WHAT'S UP???

Since we like to believe in conservation of energy, and we generally
believe in these elementary expressions for the basic characteristics of
capacitors, there is something wrong.

What is wrong is that our initial assumptions about the problem are
impossible to achieve. If the system is really lossless then it never
comes to static equilibrium after the switch is thrown. If there is any
loss then the system undergoes damped oscillation until the excess
energy is lost as heat.

Many of the examples of the nature, "add 100 W to 100 W" suffer the same
problem. You simply cannot make all the ideal assumptions and also
require that the *readily observable energy* is held constant throughout
the problem.

You may try to assume an ideal system, but Mother Nature won't always
let you get away with it.

73,
Gene, W4SZ

CAM wrote:
>
> Tdonaly wrote:
> >
> > >
> > > >Gary Schafer wrote:
> > > >> When I said "You can not directly add two powers together." I was
> > > >> speaking of mathematically. As in 1 plus 1 = 2
> > > >
> > > >Hmmmmmm, you mean if a resistor is dissipating 1 watt and 1 watt is
> > > >added to the dissipation, the result is not 2 watts? Hmmmmmmm
> >
> > > Given 1 volt across 1 ohm dissipates 1
> > > watt, how many volts across 1 ohm does it take to dissipate 2 watts?
> >
> If you raise the voltage from 1v to 1.414v, then the power dissipation
> doubles? 1^2 * 1 = 1? 1.414^2 * 1 = 2? 1w + 1w = 2w? Of all the things in
> the entire consideration, the energy is the single thing that must be
> conserved. You can add 100v to 100v and get anything between zero volts
> and 200 volts but you cannot fool Mother Nature as far as energy is
> concerned. If you add 100v to 100v and get zero volts, energy must be
> conserved. If you add 100v to 100v and get 200 volts, energy must be
> conserved. Mother Nature doesn't care about volts. Mother Nature cares
> about joules. She told me so Herself.
> --
> cheers, CAM http://www.qsl.net/w5dxp
>
> -----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
> http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
> -----== Over 80,000 Newsgroups - 16 Different Servers! =-----

3220. Re: Chip's dark side

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-17 16:57:02 UTC
From: Uncle Peter <radioconnectionNO@cox.netSPAM>
Message-ID: <yfv79.381542$DB.12740804@news1.east.cox.net>
Source record: 136561

"Mark Keith" <nm5k@wt.net> wrote in message news:3D5D478E.2966@wt.net...
> >
> Shit or get off the pot then. We have heard this for months. I suspect
> he and many others will be waiting for a long, long, time. Do you and
> your goofball lawyers "if you really have any" ever actually sue anyone?
> Seems to me if they had a case, they would be jumping all over it.
> I suspect after their evaluation of this ongoing dilemma, they informed
> you that you have no case at all.
>
>
>
> MK
>
> --
> http://web.wt.net/~nm5k

Laches doctrine.

3221. Re: Superposition quiz

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-17 17:00:52 UTC
From: klocko@toad.net
Message-ID: <224d9cd4.0208170900.2b038e55@posting.google.com>
Source record: 136562

> Richard Clark wrote:
> "To simplify his examples and show the error of the addition consider:
> 0dBm + 0dBm = 3 dBm"

Richard Harrison wrote:
> Yes, that`s right.
>
> 0 dbm is a power of 1 milliwatt.
> Add another 0 dbm in-phase signal of the same frequency to the first and
> the total power is 2 milliwatts.
> Doubling the power for practical purposes is an increase of 3 db over
> the 0 dbm level. The combined power is +3 dbm.

Let me try this again

The addition of log terms is the same as the multiplying of equivalent
non-log terms. So
3 dBm + 3 dB = 6 dBm
is the same as
2 mw * 2 = 4 mw
Any dB term has no units, it's just a numerical value.

The subtraction of log terms is the same as the dividing of equivalent
non-log terms. So
3 dBm - 3 dBm = 0 dB
is the same as
2 mw / 2 mw = 1
The dB term has no units since they (the units) cancel in the
division.

Now
0dBm + 0dBm
would be the same as
1 mw * 1 mw
which is 1 square milliwatt or 1 mw^2. The units must be carried along
in the conversion.

So if you really wanted to write such an equation,
0dBm + 0dBm = 0 dB(smW), where dB(smW) is dB relative to a square
milliwatt

Please explain again how 0dBm + 0dBm = 3 dBm. Explain what the
physical significance of 1 square milliwatt would be.

> I`ve already posted the two ways to make this happen. One way is to cut
> the load impedance in half while keeping the voltage the same. That is
> what the power company is doing when the current demand doubles. When

> the voltage is fixed, doubling the current doubles the power.

I remember enough from my power course years ago to bet that the power company doesn't just throw a switch to bring one generator on-line with another. I would bet they carefully match the power factor (the phase angle between voltage and current) of one generator to the power factor of the other. In other words, they add the in-phase voltages and currents.

73,
Bill N3WK

3222. Re: Superposition quiz

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-17 17:14:03 UTC
From: klocko@toad.net
Message-ID: <224d9cd4.0208170914.5deb81d1@posting.google.com>
Source record: 136563

CAM <w5dxp@hotmail.com> wrote in message news:<3D5D16DB.9F854A3D@hotmail.com>...
> And, finally, this goodie. Example 2: Lossless Line, page 137
>
> "The over-all losses are small (al << 1), and so we can use the
> principle of the conservation of power."
>
> How's that for a reference?

How does Johnson use the principle? Read on to p. 138 where he sez
"since the losses in the line are negligible [al << 1], the
receiving-end power is equal to the sending-end power".

No jack-rabbit waves, no inexplicable reversal of wave direction.
Simply the power dissipated equals the power supplied. 73,
Bill N3WK

3223. Re: Ultimate 80/160m directional antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-17 17:41:37 UTC
From: 'Doc <w5lz@icok.net>
Message-ID: <3D5E8AC8.9D07C2BD@icok.net>
Source record: 136564

How about three elements at 150 feet?
'Doc

3224. Re: Tutorial #2

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-17 17:45:27 UTC
From: 'Doc <w5lz@icok.net>
Message-ID: <3D5E8BA9.13C38D8D@icok.net>
Source record: 136565

Absolutely amazing...
'Doc

3225. Re: oops, more,....

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-17 17:50:06 UTC
From: 'Doc <w5lz@icok.net>
Message-ID: <3D5E8CC3.3AD15E3@icok.net>
Source record: 136566

Gary,
If you could do a step-by-step pictorial
of that I'm sure it would help. I'll bet
ol'Georgie would be happy to enclude it on
his CD.
'Doc

3226. Re: Superposition quiz

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-17 17:58:10 UTC
From: CAM <Cecil.A.Moore@ieee.org>
Message-ID: <3D5E8EB2.45E2BCBB@ieee.org>
Source record: 136568

Gene Fuller wrote:
> You may try to assume an ideal system, but Mother Nature won't always
> let you get away with it.

"Won't always" is an understatement. My Harley salesman assured me that
my FXSTC Soft-tail Custom was an ideal transportation system but it's been
in the repair shop for three days.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

3227. Re: Ultimate 80/160m directional antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-17 17:58:25 UTC
From: Jeff Maass <jmaass@columbus.rr.com>
Message-ID: <59w79.15942$ja.2601370@twister.columbus.rr.com>
Source record: 136567

>>I have access to 25 acres and want to erect the "ultimate" 160/80
directional
>>antenna - either something physically rotatable or a phased array of wires
>>trapsed around. Space not a problem and I have quite a few trees dotted
about
>>to use if need be.
>>
>>I've considered buying four verticals and phasing them with one of those
switch
>>boxes (can you do a similar thing with horizontal antennae?). Ground
systems
>>would not be a problem. Have also seen those loops and beverage antennas.
>>
>>What could you reccommend please for the ultimate?
>>

"'Doc" <w5lz@icok.net> wrote in message news:3D5E8AC8.9D07C2BD@icok.net...
>
> How about three elements at 150 feet?
> 'Doc

Sounds big, but that's only a bit over a quarter-wave high
on 160 meters, which is the more important of the two
bands cited!

About the same as a 20 meter yagi at 20 feet, or a 40 meter
antenna at 40 feet!

Not "Ultimate", for sure!

Put that rotatable full-sized 3-element 160m yagi between 250-
and 520-feet (half to full wavelength) up on 160 meters.

From a practical point-of-view, a pair of quarter-wave high 4-squares
is a better choice if you need to change directions.

--
Jeff Maass jmaass@columbus.rr.com Located near Columbus Ohio
USPSA # L-1192 NROI/CRO Amateur Radio K8ND
Maass' IPSC Resources Page: http://home.columbus.rr.com/jmaass

"'Doc" <w5lz@icok.net> wrote in message news:3D5E8AC8.9D07C2BD@icok.net...
> How about three elements at 150 feet?
> 'Doc

3228. Re: white coax?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-17 18:00:59 UTC
From: "Malky @ Westhill" <alcedo.atthis@talk21.com>
Message-ID: <ajm3ga$1c8q9a$1@ID-113788.news.dfncis.de>
Source record: 136469

I use RG58 White Sheath, (50 ohm) around the house. (R.S. 119-558)
It's less obtrusive to the eye than the Black Sheath.

Malky @ Westhill

3229. Re: Superposition quiz

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-17 18:09:48 UTC
From: CAM <Cecil.A.Moore@ieee.org>
Message-ID: <3D5E916C.2FF308D5@ieee.org>
Source record: 136470

Bill Klocko wrote:
> I remember enough from my power course years ago to bet that the power
> company doesn't just throw a switch to bring one generator on-line
> with another. I would bet they carefully match the power factor (the
> phase angle between voltage and current) of one generator to the power
> factor of the other. In other words, they add the in-phase voltages
> and currents.

My degree is in power engineering and I don't recall a power company ever adding generators in series because that would lift the ground of one generator up to the generator voltage of the other. It might even be illegal to do so. All of the automatic reclosure circuitry with which I am familiar puts (almost) equal voltages in parallel allowing the two currents to be whatever they need to be to satisfy Ohm's law. Of course, my knowledge of power engineering is 40+ years old but I guarantee you they don't double the voltage and double the current at the same time unless they switch in 300% more power generation capacity. 100MW + 300MW = 400MW
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
------== Over 80,000 Newsgroups - 16 Different Servers! =-----

3230. Re: Superposition quiz

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-17 18:13:18 UTC
From: CAM <Cecil.A.Moore@ieee.org>
Message-ID: <3D5E923E.875A5E53@ieee.org>
Source record: 136472

Bill Klocko wrote:
> No jack-rabbit waves, ...

No jack-rabbit waves in my theory, Bill. Jack-rabbit waves are reserved
for the RF engineers who think that energy can make it from the source
to the load without flowing through the transmission line.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
------== Over 80,000 Newsgroups - 16 Different Servers! =-----

3231. Re: Longwire antennas

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-17 18:15:13 UTC
From: lombryt@hotmail.com
Message-ID: <db35a0c.0208171015.1e0fae9@posting.google.com>
Source record: 136471

"eatc7402" <eatc7402@attbi.com> wrote in message
news:<cGU59.113109$D36.98625@rwcrnsc53>...
> I need some advice on the design of a long wire antenna.
> I have about 150' length of space to work with. The antenna
> must be end fed. I would like to use it primarily for 80-40 meters,
> but if it works on other freqs thats okay too. I realize that I will
> more than likely need an antenna tuner to match the impedance
> of the antenna to 50 ohms coax connector of the transmitter.
> Its been a lot of years since I've put up an antenna. Any design
> tips, sites with good designs on them etc would be most
> helpful.
> Thanks
>
> David Freedman
> K0KWK

Hi David,

See what I did in my backyard:
http://www.astrosurf.com/lombry/qsl-longwire.htm

The longwire of about 40m is tied at about 3m high only. It is made of simple electric wire + coax directly connected to my RTX (could be best !).

The built-in antenna tuner of my RTX do the rest to SWR near 1:1 in quasi all bands including WARC.

Work fine as in 2 months I heard nearly 170 DXCC in all HF bands from canada to Argentina, Antarctica or South Africa to Finland and Taiwan to New Zealand !

(ok the QTH seems QRO: this is in a small village at 7 km from any city, 200m on top of "hills"), no one building or QRM source around. QRM is weak about S-2/3 on all band (S <1 on 28 Mhz).

In cannot say the same for my QTH in LX where my 15m sloper +10m of wire in the appartment capture much QRM, at least 2-3 points above vs the first QTH. I bough an MFJ-1026 noise canceller for this last.

However, as OM you are and as you have 150' available, I suggest you warmly (strongly) to erect a multiband dipole type G5RV at about 10m high attached between two masts or in a tree and to your chemny. Results must be better, and surely for emission.

Hope this help !

Thierry
ONL5183

3232. Why God do we made soo few loop antennas ?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-17 18:23:57 UTC
From: lombryt@hotmail.com
Message-ID: <db35a0c.0208171023.1ed4ca5b@posting.google.com>
Source record: 136473

Hi,

Pfff.. I'm trying to find on the place dealers or manufacturers or HF loop antennas as my blooming (short)longwire creates severe QRM in my LX QTH.

But browsing the web I only find 2 manufacturers : MFJ and another one + AEA (www.ryl.nl) but his isoloop seems discontinued.

So roughly there is only one available, the two models from MFJ...

Is this design so bad that no other manufacturer wants to sale such antennas?
Surely not.

So where can I find other loops ?

Thanks for comments.

Thierry
ONL5183
http://www.astrosurf.com/lombry/menu-qsl.htm

3233. Re: Tutorial #2

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-17 18:28:23 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <nbsslu039ombp76eqcs4inuenmdrv3mnt3@4ax.com>
Source record: 136474

On 17 Aug 2002 07:52:40 -0700, aunwin@fgi.net (Art Unwin KB9MZ) wrote:

snip

> I have now achieved what I set out to do, a all round antenna that
>can be used on small lots, rotatable, frequency variable, high
>efficiancy

which is OK as far as it goes - then
you take another plunge:

> with measurable gain over other antennas known today.

Which you will be the first to admit that you have neither modeled,
had modeled, measured nor independently compared in controlled
situations and follows from a history of similar claims later shown to
be overstated. But the gall is to expect and demand someone else to
tote your water:
> I will leave it to others to determine if the above aproach can be
>used update the old wire antennas in the ARRL so theirain a
>rejuvenated life.
>I will leave that the the experts to explain in detail.
Where you condemn working theory as regurgitation, dismiss critics as
stupid, ignore tepid results, and whine on about how lazy those who do
not step up to prove your claims must be. Your recruitment of help is
seriously undercut by your backhanded thanks.

Art, you should be proud you've designed an all band antenna that at
least does not lose anything along the way. This is no trivial task
and is the shimmering nirvana of fractal builders. It is sufficient
that it exhibits characteristics of a dipole/beam with a novel (or at
least handy) method of tuning.

Fluidmotion with their SteppIR is doing just this and they have no
problem attracting customers to their booth to purchase simple beams
of modest specification at more than ambitious prices. None of them
signed on here to ask for peer review either. Enquiries to their
product here have been occasional but from apparently committed
buyers. Testimonials from customers have been few, but positive.

However, let me add some perspective to this;
by their own specs, their antenna offers
"8.8 Average Gain, Forward dBi (free space)"
and their claim is
"Gain that equals or exceeds that of
antennas on much larger booms!"

A simple comparison to the NBS Yagi reveals more gain at 9.68dBi (free space). But, hey! Who is going to quibble less than a dB difference? (Hardly the loser.) Similarly, who is going to withhold a chuckle over their claim? Even then, there among the smiling is at least one fellow opening his wallet. In the arts (I do more than weather) this characteristic of the audience is known as "the willing suspension of disbelief."

73's
Richard Clark, KB7QHC

3234. Re: Ultimate 80/160m directional antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-17 18:30:48 UTC
From: Bill Turner <w4wnt@carolina.rr.com>
Message-ID: <sDw79.28683$Xa.1221620@twister.southeast.rr.com>
Source record: 136475

I'd start by looking up Comtek. Jim Miller makes four square controllers and
they work well on 80m, I don't know if he's ever done one for 160m.

Good luck, you're really blessed with all that space!

Bill, W4WNT

"Anne Bolyn" <angie1@rout.co.uk> wrote in message
news:eceadf6b.0208170738.5b972291@posting.google.com...
> Hi
>
> I have access to 25 acres and want to erect the "ultimate" 160/80
directional
> antenna - either something physically rotatable or a phased array of wires
> trapsed around. Space not a problem and I have quite a few trees dotted
about
> to use if need be.
>
> I've considered buying four verticals and phasing them with one of those
switch
> boxes (can you do a similar thing with horizontal antennae?). Ground
systems
> would not be a problem. Have also seen those loops and beverage antennas.
>
> What could you reccommend please for the ultimate?
>
> 73's.

3235. Re: EVERY THING IS NOW KNOWN ON ANTENNAS.

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-17 19:01:56 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <3D5E9DA4.4090900@eznec.com>
Source record: 136476

A very interesting story. But I seriously doubt that the performance of this antenna was due to anything about antennas we don't know. The fact is, there was something about this particular antenna you don't know. A first guess would be that it was coincidentally placed in a spot where signals from several paths happened to add in phase from one particular repeater -- not exactly an unknown phenomenon. Anyone with a VHF mobile setup has observed this.

Just because we don't understand how a particular antenna works doesn't mean there's some mysterious process that's yet to be understood. A Brazilian tribal rain forest dweller wouldn't understand how a light switch works. That doesn't mean that "there are things about light switches we still do not know." Unless, of course, "we" is limited to tribal rain forest dwellers.

Roy Lewallen, W7EL

Gary V. Deutschmann, Sr. wrote:
> . . .
> So, just like my nickel plated yagi that wouldn't work, there are many
> things about antenna's we still do not know.

3236. NEED MFJ-16010 ST Instructions/Schematic

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-17 19:06:00 UTC
From: Richard <flathat@bellsouth.net>
Message-ID: <B98416D8.8A4D%flathat@bellsouth.net>
Source record: 136477

Just bought a used MFJ-16010 ST, but there are no instructions. I'm going to use it for receiving only with a random wire antenna. I'd like to know the best way to connect everything.

Thanks if you can help.

Cheers,

Richard K.

3237. Re: Superposition quiz

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-17 19:42:29 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <3D5EA725.2040405@eznec.com>
Source record: 136478

Food for thought: Superposition

Superposition is a simple concept, but like other simple concepts, it can be and often is misapplied.

The test for superposition is as follows:

If excitation x1(t) produces response f(x1(t)) and x2(t) produces response f(x1(t)), then x1(t) + x2(t) produce f(x1(t) + x2(t)).

Let's take a simple example. Connect a 50 volt DC voltage source (V1) in series with a 30 volt DC voltage source (V2) (+ to -), and this in series with a 20 ohm resistor (R) to make a simple loop. We know that I = V/R, so we can say:

I = f(x) = x/20 ohms
V1 = x1 = 50 volts
V2 = x2 = 30 volts

Let's see if the voltages and currents can be superposed. Mathematically,

I1 = f(50 volts) = 50 volts/20 ohms = 2.5 amperes
I2 = f(30 volts) = 30 volts/20 ohms = 1.5 amperes
f(50 + 30 volts) = (50 volts + 30 volts) / 20 ohms = 4 amperes = 2.5 + 1.5

So the voltages satisfy the requirement. In our circuit, we can do this test by turning off all the sources (replacing them with short circuits, since the impedance of a voltage source is zero), then turning them on one at a time. With only V1 on, I = I1 = 50/20 = 2.5 amps. With only V2 on, I = I2 = 30/20 = 1.5 amps. With both on, I = (50 + 30)/20 = 80/20 = 4 amps. This is the sum of the currents we got from each source by itself.

We can turn the 30 volt source around the other way so it subtracts from the 50 volt source, and still have superposition satisfied. In that case,

I1 = 50/20 = 2.5 amperes
I2 = -30/20 = -1.5 amperes
I1 + I2 = (50 - 30) / 20 = 1 ampere

The conditions for superposition are pretty strict. For example, we can't have a source that's one value when we turn it on one time and another value when we turn it on another time. And we can't have a voltage or current source whose value changes depending on the load. But we can have time varying sources like sine waves, providing the voltage-time function they produce stays the constant. And we can have, say, a source with 50 ohm impedance. Just replace a source with a box containing a voltage source in series with a 50 ohm resistor. Turn the

source off and on as before, and you'll see that superposition is still satisfied -- all we've done is add a resistor to the circuit. And even a simple function like the familiar first order linear equation f(x) = mx + b doesn't satisfy superposition.

Let's see if the powers produced by the sources can be superposed. Turning the 30 volt source back around so its voltage adds to the 50 volt source, we define the function relating power to voltage.

P = f(x) = x^2/20 ohms
V1 = x1(t) = 50 volts
V2 = x2(t) = 30 volts

Test for superposition:

P1 = f(50 volts) = 50^2/20 = 125 watts
P2 = f(30 volts) = 50^2/30 = 83.33 watts
f(50 + 30 volts) = (50 + 30)^2/20 = 320 watts.

f(50 + 30) isn't equal to f(50) + f(30), so this function (power) doesn't satisfy superposition. We can see this with the circuit by turning each source on in turn and observing the power dissipated by the resistor, then turning both on at the same time and looking at the power.

The test for superposition is simple, so before declaring that superposition holds for a particular quantity or circuit, first plug the values into the test and see if what you say is true.

Roy Lewallen, W7EL

3238. Re: oops, more,....

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-17 19:45:57 UTC
From: George Kinzer <horseflygk@worldnet.att.net>
Message-ID: <VJx79.16629$Ke2.1381038@bgtnsc04-news.ops.worldnet.att.net>
Source record: 136479

CD is allready complete...Im sure this devise will sure clean the airwaves...lol

--
If first you don't suceed, do the same thing again...see what happens

3239. Re: A closer look (conservation of energy)

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-17 19:54:34 UTC
From: Walter Maxwell <w2du@iag.net>
Message-ID: <_Rx79.9374$LO1.727061@newsread2.prod.itd.earthlink.net>
Source record: 136480

Cecil wrote:
> In order to prove your point, Walt, you are going to have to prove that
> wave cancellation is technically the same thing as re-reflection. That's
> a tough argument but let me give it a go.
>
> When a wave of 1 volt at 1 amp in phase at +90 degrees is superposed with
> a wave of 1 volt at 1 amp in phase at -30 degrees traveling in the same
> direction, the result is a wave of 1 volt at 1 amp in phase at +30
degrees.
> Each of these waves has an associated intrinsic energy of one joule/sec.
So
> has two joules/sec magically transformed to one joule/sec. Nope, there is
no
> way to superpose those two waves, assuming no other waves exist, without
> generating another wave of 1 volt at 1 amp. The superposing of those two
> waves results in three waves. The third wave is a wave traveling
> in the opposite direction to the other two. Thus the partial destructive
> interference between the first two waves creates not only a forward wave
> but a reverse wave. The question is: Is that reverse wave a "reflected"
> wave since it was generated by wave interference. Are all waves traveling
> in the direction opposite to the forward wave defined as reflected waves?
> If so, Walt is correct. If not, Steve is correct.
> --
> cheers, CAM

Cecil, it seems to me you are missing the point concerning how complementary
reflections
establish either a short or open circuit to reflected waves, as I have
discussed in Chapter 23 of
Reflections and in QEX Mar/Apr 1998. Whether you call these circuits real or
virtual is
irrelevant here.

Let's assume your 1 volt wave at 90 degrees and the 1 volt wave at -30
degrees superpose at an
intended matching point, with their resultant at +30 degrees, as you stated.
Let's also assume the
matching point is at the input of an antenna tuner. We know that when the
tuner is adjusted to
provide a match the input impedance will be 50+j0. However, with the
resultant at +30 degrees
the input impedance will be some value R+jX, indicating that some reflected
waves are
penetrating the match point, resulting in a less than perfect match. In
other words, the tuner is

mistuned--when re-adjusted to obtain a 50+j0 input impedance the resultant voltage angle will
be either zero or 180 degrees, depending on whether the resulting impedance to the reflected
waves is an open or short circuit, respectively.

However, if you review my references above you will note that to establish a short or open
circuit to reflected waves the two sets of reflected waves that superpose to establish the short or
open circuit must be complementary. That is, to establish the short circuit the voltages of the
two reflected waves must be of exactly the same amplitude, but with opposite phase angle. To
establish the open circuit the respective currents must be of the same amplitude, but with
opposite phase angle. If the resultant angle of the voltages is 180 degrees the current resultant
angle will be zero and the impedance to reflected waves is zero--a short circuit only to reflected
waves--50+j0 to the source waves. Conversely, if the resultant angle of current is 180 degrees
the voltage resultant angle will be zero degrees, and the impedance to reflected waves is
infinite--an open circuit only to reflected waves--50+j0 to the source waves.

Consider the case where the voltages are equal and of opposite polarity. Analytically these
voltages can be delivered by two separate generators at the matching point. When the voltages
from these generators are equal and of opposite polarity a short circuit is established, just as
surely as if two batteries of equal voltage were connected plus-to-minus and plus-to-minus.

Now consider the energy contained in the reflected voltages and currents from the viewpoint of
their corresponding electric and magnetic fields. We know that the electromagnetic field
contains an equal amount of electric and magnetic fields, with their energies alternating
cyclically between them. According to Poynting's theorem, when electric and magnetic fields
encounter a short circuit the electric field collapses and its energy is transferred into the
magnetic field, causing it to double. Simultaneously, the voltage goes to zero and the current
doubles. However, as the energy in the doubled magnetic field continues changing, half of its
energy is re-transferred back into a new electric field with its direction

reversed. The magnetic
field returns to its original value with its direction also reversed, thus establishing a total re-
reflection of the energies in the fields of the former reflected waves.

At this point the re-reflected electric and magnetic fields merge with the corresponding fields of
the incoming electromagnetic field from the source. Thus, contrary to Steve's position that the
reflected and source voltages add to establish the forward voltage, and ultimately the forward
power, it is the energies in the fields that add as the source and re-reflected fields merge. The
true forward voltage in the steady state determined by multiplying the source voltage by the
square root of the power increase factor, which is 1/(1-rho squared), where rho is the voltage
reflection coefficient of the load mismatch on a lossless line. Steve asserts that the forward
voltage is derived from Johnson's Eq 4.23 on Page 100. However, Steve's problem is that he
fails to understand that this equation derives the voltage of the standing wave at any point along
the line, not the forward voltage, which is constant along lossless line.

It is universally known that when an electromagnetic field encounters a short circuit, the result
is total reflection of both voltage and current. It is still a mystery to my why there is so much
confusion about this subject.

Walt, W2DU

3240. Re: Superposition: was Re: Email to ...

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-17 20:18:30 UTC
From: Walter Maxwell <w2du@iag.net>
Message-ID: <qcy79.9396$LO1.730556@newsread2.prod.itd.earthlink.net>
Source record: 136481

"Bill Klocko" <klocko@toad.net> wrote in message
news:224d9cd4.0208161245.a439701@posting.google.com...
> "Walter Maxwell" <w2du@iag.net> wrote in message
news:<RkR69.4247$I6.348503@newsread1.prod.itd.earthlink.net>...
> > A few posts back Steve referenced Johnson's Pages 98-101, where Steve
says
> > the derivation in the steady state shows voltages and currents adding to
> > determine the forward voltage and current.
> >
> > Unfortunately, Steve misconstrued the purpose of Johnson's derivation,
> > because instead of deriving forward voltage and current it derives the
> > standing wave of voltage and current. Big'a differencia'. I pointed this
out
> > to Steve many, many months ago. Didn't take, did it?
> >
> > Walt Maxwell, W2DU
>
> Hi Walt,
> The section on pages 98-101 has to do with the solution for E at some
> distance x from the generator given in terms of Eg, Zg, and Zr. Eqn
> 4.23 appears to be just a general expression for the voltage at an
> arbitrary distance from the generator. Johnson's comment (p. 100) with
> regard to Eqn 4.23 has to do with it being in the form (E+) + (E-),
> where E+ is the net incident (forward) wave consisting of the sum of
> all the individual waves traveling toward the load. E- is a similar
> term for the net wave representing the sum of the waves traveling
> (backward) toward the generator. The equation can be divided into 2
> terms, one in e^(-gamma*X) which would be the forward voltage wave
> component, and the other one in e^(+gamma*X) which would be the
> backward voltage wave component.
>
> 73,
> Bill N3WK

Bill, I understand the -gamma and +gamma as E- and E+ respectively, but it
is the addition of E- and E+ at points generally along the line that add at
each point to establish the standing wave. Steve says it establishes the
forward voltage, which is not correct.

The forward voltage is determined by multiplying the source voltage by the
square root of the forward-power increase factor, which is 1/(1 - rho
squared), where rho is the voltage reflection coefficient of the mismatch
terminating a lossless line.

73, Walt

3241. Re: Superposition quiz

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-17 20:19:36 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <3D5EAFD8.90403@eznec.com>
Source record: 136482

Food for thought: Source reflections

Here's an insight that might help you understand forward and reflected waves a little better.

Consider a transmission line at the moment a signal is first applied. A wave will travel down the line, with voltage and current related by Vf/If = Z0. The wave hits the end of the line, and some fraction of it will be reflected. This fraction, which can also include a phase shift, is the reflection coefficient GAMMA at the end of the line. (Lower case rho is also sometimes used for the complex reflection coefficient, but it's also sometimes used for the magnitude only.) The reflection coefficient at the end of the line is determined solely by the load impedance Zl and the line's characteristic impedance Z0: GAMMA = (Zl-Z0)/(Zl+Z0). It's a simple relationship, but you have to remember that Zl can be complex and, if the line has loss, Z0 can also be complex.

If Zl isn't equal to Z0, GAMMA won't be zero, and GAMMA times the forward wave is reflected at the end of the line and travels back toward the source as a reflected wave. When it reaches the input end of the line, we've established standing waves along the line due to the interference between the forward and reverse waves. The SWR is, in fact, (1 + rho)/(1 - rho), where rho is the magnitude of the reflection coefficient GAMMA. We can also calculate an impedance V/I at any place along the line.

If the source impedance isn't the same as the line impedance, some fraction of the reverse travelling wave will be re-reflected toward the source. And now we come to the important point that I believe people often don't think about. Whatever fraction of the reverse wave is re-reflected back toward the load, GAMMA times that amount will be reflected back toward the source when it reaches the load end. So this re-reflection adds some amount (depending on the source mismatch) to the initial forward wave, and GAMMA times that amount to the reverse travelling wave. It changes both the forward and reverse travelling waves in the same proportion as the original pair of waves! So THE RATIO OF THE FORWARD AND REVERSE TRAVELLING WAVES ISN'T CHANGED BY THE REFLECTION FROM THE SOURCE. The amplitude and perhaps phase of the forward and reverse travelling waves change as re-reflections continue to occur until steady state is reached. BUT THE RATIO OF THE FORWARD AND REVERSE TRAVELLNG WAVES STAYS THE SAME AS IT WAS BEFORE ANY RE-REFLECTIONS TOOK PLACE FROM THE SOURCE. THE SOURCE MISMATCH HAS NO EFFECT ON THE RATIO OF FORWARD AND REVERSE WAVES. Therefore, the source mismatch has nothing to do with the SWR. This is something that hopefully most people know, but too many people attribute too much

importance to the source match.

If we change the source match, the magnitude and phase of the source reflections change, altering the magnitude and phase of the forward and reverse travelling waves. In other words, we're adjusting the amount of voltage and current (and therefore power) we're putting into the line. But we're not changing the SWR or the ratio of the forward and reverse travelling waves. That's determined solely by the load impedance and line Z0.

Roy Lewallen, W7EL

3242. Re: Ultimate 80/160m directional antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-17 20:36:45 UTC
From: Crazy George <munschNO@attglobal.net.SPAM>
Message-ID: <3d5eb8e5_1@news1.prserv.net>
Source record: 136483

25 acres ain't near big enough. You want a rosette of Rhombics, and if you want them to go down to 160, you'll need a couple hundred acres. Look at any of the better MOD HF comm. sites from WW2. Of course, most of yours were all aimed in the same direction.

--
Crazy George
Remove NO and SPAM from return address
Anne Bolyn <angie1@rout.co.uk> wrote in message
news:eceadf6b.0208170738.5b972291@posting.google.com...
> Hi
>
> I have access to 25 acres and want to erect the "ultimate" 160/80
directional
> antenna - either something physically rotatable or a phased array of wires
> trapsed around. Space not a problem and I have quite a few trees dotted
about
> to use if need be.
>
> I've considered buying four verticals and phasing them with one of those
switch
> boxes (can you do a similar thing with horizontal antennae?). Ground
systems
> would not be a problem. Have also seen those loops and beverage antennas.
>
> What could you reccommend please for the ultimate?
>
> 73's.

3243. New tower = many questions

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-17 21:23:27 UTC
From: JWheeler <kd5bcu@yahoo.com>
Message-ID: <ultflvos7ioe14@corp.supernews.com>
Source record: 136484

I have just become the proud new owner of about 70 feet of Rohn 45. The reason I have this new tower is that a tornado blew it over. It was the property of my local club until said tornado came through a couple of years ago and nicely deposited most of it in a stand of pine trees. There is remained until a few weeks ago. It started out as about 190 feet, but only about 150 of those could be salvaged. Another member of the club and I, being the only current club members needing towers, divided up the salvaged sections. I hope, in the next few weeks, to host a tower raising party. Before that time comes, I need to do a good deal of research. I am pretty sure there are a good number of experts who frequent this forum (good amateurs are welcome, too). All of the basic nightmares have started coming to mind now that I have it sitting in the backyard. What if it falls!!! Ok, none of that. I want to be sure to over compensate when this thing goes in. I am going to have a custom tilt-over base made since I have a friend/fellow ham who works for a local utility company and can call in a few favors with the guys at the machine shop. Why spend mega-bucks when you can have a better-than-retail version built on the cheap (maybe even free)? Right?
At any rate:
1. What do I need to look at to make sure this thing stays up until I'm ready for it to come down?
a. What dimensions do I need to start with on the hole? Ball park estimates are okay. I plan to go bigger than the average suggestions just to be sure.
b. What are some good suggestions on types of material for this custom base plate?
c. At 70 feet, does this thing need to be guyed? Please say no... my wife won't be happy if she has to look at my ugly (her words) tower AND deal with the presence of guy wires in her yard.
d. What's the easiest way to stand one of these things up?
z. What have I missed? .

I know that windload is going to be an issue. I currently have a 10 element 2 meter beam, but may add a 2nd beam to have a stacked array. I may also decide to part with both beams and opt instead for an array of stacked 4 element quads. My current HF antenna is the standard inverted-V, but I hope in the near future to add a triband beam to the mix. I will also anchor one corner of an 80 meter full wave loop on a leg of the tower. If possible, I'm going to erect this thing far enough away from the house that, if it does fall, it won't land on any structure, but as stated above, I want to be sure it won't fall from anything short of direct intervention from God.
I live in East Texas, where thunderstorms are not uncommon. High winds often accompany these storms. Then, there is the occasional tornado, such

as the one I have to thank (?) for my new tower. To the naked eye, these tower sections are in remarkable condition knowing what they have gone through. I look forward to any and all advice.

Thanks in advance,

JWheeler
KC5AV

I'm sure I've taken an ultra-simple look at this, so be gentle

3244. Re: Why God do we made soo few loop antennas ?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-17 21:25:09 UTC
From: JC <jacques.culot@skynet.be>
Message-ID: <3d5ebf38$0$217$ba620e4c@news.skynet.be>
Source record: 136485

Some loop antennas are described in ham books from ARRL, RSGB and in ham magazines. If you want you may contact me (even in french).

73, from Jacques ON5MJ.

3245. Re: New tower = many questions

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-17 22:00:07 UTC
From: Chester Alderman <calderman@cox.net>
Message-ID: <HHz79.63229$Pb.2294167@news2.east.cox.net>
Source record: 136486

JW....

Your planning on a REAL disaster, for sure. A Rohn 45 is not a small tower and the only way you can install it safely is by knowing exactly what you are doing!!!! You want it to survive strong winds; you want it to survive a tornado, yet you do not want to put guy wires on it!!!

Two things I suggest you do BEFORE you consider doing anything with those tower sections. One is to go to www.contesting.com and look in the TowerTalk reflector, read back for several months everything you can about the Rohn 45, THEN put these same questions to that very knowledgale group. Then, do not take their answers as gospil, go to the Rohn web site and read their published information on the Rohn 45.

The main point about putting up a tower is YOU NEVER DO ANYTHING EXCEPT INSTALL IT EXACTLY THE WAY THE MANUFACTURER SPECIFIES!!! Tower manufacturers had professional engineers design these things and us AMATEUR's do not know how to do it better than those engineers do. Don't go 'cheap' or one day your going to have it laying on top of your house.

Be safe, do a good job, and then enjoy your tower for a long time.

73,
Tom/W4BQF

"JWheeler" <kd5bcu@yahoo.com> wrote in message
news:ultflvos7ioe14@corp.supernews.com...
> I have just become the proud new owner of about 70 feet of Rohn 45.
The
> reason I have this new tower is that a tornado blew it over. It was the
> property of my local club until said tornado came through a couple of
years
> ago and nicely deposited most of it in a stand of pine trees. There is
> remained until a few weeks ago. It started out as about 190 feet, but
only
> about 150 of those could be salvaged. Another member of the club and I,
> being the only current club members needing towers, divided up the
salvaged
> sections. I hope, in the next few weeks, to host a tower raising party.
> Before that time comes, I need to do a good deal of research. I am pretty
> sure there are a good number of experts who frequent this forum (good
> amateurs are welcome, too). All of the basic nightmares have started
coming
> to mind now that I have it sitting in the backyard. What if it falls!!!
> Ok, none of that. I want to be sure to over compensate when this thing
goes

> in. I am going to have a custom tilt-over base made since I have a
> friend/fellow ham who works for a local utility company and can call in a
> few favors with the guys at the machine shop. Why spend mega-bucks when
you
> can have a better-than-retail version built on the cheap (maybe even
free)?
> Right?
> At any rate:
> 1. What do I need to look at to make sure this thing stays up until
I'm
> ready for it to come down?
> a. What dimensions do I need to start with on the hole? Ball
> park estimates are okay. I plan to go bigger than the average suggestions
> just to be sure.
> b. What are some good suggestions on types of material for
this
> custom base plate?
> c. At 70 feet, does this thing need to be guyed? Please say
> no... my wife won't be happy if she has to look at my ugly (her words)
tower
> AND deal with the presence of guy wires in her yard.
> d. What's the easiest way to stand one of these things up?
> z. What have I missed? .
>
> I know that windload is going to be an issue. I currently have a 10
> element 2 meter beam, but may add a 2nd beam to have a stacked array. I
may
> also decide to part with both beams and opt instead for an array of
stacked
> 4 element quads. My current HF antenna is the standard inverted-V, but I
> hope in the near future to add a triband beam to the mix. I will also
> anchor one corner of an 80 meter full wave loop on a leg of the tower. If
> possible, I'm going to erect this thing far enough away from the house
that,
> if it does fall, it won't land on any structure, but as stated above, I
want
> to be sure it won't fall from anything short of direct intervention from
> God.
> I live in East Texas, where thunderstorms are not uncommon. High
winds
> often accompany these storms. Then, there is the occasional tornado, such
> as the one I have to thank (?) for my new tower. To the naked eye, these
> tower sections are in remarkable condition knowing what they have gone
> through. I look forward to any and all advice.
>
> Thanks in advance,
>
> JWheeler
> KC5AV
>

> I'm sure I've taken an ultra-simple look at this, so be gentle
>
>

3246. Re: Superposition quiz

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-17 22:16:42 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <3D5ECB4A.9050406@eznec.com>
Source record: 136487

Food for thought: Instantaneous and average power

Power is the rate of doing work, or expending or transferring energy. Because these quantities can vary with time, power can also be a function of time. If power is used to express movement of energy (such as the power in a radiated field), a direction can also be assigned to it.

In terms of voltage and current, power is simply calculated as:

P(t) = v(t) * i(t)

where v(t) and i(t) can be any arbitrary functions of time.

We're often interested in the steady state case, where v(t) and i(t) are sine waves of the same frequency. In that case, we can represent v(t) and i(t) as:

v(t) = V * cos(omega*t + phiv)
i(t) = I * cos(omega*t + phii)

where

V = the peak (not RMS) value of the voltage
I = the peak (not RMS) value of the current
omega = 2 * pi * frequency
t = time
phiv = phase angle of the voltage
phii = phase angle of the current

Multiplying to get power,

P = V * I * cos(omega*t + phiv) * cos(omega*t + phii)

Using the trig identity

cos(a) * cos(b) = 1/2[cos(a-b) + cos(a+b)]

the power equation can be rewritten

P = (V * I)/2 * [cos(phiv - phii) + cos (2 * omega * t + phii + phiv)]

It's evident that this is the sum of two quantities,

(V * I)/2 * cos(phiv - phii), and
(V * I)/2 * cos(2 * omega * t * phii + phiv)

The first term is a constant value that doesn't vary with time. The second is a sine wave, with frequency equal to twice the frequency of v or i. So the power does change with time. If we graph it, we'll see a

sine wave (the second term above) with frequency of twice that of v or i, with an offset equal to the first term above.

Let's look at some interesting cases. If v and i are in phase, phiv - phii = 0, and the offset (the first term above) will be equal to (V * I) / 2. This will bring the entire waveform above the horizontal axis, so the power will never be negative. The power will touch zero just for an instant at the most negative part of each cycle.

If v and i are 90 degrees out of phase (it doesn't matter whether the difference is + or - 90 degrees, since cos(-x) = cos(x)), the first term will be zero. The power waveform will then be a sine wave centered around zero, and will be positive for half of each cycle, and negative for the other half. I'll talk about what this means in a moment.

If v and i are between 0 and +/-90 degrees, the first term will be positive, but not enough to bring the whole power waveform above zero. So it will be positive for most of each cycle, but negative for part.

v and i will be in phase if the load is purely resistive. That is, the impedance Z relating v and i (Z = v/i) is purely real. In that case, power always flows toward the load (actually, in the direction defined as positive for I), although its amplitude varies during the cycle.

If Z is a pure reactance like an inductance or capacitance would present, then phiv and phii would be 90 degrees apart. There's still energy flowing in the circuit, but it flows one way for half the cycle and the other way for the other half. In the case of a purely capacitive load, the energy is accumulated and stored in an electric field for half the cycle, then returned during the other half. The same thing happens with a purely inductive load, except the energy is stored in a magnetic field. It's very important to realize that power is moving back and forth in this circuit, even though it's not doing any work. Because it doesn't do work, the power in this situation is sometimes called "imaginary", "reactive", or "VAR" (volt-amp-reactive) power. But it can be calculated, detected, and measured flowing in the circuit just as surely as power that does work.

So how do we find out how much work is being done? The rigorous way is to integrate the power over the period of interest. This works for any power waveform, not just the sinusoidal steady state waveform. But a way that works as well, and amounts to the same thing, is to calculate the average power, which will be a constant value for the steady state condition if calculated over an integral number of cycles. This is multiplied by the time to get the work done or energy expended, or the net energy moved. There's a standard way to calculate the average value of any periodic waveform, and that could be done here. But for the steady state condition, a simple inspection of the two terms making up the power waveform show that the first term IS the average value. The average of the second term is zero, so it contributes nothing to the overall average. So the average power is simply

(V * I)/2 * cos(phiv - phii)

which is equal to

Vrms * Irms * cos(phiv - phii)

Notice that if the load is purely reactive, the average is zero and no work is being done. No work is done by energy that leaves the source then is returned.

Although the average power is useful in determining how much work is done, energy expended, or net energy moved, remember that it doesn't tell the whole story. Keep in mind the statistician who drowned while crossing a creek whose average depth was only three feet.

One final caution: Be careful when using phasor quantities to calculate power. Phasors are not exact representations of the corresponding time waveforms, and ~V * ~I, where ~V and ~I are phasors, is not power or any other useful quantity. Among other problems, phasors have a built in assumption that all quantities have the same frequency or are D.C. So for that reason alone there's no way to express power as a single phasor quantity or single quantity plus a D.C. term as a function of V and/or I, since V and I have different frequencies than P. It does turn out that Re{~V * ~I(conj)}, where ~I(conj) is the complex conjugate of ~I, or Re{~V(conj) * ~I} does happen to be the average power. So it's possible to calculate the average power from phasors, but not to express power as a phasor quantity in the same equation with V or I.

Roy Lewallen, W7EL

3247. Re: 'Nother question about ladderline

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-17 22:58:32 UTC
From: jgboyles@aol.com
Message-ID: <20020817185832.20933.00000825@mb-cn.aol.com>
Source record: 136488

>(1) If you need a little slack, Can you put some waves in it?

Yes. 450 ohm line as well as coax should act like a transmission line. Ideal transmission lines don't radiate, you want the antenna to do that. The reason we go to pains in the routing of 450 ohm line is to try to keep the currents balanced in the line so it will not become part of your radiating antenna. Some antenna systems depend on transmission line radiation. But your question is on routing of ladder line, route it so it won't become unbalanced and radiate. Keep it away from conducting surfaces, and don't coil it so it will couple with itself or anything else.
73 Gary N4AST

3248. Re: New tower = many questions

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-17 23:04:32 UTC
From: Fulano de Tal <therealexray@netscape.net>
Message-ID: <3D5ED680.DC895C2C@netscape.net>
Source record: 136489

JWheeler wrote:

> At any rate:
>
> a. What dimensions do I need to start with on the hole? Ball
> park estimates are okay. I plan to go bigger than the average suggestions
> just to be sure.

Later you say you want it free-standing. Depends a lot on the soil and
how much load you want to top it with. If you want your insurance
company to be happy, go by the book.

> c. At 70 feet, does this thing need to be guyed? Please say
> no... my wife won't be happy if she has to look at my ugly (her words) tower
> AND deal with the presence of guy wires in her yard.

If it were mine, yes.

> d. What's the easiest way to stand one of these things up?

Piece by piece with a gin pole and young guys doing the work.

> I live in East Texas, where thunderstorms are not uncommon. High winds
> often accompany these storms. Then, there is the occasional tornado, such
> as the one I have to thank (?) for my new tower. To the naked eye, these
> tower sections are in remarkable condition knowing what they have gone
> through. I look forward to any and all advice.

I put up two Rohn 45s in the Caribbean in 1987 that are still standing
today. 70 footers, on a hill, 4-way guying and loaded top to bottom
with heavy duty CATV antennas. One hurricane carried the 20 foot dishes
about a quarter mile away but did no more than wet the towers.
Base and all 3 guys are about 1 cubic yard of concrete which was a bit
excessive.
Only corrosion is a brown tint on the windward side of them after 15
years.

In this part of the world I wouldn't even consider non-guyed 45 because
of regular hurricanes. If you get 80+ mph winds occasionally you
shouldn't either. Tornadoes don't care...they will take down most
anything.

One comment, I'd mark the sections and sides somehow to facilitate
reassembly. It ain't gonna go back together like factory fresh
sections.

Good luck with convincing the yf that it must be guyed.

-BM

3249. Re: Map assistance required please - which type of projection for direction finding?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-17 23:24:11 UTC
From: Z <post@imaZZZZris.demon.co.uk>
Message-ID: <NzEiUKCbstX9Ewmr@imaris.demon.co.uk>
Source record: 136491

In article <ijhqlusbedvn44p8ja5asvjons32sk52j3@4ax.com>, Dan Richardson
<k6mhe@mendolink.com> writes
>Do a search for "gcmwin23 download" and you find several sites where
>you can download this fine program which does what you are looking
>for.
>
>Hope this helps.
>
>73
>Danny, K6MHE
>
Thank you

>On Fri, 16 Aug 2002 15:17:03 +0100, Z <post@imaZZZZris.demon.co.uk>
>wrote:
>
>>Which type of topographical (or is it topological?) projection of map is
>>it than can be used to plot the actual direction to somewhere?
>>
>>Or how would I calculate the direction given the map co-ordinates
>>(degN/S, degE/W) of two places. Normal plane geometry Pythagoras
>>wouldn't work, no?
>>
>>Any internet web based tools for determining positional co-ordinates and
>>direction would be useful as well.
>>
>>It's for directional aerials.
>

X-SCJM-Force-Mod: yes
X-NO-ARCHIVE: yes
--
Z
Remove Zeds in e-mail address to reply.

3250. Re: New tower = many questions

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-17 23:35:15 UTC
From: JWheeler <kd5bcu@yahoo.com>
Message-ID: <ultnd2n0tdv986@corp.supernews.com>
Source record: 136490

"Chester Alderman" <calderman@cox.net> wrote in message
news:HHz79.63229$Pb.2294167@news2.east.cox.net...
> JW....
>
> Your planning on a REAL disaster, for sure. A Rohn 45 is not a small
> tower and the only way you can install it safely is by knowing exactly
what
> you are doing!!!! You want it to survive strong winds; you want it to
> survive a tornado, yet you do not want to put guy wires on it!!!
>
> Two things I suggest you do BEFORE you consider doing anything with
> those tower sections. One is to go to www.contesting.com and look in the
> TowerTalk reflector, read back for several months everything you can
about
> the Rohn 45, THEN put these same questions to that very knowledgale
group.
> Then, do not take their answers as gospil, go to the Rohn web site and
read
> their published information on the Rohn 45.
>
> The main point about putting up a tower is YOU NEVER DO ANYTHING
EXCEPT
> INSTALL IT EXACTLY THE WAY THE MANUFACTURER SPECIFIES!!! Tower
manufacturers
> had professional engineers design these things and us AMATEUR's do not
know
> how to do it better than those engineers do. Don't go 'cheap' or one day
> your going to have it laying on top of your house.
>
> Be safe, do a good job, and then enjoy your tower for a long time.
>
> 73,
> Tom/W4BQF
>

I didn't say that I wouldn't guy it. I just said my wife would prefer not
having to look at the guy wires. I appreciate the suggestion of
contesting.com. I will dive in there immediately.

Thanks,

JWheeler
KC5AV

3251. Re: Amateur CB Radio

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-17 23:45:15 UTC
From: Uncle Peter <radioconnectionNO@cox.netSPAM>
Message-ID: <feB79.383379$DB.12822490@news1.east.cox.net>
Source record: 136492
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.dx,rec.radio.amateur.equipment

Ham radio is finally dumbed down to CJ's level!!

"CJ" <fantastic@sex.edu> wrote in message
news:ulielti83fuv6c@corp.supernews.com...
> Hello Walt,
> That is some of the very BEST Ham Radio news I have heard in a long
> time Walt. Thank you for posting it. It's going to bring many more
> people into the ranks. It also serves to establish at long last a
> "no-Morse code" license (I read about the "Morse appreciation" - test -)
> and should go a long ways to encouraging other countries to do the same.
> It is long overdue. I am also thrilled to see the new and correct
> nomenclature of "Hobby Radio" be used. Too many Hams make radio a
> religion and a life's philosophy. Especially hard-core CW advocates and
> many DX'ers. It is a "hobby" and the UK has it nailed 100% correctly.
>
> Moreover your advice to ignore and purposely not make contacts with
> any of the new license holders once they get on the air is really silly.
> It makes you look like an asshole and an old curmudgeon fuck dick. I
> hope instead the new license holders ignore "YOU". They would be far
> better off to do so and thus never have to meet you or hear your
> prejudiced views on "Hobby Radio"
>
> Have a nice day.....
>
> --
> 73 / DX de AB7SL - Charles
> AB7SL - Ham Radio Pages
> Prescott, Arizona - USA
> www.ab7sl.com
>
>
> "Walt Davidson" <walt99@tiscali.co.uk> wrote in message
> news:d0hhlu4lsn3ep483csciel3o44dtqpdd20@4ax.com...
> > The licensing authority in the UK is in the process of combining the
> > amateur radio and CB services in this country into a single, unified
> > service under the banner of "Hobby Radio". A government statistical
> > forecast published this month indicates that there is a target to
> > phase out the separate CB license completely by 2004.
> >
> > As a major step towards the unification of the two services, the
> > licensing authority, working in collusion with one of the UK's amateur
> > radio societies, has introduced a so-called "Foundation Amateur Radio
> > License". To obtain this license, which gives access to all modes on

> > all the amateur bands between 1.8 MHz and 440 MHz, with the exception
> > of the 28 MHz band, the requirement for a Morse Test has been waived
> > (in contravention of the international ITU agreement) and a minimalist
> > technical "test" is all that is required to qualify. The technical
> > test includes about twenty questions of the type, "What is the correct
> > wiring for a power plug?" and "Is resistance measured in ohms, volts
> > or amps?". Even a knowledge of Ohm's Law is deemed too advanced for
> > this class of license test. A so-called "Morse Appreciation" is
> > performed, which involves listening to individual Morse characters,
> > sent as slowly and as often as desired, and looking them up
> > individually in a textbook.
> >
> > The callsigns issued for this type of pseudo-CB license are in the
> > M3*** series. In common with other CB licensees, they are allowed to
> > use only commercially-made, type-approved equipment. This unwelcome
> > feature alone, is totally contrary to the traditional amateur radio
> > ethic of experimentation.
> >
> > If, like me, you deprecate this ultimate step in the dumbing-down and
> > devaluation of our hobby, I hope you will make your disapproval clear
> > by refraining from making contact with, or acknowledging the existence
> > of, the M3*** CB calls on the amateur bands. There is a perfectly
> > adequate Novice Licence scheme already in existence in the UK, which
> > serves as a good introductory path into the hobby.
> >
> > 73 de G3NYY
> >
> > --
> > Walt Davidson Email: g3nyy @freeuk.com
>
>

3252. Re: Amateur CB Radio

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-18 00:16:18 UTC
From: Fulano de Tal <therealexray@netscape.net>
Message-ID: <3D5EE752.51D53F22@netscape.net>
Source record: 136493
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.dx,rec.radio.amateur.equipment

Uncle Peter wrote:
>
> Ham radio is finally dumbed down to CJ's level!!

Having been in Little League Baseball, I find Charles' attitude the same
as what many parents expect. Their kids who are pitiful players are
worthy of a table full of 'participation' trophies even when they come
in last place. So whats the prize for the real winners?
This "you can be a superstar if you try" crap simply doesn't work when
you try to spread it across different disciplines. Its an insult to the
talented and a false hope to the hopeless.
Anybody who has the ambition to excel in something typically has the
talent to do so or else that ambition is short lived. You can't
legislate it by force-feeding government edicts that make them appear to
be equal.
I'm all for any free-bander who can put together a fine station and work
1000 countries without a bunch of frigging echoes, swingbacks, truck
stop chatter and all that other crap. They become hams quite naturally.
On the other hand, toads like Charles (see his pix) signing names like
"fantastic@sex" pretty much reveal his character as something you don't
want your children to encounter. He approves opening the doors simply
to accumulate a bigger corral for his deviance and you don't have to
guess very far what that might be.
-Bill
>
> "CJ" <fantastic@sex.edu> wrote in message
> news:ulielti83fuv6c@corp.supernews.com...
> > Hello Walt,
> > That is some of the very BEST Ham Radio news I have heard in a long
> > time Walt. Thank you for posting it. It's going to bring many more
> > people into the ranks. It also serves to establish at long last a
> > "no-Morse code" license (I read about the "Morse appreciation" - test -)
> > and should go a long ways to encouraging other countries to do the same.
> > It is long overdue. I am also thrilled to see the new and correct
> > nomenclature of "Hobby Radio" be used. Too many Hams make radio a
> > religion and a life's philosophy. Especially hard-core CW advocates and
> > many DX'ers. It is a "hobby" and the UK has it nailed 100% correctly.
> >
> > Moreover your advice to ignore and purposely not make contacts with
> > any of the new license holders once they get on the air is really silly.
> > It makes you look like an asshole and an old curmudgeon fuck dick. I
> > hope instead the new license holders ignore "YOU". They would be far
> > better off to do so and thus never have to meet you or hear your

> > prejudiced views on "Hobby Radio"
> >
> > Have a nice day.....
> >
> > --
> > 73 / DX de AB7SL - Charles
> > AB7SL - Ham Radio Pages
> > Prescott, Arizona - USA
> > www.ab7sl.com

3253. Re: Superposition quiz

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-18 00:19:22 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <3D5EE80A.9020909@eznec.com>
Source record: 136494

Food for thought: Waves and power

In a transmission line under steady state conditions, we can conveniently separate the voltage and current into forward and reverse travelling voltage and current waves. In actuality, electric and magnetic fields were created when power was first applied to the line, and if both source and load are mismatched, an infinite number of reflections took place from both ends of the line. And arguments can be made that fields themselves are mathematical constructs. But the simplified model of single forward travelling V and I waves and single reverse travelling V and I waves are adequate to explain virtually everything about voltage, current, impedance, and power that can be observed and measured. Hence, the model is well accepted and in general use.

The following discussion will be restricted to steady state analysis with sinusoidal voltages and currents.

The forward and reverse travelling voltage and current waves add at each point along the line. At any point 1 along the line,

```
v1 = fv1 + rv1
i1 = fi1 + ri1
```

where f and r denote forward and reverse waves respectively, and v1, fv1, rv1, i1, fi1, and ri1 are all functions of time (sinusoids). Note that when using the above formula for i1, the positive direction of current is physically the same (toward the load) for both the forward and reverse waves. With this convention, the sign of i changes when it reflects from the end of the line.

At any point along the line, we can calculate a power. We can calculate the power directly from the time functions of voltage and current. In a lossless line with resistive load, this isn't difficult, but it becomes pretty ugly in the general case where the line has loss, and reflection coefficient and line characteristic impedance can be complex. In the general case, it's not too difficult to calculate average power from phasor representations of v and i.

The power at the input of the line, or any point 1 along the line is:

```
p1 = v1 * i1
```

where all three quantities are functions of time.

"Forward" and "reverse" powers are often calculated as follows:

```
fp = fv * fi
rp = rv * -ri
```

The negative sign for ri is because of the common convention that the positive direction for the reverse power is in the direction of flow, i.e., from the load toward the source, while the convention followed for ri is from the source to the load.

Because p = v * i, and v and i are each the sum of a forward and reverse component, we can write that at any point 1,

p1 = (fv1 + rv1) * (fi1 * ri1)

and, expanding,

p1 = fv1 * fi1 + rv1 * ri1 + fv1 * ri1 + rv1 * fv1

A popular concept is to consider the "forward" and "reverse" powers as being waves travelling along with the voltage and current, and the net power being moved at any point being equal to their difference, that is,

p1 = fp1 - rp1

Substituting from equations above,

p1 = fv1 * fi1 - (rv1 * -ri1) = fv1 * fi1 + rv1 * ri1.

Unfortunately, this isn't the same result as we got by directly calculating the power from the total voltage and current at a given point -- two terms are missing. The product of the sum of the waves isn't equal to the sum of the products. The net power isn't the same as the difference between the forward and reverse powers. (Don't blow your stack yet. I said they're not the same, not that they can't be equal or nearly equal. Read on.)

If we measure i and v at the input end of the line and multiply them, the result is the power entering the line. The average value of that power is the net amount of power being delivered to the input end of the line that can do work. (From an earlier discussion, the time power waveform can include power (so-called reactive power) being pushed into the line and being returned each cycle. This power doesn't do work, and doesn't show up as part of the average.) So the actual power being delivered to the line is the power calculated by first summing the forward and reverse voltage and current waves, not the difference between the forward and reverse power. Because we can take the average of each additive term in either expression and add them to get the overall average, the same problem exists for the averages as for the time waveforms themselves.

But directional wattmeters work and give useful results. Why?

The reason is that AS LONG AS THE LINE Z0 IS ENTIRELY REAL (RESISTIVE), THE CROSS TERMS fv1 * ri1 AND rv1 * fv1 ARE EXACTLY THE NEGATIVE OF EACH OTHER AND CANCEL. This happy result occurs because of the unique relationship between the forward and reverse voltage and current waves, and between current and voltage. As long as Z0 is purely real, we can calculate the actual power flow by subtracting the reverse power from the forward power.

What happens when Z0 is complex? The cross terms are then functions of not only the phase of Z0, but also the magnitude and phase of the reflection coefficient, and the length and attenuation of the cable. So the difference between the actual power and the power calculated by subtracting "reverse" from "forward" power depends on all these quantities.

As it turns out, Z0 can be considered to be purely real in the vast majority of amateur antenna situations. Reactive Z0 is caused by high loss per wavelength. As frequency increases, wavelength decreases in inverse proportion to the frequency, but loss per unit length increases only as the square root of frequency. (This is true as long as conductor loss dominates, which is the case for coax cables with decent dielectric up to 1 GHz or higher.) So for a given cable, the loss per wavelength decreases as frequency increases. Consequently, reactive Z0 occurs at low, not high, frequencies, and is more pronounced with lossier cables. At 3.5 MHz, the impedance of RG-58 is about 50.0 - j1.2 ohms. At 1.8 MHz, it's 50.0 - 1.7. It's not likely that this amount of reactance would cause objectionable errors in power calculations. About the most extreme more-or-less practical case would be RG-174 at 1.8 MHz, which has a Z0 of about 50.4 - j5.9 ohms. That might produce a noticeable error when calculating power from forward and reverse, but this isn't a common combination of cable and frequency.

Lofers should take note, though. Below the AM broadcast band, some cables could have a significantly reactive Z0.

Directional wattmeters such as the Bird indirectly calculate the power in an internal line which presumably has a very nearly pure real Z0, so they should remain accurate even if connected lines have complex Z0.

One of my college professors made a statement that stuck with me: "Progress hasn't been set back so much by getting the wrong results with the right methods as it has by getting the right results by the wrong methods." When you subtract reverse power from forward power, be aware that you're not actually calculating the total power. You're just getting close enough for practical purposes. Usually.

Roy Lewallen, W7EL

3254. Re: New tower = many questions

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-18 00:49:47 UTC
From: 'Doc <w5lz@icok.net>
Message-ID: <3D5EEF21.F10333BB@icok.net>
Source record: 136495

JW,
I would seriously suggest that you get a copy
of Rohn's tower book/catalog. It has the information
you need to to put in your tower.
'Doc

3255. Re: Ultimate 80/160m directional antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-18 00:52:52 UTC
From: 'Doc <w5lz@icok.net>
Message-ID: <3D5EEFD9.AEC47286@icok.net>
Source record: 136496

Jeff,
Just trying to keep from having to notify the
FAA, put lights on the thing, etc. Are you saying
you wouldn't be happy with a 3 element bean for 160
at 150 feet?
'Doc

3256. Choke needed on Mosely TA33?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-18 02:05:08 UTC
From: Scott <hml59@yahoo.com>
Message-ID: <3D5F29B1.1367B94B@yahoo.com>
Source record: 136497

This group showed A3 needs choke or balun to keep RF from coming down
the cable..
Most of the beam antenna requires(?) coax choke or balun from their
manual..
But old TA33 does not require any choke or balun on the manual.. Is
there any reason?? or special Mosely design??

I acquired old TA33 form local old man and am hesitating to put coax
choke or balun..
Please let me know..
Thanks
Scott

3257. Re: Wireless cable?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-18 02:33:49 UTC
From: Crazy George <munschNO@attglobal.net.SPAM>
Message-ID: <3d5f0b91_1@news1.prserv.net>
Source record: 136498

Permutations of 802.11 at 5GHz, or even 802.11b at 2.45 GHz, but probably need to go to X-Band with a couple Gunnplexers. All ISM bands.

Now, practically, there were some products called Rabbits or some such which did exactly what he wants to do. Put the signal on a UHF channel, I think. And, if so, the FCC made them go away. I have also seen some 913 MHz ISM TV links, but they were low bandwidth, and not broadcast quality.

--
Crazy George
Remove NO and SPAM from return address
CAM <Cecil.A.Moore@ieee.org> wrote in message
news:3D5E3953.A3CB4317@ieee.org...
> The Hailo wrote:
> >
> > I'm pretty new to antennas and wireless and all that good stuff, and
> > I'm working on my first antenna right now (basic pringles can yagi
> > antenna). Anyways I was thinking...I've got digital cable running
> > downstairs, would it be possible somehow to broadcast that signal,
> > receive it upstairs, and hook it up to a TV? I don't know too much
> > about the signal inside the coaxil, ect. Anyone have any idea how/if
> > this is possible?
>
> Are there any frequencies legally available to hams or citizens that
> can carry the required bandwidth? And the cost of such a system would
> be prohibitive for most people.
> --
> cheers, CAM http://www.qsl.net/w5dxp
>
>
> -----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
> http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
> -----== Over 80,000 Newsgroups - 16 Different Servers! =-----

3258. Re: BACK TO BASICS - EM waves, E and H fields, in phase orinquadr...

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-18 02:36:58 UTC
From: Reg Edwards <g4fgq.regp@btinternet.com>
Message-ID: <ajn189pmf1@knossos.btinternet.com>
Source record: 136499

For the amount of radiation from the outside of a coax feedline connected to the centre of a balanced dipole without a balun at the junction, download program FEEDPOWR in a few seconds and run immediately.

In practical circumstances it may be less than what the old wives lose a lot of sleep about but it certainly does exist.

========================
Regards from Reg G4FGQ
FREE Radio Design Software
Go to http://www.g4fgq.com
========================

3259. Re: Wireless cable?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-18 03:05:31 UTC
From: Paul N3EOP <n3eop@arrl.or.callsign.net>
Message-ID: <Xns926DCC6358C69n3eophotmailcom@64.164.98.7>
Source record: 136500

"Crazy George" wrote:

> Now, practically, there were some products called Rabbits or some such
> which did exactly what he wants to do. Put the signal on a UHF
> channel, I think. And, if so, the FCC made them go away. I have also
> seen some 913 MHz ISM TV links, but they were low bandwidth, and not
> broadcast quality.

X10 has some products that will do exactly that, and even pass along
remote control signals in the reverse direction.

3260. Re: Tutorial #2

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-18 03:18:15 UTC
From: aunwin@fgi.net
Message-ID: <c4becf19.0208171918.7856b9d4@posting.google.com>
Source record: 136501

Richard Clark <kb7qhc@attbi.com> wrote in message
news:<nbsslu039ombp76eqcs4inuenmdrv3mnt3@4ax.com>...
> On 17 Aug 2002 07:52:40 -0700, aunwin@fgi.net (Art Unwin KB9MZ) wrote:
>
> snip
>
> > I have now achieved what I set out to do, a all round antenna that
> >can be used on small lots, rotatable, frequency variable, high
> >efficiancy
>
> which is OK as far as it goes - then
> you take another plunge:
>
> > with measurable gain over other antennas known today.
>
> Which you will be the first to admit that you have neither modeled,

No Richard, I have modeled it and it shows me that the above
statemnt is apparently correct. Field patterns appear the same also
and the curent curve shows separation and phase correction either side
of the center. The current peaks are higher than normal with center of
area of current curve further away from center as seen with normal
dual curves. But it was I that did the modeling and I am not confident
in modeling, but when built per model it worked as expected with near
impedance valuess

> had modeled, measured nor independently compared in controlled
> situations and follows from a history of similar claims later shown to
> be overstated.
Well a person on this group is going to try to do that in an amateur
format.He is presently indisposed because of family problems and
family always comes first
Controlled situations is a difficult thing for an amateur to do. And
from past experiences it would appear that there is always more
discussion regarding the
controlled circumstances in ham circles than in the antenna itself.
Elswear it seems sufficient to quote model figures and others will say
garbage in/garbage out and that may be closer to the truth with my
programing even tho the actual
antenna showed a more directional pattern than expected with a dipole
which I assume is the collinear effect. Even tho everything is
consistent with the expected I am not taking money away from anybody
with faulty claims.

But the gall is to expect and demand someone else to
> tote your water:
> > I will leave it to others to determine if the above aproach can be
> >used update the old wire antennas in the ARRL so theirain a
> >rejuvenated life.
> >I will leave that the the experts to explain in detail.
> Where you condemn working theory as regurgitation, dismiss critics as
> stupid, ignore tepid results, and whine on about how lazy those who do
> not step up to prove your claims must be. Your recruitment of help is
> seriously undercut by your backhanded thanks.
I suppose that can be considered fair comment. "Lazy" was referring to
the
the practice of reprinting from prior editions without review. Many
editions and books 'regurgitate' as it is an inexpensive way to
produce production gains.
>
> Art, you should be proud you've designed an all band antenna that at
> least does not lose anything along the way. This is no trivial task
> and is the shimmering nirvana of fractal builders. It is sufficient
> that it exhibits characteristics of a dipole/beam with a novel (or at
> least handy) method of tuning.

But Richard, don,t you think that it is a fair observation to say that
if an element produces two maxima current values along the element,
higher values than 'normal' reasonably suggests linear gain ? What is
so wrong by such a statement?
What would this suggest if gain is excluded ? What if I told you that
with using a shoter dipole (4 foot shorter per side) one can lower
the "Q" such
that it provides even shorter turning radius. If it works why kill
yourself
to prove to all why it is so when the customer is convinced that it
works?
Travelling salesmen have an old adage. When you have got the signature
stop talking and get out.

> Fluidmotion with their SteppIR is doing just this and they have no
> problem attracting customers to their booth to purchase simple beams
> of modest specification at more than ambitious prices.
> None of them
> signed on here to ask for peer review either.

I could have done that also if I was absolutely,absolutely......
sure.
But thoughts of ethics predominate what I thought was right,and was
not right, and buyers lost their money. It depends where you draw the
line, to observe common precautions, or go bankrupt in the long
process that someone such as you would desire. Personaly I was alarmed
at what could go wrong rather than thinking what money I could earn. A
business man has no such hold back viewing investment as a shared risk
which includes customers. It really comes down to what you are willing
to put at risk in the search for money. Some would call it being

chicken!
In the case of the I.R. antenna, as a mechanical engineer I would need
a bulldozer to push me forward.

Enquiries to their
> product here have been occasional but from apparently committed
> buyers. Testimonials from customers have been few, but positive.
>
> However, let me add some perspective to this;
> by their own specs, their antenna offers
> "8.8 Average Gain, Forward dBi (free space)"
> and their claim is
> "Gain that equals or exceeds that of
> antennas on much larger booms!"

I can see how they can make a claim "equal or exceeds" because
manufactures claim the 'peak gain' and ignore the fall off at the band
edges. Where-as the IR antenna can retune, so that the band edge gains
of a fixed antenna can be improved upon.They would also out perform a
trapped tri bander which is often the only antenna that some can put
into their gardens. But as an engineer I would view so many moving
parts on a tower beyond reach does not give me confidence and that is
only the mechanical aspect. But now I notice the comment
"larger booms" which I suspect they are reffering to tribanders.
Depends what they mean by "much".

>
> A simple comparison to the NBS Yagi reveals more gain at 9.68dBi (free
> space). But, hey! Who is going to quibble less than a dB difference?
> (Hardly the loser.) Similarly, who is going to withhold a chuckle
> over their claim?
I don't see how their claim can be faulted other than the lack of
knoweledge about what happens to radiating efficiency when the
radiator is reduced in
length because of the proximity of a dielectric. I asked on a magazine
site what happens in such a case and they said the dielectric can
INCREASE the efficiency.

Even then, there among the smiling is at least one
> fellow opening his wallet. In the arts (I do more than weather) this
> characteristic of the audience is known as "the willing suspension of
> disbelief."

Well I am not convinced either. I have seen so called quality tests
that were continuos in nature as opposed to 'on/off' interuptions. I
have also seen technicians have tests put into motion again,
dismissing the observation that it stopped which means 'stuck'. We
have all done things similar to this in the past
but to climb a tower to do it is more that I would want at my age.

>
> 73's

> Richard Clark, KB7QHC
As a final note, I based my claims on what I call common sense when viewing the current curves and obvious collinear gains based on my personal experience with what is at hand. If a business man can make claims based on that then could possibly an amateur make similar claims that are based on what he feels are honest observations that have not been molded by the advertising department?
If we demand total correctness, total safety, total reliability then we are in a world that cannot contiue. The 'normal' man relies on ethics and personal honesty, if we change to absolutes then this discussion group would not exist,
One posting and then all is done!!!
Can we move on and discuss the mechanics of the design as amateurs in a similar way we would discuss commercial antennas knowing that I am not persuing
commercial interests. Isn't that what hams do?
Regards
Art Unwin KB9MZ......XG.

3261. Re: Ultimate 80/160m directional antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-18 03:23:01 UTC
From: Jeff Maass <jmaass@columbus.rr.com>
Message-ID: <pqE79.19177$ja.2909010@twister.columbus.rr.com>
Source record: 136502

"'Doc" <w5lz@icok.net> wrote in message news:3D5EEFD9.AEC47286@icok.net...
>
>
> Jeff,
> Just trying to keep from having to notify the
> FAA, put lights on the thing, etc. Are you saying
> you wouldn't be happy with a 3 element bean for 160
> at 150 feet?
> 'Doc

Given the investment required to put a 3-element yagi on
150 feet of tower, lighting the tower is a trivial expense!

Even without the incredible problem of installing and
keeping such a beast operating and in the air (which
would be a full-time job), there is the problem of keeping
a rotator working for such a behemoth.

Given a choice between a ground-mounted 4-square and a
3-element 160 meter yagi at 150 feet, I'd pick the vertical
array every time, with a proper ground-mounted ground
system. W8JI's experimenting with horizontal antennas
on his 318-, 200- and 160-foot towers, comparing them
to vertical antennas on DX paths confirms the old wisdom
of using vertical(s) for DX applications.

The 3-els at 150' would be great for domestic contesting,
though, with major lobe at 90-degrees! I'd saturate a very-
productive 500-mile circle centered on me in Central Ohio.
That's the reason I have a 40 meter antenna at 35-feet for
Sweepstakes: saturate the east coast!

Use the rest of the 25 acres for phased Beverage receiving
antennas. On 160, he who *hears* best works the most DX!
--
Jeff Maass jmaass@columbus.rr.com Located near Columbus Ohio
USPSA # L-1192 NROI/CRO Amateur Radio K8ND
Maass' IPSC Resources Page: http://home.columbus.rr.com/jmaass

3262. Re: BACK TO BASICS - EM waves, E and H fields, in phase orinquadr...

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-18 03:28:42 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <3D5F146A.9020601@eznec.com>
Source record: 136503

I did a quick run with FEEDPOWR and EZNEC on the following dipole:

Length = 10.192 m
Wire dia = 2.05 mm
Feedline length = 10.9728 m
Braid diameter = 6.35 mm
Loss resistance at base of feedline = 3 ohms

FEEDPOWR reports that:

47.3% of the power is radiated from the "hot" dipole side
29.0% of the power is radiated from the "cold" dipole side
23.7% of the power is radiated from the feedline

EZNEC shows the current on the "hot" side at the center of the antenna to be 0.99 A, at the center of the "cold" side to be 0.15 A, and on the feedline, 0.86 A at the top and 0.82 A at the bottom.

If we assume that the radiated power is proportional to the square of the field strength (not at all a valid assumption, since fields can reinforce or cancel, but it's about the best we can do if we absolutely have to come up with a power), and that the field strength is proportional to the product of the current and the length of conductor the current flows on, we'd conclude from the EZNEC results that:

"Hot" side power = K * (0.99 * 5.096)^2 = K * 25.45
"Cold" side power = K * (0.15 * 5.096)^2 = K * 0.58
Feedline power = K * (0.84 * 10.9728)^2 = K * 120.40

(All wires are just about a multiple of a quarter wavelength long and the currents are sinusoidally distributed, so the current-length integral is very nearly proportional to the simple product when comparing wires.)

which leads to the conclusion that:

17.4% of the power is radiated from the "hot" dipole side
0.4% of the power is radiated from the "cold" dipole side
82.2% of the power is radiated from the feedline.

Quite a difference. Once again, I proudly place myself into your "old wives" category.

Roy Lewallen, W7EL

Reg Edwards wrote:
> For the amount of radiation from the outside of a coax feedline connected to
> the centre of a balanced dipole without a balun at the junction, download

> program FEEDPOWR in a few seconds and run immediately.
>
> In practical circumstances it may be less than what the old wives lose a lot
> of sleep about but it certainly does exist.
> ---
> ========================
> Regards from Reg G4FGQ
> FREE Radio Design Software
> Go to http://www.g4fgq.com
> ========================
>
>

3263. Re: DESPERATELY NEED HELP FROM HY-TOWER USERS!!!!!!!

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-18 05:25:00 UTC
From: w9gb <gregory.beat@attbi.com>
Message-ID: <McG79.3171$IJ.191@sccrnsc02>
Source record: 136504

There have been major changes in zoning and municipal approval laws - thanks to the cellular tower construction boom over the past 8 years.

Some of these changes were citizen demanded (I do not want that "xxx " tower in my backyard), some due to accidents or severe storm damage, others with insurance & liability concerns.

I have noted that mew cellular / PCS antennas in urban areas are now located on existing structures and buildings - with water towers being a favorite -- also sharing among the carriers of sites is becoming more commonplace. Although I see new towers along the interstate and major 2 lane state highways, I see VERY few new towers in the Chicago area (that is what zoning has changed).

w9gb

"Fractenna" <fractenna@aol.com> wrote in message
news:20020817103538.10600.00000951@mb-cr.aol.com...
> >2>
> >
> >Ed -
> >
> >I double checked with a couple of other sources. Much of your supporting
> >documentation is Rohn based (mfg. of tower) since it is their standard
tower
> >product that HyGain used as the core for this vertical.
> >
> >http://www.rohnnet.com/
> >
> >http://www.rohnnet.com/rohnnet2001/html/towersindex.html
> >
> >
> >Greg
> >w9gb
> >
> >"Ed Juge/NM" <ed@juge.org> wrote in message
> >news:3d59a5c4.0@oracle.zianet.com...
> >> Hey, guys, I appreciate your good intentions. However, only three out
of
> >a
> >> dozen or more responses were what I asked for in the message below.
The
> >> majority of others were telling me why this won't do any good or to
> >contact
> >> Hy-Gain, etc. We've already tried Hy-Gain and MFJ.

> >>
> >> Our P&Z is in a small mountain village, not a big, sophisticated city.
We
> >> have already had the "what's relevant?" conversation with the planning
> >> director and the village attorney. TESTAMONIALS ABOUT HY-TOWERS THAT
HAVE
> >> SURVIVED STRONG WINDS IS QUITE ADEQUATE FOR THEM AND WILL CARRY A LOT
OF
> >> WEIGHT.
> >>
> >> So, with all due respect... please save your opinions as to why this
> >> information is useless.
> >>
> >> Thanks... Ed, W5EJ
> >>
> >>
> >> > "Ed Juge/NM" <ed@juge.org> wrote in message
> >> > news:3d513665.0@oracle.zianet.com...
> >> > > I am in negotiations with my local planning and zoning commission
for
> >> > > authority to install a pair of Hy-Gain Hy-Towers. There are a
dozen
> >> > > residents of the area opposing them. Their main point now, other
than
> >> > > aesthetics, is that Hy-Gain's specs say 75mph wind survival and we
> >> >will
> >> be
> >> > > in an area that gets 60-70 mph winds every few years. One of my
> >> Hy-Towers
> >> > > has survived 110 mph winds, twice, but I can't prove it.
> >> > >
> >> > > If you own a Hy-Tower, and it has been through very high winds...
in
> >> > excess
> >> > > of 75 mph, PLEASE send me an email with details. It will need to
> >> include
> >> > > your name, address and phone number in case they want to verify
that I
> >> > > didn't dummy up the email.
> >> > >
> >> > > Thanks... Ed, W5EJ
> >> > > Ruidoso, NM
> >> > > Phone: 505-258-1721
>
> Isn't the issue the wind load of the verticals? The tower seems
> straightforward.
>
> The irony of all this is that its even an issue this OM has to address.
After
> all, how many home TV reception towers are out there in that neck of the

woods?
> Do they have to undergo the same scrutiny?(Not a rhetorical question: do
hams
> have to meet a different, harder, standard?)
>
> 73,
> Chip N1IR

3264. Re: Air-Wound Balun Design Info??

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-18 07:12:42 UTC
From: Roger Leone <arleoneSPAMBLOCK@inreach.com>
Message-ID: <jNH79.1772$i16.203612279@news.inreach.com>
Source record: 136505

Brian:

> Questions: Do air-wound baluns inherently have lower losses than
> ferrite core baluns particularly under high SWR conditions?

Ferrite or powdered iron cores do have some losses but choice of the right core material minimizes them. However, they are never as low loss as air. Also, air core baluns don't saturate as ferrite/powdered iron can, so you can put a lot of RF energy into them. With high SWR, I would suspect the air core balun would have an advantage.

Over what bandwidths?

Bandwidth is the advantage ferrite/powdered iron cores provide. With higher permeability material you need fewer turns of wire to get the necessary inductance for good low frequency performance, and with fewer turns of wire there is less stray capacitance to limit high freq performance. They can give over 10:1 bandwidth. But with an air core balun you should be able to cover at least a 3:1 freq range. For a single band yagi, bandwidth is no problem.

Does anyone have a source for design info for homebrewed
> 1:1 and 4:1 air-wound baluns?

I have been using an air core balun for many years. It was a Bill Orr design from one of the first issues of Ham Radio Magazine from 1968 and was designed for 80 and 40 meters. I haven't used it on 30 meters, but I am guessing it would be OK. There are 3 air core balun designs in his Beam Antenna Handbook covering .54 - 2.5 mHz, 7 - 25 mHz and 14 - 30 mHz. They are all 1:1 ratio using trifilar windings. I suspect you could omit the 3rd winding and go bifilar for 4:1 ratio with the same designs. If you want the details, let me know.

73,

Roger K6XQ

3265. Re: Tutorial #2

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-18 07:45:48 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <hckulu4k5ats4gdritnis7lrjgerfohd20@4ax.com>
Source record: 136506

On 17 Aug 2002 20:18:15 -0700, aunwin@fgi.net (Art Unwin KB9MZ) wrote:

>
>No Richard, I have modeled it and it shows me that the above
>statemnt is apparently correct. Field patterns appear the same also
>and the curent curve shows separation and phase correction either side
>of the center. The current peaks are higher than normal with center of
>area of current curve further away from center as seen with normal
>dual curves. But it was I that did the modeling and I am not confident
>in modeling, but when built per model it worked as expected with near
>impedance valuess

Art, it is all well and good that you put it to the model. If you are not the world's best, that is merely a side issue that no one will dwell on. Allowing us to see the model clears up a lot of issues. Take the small knocks and get over it - confidence comes in no other form.
>
snip

>
>But Richard, don,t you think that it is a fair observation to say that
>if an element produces two maxima current values along the element,
>higher values than 'normal' reasonably suggests linear gain ? What is
>so wrong by such a statement?

Nothing. However, when you then take the next step to proclaim it unequaled since the invention of rocket surgery....

>
>> Fluidmotion with their SteppIR is doing just this and they have no
>> problem attracting customers to their booth to purchase simple beams
>> of modest specification at more than ambitious prices.
>> None of them
>> signed on here to ask for peer review either.
>
> I could have done that also if I was absolutely,absolutely......
>sure.

Only the dead are sure.

>But thoughts of ethics predominate what I thought was right
snip

Art, like the typical engineer, you haven't the vaguest notion of how business works. A good business investor doesn't look at the specs, he looks at the niche you fill. If it means selling a dummy load on a

pole, and there is a crowd to buy them knowing full well they are dummy loads on a pole, then there is absolutely no issue of "ethics" involved. There are a bajillion reasons why a business may fail, and I have every hunch you were not a loss center. What you describe is in terms of a guilt trip, take it easy on yourself. The businessmen are professionals, and adults. They know how to take care of themselves. You would have to be an extraordinary charlatan to hoodwink them.

Let's get out of the personal side of things and get back to antennas.

>>
>> A simple comparison to the NBS Yagi reveals more gain at 9.68dBi (free
>> space). But, hey! Who is going to quibble less than a dB difference?
>> (Hardly the loser.) Similarly, who is going to withhold a chuckle
>> over their claim?
>
>I don't see how their claim can be faulted
>

Hi Art,

Their claim did not withstand a simple assault so easily arrived at. I chose the NBS yagi simply because it is in EZNEC's repertoire of example files. I could have browsed around for a better design, or one optimized to the band edges as you noted - and still bested their claim.

The point I would impress upon you is that I forgave their inflated terms because they gave me the numbers, and they look achievable (that is to say, honest). When I compared a random model against those numbers, they proved to be tepid. Again, this was for me a roundabout proof that they were not pencil whipping the specifications for bragging rights.

Once I had resolved those conflicting statements (the claim and the tepid characteristics), I then settled to judge the antenna for its other features. By virtue of their drive system, they could guarantee a match pretty much anywhere. The drive appeared to be robust, and the tubing stout. So in that regard there was quality for money. Now the only thing left that would keep me from buying one is does the technology justify the expense? I come out with a mediocre antenna, but it is simple, robust and covers every band.

And yes, Art, mediocre can be Vastly Superior under certain but common circumstances. You simply have to allow it to be uniformly mediocre. The race is not always won by the swiftest.

73's
Richard Clark, KB7QHC

3266. Re: Chip's dark side

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-18 08:19:32 UTC
From: Will White <googlyelmo@earthlink.net>
Message-ID: <3D5F58A2.F4FED6D6@earthlink.net>
Source record: 136507

Ha ha! I guess if you want to, it's your money!

"O. Epstein" wrote:

> --
>
> You need to speak to an attorney.
>
> Ask him or her whether it is copyright infringement for you to type up a copy
> of Robert Frost's 'North of Boston' and publish and distribute it on your web
> site.
>

--
Will White, KD7BFX
Seattle WA US
King County, Grid CN87tq
ITU Zone 6, CQ Zone 3
****
"The wireless telegraph is not difficult to understand.
The ordinary telegraph is like a very long cat.
You pull the tail in New York, and it meows in Los Angeles.
The wireless is the same, only without the cat."
- Albert Einstein
****

3267. Re: Why God do we made soo few loop antennas ?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-18 10:08:13 UTC
From: Adam <digipoint@hotmail.com>
Message-ID: <ajnrql$2m86$1@news.kabelfoon.nl>
Source record: 136508

Read my answer to your questions between the lines:

> Hi,
>
> Pfff.. I'm trying to find on the place dealers or manufacturers or HF
> loop antennas as my blooming (short)longwire creates severe QRM in my
> LX QTH.
>
> But browsing the web I only find 2 manufacturers : MFJ and another one
> + AEA (www.ryl.nl) but his isoloop seems discontinued.
>

The company Rys here in the Netherlands advertises that he has still an AEA Isoloop on stock.... The correct URL is www.rys.nl
AEA isoloops are not produced anymore. Also these loops are quite sensitive to weather conditions.

> So roughly there is only one available, the two models from MFJ...
>
> Is this design so bad that no other manufacturer wants to sale such
> antennas?
> Surely not.

It's a very good electrical design. Not very solid however when it comes to weather protection.

>
> So where can I find other loops ?
>

AMA antenna's Germany:
www.magneticloop.com

WIMO Germany antenna's and HAM stuff:
www.wimo.de

Ciromazzoni Italy:
http://www.ciromazzoni.com/

Check the new Magnetic Loop forum in German and English language:
http://www.magnetic-loop.de/

And of course you can make your own magnetic loop. There are many URL's where you can find instructions how to make one. Use www.google.com and check for magnetic loop.

> Thanks for comments.
>

You're welcome

> Thierry
> ONL5183

73, Adam

3268. Re: 'Nother question about ladderline

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-18 11:08:13 UTC
From: cprstn54zz@att.net
Message-ID: <3d5f7f91.23162937@news-server.optonline.net>
Source record: 136509

On Sat, 17 Aug 2002 07:27:14 -0500, CAM <Cecil.A.Moore@ieee.org>
wrote:
>As long as each turn is kept about 6 inches away from any other turn.
>Why do you need to roll it up?

I'm not sure the current location of my shack is permanent. I am
temporarily leaving some slack in my feedlines so I can relocate
without adding couplers.

Ken KC2JDY

Ken
(to reply via email
remove "zz" from address)

3269. Re: Choke needed on Mosely TA33?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-18 11:41:41 UTC
From: 'Doc <w5lz@icok.net>
Message-ID: <3D5F87E8.A004D392@icok.net>
Source record: 136510

Scott,
I wouldn't worry about a choke unless you find
you need one. If you want to add one just to be
'safe', it shouldn't do any harm. Mosely doesn't
use baluns that I'm aware of.
'Doc

3270. Re: Choke needed on Mosely TA33?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-18 11:52:24 UTC
From: Ken Ashcroft <ken@g3msw.demon.co.uk>
Message-ID: <GvQsnTA4p4X9EwWX@g3msw.demon.co.uk>
Source record: 136512

I am on my second TA33jnr. Both had baluns mounted at the centre of the
driven element.
In article <3D5F29B1.1367B94B@yahoo.com>, Scott <hml59@yahoo.com> writes
>This group showed A3 needs choke or balun to keep RF from coming down
>the cable..
>Most of the beam antenna requires(?) coax choke or balun from their
>manual..
>But old TA33 does not require any choke or balun on the manual.. Is
>there any reason?? or special Mosely design??
>
>I acquired old TA33 form local old man and am hesitating to put coax
>choke or balun..
>Please let me know..
>Thanks
>Scott
>

--
Ken Ashcroft

3271. Re: Ultimate 80/160m directional antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-18 11:53:16 UTC
From: aunwin@fgi.net
Message-ID: <c4becf19.0208180353.32b64c3a@posting.google.com>
Source record: 136511

"Crazy George" <munschNO@attglobal.net.SPAM> wrote in message Iif need be.
> >
> > I've considered buying four verticals and phasing them with one of those
> switch
> > boxes (can you do a similar thing with horizontal antennae?). Ground
> systems
> > would not be a problem. Have also seen those loops and beverage antennas.
> >
> > What could you reccommend please for the ultimate?
> >
> > 73's.

I would slow down on the thought of horizontal antennas. I seem to
remember
Tom W ?TI stating that he had a horizontal dipole at some 300 feet and
it did not beat his ground based antenna. He is considered as a very
experienced person in this field so I certainly would look him up. I
seem to remember that he also has a large tract of ground and has also
gone all out to be the best of the best
on top band. Seem to remember that he used a four square phased
verticles with a ton of radials.Either way he certainly knows what he
is talking about.
I assume that your question is relating to a transmitting antenna.
Good luck
Art Unwin...KB9MZ

3272. Re: Choke needed on Mosely TA33?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-18 12:27:58 UTC
From: k1bqt@aol.com
Message-ID: <20020818082758.19510.00001240@mb-mf.aol.com>
Source record: 136513

>I wouldn't worry about a choke unless you find you need one.<

If it's a split driven element, which I believe it is, it's good engineering practice to install one.

>Mosely doesn't use baluns that I'm aware of.<

When that antenna was built, there was less awareness of the problems associated with common-mode current on the outer shield. Hell, I used to smoke back then...but not anymore.

>If you want to add one just to be
'safe', it shouldn't do any harm.<

It needn't cost anything, either. Just coil up a few feet of cable at the feedpoint (per W7EL's recommendation in the ARRL Handbook).

Rick K1BQT

3273. Re: Tutorial #2

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-18 12:34:47 UTC
From: aunwin@fgi.net
Message-ID: <c4becf19.0208180434.744142b1@posting.google.com>
Source record: 136514

Richard Clark <kb7qhc@attbi.com> wrote in message
news:<nbsslu039ombp76eqcs4inuenmdrv3mnt3@4ax.com>...
> On 17 Aug 2002 07:52:40 -0700, aunwin@fgi.net (Art Unwin KB9MZ) wrote:
>
> snip
>
> > I have now achieved what I set out to do, a all round antenna that
> >can be used on small lots, rotatable, frequency variable, high
> >efficiancy
>
> which is OK as far as it goes - then
> you take another plunge:
>
> > with measurable gain over other antennas known today.
snip
>
> 73's
> Richard Clark, KB7QHC

Richard, allow me to have another stab at justifying gain.
The ARRL antenna book states on the Resonant Breaker which is clearly
a relative
of my antenna. It states".......loop is inductively coupled to the
parasitic conductor and is resonated to the desired frequency with a
variable capacitor.
The result is a very high impedance induced in series with the pipe,
wire e.t.c.
This impedance will block the flow of radio frequency currents.
Note it does not say that radiation took place in the coupling area
that could eventually be cancelled, it clearly said 'blocked'.
When modeling my antenna the drop of current is clearly shown.
If one assumes that the statement is correct then it is an easy step
to assume
that the energy that is not consumed in the coupling portion it will
be released
via radiation from the remaining portions of the dipole (resonator)
Thus there is a higher current flow in the remaining electrical
lengths of the dipole and thus provides for collinear gains.
The current curves created by modelling reflect both the antenna
handbooks explanation of what happens because of this coupling and
thus implies verification of my claims. I could also throw in that the
high impedance intregal with this antenna also implies high efficiency
but that can be left to later. With the above statement seemigly
satisfied I think we can say, to reflect Peter O brackets thoughts,

the antenna should also be able to be justified on mathematical terms.
Regards
Art Unwin .KB9MZ......XG

3274. Re: Air-Wound Balun Design Info??

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-18 12:53:59 UTC
From: k1bqt@aol.com
Message-ID: <20020818085359.19510.00001243@mb-mf.aol.com>
Source record: 136515

Heathkit made one back in the late 50's. Don't know if AirDux still makes bifilar air-wound inductors, but I built one of the Heathkits back in my novice days--and there was a ton of small-gauge wire in those coils. Can't imagine that would be less lossy than a fractional amount of heavier wire on a #2 core!

Rick K1BQT

3275. Re: Superposition quiz

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-18 13:31:20 UTC
From: CAM <Cecil.A.Moore@ieee.org>
Message-ID: <3D5FA1A8.BEACEB67@ieee.org>
Source record: 136516

Roy Lewallen wrote:
> So it's
> possible to calculate the average power from phasors, but not to express
> power as a phasor quantity in the same equation with V or I.

Given that power is not a phasor (no phase except direction), how
about Johnson's equation for scalar average power transmitted by a line?

P = (|E+|^2)/Z0 - (|E-|^2)/Z0 (equation 6.17)

Also P = (|I+|^2 * Z0) - (|I-|^2 * Z0)
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

3276. Re: New tower = many questions

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-18 13:34:57 UTC
From: CAM <Cecil.A.Moore@ieee.org>
Message-ID: <3D5FA281.475D9597@ieee.org>
Source record: 136517

JWheeler wrote:
> I didn't say that I wouldn't guy it. I just said my wife would prefer not
> having to look at the guy wires.

Do you think she would like gal wires better?
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

3277. Re: Wireless cable?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-18 13:41:18 UTC
From: CAM <Cecil.A.Moore@ieee.org>
Message-ID: <3D5FA3FE.D83810BC@ieee.org>
Source record: 136419

Crazy George wrote:
>
> Permutations of 802.11 at 5GHz, or even 802.11b at 2.45 GHz, but probably
> need to go to X-Band with a couple Gunnplexers. All ISM bands.
>
> Now, practically, there were some products called Rabbits or some such which
> did exactly what he wants to do. Put the signal on a UHF channel, I think.
> And, if so, the FCC made them go away. I have also seen some 913 MHz ISM TV
> links, but they were low bandwidth, and not broadcast quality.

I was assuming he wanted to route the entire bandwidth of digital TV signals
to the other location. Routing the output of the digital TV box would be
relatively simple as you say. Question is, would it be legal for a ham
to use ham frequencies for such? Then again, at 300 GHz, who would know?
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
------== Over 80,000 Newsgroups - 16 Different Servers! =-----

3278. Re: A few newbie questions please ?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-18 13:41:50 UTC
From: Floyd Sense <sentek@sprintmail.com>
Message-ID: <yuN79.10724$LO1.850009@newsread2.prod.itd.earthlink.net>
Source record: 136518

Regarding your technical questions: I suggest that you obtain a copy of the ARRL Antenna Book and the ARRL Handbook. For most of the questions you'll be generating in the beginning, the vintage of the books won't make much difference and the answers are very clearly spelled out in those publications. While you can always get concise answers to specific questions on the newsgroup, the depth of explanation is much greater in the books and the associated drawings and diagrams will help understand the concepts much better.

--
K8AC

"newsguy" <harpoon32@yahoo.com> wrote in message
news:ajjs2u01sp6@enews4.newsguy.com...
> #1 Can someone explain about 6 meter to me? On one hand I read its a
great
> band for dx etc etc, then I read its almost impossible to even use it?
> #2 I have looked at pattern plots till I am blue in the face and I
> understand what the degree points are for, but what about the db?
> #3 What in the world is a 'gamma match' ?
> #4 Doe I have to join a local club before I will be able to find an
elmer?
> Is it kosher
> to look (advertise) for one online?
> #5 Has anyone ever gone nutso trying to assimilate all this info? :)
>
>
>

3279. Re: 'Nother question about ladderline

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-18 13:46:13 UTC
From: CAM <Cecil.A.Moore@ieee.org>
Message-ID: <3D5FA525.5C73183@ieee.org>
Source record: 136420

Ken wrote:
>
> On Sat, 17 Aug 2002 07:27:14 -0500, CAM <Cecil.A.Moore@ieee.org>
> wrote:
> >As long as each turn is kept about 6 inches away from any other turn.
> >Why do you need to roll it up?
>
> I'm not sure the current location of my shack is permanent. I am
> temporarily leaving some slack in my feedlines so I can relocate
> without adding couplers.

I use automotive butt connectors to splice my ladder-line. Seems to
work quite well with the help of a few drops of solder.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

3280. Re: Superposition quiz

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-18 14:23:27 UTC
From: klocko@toad.net
Message-ID: <224d9cd4.0208180623.23032fcb@posting.google.com>
Source record: 136421

richardharrison@webtv.net (Richard Harrison) wrote in message news:<4209-3D5E6FA3-79@storefull-2397.public.lawson.webtv.net>...
> The superposition principle works for the electric power company, so
> that`s the short answer to Cecil`s question.
>
> I have only used the word "superposition" in this thread, so far, in
> quoting another`s posting. I gave an example using batteries connected
> in series aiding in response to a query about two transmitters with
> their outputs connected together. The question was: where does the power
> go?
>
> With superposition, you short out all of the energy sources, except one
> at a time, and consider circuit response to that particular energy
> source. Total response comes from adding individual responses together.
> This means there is a voltage across a resistance in a circuit which is
> the sum of the voltage drops produced by the various currents produced
> by the vartious sources, Ohm says the power in this particular
> resistance is I squared R or E squared over R.

Using Ohm's law, you would compute power from the voltage or from the current, which is what everybody else in this thread has been arguing should be done. This argument is no argument at all.

> So, power is derived from superposition as are voltage and current. Ohm
> is not violated. Power from one source adds to or subtracts from power
> supplied from other sources. Proof is in the application or removal of
> other sources. The change can be monitored in the heat produced by the
> resistor. Remember some of these sources can be d-c as well as a-c with
> no violation of superposition.

Here's part of a message I posted about a year ago:

However, superposition "is applicable only to linear responses, and the most common nonlinear response - power - is not subject to superposition. For example, consider 2 1-V batteries in series with a 1-ohm resistor. The power delivered to the resistor is obviously 4 watts, but if we mistakenly try to apply superposition we might say that each battery alone furnished 1 watt and thus the total power is 2 watts. This is incorrect."

This direct quote is from Engineering Circuit Analysis by Hayt and Kennedy. The example is for DC, but it applies to AC as well. In any event, the point is *clearly* made that 1 watt cannot be added to 1 watt and still get the correct answer.

You can insist all you want that superposition applies to power, but it simply is not true. Superposition of power is not valid.

73,
Bill N3WK

3281. Discone question

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-18 14:39:58 UTC
From: vhfradiobuff@aol.comspamsux
Message-ID: <20020818103958.20202.00001188@mb-ms.aol.com>
Source record: 136422

Yesterday I moved my VHF/UHF discone antenna. It was on top of a 15 foot mast, which was attached to a wooden fencepost on my 7' tall wooden fence, a few feet from the side of my house. It performed about as expected, able to get into repeaters 20 - 30 miles away with no problem. Yesterday I moved it on my roof, above my 2m/70cm horizontally polarized yagi (5 elements on each) and my 3 element 6m yagi. All of a sudden the receive has gone way down. A repeater about 20 miles away that used to come in at an S7 doesn't even show anything on the meter. The local repeater comes in fine, but it seems that the signal has dropped very slightly. Could the yagi's be interacting with the discone, possibly causing the signal to be reflected up and thus reducing the range of the antenna? I plan on moving the antenna back to where it was, but we're having some super hot days here in NJ so I can't get up onto the roof right now.

=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-

73! de Andy KC2SSB (ex: KF4KHC/HL9HCT)
Beachwood, NJ USA! Grid FM29vw
http://vhfradiobuff.tripod.com

3282. Re: Choke needed on Mosely TA33?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-18 14:44:29 UTC
From: w9gb <gregory.beat@attbi.com>
Message-ID: <hpO79.151079$UU1.26529@sccrnsc03>
Source record: 136423

The #827 beam balun from The Wireman is popular
http://www.thewireman.com/baluns.html

CQ 1:1 W2DU current type, 6 kW beam type in mini design, UV resistant,
weather hood.
Tape balun to boom; specify pigtails, length, or connector - priced
accordingly.
http://www.thewireman.com/prodpix2.html

w9gb

"Scott" <hml59@yahoo.com> wrote in message
news:3D5F29B1.1367B94B@yahoo.com...
> This group showed A3 needs choke or balun to keep RF from coming down
> the cable..
> Most of the beam antenna requires(?) coax choke or balun from their
> manual..
> But old TA33 does not require any choke or balun on the manual.. Is
> there any reason?? or special Mosely design??
>
> I acquired old TA33 form local old man and am hesitating to put coax
> choke or balun..
> Please let me know..
> Thanks
> Scott
>

3283. Re: New Rohn GT Series - 45G model

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-18 14:53:35 UTC
From: w9gb <gregory.beat@attbi.com>
Message-ID: <PxO79.9502$IJ.216@sccrnsc02>
Source record: 136424

Here is the Rohn web site:
http://www.rohnnet.com/

You may require building or construction permits, Rohn can supply proper assembly, installation and engineering data ... as required. NOTE: Guying for specific winds is provided in web site below (as well as all other pertinent information).

Texas Towers (dealer in your area) should be able to supply you with specific parts or accessories that you may require.
Rohn "GT series" and the "45G" model.
http://www.rohnnet.com/rohnnet2001/catalog/pdfs/45G/45gtowers.html

w9gb

"JWheeler" <kd5bcu@yahoo.com> wrote in message
news:ultflvos7ioe14@corp.supernews.com...
> I have just become the proud new owner of about 70 feet of Rohn 45.
The
> reason I have this new tower is that a tornado blew it over. It was the
> property of my local club until said tornado came through a couple of
years
> ago and nicely deposited most of it in a stand of pine trees. There is
> remained until a few weeks ago. It started out as about 190 feet, but
only
> about 150 of those could be salvaged. Another member of the club and I,
> being the only current club members needing towers, divided up the
salvaged
> sections. I hope, in the next few weeks, to host a tower raising party.
> Before that time comes, I need to do a good deal of research. I am pretty
> sure there are a good number of experts who frequent this forum (good
> amateurs are welcome, too). All of the basic nightmares have started
coming
> to mind now that I have it sitting in the backyard. What if it falls!!!
> Ok, none of that. I want to be sure to over compensate when this thing
goes
> in. I am going to have a custom tilt-over base made since I have a
> friend/fellow ham who works for a local utility company and can call in a
> few favors with the guys at the machine shop. Why spend mega-bucks when
you
> can have a better-than-retail version built on the cheap (maybe even
free)?
> Right?
> At any rate:
> 1. What do I need to look at to make sure this thing stays up until

I'm
> ready for it to come down?
> a. What dimensions do I need to start with on the hole? Ball
> park estimates are okay. I plan to go bigger than the average suggestions
> just to be sure.
> b. What are some good suggestions on types of material for
this
> custom base plate?
> c. At 70 feet, does this thing need to be guyed? Please say
> no... my wife won't be happy if she has to look at my ugly (her words)
tower
> AND deal with the presence of guy wires in her yard.
> d. What's the easiest way to stand one of these things up?
> z. What have I missed? .
>
> I know that windload is going to be an issue. I currently have a 10
> element 2 meter beam, but may add a 2nd beam to have a stacked array. I
may
> also decide to part with both beams and opt instead for an array of
stacked
> 4 element quads. My current HF antenna is the standard inverted-V, but I
> hope in the near future to add a triband beam to the mix. I will also
> anchor one corner of an 80 meter full wave loop on a leg of the tower. If
> possible, I'm going to erect this thing far enough away from the house
that,
> if it does fall, it won't land on any structure, but as stated above, I
want
> to be sure it won't fall from anything short of direct intervention from
> God.
> I live in East Texas, where thunderstorms are not uncommon. High
winds
> often accompany these storms. Then, there is the occasional tornado, such
> as the one I have to thank (?) for my new tower. To the naked eye, these
> tower sections are in remarkable condition knowing what they have gone
> through. I look forward to any and all advice.
>
> Thanks in advance,
>
> JWheeler
> KC5AV
>
> I'm sure I've taken an ultra-simple look at this, so be gentle
>
>

3284. Re: Superposition: was Re: Email to ...

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-18 14:58:12 UTC
From: klocko@toad.net
Message-ID: <224d9cd4.0208180658.a9ff31c@posting.google.com>
Source record: 136425

"Walter Maxwell" <w2du@iag.net> wrote in message
news:<qcy79.9396$LO1.730556@newsread2.prod.itd.earthlink.net>...
> "Bill Klocko" <klocko@toad.net> wrote in message
> news:224d9cd4.0208161245.a439701@posting.google.com...
> > Hi Walt,
> > The section on pages 98-101 has to do with the solution for E at some
> > distance x from the generator given in terms of Eg, Zg, and Zr. Eqn
> > 4.23 appears to be just a general expression for the voltage at an
> > arbitrary distance from the generator. Johnson's comment (p. 100) with
> > regard to Eqn 4.23 has to do with it being in the form (E+) + (E-),
> > where E+ is the net incident (forward) wave consisting of the sum of
> > all the individual waves traveling toward the load. E- is a similar
> > term for the net wave representing the sum of the waves traveling
> > (backward) toward the generator. The equation can be divided into 2
> > terms, one in e^(-gamma*X) which would be the forward voltage wave
> > component, and the other one in e^(+gamma*X) which would be the
> > backward voltage wave component.
> >
> > 73,
> > Bill N3WK
>
> Bill, I understand the -gamma and +gamma as E- and E+ respectively, but it
> is the addition of E- and E+ at points generally along the line that add at
> each point to establish the standing wave. Steve says it establishes the
> forward voltage, which is not correct.
>
> The forward voltage is determined by multiplying the source voltage by the
> square root of the forward-power increase factor, which is 1/(1 - rho
> squared), where rho is the voltage reflection coefficient of the mismatch
> terminating a lossless line.
>
> 73, Walt

Hi Walt,
I'm not going to comment on what Steve said. Like I mentioned in my
previous post, equations 4.23, 4.24, and 4.25 are just general
expressions for voltage and current at an arbitrary point on the line.
These may be used later on by Johnson in his standing wave analysis,
but there is no mention of SWR or standing waves in that whole section
spanning pages 98 to 101. In fact, standing waves aren't even
introduced until page 107. Based on what Johnson has, a term in
e^(-gamma*X) or e^(gamma*d) would be a forward wave component. 73,
Bill N3WK

3285. Re: Discone question

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-18 15:01:59 UTC
From: k1bqt@aol.com
Message-ID: <20020818110159.02311.00001386@mb-dd.aol.com>
Source record: 136426

>Could the yagi's be interacting with the discone, possibly causing the signal
to be reflected up and thus reducing the range of
the antenna?<

Very possibly, indeed. How high is the discone above the first yagi below?

Rick K1BQT

3286. Re: Tutorial #2

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-18 15:02:49 UTC
From: aunwin@fgi.net
Message-ID: <c4becf19.0208180702.6027584d@posting.google.com>
Source record: 136427

aunwin@fgi.net (Art Unwin KB9MZ) wrote in message
news:<c4becf19.0208171918.7856b9d4@posting.google.com>...
> Richard Clark <kb7qhc@attbi.com> wrote in message
news:<nbsslu039ombp76eqcs4inuenmdrv3mnt3@4ax.com>...
> > On 17 Aug 2002 07:52:40 -0700, aunwin@fgi.net (Art Unwin KB9MZ) wrote:
> >
> > snip
O.K. Richard you have had time to digest and I expect that you now
agree that:

1. The antenna is rotatable and it is frequequency changabable
using remote
control.
2.From the previous post I think we can say that we have
established that we have blocked current flow in the center of the
dipole.
Now following in the line of thinking that you are most
comfortablelet me move sideways a bit. It has been said that maximum
radiation is obtained where energy
is forced to radiate from a single point which means

di/dt = an unbelievable high number

for others that are following this is tantamount to having a sprinter
run the 100 metres in an infitesimaly short time where all his energy
is released in a short unmeasurable pulse that was formally expended
over a longer length of time
since the length of the run is physically longer than just one step.
So getting back to his original statement it means we are
pursueing a shorter time to release energy available with out having
to use a half wave
radiator. (remember, the rate of change of current flow is what
determines in the final analysis the radiation from a radiator)

Coming back to my antennaa and it to be used for 10 metres.
With a 20 metre length radiatir one can easily deduce that that there
is a normal 10 metre current curve at each side.
Now looking at one half of the antenna which is 1/2 wave element
for 10 metres we can see that we have shortened the electrical length
required because we have effectively shortened the radiator be cause
of the blocked current flow
at on end where coupling occurs.

So getting back to the simple di/dt formula by reducing the
time for
maximum energy exchanged (to radiation energy

the resultant to di/dt has increased. But we cannot create enrgy so it follows that peak current will increase which inturn gives a power gain.
Now ignoring the fact that two current maxima provides for linear gain we can see from the antenna current curve on each side that the areas under the current curves which represents energy available has changed in physical shape which correllates to an increase in radiation of each 10 metre dipole over one that stands alone.

So getting back to 'gain' over a traditional multiband antenna,
where the physical length is represented by 20 metres, half wave
we have :
1. A power gain from each individual 10 metre radiator over two separate half w3ave dipoles

2. We also further increase 'gains' because of the collinear effect,
Which ,when combined with the power gain provided by each individual
radiator it becomes obvious that gains have escalated in a large way.

So we are not looking at just 1 db gain which you have implied is a
significant improvement but much larger gains.

Reflecting back to radiation from a point. The change in effective or electrical length reflects a start in the pursuit of the final pot of gold.
I can also use a dipole radiator that is shorter in length than the standard dipole which effectively shortens 'dt' even further.
Piling on, this antenna can be made narrow banded or broad banded for a particular frequency thus focussing energy only over a band width that CW or audio would require.

So Richard I have made the above attempt to explain what happens and why . and also why I can assume that gains obtained are major compared to prior
state of the art antennas.
These are my explanations for my antenna, so naturally I should be
expected that with my lack of knoweledge with respect to I may have twisted laws enunciated by Maxwell ,Kirchoff. the Lenz guy and others
to unintended manipulation to produce what I would like to see.
Hopefully with this debate opened in a generous way by yourself, others
will be inclined to join and add comments and possibly provide the principles of this antenna to rejuvinate the standard

wire antennas shown in Antenna books and encourage hams to
re-enter the experimental side of antennas .

Have a great week end everybody.
Regards
Art Unwin KB9MZ......XG

3287. Re: Superposition quiz

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-18 15:10:40 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <3D5FB8F0.8060202@eznec.com>
Source record: 136428

Johnson's equations calculate the average power. As written, they're correct only if Z0 is purely real.

Power is a time-varying quantity. It does have frequency and time phase. (If this isn't clear, please re-read my posting.) It could be expressed as a combination of a DC term and a phasor, but I can't see of what use that would be. For one thing, it couldn't be used with voltage or current phasors in the same circuit because of the different frequencies. Average power, of course, is not time-varying in a steady state circuit.

Roy Lewallen, W7EL

CAM wrote:
> Roy Lewallen wrote:
>
>>So it's
>>possible to calculate the average power from phasors, but not to express
>>power as a phasor quantity in the same equation with V or I.
>
>
> Given that power is not a phasor (no phase except direction), how
> about Johnson's equation for scalar average power transmitted by a line?
>
> P = (|E+|^2)/Z0 - (|E-|^2)/Z0 (equation 6.17)
>
> Also P = (|I+|^2 * Z0) - (|I-|^2 * Z0)

3288. Re: Discone question

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-18 15:17:54 UTC
From: Dennis Kaylor <k4oxg@tampabay.rr.com>
Message-ID: <3D5FBA8C.F51FEB77@tampabay.rr.com>
Source record: 136429

could be if its less than 5 or 6 feet above the other antennas
also if you changed your coax it could be that as well the longer the run of coax the more loss you have in it so if you have some of that wonderfully lossy radio shack coax at 2 meters at 100 foot run you are losing over half your signal coming in and half your power going out and it gets worse the higher in freq you go
good luck

VHFRadioBuff wrote:

> Yesterday I moved my VHF/UHF discone antenna. It was on top of a 15 foot mast,
> which was attached to a wooden fencepost on my 7' tall wooden fence, a few feet
> from the side of my house. It performed about as expected, able to get into
> repeaters 20 - 30 miles away with no problem. Yesterday I moved it on my roof,
> above my 2m/70cm horizontally polarized yagi (5 elements on each) and my 3
> element 6m yagi. All of a sudden the receive has gone way down. A repeater
> about 20 miles away that used to come in at an S7 doesn't even show anything on
> the meter. The local repeater comes in fine, but it seems that the signal has
> dropped very slightly. Could the yagi's be interacting with the discone,
> possibly causing the signal to be reflected up and thus reducing the range of
> the antenna? I plan on moving the antenna back to where it was, but we're
> having some super hot days here in NJ so I can't get up onto the roof right
> now.
> =-
> 73! de Andy KC2SSB (ex: KF4KHC/HL9HCT)
> Beachwood, NJ USA! Grid FM29vw
> http://vhfradiobuff.tripod.com

3289. Re: Discone question

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-18 16:10:06 UTC
From: vhfradiobuff@aol.comspamsux
Message-ID: <20020818121006.17751.00001053@mb-fu.aol.com>
Source record: 136430

>Very possibly, indeed. How high is the discone above the first yagi below?

It's probably not even 6 inches above the yagi.
=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-
73! de Andy KC2SSB (ex: KF4KHC/HL9HCT)
Beachwood, NJ USA! Grid FM29vw
http://vhfradiobuff.tripod.com

3290. Re: Scalar Electromagnetic Weapons

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-18 16:13:12 UTC
From: "Alexander S. Wood" <alec_wood@dont.spam.me.ntlworld.com>
Message-ID: <xTP79.4290$027.15028@newsfep3-gui.server.ntli.net>
Source record: 136435
Cross-posted to: alt.ham-radio.eme,alt.ham-radio.hf,alt.ham-radio.vhf-uhf,alt.radio.scanner,alt.radio.scanner.uk,rec.radio.amateur.antenna,rec.radio.amateur.misc,rec.radio.scanner,uk.radio.amateur,uk.rec.radio.cb

Wow. I never knew that every single evemt involving a US military or NASA vehicle was the result of those pesky Russians. Not only that, but every "natural" phenomenon such as earthquake, flood etc too. Me, I'd love to know how a country that cannot even afford to pay it's military personnel can afford the electricity.

You missed out some other "proven" attacks of Russian EM weapons - what about the storms, hurricanes and bad winter snows - obviously EM weapons in "climate-change" mode.

I am also quite prepeared to believe that the election of "Dubbya" was the result of some kind of foreign interference, maybe EM directed brainwashing or mind-control.

By the way, if it's all these pesky Ruskies doing this EM stuff, then what is that great big array in Alaska irradiating the atmosphere for? Peaceful climnate study, I think not!

Alec

"N W O" <ham mer@bigfoot.com> wrote in message
news:28sulu8c5b0sbgkllil092e2l9bv3nn543@4ax.com...
>
> http://216.247.92.101/pub/bearden/iraq.htm
>
>
> by Bill Morgan
>
> Source material: Scientist Tom Bearden, Chenier.Org
>
> Scalar Potential Interferometers
> "Tesla Howitzers"
> With the Bush people rushing us toward war it is important for everyone to
<snip>

3291. Re: Ultimate 80/160m directional antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-18 16:22:45 UTC
From: "Alexander S. Wood" <alec_wood@dont.spam.me.ntlworld.com>
Message-ID: <yTP79.4291$027.15028@newsfep3-gui.server.ntli.net>
Source record: 136433

I'm sure "Fractenna" will be able to come up with a good design here. How about 6 inches of wire bent into a pretty snowflake shape. Four of these "ultimate" antennas would give you directionality with proper switching and phasing. Best thing is though the enormous bandwidth would allow you to operate all over both bands without a tuner.

Then you can turn the other 24.99 acres into a nice flower garden.

Alec

"Anne Bolyn" <angie1@rout.co.uk> wrote in message news:eceadf6b.0208170738.5b972291@posting.google.com...
> Hi
>
> I have access to 25 acres and want to erect the "ultimate" 160/80 directional
> antenna - either something physically rotatable or a phased array of wires
> trapsed around. Space not a problem and I have quite a few trees dotted about
> to use if need be.
>
> I've considered buying four verticals and phasing them with one of those switch
> boxes (can you do a similar thing with horizontal antennae?). Ground systems
> would not be a problem. Have also seen those loops and beverage antennas.
>
> What could you reccommend please for the ultimate?
>
> 73's.

3292. Re: Air-Wound Balun Design Info??

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-18 16:24:05 UTC
From: Irv Finkleman <finkirv@shaw.ca>
Message-ID: <3D5FCA13.F3597872@shaw.ca>
Source record: 136431

Brian Kelly wrote:
>
> Many years ago I had a Heath air-wound 1:1 balun attached to the boom
> of my 20m Hy-Gain 204BA yagi which fed the Beta match. The Heath
> enclosure was huge, about 10 x 10 x 4, the bifilar wound coils were
> maybe 3 inches in diameter and could handle mutiple kilowattts over
> the entire HF spectrum as I recall. Looked like they were custom-wound
> by B&W. The antenna worked quite well. It seems to me I could wind a
> balun with enameled copper wire around maybe 1 inch PVC pipe as a much
> more compact "QRP version" of the Heath balun.
> >
> >
> Questions: Do air-wound baluns inherently have lower losses than
> ferrite core baluns particularly under high SWR conditions? Over what
> bandwidths? Does anyone have a source for design info for homebrewed
> 1:1 and 4:1 air-wound baluns?
> >
> >
> Thanks, Brian w3rv

There are a number of examples in the RSGB AntennaBook
by Moxon (HF Antennas for all Locations).

--
Diagnosed Type II Diabetes March 5 2001
Beating it with diet and exercise!
297/215/210 (to be revised lower)
58"/43"(!)/44" (already lower too!)

Visit my FINALLY UPDATED website at
http://members.shaw.ca/finkirv/

Irv Finkleman,
Grampa/Ex-Navy/Old Fart/Ham Radio VE6BP
Calgary, Alberta, Canada

3293. Re: Tutorial #2

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-18 16:24:44 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <ipivlu08hsojduckrdlbkkmd2jv3uosrvh@4ax.com>
Source record: 136432

On 18 Aug 2002 08:02:49 -0700, aunwin@fgi.net (Art Unwin KB9MZ) wrote:

>aunwin@fgi.net (Art Unwin KB9MZ) wrote in message
news:<c4becf19.0208171918.7856b9d4@posting.google.com>...
>> Richard Clark <kb7qhc@attbi.com> wrote in message
news:<nbsslu039ombp76eqcs4inuenmdrv3mnt3@4ax.com>...
>> > On 17 Aug 2002 07:52:40 -0700, aunwin@fgi.net (Art Unwin KB9MZ) wrote:
>> >
>> > snip
>O.K. Richard you have had time to digest and I expect that you now
>agree that:
>
> 1. The antenna is rotatable and it is frequequency changabable
>using remote
>control.

Granted

> 2.From the previous post I think we can say that we have
>established that we have blocked current flow in the center of the
>dipole.

Nope. What you describe may occur, but not in every band. This is
the failure of your enthusiasm: find the best and apply it with a
broad brush painting everything sky blue. When obvious flaws are
exposed beneath this veneer of color, the whole work becomes suspect.

snip
> Coming back to my antennaa and it to be used for 10 metres.
>With a 20 metre length radiatir one can easily deduce that that there
>is a normal 10 metre current curve at each side.
> Now looking at one half of the antenna which is 1/2 wave element
>for 10 metres we can see that we have shortened the electrical length
>required because we have effectively shortened the radiator be cause
>of the blocked current flow

You are describing the isolation of elements common to the discussion
of traps. OK, you don't have traps, but then neither does the
standard dipole you replaced that has identical characteristics. So,
in fact you have "done" nothing because it is the natural tendency of
the radiator to act this way in the first place. Don't take credit
for mother nature, Art.

snip
>
> So we are not looking at just 1 db gain which you have implied is

>a
> significant improvement but much larger gains.

No Art, you have not shown this at all. Adept modelers have in fact proven that what you describe "is no different" from the structure it replaces. I must presume that through your refusal to share your modeling that this characteristic you ascribe to your design is flawed. As you have already admitted to being a poor modeler and still show no inclination to seek improvement - No, your design does not exhibit the gain you claim.

73's
Richard Clark, KB7QHC

3294. Re: Why God do we made soo few loop antennas ?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-18 16:29:12 UTC
From: Irv Finkleman <finkirv@shaw.ca>
Message-ID: <3D5FCB45.9E108946@shaw.ca>
Source record: 136434

Thierry wrote:
>
> Hi,
>
> Pfff.. I'm trying to find on the place dealers or manufacturers or HF
> loop antennas as my blooming (short)longwire creates severe QRM in my
> LX QTH.
>
> But browsing the web I only find 2 manufacturers : MFJ and another one
> + AEA (www.ryl.nl) but his isoloop seems discontinued.
>
> So roughly there is only one available, the two models from MFJ...
>
> Is this design so bad that no other manufacturer wants to sale such
> antennas?
> Surely not.
>
> So where can I find other loops ?
>
> Thanks for comments.
>
> Thierry
> ONL5183
> http://www.astrosurf.com/lombry/menu-qsl.htm

It's very easy to homebrew your own small loop.
That may be why so few manufacturers produce
them. MFJ caters to the gullible few IMHO.

I have an old MFJ, but only because the remote
controller had been damaged -- I got it for
$100 Canadian, and repaired the controller in
short order (dirty switches). If you want to
build your own for a specific frequency it is
quite simple as you use a piece of coax for the
capacitor and just cut it to length. If you are
lucky, you may just find a good hi voltage variable
somewhere at a good price.
--
Diagnosed Type II Diabetes March 5 2001
Beating it with diet and exercise!
297/215/210 (to be revised lower)
58"/43"(!)/44" (already lower too!)

Visit my FINALLY UPDATED website at

http://members.shaw.ca/finkirv/

Irv Finkleman,
Grampa/Ex-Navy/Old Fart/Ham Radio VE6BP
Calgary, Alberta, Canada

3295. Re: Scalar Electromagnetic Weapons

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-18 16:31:12 UTC
From: Larry Gadbois <lgadbois@earthlink.net.nospam>
Message-ID: <kZP79.10751$I6.911255@newsread1.prod.itd.earthlink.net>
Source record: 136436
Cross-posted to: alt.ham-radio.eme,alt.ham-radio.hf,alt.ham-radio.vhf-uhf,alt.radio.scanner,alt.radio.scanner.uk,rec.radio.amateur.antenna,rec.radio.amateur.misc,rec.radio.scanner,uk.radio.amateur,uk.rec.radio.cb

This is non-scientific nonsense!

--
Larry

Remove ".nospam" from address to reply

****
"N W O" <ham mer@bigfoot.com> wrote in message
news:28sulu8c5b0sbgkllil092e2l9bv3nn543@4ax.com...
>
> http://216.247.92.101/pub/bearden/iraq.htm
>
>
> by Bill Morgan
>
> Source material: Scientist Tom Bearden, Chenier.Org
>
> Scalar Potential Interferometers
> "Tesla Howitzers"
> With the Bush people rushing us toward war it is important for everyone to
> realize the true and rather frightening possibility that this war will
involve
> the use of scalar electromagnetic weapons, by any of a number of
possessors of
> such weapons. They are called "Longitudinal Wave Interferometers," or
"Tesla
> howitzers", and use longitudinal (LW) electromagnetic (EM) waves to
accomplish
> true action-at-a-distance.
>
> These are the weapons Khrushchev spoke of 40 years ago, when he declared:
>
> "We have a new weapon, just within the portfolio of our scientists, so to
speak,
> which is so powerful that, if unrestrainedly used, it could wipe out all
life on
> earth. It is a fantastic weapon." Khrushchev, to the Presidium, Jan. 1960
>
> These are also the weapons referred to in 1997 by Defense Secretary
William
> Cohen, when he said:
>

> "Others [terrorists] are engaging even in an eco-type of terrorism whereby
they
> can alter the climate, set off earthquakes, volcanoes remotely through the
use
> of electromagnetic waves... So there are plenty of ingenious minds out
there
> that are at work finding ways in which they can wreak terror upon other
> nations...It's real, and that's the reason why we have to intensify our
[counter
> terrorism] efforts." - Defense Secretary William Cohen, 1997
>
> One of the leading experts in the new science of scalar electromagnetics
is
> scientist Thomas E. Bearden, and he has published many papers at his
website
> Cheniere.Org. In a letter to a writer named "Russell" (Correspondence
section)
> Bearden says,
>
> "In short, Russell, the Secretary of Defense of the United States
confirmed that
> there are indeed novel kinds of EM weapons, right now and have been for
some
> time, which have been and are being used to (1) initiate earthquakes, (2)
> engineer the weather and climate, and (3) initiate the eruption of
volcanoes. We
> wrote about those exact uses of the weaponry decades ago. Several nations
now
> have such weapons. Three of them (two on one side and the other on a
hostile
> side) are even firing practice shots into Western Australia, as a
convenient
> test range."
>
> http://www.earthchangestv.com/ufo/0209gandor.htm
>
> At Cheniere.org one can find Bearden's 1990 paper Historical Background of
> Scalar EM Weapons and see that certain possessors of these new
superweapons have
> been developing them for several decades now. He traces the clandestine
> development through the sightings of anomalous phenomena all around the
globe,
> by the statements Soviet leaders have made, and by the development of a
new
> electromagnetic theory which restores certain "lost equations" which had
been
> thrown out long ago in an attempt to "simplify things." Apparently the
Russians
> were the first to restore the lost equations which uncover the domain of
scalar

> electromagnetics.
>
> The new Scalar Electromagnetic weapons utilize a new type of
electromagnetic
> waves called "longitudinal waves" or "scalar waves." They are called by
other
> names, as Bearden points out:
>
> "We now visualize the formation of waves of pure stress in the spacetime
medium
> (in the vacuum). These we call scalar EM waves, Tesla waves,
> electrogravitational waves, longitudinal EM waves, waves of pure
potential,
> electrostatic/magnetostatic waves, and zero-vector EM waves. All these
terms are
> synonymous. Each sheds its own particular light upon the nature of these
waves
> or of their original discoverer, Nikola Tesla." Tom Bearden
>
> http://www.cheniere.org/books/ferdelance/s23.htm
>
> So there are a number of names for these newly discovered waves.
>
> The big Tesla howitzers are aimed at their targets by using a worldwide
> electromagnetic pattern called the "Woodpecker Grid," begun by the
Russians in
> 1976. You can even "hear" the Woodpecker Grid at Bearden's website.
>
> Several times during the Cold War the Russians tried to get an agreement
on
> limiting the use of these weapons, which Brezhnev said were "more terrible
than
> anything the world has known." And at that time, Bearden points out,
nobody in
> the West even knew what they were talking about.
>
> The "Fer de Lance" Briefing
>
> In his briefing "Fer de Lance" Slides 66-71. Bearden describes what it
would be
> like to operate one of these longitudinal wave interferometers and aim it
at
> place on earth using the Woodpecker Grid. By placing a "marker beacon" at
that
> target location (the glowing orbs of plasma that are being sighted all
around
> the world) the system can "read" the location of the target area and
obtain
> pin-point targeting. The "Fer de Lance" briefing is a must read for anyone
> wanting to know what is really going on in our world today. It is a set of

> graphics slides with Bearden's explanations.
>
> Instantaneous effect
>
> It is hard to imagine, but a strike with longitudinal wave weapon is
> instantaneous as the scalar waves do not go through our "3-space" world,
but
> around it. As Bearden puts it:
>
> "... it is possible to focus the potential for the effects of a weapon
through
> spacetime itself, in a manner so that mass and energy do not "travel
through
> space" from the transmitter to the target at all. Instead, ripples and
patterns
> in the fabric of spacetime itself are manipulated to meet and interfere in
and
> at the local spacetime of some distant target. There interference of these
> ripple patterns creates the desired energetic effect (hence the term
energetics)
> directly in and through the target itself, emerging from the very
spacetime
> (vacuum) in which the target is imbedded at its distant location." Bearden
> Fer-de-Lance
>
>
> What Can These New Superweapons Do?
>
> 1. Exothermic mode
> In what is called an "exothermic mode" the howitzers can cause a blast of
heat
> at the interference zone, an explosion of near-nuclear proportions. It
could
> topple buildings and cause other destruction. Or it could be set wide and
heat
> the atmosphere in that region. Or it could be set to simply destroy all
> electronics in that interference (target) zone, or to destroy the hubs of
the
> electric power grids of a very wide area. Although it seems unbelievable,
the
> actual energy of the blast is not traveling through space to hit the
target, but
> actually being made to emerge from the local vacuum in the interference
(target)
> zone.
>
> Using the exothermic mode it is possible to make any airplane drop from
the sky,
> anywhere. It is possible to destroy any missile, in its flight path or in
its

> silo. Bearden sites many instances of downed planes he believes were tests
of
> the scalar weapons. (Gandor, Newfoundland)
>
> "The Woodpecker grid/howitzer weapon system can be placed over the ocean
and
> used against cruise missiles, naval surface-to-air and surface-to-surface
> missiles, submarine-launched ballistic and cruise missiles, etc. Placed
over a
> carrier task force, it can also take care of the aircraft launched by the
> carrier as fast as they are launched. It can also handily take care of the
> missiles launched by guided-missile cruisers of the accompanying task
force."
>
> (Bearden http://www.cheniere.org/books/ferdelance/s65.htm)
>
> Here is a slide which shows the exothermic mode of action.
>
> 2. Endothermic mode
> In a second howitzer mode called the "endothermic" mode, the howitzer
sucks
> energy out of the target area, essentially creating a blast of cold at the
> distant target. It is even capable of freezing parts of the ocean. Bearden
gives
> a number of cases where these "cold explosions" have been witnessed,
mostly by
> airline pilots. April 9, 1984: 1 2 3) A huge mushroom cloud of mostly
water
> is seen rising miles into the sky from out of the ocean, an awesome sight.
>
> In the endothermic mode the sucked-out energy must go somewhere, so it is
vented
> out at some other chosen spot on the earth. These endothermic plumes have
been
> photographed by satellite.
>
> Bearden envisions the use of cold explosions in a scalar war:
>
> "Cold explosions can be used to freeze tanks, personnel, and equipment.
The
> equipment and tanks thaw out. The personnel thaw out too, but they are
dead when
> they do." Bearden, Fer-de-Lance
>
> Starting with this slide from Fer de Lance you can see a number of
sightings of
> giant mushroom clouds of water vapor which Bearden believes were created
by the
> Russians testing the howitzers in endothermic ("cold explosion") mode.
(Keep

> clicking "Next Slide").
>
> In another slide the endothermic mode of operation is shown.
>
> 3. "Mindsnapper" mode
> In a third and very terrifying mode the longitudinal wave patterns can be
> adjusted to affect the human mind. Bearden has dubbed this mode the
> "Mind-snapper" mode. Use of scalar waves in this mode is also called
> "psychoenergetics" or "psychotronics." At low power the mind-snapper
causes
> everyone in the interference zone to fall unconscious. At high power the
> mind-body connection is "snapped" and instant death occurs. Bearden
describes
> the manner of death:
>
> "Those hit by the scalar EM weapon, however, have a most peculiar death
mode.
>
> "Death comes-instantly and totally. There is no convulsion, no response.
The
> entire nervous system is destroyed instantly. Every living cell in the
body is
> killed instantly, including all bacteria, germs, etc.
>
> "A body hit with this thing falls like a limp rag and lies where it falls.
It
> doesn't decay in even 30-45 days. In a macabre fashion, it's been reduced
to
> something like food irradiated with nuclear radiation; everything is
killed, so
> the material is preserved for an extended period before any decay can set
in."
>
> http://www.cheniere.org/books/ferdelance/s81.htm
>
> In psychoenergetics mode the weapons can also induce a kind of hypnogogic
trance
> in the minds of anyone in the target zone. It this involuntary trance
state
> one's mind would be completely open to suggestions and orders. Bearden
believes
> that this is what happened in the case of one Captain Button who
inexplicably
> flew his A-10 Warthog airplane into a mountain was a test of the scalar
weapons,
> taking over a man's mind and controlling him from a distance.
>
> "Remember Captain Button, flying his A-10 Warthog toward the range,
suddenly
> peeled away from his companions and flew off cross country for over an

hour? He
> ignored all radio messages, circled at one point (probably dropped his
ordnance
> there), then flew until he crashed into the side of a mountain and was
killed.
>
> "That was a deliberate test in the mid-U.S. to demonstrate that a human
could be
> controlled for one hour, while doing a technical set of tasks (flying an
> airplane), in a hypnogogic state, successfully. The test was a total
success."
>
> http://www.cheniere.org/misc/time.htm
>
> 4. Earthquake/Weather mode
>
> As Secretary of Defense William Cohen pointed out, these same longitudinal
wave
> interferometers can be used to create earthquakes in the distant target
zone, as
> well as tornados and other storms, and the precipitation of volcanic
eruptions.
> Weather can be manipulated by using the exothermic mode to heat the
atmosphere
> in one place, and using endothermic mode to cool the atmosphere in another
> place. Even the jet stream can be pulled this way and that by these
actions.
>
> Anyone one who keeps watch of the weather radar date from an unretouched
source
> like weatherTAP will have seen many anomolies which MAY indicate hits by
the
> howitzers. According to Bearden the Russians (KGB) have been manipulating
> weather over North America for decades. Cheniere.Org has a number of
pictures of
> such radar anomolies, as well as some unusual cloud formations which,
Bearden
> says, MAY be showing the effects of the scalar wave patterns traveling the
> channels of the Woodpecker Grid. Keep your eyes on the skies.
>
> 5. Death Ray
>
> Nikola Tesla had envisioned a "Death Ray," and now it is a reality.
>
> "Those hit by the scalar EM weapon, however, have a most peculiar
deathmode.
>
> "Death comes - instantly and totally. There is no convulsion, no response.
The
> entire nervous system is destroyed instantly. Every living cell in the

body is
> killed instantly, including all bacteria, germs, etc.
>
> "A body hit with this thing falls like a limp rag and lies where it falls.
It
> doesn't decay in even 30-45 days. In a macabre fashion, it's been reduced
to
> something like food irradiated with nuclear radiation; everything is
killed, so
> the material is preserved for an extended period before any decay can set
in."
>
> http://www.cheniere.org/books/ferdelance/s81.htm
>
> "Ordinary" Warfare Obsolete
>
> Warfare has been changed forever by the development of these scalar energy
> longitudinal wave howitzers. Remember, the power for these weapons comes
from
> the time domain, longitudinal EM waves in the vacuum of empty space, and
the
> power is tremendous and mind-boggling. Being able to blast away at any
target
> from a distant control booth is something that has never happened before.
This
> is incredible power to be in control of and it divides the history of
weaponry
> into "before" and "after." And the destructive power of these weapons is
> delivered instantaneously to the target from the local vacuum at the place
of
> the target.
>
> Bearden describes how the old-style machinery of war has been made
obsolete.
> Planes can be dropped to the ground, tanks are obsolete. Bearden says of
the
> whole "Star Wars" defense system (SDI) : "It's obsolete to Soviet scalar
EM
> weapons that are already deployed and operationally tested in place!"
>
> "Interference phenomena are key. One can get action at a distance -- even
over
> hundreds of thousands of kilometers.
>
> "One can engineer gravitational and inertial effects.
>
> "One can engineer the nucleus, including transmute it, easily and cheaply.
One
> could clean up all the nuclear wastes. Electromagnetic energy can be
produced at

> a distant target, or extracted from a distant target. This is not energy
> transmission through space in the form of EM force fields. Instead, it is
> transmission through spacetime in the form of electrogravitational
potentials.
> Conventional EM shielding is ineffective against scalar EM."
>
> http://www.cheniere.org/books/ferdelance/s104.htm
>
> The fact that these weapons can transmute atoms means they can have a
metal
> softening effect, leaving one to wonder if it were a clandestine use of a
scalar
> interfermeter which brought down the Twin Towers. We may never know, since
THAT
> evidence was so quickly destroyed without study.
>
> Tesla Domes
>
> The Tesla howitzers can be used in a nearly impregnable defensive mode
whereby
> they throw up a dome (Tesla Dome) or a sphere (Tesla Globe) of highly
powerful
> electromagnetic energy, enough to "dud" or destroy missiles which try to
> penetrate them. Once again, this energy is not going through space from
the
> howitzer, but being made to emerge from the local vacuum at the location
of the
> shell. KGB tests of these domes have been witnessed by airline pilots
around
> the world. Bearden gives many examples of the Tesla domes being sighted
around
> the world in his briefing paper "Fer-de-Lance." (Russian dome test,
another
> globe incident, yet another globe test). These giant electromagnetic domes
can
> be hundreds of miles across, or narrowed down more to total
impermeability.
>
> By using nested domes one can protect the domed area even against nuclear
> radiation itself. Tesla globes can be used to hit airborne targets by
simply
> placing a globe of any chosen size in the flight path of the incoming
missile.
> It does double duty because the missile hits it going in, and then the
rubble
> hits it again going out the other side.
>
> Bearden cites a number of examples of these domes being tested around the
world:
> March 20, 1969 | March 24, 1977 | August 17, 1980 | June 17, 1966 | June

18,
> 1982 June 22, 1976
>
> So while the Russians have arrived at a near perfect missile defense, the
West
> is still messing around trying to hit an incoming missile with another
missile.
>
>
> Vulnerabilities
>
> Bearden lists some of the vulnerabilities the new weapons create:
>
> "Almost every weapon system we presently have -- or are developing -- is
totally
> vulnerable to scalar EM weaponry.
> This includes personnel, electronics (including fuzing and
warhead),
> explosives, propellants, fuels, ordnance, ships, submarines, torpedoes,
> aircraft, helicopters, missiles, drones, rockets, tanks, armored vehicles,
> weapons carriers, self-propelled and towed artillery, communications, [see
also]
> satellites, radars, command and control, directed energy weapon systems,
> surveillance and sensor systems, mines, artillery rounds and ammunition,
nuclear
> warheads, etc.
> We are in dire straits. We need a "Manhattan Project" of the
highest
> priority. Now!
> The Soviets have already had the equivalent of seven or eight
Manhattan
> Projects in this area."
>
> http://www.cheniere.org/books/ferdelance/s105.htm
>
>
> Crop circles, Glowing Orbs, and Scalar Interferometers
>
> Scalar interferometry may explain many unusual phenomena that are being
sighted.
> Two immediately come to mind, the glowing orbs that are being seen in the
skies
> around the world, and the crop circles. Both phenomena could be easily
> accomplished with the new scalar superweapons. Balls of plasma flying
through
> the sky at phenomenal speeds may well be the "marker beacons" of the
scalar
> weapons. Marker beacons are created for fine tuning the aiming of the
devices.
> Air Force jets were recently sent aloft from Edwards AFB to chase two just

> glowing orbs. After chasing them a while, the orbs simple vanished. That
is to
> say, the scalar beams creating the orb were turned off.
>
> By feeding a graphic pattern into the aiming software such a plasma ball
could
> be made to trace out that pattern, at the distant interference zone
(target
> zone), making the standing crops fall over, creating a crop circle.
Remember
> there are many modes and effects of these weapons. They are really the
> engineering of reality itself.
> Summary
>
> If Tom Bearden's information is correct then we will have to reexamine
world
> affairs in a new light, seeing the maneuvering of those forces who possess
the
> new weapons. For one thing, there is no defense against such weapons other
than
> having the weapons oneself. And it would appear that Russia (actually the
KGB)
> is the most advanced in the development of these weapons, at least
according to
> Tom Bearden, who has briefed the U.S. Military on these issues a number of
> times.
>
> With the Bush cabal about to attack Iraq, against the objection of nearly
the
> entire rest of the world, one has to wonder if we are about to see the
world's
> first overt scalar war.
>
> If the U.S. is to prevail in that attack, it can only be with the tacit
> permission of the Russian possessors of this technology, for they could
easily
> cause any sky or land attack to fail. They could drop the warplanes out of
the
> sky, cause tanks and all communications to fail, cause whole battallions
to drop
> dead like limp rags. If they wanted to they could put up a Tesla dome over
> Baghdad that would be impenetrable to missiles, planes and bombs.
>
> Won't it just be too tempting for some possessor of this technology to try
turn
> the tide of the coming war with longitudinal wave interferometers? And
will that
> lead to an all out war with these same weapons? The world's first scalar
> electromagnetic war? Or will restraint be shown, by all possesors of these
> weapons, allowing an old-fashioned war to proceed in the old-fashioned

way?
>
>
> The devices called "Tesla howitzers" can be put to a myriad of peaceful
uses,
> including reversing global warming (vent the heat to outer space), and
preparing
> a surefire means of preventing any asteroids from hitting the earth.
>
> Bearden says that the Russian possessors of these devices must surely have
> understood that the devices could wipe out all life on earth, even
upsetting the
> scalar balance of earth and sun resulting in large storms on the sun. They
can
> also backfire on the user of them:
>
> "Perhaps with the free and open release of Tesla's secret, the scientific
and
> governmental bureaucracies will be shocked awake from their slumber, and
we can
> develop defenses before Armageddon occurs. Perhaps there is hope after
all --
> for even Brezhnev, in his strange July, 1975 proposal to the SALT talks,
seemed
> to reveal a perception that a turning point in war and weaponry may have
been
> reached, and that human imagination is incapable of dealing with the
ability to
> totally engineer reality itself.
>
> "Having tested the weapons, the Soviets must be aware that the
ill-provoked
> oscillation of timeflow affects the minds and thoughts -- and the very
> lifestreams and even the collective species unconsciousnesses -- of all
> lifeforms on earth. They must know that these weapons are two-edged
swords, and
> that the backlash from their use can be far more terrible to the user than
was
> the original effect to his victim.
>
> "If we can avoid the Apocalypse, the fantastic secret of Nikola Tesla can
be
> employed to cure and elevate man, not kill him. Tesla's discovery can
eventually
> remove every conceivable external human limitation. If we humans ourselves
can
> elevate our consciousness to properly utilize the Tesla electromagnetics,
then
> Nikola Tesla -- who gave us the electrical twentieth century in the first
place

> -- may yet give us a fantastic new future more shining and glorious than
all the
> great scientists and sages have imagined."
>
> http://www.cheniere.org/books/part1/teslaweapons.htm
>
> The secrecy with which this technology has been held from the human race
can
> only be called a crime again humanity. Instead of using these incredible
new
> discoveries for good, for free energy, and for healing, shadowy groups
around
> the world have used the technology to make terrible weapons of war such as
the
> earth has never dreamed of.
>
> A final word from Tom Bearden:
>
> "The "terror" in the "balance of terror" between nations has just
increased by
> many, many orders of magnitude.
>
> "The biblical prophecy that the Earth will be wiped out by "fire and
brimstone
> from heaven" is very near fulfillment now.
>
> "Put another way, the pucker factor -- even on the Russians who may
contemplate
> unleashing Armageddon -- is higher than any Western strategic analyst has
ever
> imagined, even in his wildest nightmares.
>
> "Truly these weapons are "more frightening than the mind of man has
imagined,"
> as Brezhnev put it in 1975.
>
> "The frightening scalar EM weapons can be used, but only very, very
gingerly
> indeed. If a slight mistake is made, everybody loses everything."
>
> http://www.cheniere.org/books/ferdelance/s74.htm
>
>
>
>

3296. Re: Choke needed on Mosely TA33?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-18 16:35:27 UTC
From: "Alexander S. Wood" <alec_wood@dont.spam.me.ntlworld.com>
Message-ID: <TdQ79.4424$027.16168@newsfep3-gui.server.ntli.net>
Source record: 136439

"Scott" <hml59@yahoo.com> wrote in message
news:3D5F29B1.1367B94B@yahoo.com...
> This group showed A3 needs choke or balun to keep RF from coming down
> the cable..
> Most of the beam antenna requires(?) coax choke or balun from their
> manual..
<snip>

Hi Scott

The balun is not required for matching purposes, it is purely there in some installation for EMC purposes, stopping RF currents in the outside of the feeder which may potentially radiate. This risk rises if you are one of those people who likes to use a tuner to extend the workable frequency range of your beam beyond its design. I personally would always recommend some kind of choke balun, usually just a coil of coax, when feeding a balanced antenna with unbalanced line. Living in a built up area I feel the need to take a "belt and braces" approach to EMC. The same may not be true of your locale.

It costs next to nothing for the extra coax, takes no time and can do no harm. Much easier to put it in at the start than climb the tower and retro fit it.

But, the antenna will function fine without it, and you may well be lucky EMC wise.

Alec Wood M1BNK
Teesside UK

3297. Re: Discone question

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-18 16:38:12 UTC
From: k1bqt@aol.com
Message-ID: <20020818123812.28571.00000716@mb-mn.aol.com>
Source record: 136437

>It's probably not even 6 inches above the yagi.<

That explains it! The larger antenna underneath looks like ground to the discone. Move it up 5 feet and prepare to see a huge difference. I use one here, and it works great.

73

Rick K1BQT

3298. Re: Discone question

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-18 16:39:40 UTC
From: "Alexander S. Wood" <alec_wood@dont.spam.me.ntlworld.com>
Message-ID: <UdQ79.4425$027.16168@newsfep3-gui.server.ntli.net>
Source record: 136440

"VHFRadioBuff" <vhfradiobuff@aol.comspamsux> wrote in message
news:20020818103958.20202.00001188@mb-ms.aol.com...
<snip>yagi. All of a sudden the receive has gone way down. A repeater
> about 20 miles away that used to come in at an S7 doesn't even show
anything on
> the meter. <snip>

S7 to nothing is IMHO too big a drop to be down to purely antenna
interaction. The discone wants to be a metre or more away from the beam, but
first I think a check of the feeder and connectors is the order of the day.

Good luck

Alec Wood M1BNK
Teesside UK

3299. Re: Tutorial #2

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-18 16:40:03 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <7mjvluct2e1g4hpvgi9t3ljccbh869231e@4ax.com>
Source record: 136438

On 18 Aug 2002 05:34:47 -0700, aunwin@fgi.net (Art Unwin KB9MZ) wrote:

>When modeling my antenna the drop of current is clearly shown.
>If one assumes that the statement is correct then it is an easy step
>to assume
>that the energy that is not consumed in the coupling portion it will
>be released
>via radiation from the remaining portions of the dipole (resonator)
>Thus there is a higher current flow in the remaining electrical
>lengths of the dipole and thus provides for collinear gains.

Hi Art,

You are being too myopic by examining ONLY your antenna. This is the failure of your style in that you show no correlation to other models (and still refuse to release your own). In other words, what you describe above is commonplace for any similar sized structure. As you describe yourself as a poor modeler, I should point out this has been already confirmed by competent modelers.

73's
Richard Clark, KB7QHC

3300. Re: Ultimate 80/160m directional antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-18 16:50:25 UTC
From: richardharrison@webtv.net
Message-ID: <20819-3D5FD051-350@storefull-2392.public.lawson.webtv.net>
Source record: 136442

Anne Bolyn wrote:
"I have access to 25 acres and want to erect the "ultimate" 160/80
directional atenna.

It is prudent to see what the most successful DXers have done and do likewise. John Devoldere, ON4UN has a nice book, "Low-Band DXing" published by ARRL and likely available through RSGB or elsewhere.

In ON4UN`s book is a survey of equipment and antennas used by some of the best known DXers.

The Beverage antenna is the runaway favorite receiving antenna.

Many other antennas are used with great success for transmitting. The Beverage is excluded by its loss. This is no problem for reception because this loss attenuates interference as much as the signal and this can be offset with receiver gain.

The inverted V antenna is one of the most popular with this group of outstanding DXers. There is no clear majority. The inverted V does not require as much height, space, or support as some of the other antennas on 80-M and 160-M. This may account for its popularity.

Borrow a copy of ON4UN`s book and pick and choose for yourself.

Best regards, Richard Harrison, KB5WZI

3301. Re: Scalar Electromagnetic Weapons

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-18 16:51:15 UTC
From: Dave Holford <holford@sympatico.ca>
Message-ID: <3D5FD083.B017E1D8@sympatico.ca>
Source record: 136441
Cross-posted to: alt.ham-radio.eme,alt.ham-radio.hf,alt.ham-radio.vhf-uhf,alt.radio.scanner,alt.radio.scanner.uk,rec.radio.amateur.antenna,rec.radio.amateur.misc,rec.radio.scanner,uk.radio.amateur,uk.rec.radio.cb

N W O wrote:
>
??????????????????????????????

This stuff is nonsense.

If you want to know about Electromagnetic Weapons read up on HPMs, they really do exist.

Dave

3302. Re: Superposition quiz

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-18 17:25:25 UTC
From: richardharrison@webtv.net
Message-ID: <21612-3D5FD885-110@storefull-2398.public.lawson.webtv.net>
Source record: 136443

Bill, N3WK wrote:
"For example consider (2) 1-V batteries in series with a 1-ohm
resistor."

Short out one battery and the remaining 1-V battery puts one amp through the resistor. With two batteries you have 2-V and 2-A. It`s a no-brainer. 4-watts. You add the volts and you add the currents. Then, you multiply.

So power is derived from superposition as are voltage and current. Ohm is not violated. It`s not what you do but the way that you do it.

Best regards, Richard Harrison, KB5WZI

3303. Re: Superposition quiz

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-18 18:06:59 UTC
From: CAM <Cecil.A.Moore@ieee.org>
Message-ID: <3D5FE243.A51CDC1F@ieee.org>
Source record: 136444

Roy Lewallen wrote:
>
> CAM wrote:
> >
> Perhaps. But who says you can sum the powers in the waves to get the
> total power?

The power company?

> What's the justification for your assuming that you can simply add the
> powers in the individual waves to get the total power?

What is Steve's justification for assuming that you can add two scalar powers and get more power in the sum than exists in the individual terms? Every power engineer in the world would laugh at Steve's equation, 75w + 8.33w = 133.33w

Johnson assumes that we can subtract the power in the individual reflected wave from the power in the individual forward wave to get the power delivered to the load. How is that different from assuming power in individual waves? Not arguing, just asking.

> By the way, when you add up voltages and currents, be careful how you
> define the direction of current. If the positive direction is defined as
> being in the direction of travel, then the superposition of a forward
> travelling wave with voltage and current V1, I1 at a given point and
> reverse travelling wave V2, I2 at the same point is V1 + V2, I1 - I2.

Yep, reverse traveling waves are supposed to have the voltage and current 180 degrees out of phase. And honoring the accepted rules for what happens to voltages and currents at a reflection point is tricky depending on whether the load is higher or lower impedance than Z0.

> Do your calculations with the voltage and current waves. When you're
> done, you can calculate the power from the source and into the load, and
> you'll get the right answer. If you declare that the power in the
> forward wave plus the power in the reverse wave have to add up to the
> power in the superimposed V and I waves, you'll get the wrong answer
> more often than not.

Here's an interesting example, I think suggested by Bart, wb6hqk. I'll take it in two steps so the final configuration will be clear. All components are lossless.

100w XMTR---tuner---50 ohm feedline---+---150 ohm load

I think we can all agree that the SWR on the 50 ohm feedline is 3:1,
that 100w makes it to the load, and there are no steady-state reflections
between the tuner and XMTR. So the forward power must be 133.33 watts and
the reflected power 33.33 watts.

Now replace the 150 ohm load with 1/4WL of 150 ohm line terminated in a
50 ohm load.

100w XMTR---tuner---50 ohm feedline---+---1/4WL 150 ohm feedline---50 ohm load

The quarter-wave transformer transforms the 50 ohm load impedance to 150 ohms
seen at the 50/150 ohm transition point so steady-state power conditions on the
50 ohm feedline have not changed. There is still a 3:1 SWR on the 50 ohm feedline,
133.33w of forward power, 33.33w of reflected power, and 100w delivered to the
150 ohm feedline.

On the 150 ohm feedline, we also have an SWR of 3:1, 133.33w of forward power,
and 33.33w of reflected power because the reflection coefficient at the load
is also 0.5. The load is accepting (dissipating) 100w. There is obviously a mis-
match at the 50 ohm to 150 ohm transition point between the feedlines so reflected
energy from the load should be crossing the 150/50 ohm junction point. But is it?

I have tried Steve's method of analysis on this example and failed to get it to
work. Can anyone help with that analysis?
--
thanks & 73, Cecil, W5DXP

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
------== Over 80,000 Newsgroups - 16 Different Servers! =-----

3304. Re: Why God do we made soo few loop antennas ?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-18 18:23:34 UTC
From: lombryt@hotmail.com
Message-ID: <db35a0c.0208181023.50c4c57f@posting.google.com>
Source record: 136445

"Adam" <digipoint@hotmail.com> wrote in message news:<ajnrql$2m86$1@news.kabelfoon.nl>...
> Read my answer to your questions between the lines:
>
> > Hi,
> >
> > Pfff.. I'm trying to find on the place dealers or manufacturers or HF
> > loop antennas as my blooming (short)longwire creates severe QRM in my
> > LX QTH.
> >
> > But browsing the web I only find 2 manufacturers : MFJ and another one
> > + AEA (www.ryl.nl) but his isoloop seems discontinued.
> >
>
> The company Rys here in the Netherlands advertises that he has still an AEA
> Isoloop on stock.... The correct URL is www.rys.nl
> AEA isoloops are not produced anymore. Also these loops are quite sensitive
> to weather conditions.
>
> > So roughly there is only one available, the two models from MFJ...
> >
> > Is this design so bad that no other manufacturer wants to sale such
> > antennas?
> > Surely not.
>
> It's a very good electrical design. Not very solid however when it comes to
> weather protection.
>
> >
> > So where can I find other loops ?
> >
>
> AMA antenna's Germany:
> www.magneticloop.com
>
> WIMO Germany antenna's and HAM stuff:
> www.wimo.de
>
> Ciromazzoni Italy:
> http://www.ciromazzoni.com/
>
> Check the new Magnetic Loop forum in German and English language:
> http://www.magnetic-loop.de/
>
> And of course you can make your own magnetic loop. There are many URL's

> where you can find instructions how to make one. Use www.google.com and
> check for magnetic loop.
>
> > Thanks for comments.
> >
>
> You're welcome
>
> > Thierry
> > ONL5183
>
> 73, Adam

Thanks guys, you helped me to recover the URL I need
(www.wellbrook.uk.com) and his ALA loops. Now I have to choose between
the MFJ and ALA or a pure miliray supply...

A+
73
Thierry

3305. 160 meters Long Wire

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-18 18:23:38 UTC
From: Andy M <andrew.markham@virgin.net>
Message-ID: <6ER79.1895$h4.132400@newsfep1-win.server.ntli.net>
Source record: 136446

Hi All

I have been thinking about getting on 160 and plan to build myself a Inverted 'L' or grounded Long Wire for Tx/Rx

Question is, I don't like the idea of bringing the 'bare' wire into the shack with all that RF. So is there any way to bring it into the shack by say Coax ?. Also if I bring the Long Wire through a wooden window will that cause any problems ?.

Also any views on Topband antennas for a small garden, greatly appreciated.

Andy
M3RZA

3306. Re: Scalar Electromagnetic Weapons

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-18 18:27:47 UTC
From: lucifer@eternal-flames.gov
Message-ID: <5hpvluot7kl38nefvad3ga0nlfvdmnk3ib@4ax.com>
Source record: 136447
Cross-posted to: alt.ham-radio.eme,alt.ham-radio.hf,alt.ham-radio.vhf-uhf,alt.radio.scanner,rec.radio.amateur.antenna,rec.radio.amateur.misc,rec.radio.scanner

On Sun, 18 Aug 2002 17:13:12 +0100, "Alexander S. Wood"
<alec_wood@dont.spam.me.ntlworld.com> wrote:

>I am also quite prepeared to believe that the election of "Dubbya" was the
>result of some kind of foreign interference, maybe EM directed brainwashing
>or mind-control.

George "Dubbya" - The thinking mans 'Fozzie Bear' - Only won that
election because the people of Florida can't count and are unfortunate
enough to have his brother as Governor.

3307. Re: 160 meters Long Wire

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-18 18:36:07 UTC
From: CAM <Cecil.A.Moore@ieee.org>
Message-ID: <3D5FE917.4F2A6572@ieee.org>
Source record: 136448

Andy M wrote:
> I have been thinking about getting on 160 and plan to build myself a
> Inverted 'L' or grounded Long Wire for Tx/Rx
>
> Question is, I don't like the idea of bringing the 'bare' wire into the
> shack with all that RF. So is there any way to bring it into the shack by
> say Coax ?. Also if I bring the Long Wire through a wooden window will that
> cause any problems ?.

Ideally, you tie the coax shield to a large ground plane. The least you
should to do is tie the coax shield to a counterpoise.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
------== Over 80,000 Newsgroups - 16 Different Servers! =-----

3308. Re: Air-Wound Balun Design Info??

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-18 19:07:07 UTC
From: K4IA <K4ia@novacoxmail.com>
Message-ID: <vfS79.388103$DB.12970688@news1.east.cox.net>
Source record: 136449

Tom, N0SS has published an article on these newsgroups several times.
Summarizing his measurements concludes that 1:1 coaxial balun with an
excellent choking reactance for 10 through 20 meters can be made by winding
6 turns of RG-213 on a 4 inch pVC sewer pipe. For 40 or 30 meters use 12
turns. Wind the turns as a single layer
--
Radio K4IA
Craig "Buck"
Fredericksburg, Virginia USA

FISTS 6702 CC 788 Diamond 64
K1# 470 K2# 2460

Does anyone have a source for design info for homebrewed
> 1:1 and 4:1 air-wound baluns?
> >
> >
> Thanks, Brian w3rv

3309. Re: 'Nother question about ladderline

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-18 19:42:33 UTC
From: cprstn54zz@att.net
Message-ID: <3d5ff85b.54085453@news-server.optonline.net>
Source record: 136450

On Sun, 18 Aug 2002 08:46:13 -0500, CAM <Cecil.A.Moore@ieee.org>
wrote:
>I use automotive butt connectors to splice my ladder-line. Seems to
>work quite well with the help of a few drops of solder.

If you are soldering, why bother with the automotive connectors? Just
twist and solder.

Ken KC2JDY

Ken
(to reply via email
remove "zz" from address)

3310. Re: Scalar Electromagnetic Weapons

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-18 20:10:57 UTC
From: Fred Hambrecht <w4jle@charter.net>
Message-ID: <ulvvql3il3ura7@corp.supernews.com>
Source record: 136451
Cross-posted to: alt.ham-radio.eme,alt.ham-radio.hf,alt.ham-radio.vhf-uhf,alt.radio.scanner,rec.radio.amateur.antenna,rec.radio.amateur.misc,rec.radio.scanner

Andy Roonie mode on:
Did ga ever notice folks that attack Mr. Bush always have neat e-mail addresses like Lucifer@eternal-flames.gov, wonder why that is? Roonie mode off.

Another stupid ass kid that has all the answers to the worlds problems now that he finally learned to tie his shoes and steal software on the "Warez" sites...

<lucifer@eternal-flames.gov> wrote in message news:5hpvluot7kl38nefvad3ga0nlfvdmnk3ib@4ax.com...
> On Sun, 18 Aug 2002 17:13:12 +0100, "Alexander S. Wood"
> <alec_wood@dont.spam.me.ntlworld.com> wrote:
>
> >I am also quite prepeared to believe that the election of "Dubbya" was the
> >result of some kind of foreign interference, maybe EM directed brainwashing
> >or mind-control.
>
> George "Dubbya" - The thinking mans 'Fozzie Bear' - Only won that
> election because the people of Florida can't count and are unfortunate
> enough to have his brother as Governor.
>
>

3311. Re: New Rohn GT Series - 45G model

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-18 20:57:41 UTC
From: Crazy George <munschNO@attglobal.net.SPAM>
Message-ID: <3d600e46_3@news1.prserv.net>
Source record: 136452

Oh, and by the way, you say about 70 feet. Does this mean you have short pieces with the bent parts cut out? If so, forget it. I have seen several people try to reproduce the bolt holes at the joints, and in 45G no less, and all were unsuccessful. You can't drill them accurately enough without a fixture, and when you enlarge the holes to make the bolts fit, you end up with loose, wobbly joints. Go buy new tower. The $1,000 will be cheap compared to lawyer fees and court costs when the thing falls on someone.

--
Crazy George
Remove NO and SPAM from return address
w9gb <gregory.beat@attbi.com> wrote in message
news:PxO79.9502$IJ.216@sccrnsc02...
> Here is the Rohn web site:
> http://www.rohnnet.com/
>
> You may require building or construction permits, Rohn can supply proper
> assembly, installation and engineering data ... as required. NOTE: Guying
> for specific winds is provided in web site below (as well as all other
> pertinent information).
>
> Texas Towers (dealer in your area) should be able to supply you with
> specific parts or accessories that you may require.
> Rohn "GT series" and the "45G" model.
> http://www.rohnnet.com/rohnnet2001/catalog/pdfs/45G/45gtowers.html
>
> w9gb
>
>

3312. Re: Superposition quiz

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-18 21:56:09 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <3D6017F9.4020801@eznec.com>
Source record: 136453

CAM wrote:

> . . .
> Now replace the 150 ohm load with 1/4WL of 150 ohm line terminated in a
> 50 ohm load.
>
> 100w XMTR---tuner---50 ohm feedline---+---1/4WL 150 ohm feedline---50 ohm load
>
> The quarter-wave transformer transforms the 50 ohm load impedance to 150 ohms
> seen at the 50/150 ohm transition point so steady-state power conditions on the
> 50 ohm feedline have not changed. . . .

No, you'll see 450, not 150 ohms at the input end of the 150 ohm line.
You'd see 150 ohms only if the termination resistor were 150 ohms. The
conditions on the 50 ohm feedline have changed.

Roy Lewallen, W7EL

3313. Cushcraft verticals?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-18 22:12:13 UTC
From: Deni <deni@gm3skn.fsnet.co.uk>
Message-ID: <ajp640ejf1@news5.svr.pol.co.uk>
Source record: 136454

What is the difference between the R7/ R7000 or R8/R8000 ?

Tks 73, Deni GM3SKN

3314. Re: Scalar Electromagnetic Weapons

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-18 22:12:53 UTC
From: Jo Mamma <SurfyDude@biteme.com>
Message-ID: <ajp64k$e5i$0@pita.alt.net>
Source record: 136455
Cross-posted to: alt.ham-radio.eme,alt.ham-radio.hf,alt.ham-radio.vhf-uhf,alt.radio.scanner,rec.radio.amateur.antenna,rec.radio.amateur.misc,rec.radio.scanner

```
<lucifer@eternal-flames.gov> wrote in message
news:5hpvluot7kl38nefvad3ga0nlfvdmnk3ib@4ax.com...
> On Sun, 18 Aug 2002 17:13:12 +0100, "Alexander S. Wood"
> <alec_wood@dont.spam.me.ntlworld.com> wrote:
>
> >I am also quite prepeared to believe that the election of "Dubbya" was
the
> >result of some kind of foreign interference, maybe EM directed
brainwashing
> >or mind-control.
>
> George "Dubbya" - The thinking mans 'Fozzie Bear' - Only won that
> election because the people of Florida can't count and are unfortunate
> enough to have his brother as Governor.
>
It is not because the Democrats didn't give it a good try! Why, they even
"resurrected" thousands of deceased voters across the country who all
"voted", oddly enough, for Al Bore, a Bhuddist nun's best friend.
```

3315. Re: Cushcraft verticals?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-18 22:20:59 UTC
From: AC6V <ac6v@amsat.org>
Message-ID: <f5V79.49744$eb.3558614@news2.west.cox.net>
Source record: 136456

See URL:
http://www.cushcraft.com/amateur/support/instruction-manuals.htm
All manuals are on line.

--
I Doubt, Therefore I Might Be
73 From AC6V, Rod In Oceanside, CA
http://ac6v.com
"Deni" <deni@gm3skn.fsnet.co.uk> wrote in message
news:ajp640ejf1@news5.svr.pol.co.uk...
> What is the difference between the R7/ R7000 or R8/R8000 ?
>
> Tks 73, Deni GM3SKN
>
>

3316. Re: Scalar Electromagnetic Weapons

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-18 22:38:37 UTC
From: "John S. Dyson" <dyson@iquest.net>
Message-ID: <ygV79.846$I4.147741@news.iquest.net>
Source record: 136458
Cross-posted to: alt.ham-radio.eme,alt.ham-radio.hf,alt.ham-radio.vhf-uhf,alt.radio.scanner,rec.radio.amateur.antenna,rec.radio.amateur.misc,rec.radio.scanner

"Jo Mamma" <SurfyDude@biteme.com> wrote in message news:ajp64k$e5i$0@pita.alt.net...
>
> <lucifer@eternal-flames.gov> wrote in message
> news:5hpvluot7kl38nefvad3ga0nlfvdmnk3ib@4ax.com...
> > On Sun, 18 Aug 2002 17:13:12 +0100, "Alexander S. Wood"
> > <alec_wood@dont.spam.me.ntlworld.com> wrote:
> >
> > >I am also quite prepeared to believe that the election of "Dubbya" was
> the
> > >result of some kind of foreign interference, maybe EM directed
> brainwashing
> > >or mind-control.
> >
> > George "Dubbya" - The thinking mans 'Fozzie Bear' - Only won that
> > election because the people of Florida can't count and are unfortunate
> > enough to have his brother as Governor.
> >
> It is not because the Democrats didn't give it a good try! Why, they even
> "resurrected" thousands of deceased voters across the country who all
> "voted", oddly enough, for Al Bore, a Bhuddist nun's best friend.
>
There is nothing wrong with being a friend of any religious figure -- but there
is something wrong with taking laundered money from non-friendly foreign
governments for campaign or political purposes.

John

3317. Re: Cushcraft verticals?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-18 22:39:16 UTC
From: Deni <deni@gm3skn.fsnet.co.uk>
Message-ID: <ajp7mljii1@news8.svr.pol.co.uk>
Source record: 136457

"Deni" <deni@gm3skn.fsnet.co.uk> wrote in message
news:ajp640ejf1@news5.svr.pol.co.uk...
> What is the difference between the R7/ R7000 or R8/R8000 ?
>
> Tks 73, Deni GM3SKN
>
>
I see the difference in construction from the Cushcraft website R7/R8 uses
trombone type capacitors to resonate the traps, the R7000/ R8000 appears not
to, so does it use internal caps inside the inductors? anyone any experience
of either type and preferences, mechanical electrical etc?
I have used an R5, but now folded in high winds looking for a replacement.

73, Deni GM3SKN

3318. Re: Scalar Electromagnetic Weapons

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-18 22:55:18 UTC
From: Harold Burton <hwburton@swbell.net>
Message-ID: <qBV79.3092$9f3.778138794@newssvr12.news.prodigy.com>
Source record: 136459
Cross-posted to: alt.ham-radio.eme,alt.ham-radio.hf,alt.ham-radio.vhf-uhf,alt.radio.scanner,rec.radio.amateur.antenna,rec.radio.amateur.misc,rec.radio.scanner

"Fred Hambrecht" <w4jle@charter.net> wrote in message
news:ulvvql3il3ura7@corp.supernews.com...
> Andy Roonie mode on:
> Did ga ever notice folks that attack Mr. Bush always have neat e-mail
> addresses like Lucifer@eternal-flames.gov, wonder why that is? Roonie mode
> off.
>
> Another stupid ass kid that has all the answers to the worlds problems now
> that he finally learned to tie his shoes and steal software on the "Warez"
> sites...

Yes, indeed, another victim of the Govt. planned public school uneducation
system.

3319. Re: Why God do we made soo few loop antennas ?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-18 23:02:50 UTC
From: Will White <googlyelmo@earthlink.net>
Message-ID: <3D6027A5.51FE690@earthlink.net>
Source record: 136460

Gullible doesn't begin to cover it! Check out the two German manufacturers mentioned earlier in this thread. They have many more models to offer than MFJ, but even the cheapest, smallest runs almost $200US *more* than the MFJ (and the $$$-est over $2K!!!). I can't see why they can get away with these prices, any of them. HV vacuum and air variable caps cost a bundle, I'll say.

But has everyone forgotten that old ham virtue, the homebrewed? I have made several small loops for bands 80-10 (not in one antenna!), sizes from 1M to almost 4M diameter, and made my own caps. My most recent is for 40-30 meters, about 2M diameter, using continuous .625" copper refrigerator tubing, resonated with a series dual-piston ("trombone") capacitor, with sheet PTFE dielectric (>20 kV rating) and sections of copper water pipe as rotors/stators.

Cost: about $30, including feedline (less remote motor drive, I'll add it later, and it will add another $15-20 to the cost). So, I have a complete working loop antenna system for about $50, and I am confident that it is closely favorably comparable to any commercially manufactured, with the exception of radiation resistance. On that measure, I am certain my loop beats all the commercials, being made of copper rather than aluminum! Anyone can do this with a minimum of tools, test gear, exotic parts & materials, and homebrew aptitude. And these antennas do work, as they say, remarkably well.

Irv Finkleman wrote:

>
> It's very easy to homebrew your own small loop.
> That may be why so few manufacturers produce
> them. MFJ caters to the gullible few IMHO.
>
> I have an old MFJ, but only because the remote
> controller had been damaged -- I got it for
> $100 Canadian, and repaired the controller in
> short order (dirty switches). If you want to
> build your own for a specific frequency it is
> quite simple as you use a piece of coax for the
> capacitor and just cut it to length. If you are
> lucky, you may just find a good hi voltage variable
> somewhere at a good price.
> --
> Diagnosed Type II Diabetes March 5 2001
> Beating it with diet and exercise!
> 297/215/210 (to be revised lower)

> 58"/43"(!)/44" (already lower too!)
> --------------------
> Visit my FINALLY UPDATED website at
> http://members.shaw.ca/finkirv/
> --------------------
> Irv Finkleman,
> Grampa/Ex-Navy/Old Fart/Ham Radio VE6BP
> Calgary, Alberta, Canada

--
Will White, KD7BFX
Seattle WA US
King County, Grid CN87tq
ITU Zone 6, CQ Zone 3
****
"The wireless telegraph is not difficult to understand.
The ordinary telegraph is like a very long cat.
You pull the tail in New York, and it meows in Los Angeles.
The wireless is the same, only without the cat."
- Albert Einstein
****

3320. Re: Choke needed on Mosely TA33?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-18 23:10:00 UTC
From: gaschafer@attbi.com
Message-ID: <3d602979.2958063@netnews.attbi.com>
Source record: 136461

I have a TA33 and use a coil of coax for a balun as they recommend in the instructions that
came with it.
They also recommend a shorting strap from the boom to the element that connects to the shield
of the coax. With the shorting strap I found that the antenna had two resonant points. On 20
meters it had one at about 14.300 and a second one at around 13.8 mhz if I remember right.
With the shorting strap it would exhibit a nice broad band swr of course. With the shorting strap
removed it only had one resonant point which was sharper than with the strap. The resonant
bandwidth without the strap acted more like a 3 element beam should. It had similar response
on all 3 bands each way.

I discussed this with Mosley and got no answer. They asked for swr curves from me etc, like
they had never heard of this before. Never did get a satisfactory answer from them. I ended up
leaving the shorting strap off.
It acted like it detuned one side of the element with it on.

I think that they used it to try and make the swr curve wider on the antenna.

73
Gary K4FMX

On Sun, 18 Aug 2002 02:05:08 GMT, Scott <hml59@yahoo.com> wrote:

>This group showed A3 needs choke or balun to keep RF from coming down
>the cable..
>Most of the beam antenna requires(?) coax choke or balun from their
>manual..
>But old TA33 does not require any choke or balun on the manual.. Is
>there any reason?? or special Mosely design??
>
>I acquired old TA33 form local old man and am hesitating to put coax
>choke or balun..
>Please let me know..
>Thanks
>Scott
>

3321. Re: New tower = many questions

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-18 23:13:13 UTC
From: w9gb <gregory.beat@attbi.com>
Message-ID: <dSV79.157997$UU1.25721@sccrnsc03>
Source record: 136462

BTW,

4 or 5 foot of good tower from damaged section can sometimes be used in the foundation pier with rebar (see the specific Rohn engineering drawings for details & required depth for your soil type)

Greg
w9gb

"JWheeler" <kd5bcu@yahoo.com> wrote in message
news:ultflvos7ioe14@corp.supernews.com...
> I have just become the proud new owner of about 70 feet of Rohn 45.
The
> reason I have this new tower is that a tornado blew it over. It was the
> property of my local club until said tornado came through a couple of
years
> ago and nicely deposited most of it in a stand of pine trees. There is
> remained until a few weeks ago. It started out as about 190 feet, but
only
> about 150 of those could be salvaged. Another member of the club and I,
> being the only current club members needing towers, divided up the
salvaged
> sections. I hope, in the next few weeks, to host a tower raising party.
> Before that time comes, I need to do a good deal of research. I am pretty
> sure there are a good number of experts who frequent this forum (good
> amateurs are welcome, too). All of the basic nightmares have started
coming
> to mind now that I have it sitting in the backyard. What if it falls!!!
> Ok, none of that. I want to be sure to over compensate when this thing
goes
> in. I am going to have a custom tilt-over base made since I have a
> friend/fellow ham who works for a local utility company and can call in a
> few favors with the guys at the machine shop. Why spend mega-bucks when
you
> can have a better-than-retail version built on the cheap (maybe even
free)?
> Right?
> At any rate:
> 1. What do I need to look at to make sure this thing stays up until
I'm
> ready for it to come down?
> a. What dimensions do I need to start with on the hole? Ball
> park estimates are okay. I plan to go bigger than the average suggestions
> just to be sure.
> b. What are some good suggestions on types of material for

this
> custom base plate?
> c. At 70 feet, does this thing need to be guyed? Please say
> no... my wife won't be happy if she has to look at my ugly (her words)
tower
> AND deal with the presence of guy wires in her yard.
> d. What's the easiest way to stand one of these things up?
> z. What have I missed? .
>
> I know that windload is going to be an issue. I currently have a 10
> element 2 meter beam, but may add a 2nd beam to have a stacked array. I
may
> also decide to part with both beams and opt instead for an array of
stacked
> 4 element quads. My current HF antenna is the standard inverted-V, but I
> hope in the near future to add a triband beam to the mix. I will also
> anchor one corner of an 80 meter full wave loop on a leg of the tower. If
> possible, I'm going to erect this thing far enough away from the house
that,
> if it does fall, it won't land on any structure, but as stated above, I
want
> to be sure it won't fall from anything short of direct intervention from
> God.
> I live in East Texas, where thunderstorms are not uncommon. High
winds
> often accompany these storms. Then, there is the occasional tornado, such
> as the one I have to thank (?) for my new tower. To the naked eye, these
> tower sections are in remarkable condition knowing what they have gone
> through. I look forward to any and all advice.
>
> Thanks in advance,
>
> JWheeler
> KC5AV
>
> I'm sure I've taken an ultra-simple look at this, so be gentle
>
>

3322. Re: Cushcraft verticals?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-18 23:18:07 UTC
From: w9gb <gregory.beat@attbi.com>
Message-ID: <PWV79.16664$IJ.2622@sccrnsc02>
Source record: 136463

Some additional details on troubleshooting the R5/R7/R7000 antennas & their construction

http://www.ab7sl.com/index.html?row1col2=r7.html

Was the R5 badly damaged?
http://www.cushcraft.com/support/pdf/r5.pdf

w9gb

"Deni" <deni@gm3skn.fsnet.co.uk> wrote in message
news:ajp7mljii1@news8.svr.pol.co.uk...
>
> "Deni" <deni@gm3skn.fsnet.co.uk> wrote in message
> news:ajp640ejf1@news5.svr.pol.co.uk...
> > What is the difference between the R7/ R7000 or R8/R8000 ?
> >
> > Tks 73, Deni GM3SKN
> >
> >
> I see the difference in construction from the Cushcraft website R7/R8 uses
> trombone type capacitors to resonate the traps, the R7000/ R8000 appears
not
> to, so does it use internal caps inside the inductors? anyone any
experience
> of either type and preferences, mechanical electrical etc?
> I have used an R5, but now folded in high winds looking for a replacement.
>
> 73, Deni GM3SKN
>
>

3323. Re: Scalar Electromagnetic Weapons

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-18 23:46:21 UTC
From: adamory <adamory@ntlworld.com>
Message-ID: <PcW79.26737$IU4.808779@newsfep2-win.server.ntli.net>
Source record: 136464
Cross-posted to: alt.ham-radio.eme,alt.ham-radio.hf,alt.ham-radio.vhf-uhf,alt.radio.scanner,alt.radio.scanner.uk,rec.radio.amateur.antenna,rec.radio.amateur.misc,rec.radio.scanner,uk.radio.amateur,uk.rec.radio.cb

second that absolutely.

Scoffers need to do a little more reading. Tesla did some scary things, some people have carried on his work, and refined it considerably.

"Dave Holford" <holford@sympatico.ca> wrote in message news:3D5FD083.B017E1D8@sympatico.ca...
>
>
> N W O wrote:
> >
> ??????????????????????????????
>
>
>
> This stuff is nonsense.
>
> If you want to know about Electromagnetic Weapons read up on HPMs, they
> really do exist.
>
> Dave

3324. Re: Cushcraft verticals?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-18 23:59:45 UTC
From: k1bqt@aol.com
Message-ID: <20020818195945.14971.00000879@mb-cq.aol.com>
Source record: 136465

>What is the difference between the R7/ R7000 or R8/R8000 ?<

As I recall, the R7 preceded the R7000 and used an older style trombone trap.
The R8 is the current production model--I'm not aware that there is a R8000.

Rick K1BQT

3325. Re: 'Nother question about ladderline

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-19 00:07:45 UTC
From: CAM <Cecil.A.Moore@ieee.org>
Message-ID: <3D6036D1.8A5C4596@ieee.org>
Source record: 136466

Ken wrote:
>
> CAM <Cecil.A.Moore@ieee.org> wrote:
> >I use automotive butt connectors to splice my ladder-line. Seems to
> >work quite well with the help of a few drops of solder.
>
> If you are soldering, why bother with the automotive connectors? Just
> twist and solder.

Twisting and soldering copperweld stranded wire is ugly. The individual
wires are not well behaved.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
------== Over 80,000 Newsgroups - 16 Different Servers! =-----

3326. Re: Superposition quiz

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-19 00:10:36 UTC
From: CAM <Cecil.A.Moore@ieee.org>
Message-ID: <3D60377C.35B08475@ieee.org>
Source record: 136467

Roy Lewallen wrote:
>
> CAM wrote:
>
> > . . .
> > Now replace the 150 ohm load with 1/4WL of 150 ohm line terminated in a
> > 50 ohm load.
> >
> > 100w XMTR---tuner---50 ohm feedline---+---1/4WL 150 ohm feedline---50 ohm load
> >
> > The quarter-wave transformer transforms the 50 ohm load impedance to 150 ohms
> > seen at the 50/150 ohm transition point so steady-state power conditions on the
> > 50 ohm feedline have not changed. . . .
>
> No, you'll see 450, not 150 ohms at the input end of the 150 ohm line.
> You'd see 150 ohms only if the termination resistor were 150 ohms. The
> conditions on the 50 ohm feedline have changed.

Darn, I must have copied the example down wrong. Maybe it was 86.6 ohm
feedline or an 86.6 ohm load.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
------== Over 80,000 Newsgroups - 16 Different Servers! =-----

3327. Re: Cushcraft verticals?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-19 00:37:40 UTC
From: Bob Miller <bamiller@texas.net>
Message-ID: <ljxgPXKlUnz10P0=45TfrpLl1aLU@4ax.com>
Source record: 136468

k1bqt@aol.com (Rick Littlefield) wrote:

>>What is the difference between the R7/ R7000 or R8/R8000 ?<
>
>As I recall, the R7 preceded the R7000 and used an older style trombone trap.
>The R8 is the current production model--I'm not aware that there is a R8000.
>
>Rick K1BQT

Current AES catalog shows an R8 for 6 thru 40 meters, and an R6000 for 6 thru 20 meters, plus a little MA5V vertical for 20 thru 10.

Bob
k5qwg

3328. Re: New Rohn GT Series - 45G model

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-19 02:58:39 UTC
From: JWheeler <kd5bcu@yahoo.com>
Message-ID: <um0nmu5b1n12ee@corp.supernews.com>
Source record: 136370

"Crazy George" <munschNO@attglobal.net.SPAM> wrote in message
news:3d600e46_3@news1.prserv.net...
> Oh, and by the way, you say about 70 feet. Does this mean you have short
> pieces with the bent parts cut out? If so, forget it. I have seen
several
> people try to reproduce the bolt holes at the joints, and in 45G no less,
> and all were unsuccessful. You can't drill them accurately enough without
a
> fixture, and when you enlarge the holes to make the bolts fit, you end up
> with loose, wobbly joints. Go buy new tower. The $1,000 will be cheap
> compared to lawyer fees and court costs when the thing falls on someone.
>
> --
When I said about 70', it was because I don't know how much of it I can
actually use. As it turns out, it looks more like 50'. I'll probably
invest in another section or so. One of the sections I planned to use has a
broken leg, so it's pretty much scrap, unless someone has a suggestion on an
alternate use.

JWheeler
KC5AV

3329. Re: 'Nother question about ladderline

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-19 02:58:42 UTC
From: cprstn54zz@att.net
Message-ID: <3d605d59.79939578@news-server.optonline.net>
Source record: 136369

On Sun, 18 Aug 2002 19:07:45 -0500, CAM <Cecil.A.Moore@ieee.org>
wrote:
>Twisting and soldering copperweld stranded wire is ugly. The individual
>wires are not well behaved.

Copperweld being copper on steel? I have the ladder line on hand but
haven't played with it yet. Thanks for the heads up.

I will be using automotive-type bullet connectors for the joints I
need to take apart. I guess I'll solder the crimped spots for
reliability.

Ken KC2JDY

Ken
(to reply via email
remove "zz" from address)

3330. Re: New Rohn GT Series - 45G model

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-19 02:59:55 UTC
From: JWheeler <kd5bcu@yahoo.com>
Message-ID: <um0npammvt0t2e@corp.supernews.com>
Source record: 136372

"w9gb" <gregory.beat@attbi.com> wrote in message
news:PxO79.9502$IJ.216@sccrnsc02...
> Here is the Rohn web site:
> http://www.rohnnet.com/
>
> You may require building or construction permits, Rohn can supply proper
> assembly, installation and engineering data ... as required. NOTE: Guying
> for specific winds is provided in web site below (as well as all other
> pertinent information).
>
> Texas Towers (dealer in your area) should be able to supply you with
> specific parts or accessories that you may require.
> Rohn "GT series" and the "45G" model.
> http://www.rohnnet.com/rohnnet2001/catalog/pdfs/45G/45gtowers.html
>
> w9gb
>
>
Thanks for the link. It's been a while since I've looked at the Rohn page,
and it has changed quite a bit. I've been having some problems navigating
it.

JWheeler
KC5AV

3331. Crimp-style RF connectors - Diagrams On How to Prepare Coax

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-19 03:00:40 UTC
From: Tony Hackenberg <tony.hackenberg@worldnet.att.net>
Message-ID: <sbZ79.19019$Ke2.1552327@bgtnsc04-news.ops.worldnet.att.net>
Source record: 136371

Could you refer me to a web site (or other resource) that would show me how to install the following 'crimp-style' RF connectors onto the coax types listed below?

ITEM# DESCRIPTION
------------ -------------------------------------
(1) RFC505 PL-259 Crimp for RG-58;
(2) RFC508-X PL-259 Crimp for RG-8X; and
(3) RFC601-1X Mini UHF(F) Crimp for RG-8X.

I searched the Web but could not locate any diagrams or information. I also tried the ARRL site and the ARRL 2002 Handbook. Unfortunately, I came up with nothing.

I purchased these crimp-style RF connectors from The R.F. Connection (http://www.therfc.com). The ITEM#s listed above are their part numbers. I contacted them but did not point me to any diagrams or schematics on how to properly cut/prepare the coax for assembly onto those crimpable connectors.

73,
Tony/WA8SSQ

3332. Solder-style RF connectors - Diagrams On How to Prepare Coax

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-19 03:12:10 UTC
From: Tony Hackenberg <tony.hackenberg@worldnet.att.net>
Message-ID: <emZ79.19046$Ke2.1552745@bgtnsc04-news.ops.worldnet.att.net>
Source record: 136373

Could you refer me to a web site (or other resource) showing how to install the following 'solder-style' RF connectors onto the coax types listed below?

ITEM# DESCRIPTION
--- ---
(1) PL259 PL-259 Solder type (with adapter below) and
(2) UG-176/U Reducer to allow PL-259 to fit RG-8X coax cable.

I searched the Web but could not locate any diagrams or information. I also tried the ARRL site and the ARRL 2002 Handbook. Unfortunately, I came up with nothing.

My reference library once held diagrams on how to do all kinds of RF connectors. I think a very old issue of CQ or 73 Magazine contained these diagrams. However, I could not locate it in my library. I guess I lost the issue.

73,
Tony/WA8SSQ

3333. Re: Solder-style RF connectors - Diagrams On How to Prepare Coax

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-19 03:34:34 UTC
From: George Kinzer <horseflygk@worldnet.att.net>
Message-ID: <eHZ79.19099$Ke2.1555978@bgtnsc04-news.ops.worldnet.att.net>
Source record: 136375

emailed to ya Tony...as long as your email is correct..

--
If first you don't succeed, do the same thing again...see what happens

3334. Re: Cushcraft verticals?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-19 03:36:34 UTC
From: K4IA <K4ia@novacoxmail.com>
Message-ID: <6JZ79.391972$DB.13059926@news1.east.cox.net>
Source record: 136376

The R7000 blows up if you put anything over 100 watts into it. Can't vouch
for the others.
--
Radio K4IA
Craig "Buck"
Fredericksburg, Virginia USA

FISTS 6702 CC 788 Diamond 64
K1♯ 470 K2♯ 2460
"Deni" <deni@gm3skn.fsnet.co.uk> wrote in message
news:ajp640ejf1@news5.svr.pol.co.uk...
> What is the difference between the R7/ R7000 or R8/R8000 ?
>
> Tks 73, Deni GM3SKN
>
>

3335. Re: Crimp-style RF connectors - Diagrams On How to Prepare Coax

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-19 03:37:33 UTC
From: George Kinzer <horseflygk@worldnet.att.net>
Message-ID: <1KZ79.19103$Ke2.1555502@bgtnsc04-news.ops.worldnet.att.net>
Source record: 136377

radio shack sells tool for this, as well as connectors...Im sure they' ll
have diagram somewhere, probally is a little booklet..Ill look around for
site for ya, be a little patient..
--
If first you don't succeed, do the same thing again...see what happens

3336. Yaesu ATAS-100 antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-19 03:40:59 UTC
From: ckesler@chartermi.net
Message-ID: <um0ph7q7uuqs81@corp.supernews.com>
Source record: 136374

I have a Yaesu FT-100D which has some built in features for the ATAS-100. Has anyone used an ATAS-100 or heard anything good or bad about it? I'm looking for a portable, multiple band, HF antenna that actually performs well. I bought a MFJ-1622 apartment antenna. I am not impressed with its performance. MFJ says that it works well on all bands from 2 meter to 40 meter. That's not true. I can work 20 meter with it sometimes, and have never been able to get out on 40 meter. If anyone has any experience using an ATAS-100 please let me know what you think of it. If anyone has any suggestions for a nice portable HF antenna let me know also. The July QST had some plans for a nice portable HF... has anyone tried that? If so, let me know if it was worth it.

Thanks,

Kes,
KC8UIE

3337. Better Antenna Question

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-19 05:25:38 UTC
From: theplanters95@aol.comnospam
Message-ID: <20020819012538.16571.00002303@mb-ch.aol.com>
Source record: 136378

Which of the following is the better antenna system for 40-10m?

1. Buddipole
2. MP-1 By Super Antenna
3. MFJ Mini Bug catcher
4. Hamsticks
5. Hustler with resonaters?

Randy ka4nma

3338. Re: Scalar Electromagnetic Weapons

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-19 05:52:28 UTC
From: lucifer@eternal-flames.gov
Message-ID: <uh11musi7lascdqer229lbeul7bdk1nq0s@4ax.com>
Source record: 136379
Cross-posted to: alt.ham-radio.eme,alt.ham-radio.hf,alt.ham-radio.vhf-uhf,alt.radio.scanner,rec.radio.amateur.antenna,rec.radio.amateur.misc,rec.radio.scanner

On Sun, 18 Aug 2002 22:55:18 GMT, "Harold Burton"
<hwburton@swbell.net> wrote:

>
>"Fred Hambrecht" <w4jle@charter.net> wrote in message
>news:ulvvql3il3ura7@corp.supernews.com...
>> Andy Roonie mode on:
>> Did ga ever notice folks that attack Mr. Bush always have neat e-mail
>> addresses like Lucifer@eternal-flames.gov, wonder why that is? Roonie mode
>> off.
>>
>> Another stupid ass kid that has all the answers to the worlds problems now
>> that he finally learned to tie his shoes and steal software on the "Warez"
>> sites...
>
>Yes, indeed, another victim of the Govt. planned public school uneducation
>system.
>

Yeah! Ain't it a bummer when that old freedom of speech thing kicks
in... ;-)

Hey guys, much as I'd like to claim the credit for the Fozzie Bear
remark, I just can't do it. That was on Letterman.

Y'have a nice day now.

3339. Re: Better Antenna Question

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-19 06:01:27 UTC
From: Fred Hambrecht <w4jle@charter.net>
Message-ID: <um12dr9vp3b8ea@corp.supernews.com>
Source record: 136380

While I might infer from your choices your speaking about mobile operations,
it would help if your question were a bit more specific. Do you want to work
local, DX, or what is the requirements you wish to solve. My answer would e
a screwdriver antenna for 40-10.

"Theplanters95" <theplanters95@aol.comnospam> wrote in message
news:20020819012538.16571.00002303@mb-ch.aol.com...
> Which of the following is the better antenna system for 40-10m?
>
> 1. Buddipole
> 2. MP-1 By Super Antenna
> 3. MFJ Mini Bug catcher
> 4. Hamsticks
> 5. Hustler with resonaters?
>
> Randy ka4nma

3340. Re: Yaesu ATAS-100 antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-19 07:17:51 UTC
From: W6DKN <w6dkn@qsl.net>
Message-ID: <zY089.15133$l62.14812@nwrddc02.gnilink.net>
Source record: 136381

<ckesler@chartermi.net> wrote in message
news:um0ph7q7uuqs81@corp.supernews.com...
> I have a Yaesu FT-100D which has some built in features for the ATAS-100.
> Has anyone used an ATAS-100 or heard anything good or bad about it? I'm
> looking for a portable, multiple band, HF antenna that actually performs
> well. I bought a MFJ-1622 apartment antenna. I am not impressed with
its
> performance. MFJ says that it works well on all bands from 2 meter to 40
> meter. That's not true. I can work 20 meter with it sometimes, and have
> never been able to get out on 40 meter. If anyone has any experience
using
> an ATAS-100 please let me know what you think of it. If anyone has any
> suggestions for a nice portable HF antenna let me know also. The July
QST
> had some plans for a nice portable HF... has anyone tried that? If so,
let
> me know if it was worth it.
>
> Thanks,
>
> Kes,
> KC8UIE

http://makeashorterlink.com/?A60823D81

73 de W6DKN

3341. Parallel Dipoles for 20 and 17?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-19 08:53:02 UTC
From: n2cqr@clix.pt
Message-ID: <3d60b0af.38696775@news.clix.pt>
Source record: 136382

My efforts to use coaxial traps to convert my 17 meter rotatable dipole for 20 and 17 meter use didn't work out. So now I'm looking at other options.

What do you guys think would happen if I tried to add a 20 meter dipole in parallel with he 17 meter wire element (using the same piece of coax)? The antennas would be very close together, separated only by the diameter of the fishing pole supports.

Could someone run this antenna with modeling software to see if it would work. I'm concerned about the frequencies being so close...

73 de Bill CU2JL N2CQR
Sao Miguel Island, The Azores, Portugal
37.7 N 25.7 W
http://planeta.clix.pt/n2cqr

3342. Re: Choke needed on Mosely TA33?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-19 09:00:17 UTC
From: Kenneth Fattmann <na0y@worldnet.att.net>
Message-ID: <Bs289.19349$Ke2.1579842@bgtnsc04-news.ops.worldnet.att.net>
Source record: 136383

You will notice the TA-33 has the side the coax shield goes to has the element grounded. That is probably the reason. I think I would use current bead balun making sure the coax shield side of the output goes to the grounded element.

Good luck es 73 de Ken NA0Y

"Scott" <hml59@yahoo.com> wrote in message news:3D5F29B1.1367B94B@yahoo.com...
> This group showed A3 needs choke or balun to keep RF from coming down
> the cable..
> Most of the beam antenna requires(?) coax choke or balun from their
> manual..
> But old TA33 does not require any choke or balun on the manual.. Is
> there any reason?? or special Mosely design??
>
> I acquired old TA33 form local old man and am hesitating to put coax
> choke or balun..
> Please let me know..
> Thanks
> Scott
>

3343. Re: Scalar Electromagnetic Weapons

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-19 10:46:40 UTC
From: "R.Wilhelm" <nhbiwilh@rrzn-user.uni-hannover.de>
Message-ID: <Pine.GSO.4.44.0208191241510.8416-100000@unics>
Source record: 136384
Cross-posted to: alt.ham-radio.eme,alt.ham-radio.hf,alt.ham-radio.vhf-uhf,alt.radio.scanner,alt.radio.scanner.uk,rec.radio.amateur.antenna,rec.radio.amateur.misc,rec.radio.scanner,uk.radio.amateur,uk.rec.radio.cb

On Sun, 18 Aug 2002, Alexander S. Wood wrote:

> ...Me, I'd love to know
> how a country that cannot even afford to pay it's military personnel can
> afford the electricity.
>
That's why they can't pay their staff or maybe
they stole it from California last year ;-)

>
> By the way, if it's all these pesky Ruskies doing this EM stuff, then what
> is that great big array in Alaska irradiating the atmosphere for? Peaceful
> climnate study, I think not!

It's an attempt to take the electricity back for California.

Greetings

Ralf

Ralf Wilhelm
DL 6 OAP

Hannover, Germany, where mankind's first motorized flight took place:
Karl Jatho, August 18th 1903, 4 months before the Wright Bros.
(When will history notice this ?)

"History is irrelevant" (Star Trek character "Seven of Nine")

3344. Re: 6 meter antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-19 12:04:44 UTC
From: CBoone@Earthlink.Net
Message-ID: <3D60E2C2.DC6B39F6@Earthlink.Net>
Source record: 136385

Ahhh dont bother....buy or build a 6mtr antenna....you're better
off in the long run..

apachee apachee1 wrote:
>
> I have a 13b2 2 meter antenna. ? i am wanting to make a 6 meter antenna
> out of it. Can someone help me out on this? Also wanting to know how
> many elements i can make out of it.

3345. Re: 70 cm duplexers

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-19 12:06:26 UTC
From: CBoone@Earthlink.Net
Message-ID: <3D60E328.C423213D@Earthlink.Net>
Source record: 136386

WACOM is now part of TX/RX....some of the WACOM line is still available
but the TXRX series that duplicated the WACOM line is now the only ones
being made by them...(of course)...you can look at TXRX at www.txrx.com

Chris
WB5ITT
(A WACOM cusotmer for decades!)

Mike Newman wrote:
>
> I would appreciate some advice on what are sources of 70 cm
> bandpass/band reject duplexers for use in 430-440 MHz band, now that
> Wacom has been taken over?
>
> MikeN ZL1BNB

3346. Re: Broadband Folded Dipoles & Delta Loops

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-19 12:10:07 UTC
From: CBoone@Earthlink.Net
Message-ID: <3D60E405.2113080F@Earthlink.Net>
Source record: 136387

Check out the web site by W4RNL which discusses ALL types of
HF antennas...including the T2FD (the B&W)...it tells you all you
need to know and then some! :) http://www.cebik.com/

Chris
WB5ITT

K7HMP / 4 wrote:
>
> I've recently become interested in a couple antennas I've noticed over
> the years in catalogs and magazines. They appear to be "normal" Folded
> Dipoles or Delta Loops; except, they are fed with a balun and have a
> "termination device" (read "dummy load"?) at the midpoint. The most
> common one is the B&W Broadband Folded Dipole which will apparently work
> from 1.8 to 30 MHz with an SWR of less than 2:1.
>
> Has anyone used these with any success? Is the 2:1 real? Or, does the
> "termination device" do something with other portions of the power, so
> that although it isn't being reflected, it isn't radiating either?
>
> While I know that termination resistors are a time-honored technique for
> Rhombics - which work great on a broad range of frequencies - I'm less
> sure I understand why they would work in a dipole type configuration.
>
> Are their any sites or books that have a layman's explanation of how or
> why these antennas work?
>
> Appreciate the insight either direct or posted here.
>
> 73, Dave
>
> Dave Williams - K7HMP/4

3347. Re: Cleaning oxidized antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-19 12:13:08 UTC
From: CBoone@Earthlink.Net
Message-ID: <3D60E4BA.21E59093@Earthlink.Net>
Source record: 136388

Use the floridic acid (watered down of course!) that is used to clean
AC coils outside...(which are aluminum!)....works really well and makes
the antenna look brand new....
WARNING this is an acid...be SURE to cut it down with water before
using.....follow the instructions TO THE LETTER!!!
Beats the hell out of scrubbing with a pad....
AL Oxide is only of concern though where the elements come together....
On the rest of the elements, it actually protects..

Chris
WB5ITT

Larry Shilkoff wrote:
>
> I have a Cushcraft A3 yagi that was used at my previous home for a number of
> years. I'm planning on putting it back up, but I'm concerned about the
> apparent oxidation on the aluminum tubing. Is there a recommended method of
> cleaning the aluminum?
>
> Thanks
>
> Larry

3348. Re: Yaesu ATAS-100 antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-19 12:15:04 UTC
From: 'Doc <w5lz@icok.net>
Message-ID: <3D60E137.1B9F67B0@icok.net>
Source record: 136389

Kes,
The early ATAS-100's had some problems, for some
reason they would 'lock-up' the system and require
everything to be turned off/on to get it working again.
I understand that Yaesu has cured that problem.
Any mobile antenna is a 'compromise' and will very
seldom work as well as an antenna normally used at a
'fixed' location, as a 'real live' full sized antenna
will. If your situation is that you can't have a full
sized antenna, then the ATAS-100 will probably work as
well as any other 'compromise' antenna of comparable
size.
'Doc

3349. Re: Coax Length for Fixed Frequency Antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-19 12:16:53 UTC
From: CBoone@Earthlink.Net
Message-ID: <3D60E592.67A72322@Earthlink.Net>
Source record: 136390

ANY line 1/2wave in length (x velocity factor of course) will repeat
the Z at one end to the other....SOOO on a fixed freq antenna, use
ANY line that is 1/2wl x VF in length ...or ANY multiple of said length
(As long as it is a Mutl of the 1/2 x VF)
That way the dipole impeadance is correctly reflected to the xmtr...

OF course if the antenna is resonant and the feedline is the same Z
as the feedpoint is, then ANY length will do ok....(say the dipole
is a true 72ohms...then ANY length of RG59, etc will work....but
any length of RG58 other than Nx1/2wlxVF lengths will not be correct!)

Chris
WB5ITT

Al wrote:
>
> I plan to build a simple dipole and operate on 14.070MHz only (yes, I like
> PSK) using about 30 watts max. In an article on balanced systems in
>
> http://www.moonraker.com.au/techni.feeders.htm
>
> the author talks about the transmission line approaching an electrical 1/4
> wave length. I do not understand if this is desirable or undesirable. In
> other words should my feedline be a multiple of 1/4 wave or 1/2 wave if I'm
> going to use it on one frequency only? Or is all of this really quite
> unnecessary and should I just use any reasonable length of coax?
>
> A second question. This antenna will be about 4 feet above the eave of my
> house, running the full length of the eave. The underside of the eave is
> covered with vinyl coated aluminum. Will the nearness of the antenna to this
> aluminum covered eave be a serious problem?
>
> I'm not going to ask anything about the balun I plan to use. I don't want to
> start any wars just yet.
>
> Thank you.
> Al
> KA5JGV

3350. Re: Comet GP-15

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-19 12:19:22 UTC
From: CBoone@Earthlink.Net
Message-ID: <3D60E630.EEAB4C56@Earthlink.Net>
Source record: 136391

The band has been closed lately.....the antenna should have about
a 2MHz MAX SWR of 2:1 so if it is 1:1 at 52.525, it will only cover
from 52-54 MHz ok...or maybe a little lower....if you want to use it
on SSB and FM, you need to move the resonant freq down to 51.2 MHz..
but this will cause the SWR at 52.525 to be higher than 2:1 likely.

Time for a high horizontal omni antenna on 6 for SSB! like a turnstile
or similar!

Chris
WB5ITT

Darrin wrote:
>
> Anyone have any comments on the GP-15? I just put one up on the
> chimney and it seems to work very well on 2M, 440, and 6M FM. Haven't
> heard a thing on 6M SSB though. Could just be the band though. Without
> a tuner, the bandwidth seems very narrow on 6M too.

3351. Re: Comet GP-15

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-19 12:25:43 UTC
From: CBoone@Earthlink.Net
Message-ID: <3D60E7A3.546EE53B@Earthlink.Net>
Source record: 136392

The fact it handles all three at once is no secret.....it is merely
physics!!!

ANY antenna that is multiresonant will work with the same number of
xmtrs into it at the same time....the problem is making it work with-
out blowing up the xmtrs!!! This is done by the diplexers!!!
They are merely LP, HP and combination filters that allow the
RF from the proper band to flow in and onto the antenna side..
without feeding back into the other ports....a LP filter will NOT
pass higher freqs (depending on the design cutoff freq and isolation)
and a HP will not pass LOWER freqs below a certain point...
a combo or BandPass filter only allows those signals within a certain
range to pass....SOOO each port is protected from the others (up
to a certain power level!).....and they merely mix together out the
common port to the antenna...NOW if the antenna goes bad on ONE band,
you will have a serious problem as the system is no longer balanced
and SWRs on the band in question will cause serious overheating,
etc in the components on the other bands.....possibly causing them
to burn out and then that will damage the xmtr, etc on that port!
Its all a balanced system (they like to see 50ohms at all ports!)..
remove one side and it becomes a nasty unbalanced thing! :)
Hope that helps

Chris
WB5ITT
ARRL TS- S Texas

Larry Saletzki wrote:
>
> HI Darrin, I used one with the triplexer for a couple of years on packet. I
> had a 6m, 2m and uhf connection going all at once. Baffled the heck out of
> me that all three could be transmitting at once. It worked very well. One
> negative is that it will not hold up very well to a direct lightening bolt!!
> But then again I guess we wouldn't either! I have another that I will be
> putting up later this year. 73's Larry WA9VRH

3352. Re: Tutorial #2

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-19 13:07:31 UTC
From: aunwin@fgi.net
Message-ID: <c4becf19.0208190507.2ed72f0d@posting.google.com>
Source record: 136393

Richard Clark <kb7qhc@attbi.com> wrote in message
news:<ipivlu08hsojduckrdlbkkmd2jv3uosrvh@4ax.com>...
> On 18 Aug 2002 08:02:49 -0700, aunwin@fgi.net (Art Unwin KB9MZ) wrote:
>
> >aunwin@fgi.net (Art Unwin KB9MZ) wrote in message
news:<c4becf19.0208171918.7856b9d4@posting.google.com>...
> >> Richard Clark <kb7qhc@attbi.com> wrote in message
news:<nbsslu039ombp76eqcs4inuenmdrv3mnt3@4ax.com>...
> >> > On 17 Aug 2002 07:52:40 -0700, aunwin@fgi.net (Art Unwin KB9MZ) wrote:
> >> >
> >> > snip
> >O.K. Richard you have had time to digest and I expect that you now
> >agree that:
> >
> > 1. The antenna is rotatable and it is frequequency changabable
> >using remote
> >control.
>
> Granted
>
> > 2.From the previous post I think we can say that we have
> >established that we have blocked current flow in the center of the
> >dipole.
>
> Nope. What you describe may occur, but not in every band. This is
> the failure of your enthusiasm: find the best and apply it with a
> broad brush painting everything sky blue. When obvious flaws are
> exposed beneath this veneer of color, the whole work becomes suspect.
>
> snip
> 73's
> Richard Clark, KB7QHC

The long delays for postings to be placed for view
is causing cross talk.

What you say above is MAJOR to the antenna and may well be the hurdle
that is preventing the acceptance of my antenna.

Your statement implies that the ARRL publication is in error
as it does not relate to facts on all frequencies.

You infer from this that these 'gaps' in frequency coverage
or more specifically "bands', the statement in the book does NOT
apply.

Since the specific antenna range is for 20 thru 10 metres

Would you agree that it DOES happen on 10 metres for example,
for starters, so the debate can continue.

This is very important because it affects the viability
of frequency change and rotatabilility which you
previously accepted ! Is this now being thrown out of the window ?

In addition, could you shed some light as to what in the ARRL
statement is in error and how it should be corrected ?

I see no point at this time to continue with the rest of your
posting at this time because of the seriousness of your statement
and the extrordinary slow pace that this net is being run.
Regards
Art

(PLEASE, no e mails on this subject from non members of this group
unless known to me. Join the group and then participate in the
technical pursuit so answers are available to all. Technical
discussions with all and sundry is impossible. Let us leave it to net
participants at this time. Thanking all in anticipation of compliance)

3353. Re: Solder-style RF connectors - Diagrams On How to Prepare Coax

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-19 13:11:02 UTC
From: Bob Miller <bamiller@texas.net>
Message-ID: <ou1gPckptuxvbQkQ1amtQ=FuE6iT@4ax.com>
Source record: 136394

"Tony Hackenberg" <tony.hackenberg@worldnet.att.net> wrote:

>Could you refer me to a web site (or other resource) showing how to install
>the following 'solder-style' RF connectors onto the coax types listed below?
>
> ITEM# DESCRIPTION
> -------------- ---------------------
> (1) PL259 PL-259 Solder type (with adapter below) and
> (2) UG-176/U Reducer to allow PL-259 to fit RG-8X coax cable.
>
>I searched the Web but could not locate any diagrams or information. I also
>tried the ARRL site and the ARRL 2002 Handbook. Unfortunately, I came up
>with nothing.

It should be in your ARRL Handbook. I've got the year 2000 book, and in chapter
22, "Station Setup," page 22.7 shows a diagram of how to cut your coax and
install it into these two connectors.

Bob
k5qwg

>
>My reference library once held diagrams on how to do all kinds of RF
>connectors. I think a very old issue of CQ or 73 Magazine contained these
>diagrams. However, I could not locate it in my library. I guess I lost the
>issue.
>
>73,
>Tony/WA8SSQ
>
>
>
>
>
>

3354. Re: Solder-style RF connectors - Diagrams On How to Prepare Coax

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-19 13:55:17 UTC
From: AC6V <ac6v@amsat.org>
Message-ID: <9N689.53375$eb.3719844@news2.west.cox.net>
Source record: 136395

See URL:
http://www.seed-solutions.com/gregordy/Amateur%20Radio/Experimentation/SolderCoax.htm

--
I Doubt, Therefore I Might Be
73 From AC6V, Rod In Oceanside, CA
Ham Mega Pages -- http://ac6v.com
==========
"Bob Miller" <bamiller@texas.net> wrote in message
news:ou1gPckptuxvbQkQ1amtQ=FuE6iT@4ax.com...
> "Tony Hackenberg" <tony.hackenberg@worldnet.att.net> wrote:
>
> >Could you refer me to a web site (or other resource) showing how to
install
> >the following 'solder-style' RF connectors onto the coax types listed
below?
> >
> > ITEM# DESCRIPTION
> > ------------- --------------------
> > (1) PL259 PL-259 Solder type (with adapter below) and
> > (2) UG-176/U Reducer to allow PL-259 to fit RG-8X coax
cable.
> >
> >I searched the Web but could not locate any diagrams or information. I
also
> >tried the ARRL site and the ARRL 2002 Handbook. Unfortunately, I came up
> >with nothing.
>
> It should be in your ARRL Handbook. I've got the year 2000 book, and in
chapter
> 22, "Station Setup," page 22.7 shows a diagram of how to cut your coax and
> install it into these two connectors.
>
> Bob
> k5qwg
>
> >
> >My reference library once held diagrams on how to do all kinds of RF
> >connectors. I think a very old issue of CQ or 73 Magazine contained
these
> >diagrams. However, I could not locate it in my library. I guess I lost
the
> >issue.

> >
> >73,
> >Tony/WA8SSQ
> >
> >
> >
> >
> >
> >
>

3355. Re: Parallel Dipoles for 20 and 17?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-19 13:58:50 UTC
From: CAM <Cecil.A.Moore@ieee.org>
Message-ID: <3D60F99A.E8480A81@ieee.org>
Source record: 136396

Bill Meara wrote:
> What do you guys think would happen if I tried to add a 20 meter
> dipole in parallel with he 17 meter wire element (using the same piece
> of coax)? The antennas would be very close together, separated only
> by the diameter of the fishing pole supports.

Bill, seems to me you are trying to solve your problem the hard way.
I have a 33ft rotatable dipole that works on all ham frequencies
above 14MHz. I vary the length of the ladder-line to achieve a
match on all those bands without an antenna tuner.

In particular, for operation on 20m and 17m, the "magic" lengths of
450 ohm ladder-line *calculate* out to be:

450 ohm ladder-line Lengths
20m 17m

62.3ft 66.2ft 1st close point

93.5ft 90.6ft 2nd close point

These are calculated values and you would need to add or subtract a
few feet to match your QTH but you can tune the rotatable dipole to
20m by adding or subtracting to the ladder-line length until you get
a multiple of 1/2WL on 20m. Then add or subtract whatever length is
necessary to resonate your antenna system on 17m. Whenever you want
to change bands, simply switch the single length of ladder-line in
or out. You can do it with relays, knife switches, or manually with
banana plugs. You only to deal with a single three or four foot piece
of ladder-line. For my rotatable dipole, the difference in ladder-line
length on 20m and 17m is an actual three feet in reality.

Or if you don't mind using an antenna tuner, find the "magic" lengths
at your QTH, choose a length halfway in between, and use a tuner.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

3356. Re: Solder-style RF connectors - Diagrams On How to Prepare Coax

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-19 14:09:59 UTC
From: AC6V <ac6v@amsat.org>
Message-ID: <X_689.53383$eb.3722146@news2.west.cox.net>
Source record: 136397

MORE AT URL:
Esy clicks at http://ac6v.com/techref.htm#SOLD

--
I Doubt, Therefore I Might Be
73 From AC6V, Rod In Oceanside, CA
http://ac6v.com

"AC6V" <ac6v@amsat.org> wrote in message
news:9N689.53375$eb.3719844@news2.west.cox.net...
> See URL:
>
http://www.seed-solutions.com/gregordy/Amateur%20Radio/Experimentation/Solde
> rCoax.htm
>
> --
> I Doubt, Therefore I Might Be
> 73 From AC6V, Rod In Oceanside, CA
> Ham Mega Pages -- http://ac6v.com
> ===================================
> "Bob Miller" <bamiller@texas.net> wrote in message
> news:ou1gPckptuxvbQkQ1amtQ=FuE6iT@4ax.com...
> > "Tony Hackenberg" <tony.hackenberg@worldnet.att.net> wrote:
> >
> > >Could you refer me to a web site (or other resource) showing how to
> install
> > >the following 'solder-style' RF connectors onto the coax types listed
> below?
> > >
> > > ITEM# DESCRIPTION
> > > ------------- --------------------
> > > (1) PL259 PL-259 Solder type (with adapter below)
and
> > > (2) UG-176/U Reducer to allow PL-259 to fit RG-8X coax
> cable.
> > >
> > >I searched the Web but could not locate any diagrams or information. I
> also
> > >tried the ARRL site and the ARRL 2002 Handbook. Unfortunately, I came
up
> > >with nothing.
> >
> > It should be in your ARRL Handbook. I've got the year 2000 book, and in
> chapter
> > 22, "Station Setup," page 22.7 shows a diagram of how to cut your coax

and
> > install it into these two connectors.
> >
> > Bob
> > k5qwg
> >
> > >
> > >My reference library once held diagrams on how to do all kinds of RF
> > >connectors. I think a very old issue of CQ or 73 Magazine contained
> these
> > >diagrams. However, I could not locate it in my library. I guess I
lost
> the
> > >issue.
> > >
> > >73,
> > >Tony/WA8SSQ
> > >
> > >
> > >
> > >
> > >
> > >
> > >
> >
>
>

3357. Re: Superposition quiz

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-19 14:40:49 UTC
From: CAM <Cecil.A.Moore@ieee.org>
Message-ID: <3D610371.6937EA98@ieee.org>
Source record: 136398

Roy Lewallen wrote:
>
> CAM wrote:
>
> > . . .
> > Now replace the 150 ohm load with 1/4WL of 150 ohm line terminated in a
> > 50 ohm load.
> >
> > 100w XMTR---tuner---50 ohm feedline---+---1/4WL 150 ohm feedline---50 ohm load
> >
> > The quarter-wave transformer transforms the 50 ohm load impedance to 150 ohms
> > seen at the 50/150 ohm transition point so steady-state power conditions on the
> > 50 ohm feedline have not changed. . . .
>
> No, you'll see 450, not 150 ohms at the input end of the 150 ohm line.
> You'd see 150 ohms only if the termination resistor were 150 ohms. The
> conditions on the 50 ohm feedline have changed.

I must have copied the example down wrong but the following should do.

100w XMTR---tuner---50 ohm feedline---+---1/4WL 86.6 ohm feedline---50 ohm load

Can someone show me how to analyze what happens at the 50/86.6 ohm junction
using Steve's method of deriving voltages from calculated powers?
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

3358. Re: Superposition quiz

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-19 15:16:52 UTC
From: CAM <Cecil.A.Moore@ieee.org>
Message-ID: <3D610BE4.C9F7A881@ieee.org>
Source record: 136399

CAM wrote:
> Can someone show me how to analyze what happens at the 50/86.6 ohm junction
> using Steve's method of deriving voltages from calculated powers?

Never mind, I found my error. I was using Rho instead of Rho squared.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

3359. Re: Tutorial #2

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-19 15:36:15 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <oa42mu4fhbo7qm8bu0ff95plp04rvjhhe4@4ax.com>
Source record: 136400

On 19 Aug 2002 06:07:31 -0700, aunwin@fgi.net (Art Unwin KB9MZ) wrote:
>
>The long delays for postings to be placed for view
>is causing cross talk.
>
>What you say above is MAJOR to the antenna and may well be the hurdle
>that is preventing the acceptance of my antenna.

I doubt both observations.

>
>Your statement implies that the ARRL publication is in error
>as it does not relate to facts on all frequencies.

This is simply your mis-read. Why fumble around the question? Ask
what it is that is bugging you.

>
>You infer from this that these 'gaps' in frequency coverage
>or more specifically "bands', the statement in the book does NOT
>apply.
>Since the specific antenna range is for 20 thru 10 metres

Art, as it seems you are having trouble with what I wrote ("implies"
"infer") perhaps it is time for you to ask questions about that
instead of summoning up demons of your own invention.

>
>Would you agree that it DOES happen on 10 metres for example,
>for starters, so the debate can continue.

I haven't the vaguest notion of what you are talking about.

>
>This is very important because it affects the viability
>of frequency change and rotatabililityy which you
>previously accepted ! Is this now being thrown out of the window ?

Art, only you have come to this interpretation that you now ascribe to
me. Time to stop doing that too.

>
>In addition, could you shed some light as to what in the ARRL
>statement is in error and how it should be corrected ?
>
>I see no point at this time to continue with the rest of your
>posting at this time because of the seriousness of your statement

>and the extrordinary slow pace that this net is being run.
>Regards
>Art

Hi Art,

Rather than curse the darkness of the slow pace, light a candle and publish your model.

73's
Richard Clark, KB7QHC

3360. Re: 'Nother question about ladderline

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-19 16:24:02 UTC
From: cprstn54zz@att.net
Message-ID: <3d611b9c.35317750@news-server.optonline.net>
Source record: 136401

On Sun, 18 Aug 2002 19:07:45 -0500, CAM <Cecil.A.Moore@ieee.org>
wrote:
>Twisting and soldering copperweld stranded wire is ugly. The individual
>wires are not well behaved.

One more thought: What do you do at the stainless antenna posts with
the unruly Copperweld wires? If you crimp on an apropriate connector,
it will be subject to corrosion. What about using a butt connector to
go to insulated copper 14 gauge for maybe 6"? Then you could solder
the butt and coat it with epoxy sealer or hrink tubing. Only the
copper wire would be in the breeze and you bend that around the posts
and tighten the nuts.

If this makes sense, should the copper wire be solid or stranded (and
tinned at the end)?

Does connecting Copperweld to copper in an HF feedline cause anything
strange to happen?

Ken KC2JDY
Ken
(to reply via email
remove "zz" from address)

3361. Radio Shack Discone Antenna Opinions ?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-19 16:26:01 UTC
From: Robert Rose <rgsrose@tiac.net>
Message-ID: <ajr6ddduo1@slb5.atl.mindspring.net>
Source record: 136402

Hi,

Have been using a 20 year old Antenna Specialists Model MONR 31 aerial in my attic for frequencies over
30 MHz. They still apparently sell this model.

Works O.K., but was wondering if the Radio Shack Catalog No.-Model 20-043 "Outdoor Scanner/Ham DISCONE Antenna" "might" be better?

Both antennas look fairly similar, with the radial arms, etc.

Anyone have any experience with either of these? Opinions would be appreciated.

Thanks,
Bob

3362. Re: Cushcraft verticals?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-19 16:27:59 UTC
From: Deni <gm3skn@fsnet.co.uk>
Message-ID: <ajr6b1$5bj$1@newsg3.svr.pol.co.uk>
Source record: 136403

Just been reading the E-Ham reviews on the R7000...'nuff said, should have done this first, thanks all.

73, Deni GM3SKN

"Deni" <deni@gm3skn.fsnet.co.uk> wrote in message news:ajp640ejf1@news5.svr.pol.co.uk...
> What is the difference between the R7/ R7000 or R8/R8000 ?
>
> Tks 73, Deni GM3SKN
>
>

3363. Re: Scalar Electromagnetic Weapons

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-19 17:10:22 UTC
From: "Alexander S. Wood" <alec_wood@dont.spam.me.ntlworld.com>
Message-ID: <V4a89.3098$_q2.17813@newsfep3-gui.server.ntli.net>
Source record: 136407
Cross-posted to: alt.ham-radio.eme,alt.ham-radio.hf,alt.ham-radio.vhf-uhf,alt.radio.scanner,rec.radio.amateur.antenna,rec.radio.amateur.misc,rec.radio.scanner

"Fred Hambrecht" <w4jle@charter.net> wrote in message
news:ulvvql3il3ura7@corp.supernews.com...
> Andy Roonie mode on:
> Did ga ever notice folks that attack Mr. Bush always have neat e-mail
> addresses like Lucifer@eternal-flames.gov, wonder why that is? Roonie mode
> off.
>
<snip>

Hi Fred

My email address is not very neat. Then again, I don't attack Mr Bush - I just dare to question the direction in which he is leading us. Unfortunately it is "us", since Mr Blair just does as he's told, as do most of the other NATO leaders. Wonder why. Is that a small globe of white light I see above 10 Downing St.....

Alec

PS For those Americans with a similar knowledge of other countries to their president, I'd better explain that 10 Downing Street is the residence of the British Prime Minister, who is called Tony Blair - short for "Anthony" by the way.

3364. Re: Scalar Electromagnetic Weapons

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-19 17:10:49 UTC
From: "Alexander S. Wood" <alec_wood@dont.spam.me.ntlworld.com>
Message-ID: <V4a89.3099$_q2.17813@newsfep3-gui.server.ntli.net>
Source record: 136408
Cross-posted to: alt.ham-radio.eme,alt.ham-radio.hf,alt.ham-radio.vhf-uhf,alt.radio.scanner,alt.radio.scanner.uk,rec.radio.amateur.antenna,rec.radio.amateur.misc,rec.radio.scanner,uk.radio.amateur,uk.rec.radio.cb

"Dave Holford" <holford@sympatico.ca> wrote in message
news:3D5FD083.B017E1D8@sympatico.ca...
>
>
> If you want to know about Electromagnetic Weapons read up on HPMs, they
> really do exist.
>
> Dave

Indeed they probably do exist. I think what people have a problem with is the idea that every "natural" disaster and every event involving loss of US military personnel is down to Russia, which is now basically a third world country. If these weapons do exist and are in use, it is most likely that they would be in the hands of the worlds richest country, not one of the poorest.

That said, I don't believe that the US have yet perfected such a weapon, if they had we would all know about it. America's "national security requirements" would have required its use on all of us by now for daring to question "Dubbya".

Alec

3365. Re: 'Nother question about ladderline

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-19 17:33:44 UTC
From: CAM <Cecil.A.Moore@ieee.org>
Message-ID: <3D612BF8.87695AAB@ieee.org>
Source record: 136406

Ken wrote:
>
> On Sun, 18 Aug 2002 19:07:45 -0500, CAM <Cecil.A.Moore@ieee.org>
> wrote:
> >Twisting and soldering copperweld stranded wire is ugly. The individual
> >wires are not well behaved.
>
> One more thought: What do you do at the stainless antenna posts with
> the unruly Copperweld wires? If you crimp on an apropriate connector,
> it will be subject to corrosion.

Any dissimilar metals will be subject to corrosion, some worse than others.
In my particular configuration, there is the need to connect copper to
aluminum which causes known problems. Lead-tin solder is more similar to
aluminum in the galvanic table than is copper so I use solder covered lugs
at the aluminum contact point. I also use antioxidants at that point and try
to waterproof the connection. It's not perfect but it is probably good enough.
Stainless steel is very close to lead-tin solders in the galvanic table, so
solder the copper wire into a solder-tinned lug and you should be (almost)
home free. Polyphaser has an application note on the subject that you can
download. The ID of the ap note is PTD1010.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

3366. Re: Discone question

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-19 17:35:43 UTC
From: vhfradiobuff@aol.comspamsux
Message-ID: <20020819133543.24719.00001547@mb-ft.aol.com>
Source record: 136404

>. Move it up 5 feet and prepare to see a huge difference.

Unfortunately I can't move the antenna any higher. I'm going to have to put it back where it was at before I put it on the roof, back around 15 feet above the ground.

=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-

73! de Andy KC2SSB (ex: KF4KHC/HL9HCT)
Beachwood, NJ USA! Grid FM29vw
http://vhfradiobuff.tripod.com

3367. Re: Discone question

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-19 17:36:40 UTC
From: vhfradiobuff@aol.comspamsux
Message-ID: <20020819133640.24719.00001548@mb-ft.aol.com>
Source record: 136405

>S7 to nothing is IMHO too big a drop to be down to purely antenna
>interaction. The discone wants to be a metre or more away from the beam, but
>first I think a check of the feeder and connectors is the order of the day.

Well, I'm gonna move the antenna back where it was and I am sure I will see
that signal strength return before I bother checking the coax and connectors.
They were working fine an hour before I moved the antenna. They don't
spontaneously become bad.
=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-
73! de Andy KC2SSB (ex: KF4KHC/HL9HCT)
Beachwood, NJ USA! Grid FM29vw
http://vhfradiobuff.tripod.com

3368. Re: Scalar Electromagnetic Weapons

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-19 17:45:33 UTC
From: lucifer@eternal-flames.gov
Message-ID: <qt92mu4mid0cg2cibj9uankh9fiqeqv8um@4ax.com>
Source record: 136409
Cross-posted to: alt.ham-radio.eme,alt.ham-radio.hf,alt.ham-radio.vhf-uhf,alt.radio.scanner,rec.radio.amateur.antenna,rec.radio.amateur.misc,rec.radio.scanner

On Sun, 18 Aug 2002 17:13:12 +0100, "Alexander S. Wood"
<alec_wood@dont.spam.me.ntlworld.com> wrote:

>I'd love to know
>how a country that cannot even afford to pay it's military personnel can
>afford the electricity.

That's easy. First they apply to Washington for 'Favored Nation
Status' then they apply for a massive loan and poor Joe Public, right
across America, ends up footing the bill.

Same as usual.

3369. Re: Scalar Electromagnetic Weapons

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-19 17:59:51 UTC
From: Fred Hambrecht <w4jle@charter.net>
Message-ID: <um2cgr4n5ku05d@corp.supernews.com>
Source record: 136412
Cross-posted to: alt.ham-radio.eme,alt.ham-radio.hf,alt.ham-radio.vhf-uhf,alt.radio.scanner,rec.radio.amateur.antenna,rec.radio.amateur.misc,rec.radio.scanner

Go sit on a tack, you supercilious limey bastard.

We should have drowned your Great, Great Grandfather in Boston harbor along with the tea, when we had the chance.

"Alexander S. Wood" <alec_wood@dont.spam.me.ntlworld.com> wrote in message news:V4a89.3098$_q2.17813@newsfep3-gui.server.ntli.net...
>
> "Fred Hambrecht" <w4jle@charter.net> wrote in message
> news:ulvvql3il3ura7@corp.supernews.com...
> > Andy Roonie mode on:
> > Did ga ever notice folks that attack Mr. Bush always have neat e-mail
> > addresses like Lucifer@eternal-flames.gov, wonder why that is? Roonie mode
> > off.
> >
> <snip>
>
> Hi Fred
>
> My email address is not very neat. Then again, I don't attack Mr Bush - I
> just dare to question the direction in which he is leading us. Unfortunately
> it is "us", since Mr Blair just does as he's told, as do most of the other
> NATO leaders. Wonder why. Is that a small globe of white light I see above
> 10 Downing St.............................
>
> Alec
>
> PS For those Americans with a similar knowledge of other countries to their
> president, I'd better explain that 10 Downing Street is the residence of the
> British Prime Minister, who is called Tony Blair - short for "Anthony" by
> the way.
>
>

3370. Re: Radio Shack Discone Antenna Opinions ?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-19 18:00:08 UTC
From: 'Doc <w5lz@icok.net>
Message-ID: <3D613206.2E79DE9F@icok.net>
Source record: 136410

Bob,
There would probably be very little, if any
difference between them.
'Doc

3371. Re: What is Lithium grease good for?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-19 18:05:07 UTC
From: thompson@mindspring.com
Message-ID: <ajrbp4$9kp$1@slb3.atl.mindspring.net>
Source record: 136411

Lithium grease under various trade names (Lith-Ease is one) is good for
virtually all outside antenna hardware. I have used it for thrust bearings
and tower hardware. It protects the outside
from rust and weather. I then use Pre-Lube 6 or similar for say wire rope
or cables where you want the lubricant to sink in. (DO NOT USE WD-40).
73 Dave K4JRB

>
> Always put a dab on each stud when you change a tire.
> (Here in Ottawa, that happens twice a year when we change
> snow tires.) At the garage, it's sometimes called anti-
> sieze grease.
>
> Why? Try to change a tire when the nuts are rust welded!

3372. Re: Cushcraft going out of business?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-19 18:10:15 UTC
From: thompson@mindspring.com
Message-ID: <ajrc2p$u9s$1@slb6.atl.mindspring.net>
Source record: 136413

Cushcraft closed out much of its HF antennas as the amateur HF market is very small and there are many competitors. You gotta make money and thats hard in this market. They still make the 7 El tri-bander, the Log Yagi, the A3WS, and the XM240 (2 eol 40). Too bad as the 4 el beams were quite good.

Dave K4JRB

3373. Re: 'Nother question about ladderline

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-19 18:13:56 UTC
From: 'Doc <w5lz@icok.net>
Message-ID: <3D613547.49001C42@icok.net>
Source record: 136414

Ken,
I don't seem to have the problems using copperweld
wire that others seem to have. The only 'posts' I have
to make a connection to with the ladder line are on a
tuner, and I just form the copperweld into a loop and
it's clamped between two washers on the posts. I have to
re-tighten the wing-nuts occasionally, but that's about
it.
I've used both the single conductor and the stranded
conductor ladder line and can't tell much difference
between them. I don't think there is much difference.
As far as soldering copperweld wire, make a good mechanical
joint, then solder it, no big deal. If your really that
worried about soldering copperweld, make a 'linesman' splice,
then solder it. If that doesn't make good enough connection,
'ain't nuthin' gonna work anyway...
'Doc

3374. Re: Scalar Electromagnetic Weapons

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-19 18:46:37 UTC
From: lucifer@eternal-flames.gov
Message-ID: <gqc2mu8nrk688hhnh3mehdrir1pek3psu2@4ax.com>
Source record: 136416
Cross-posted to: alt.ham-radio.eme,alt.ham-radio.hf,alt.ham-radio.vhf-uhf,alt.radio.scanner,rec.radio.amateur.antenna,rec.radio.amateur.misc,rec.radio.scanner

On Mon, 19 Aug 2002 18:10:49 +0100, "Alexander S. Wood"
<alec_wood@dont.spam.me.ntlworld.com> wrote:

>That said, I don't believe that the US have yet perfected such a weapon, if
>they had we would all know about it. America's "national security
>requirements" would have required its use on all of us by now for daring to
>question "Dubbya".

Are you suggesting an over generosity in the use of 'friendly fire' ?

Surely not....

3375. Re: Scalar Electromagnetic Weapons

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-19 18:46:38 UTC
From: lucifer@eternal-flames.gov
Message-ID: <evc2muspvthc8ablvu2lubjeko5i4ol8ql@4ax.com>
Source record: 136415
Cross-posted to: alt.ham-radio.eme,alt.ham-radio.hf,alt.ham-radio.vhf-uhf,alt.radio.scanner,rec.radio.amateur.antenna,rec.radio.amateur.misc,rec.radio.scanner

On Mon, 19 Aug 2002 18:10:22 +0100, "Alexander S. Wood"
<alec_wood@dont.spam.me.ntlworld.com> wrote:

>PS For those Americans with a similar knowledge of other countries to their
>president, I'd better explain that 10 Downing Street is the residence of the
>British Prime Minister, who is called Tony Blair - short for "Anthony" by
>the way.

For those Americans with an average standard of geographical
education. The British Isles are that pretty little group of islands
off the north coast of France.....

What do you mean, "where's France" ?

You must have heard of France... It's where that green statue in New
York harbor came from.

Old Nick.

3376. New Forum for MagLoops online

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-19 19:53:57 UTC
From: Carsten Hausdorf <c.hausdorf@hausdorf.org>
Message-ID: <3D614CD5.3669AF96@hausdorf.org>
Source record: 136417
Cross-posted to:
rec.radio.amateur.antenna,rec.radio.amateur.dx,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc

Hi there,

we set up a new Forum dealing with MagLoops. You will find Pics,
Reviews, Generel Diskussion and hints at

www.magnetic-loop.de

Please visit us.

The Forum is in English as well as in German language.

Don't hesitate to visit us.

TNX es vy 73 de DF2DD
--
You can contact me at: http://www.hausdorf.org
Unterstï¿½tzen Sie die Aktion "PLC - nein Danke" auf meiner Homepage
Groï¿½er Erfahrungsbericht ï¿½ber Loopantennen
NEU !!! Amateurfunk-Stilblï¿½ten als MP3 zum Download

3377. Re: Air-Wound Balun Design Info??

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-19 19:56:15 UTC
From: Dave Allen <david_e_allen@agilent.com>
Message-ID: <3D614D5F.D1226FA1@agilent.com>
Source record: 136418

One of my older (all of mine are old...) ARRL Handbooks describes an air balun that goes with the SPC tuner. Some dozen tri-filiar turns on 3/4" (ID) pvc pipe. Very simple. Made one. Haven't used it yet.

Let me know if you need more details.

73, dave, wb0taq

3378. Re: Air-Wound Balun Design Info??

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-19 20:09:08 UTC
From: Dave Allen <david_e_allen@agilent.com>
Message-ID: <3D615064.A18F7401@agilent.com>
Source record: 136319

What you are describing is a choke. I know it's called a "choke balun" even by manufacturers. But it remains a choke, not a balun in the sense that its function is not to transfer power to a balanced system, but rather to inhibit power (ie choke it) to one side of the system. Sure it "works" in terms of inhibiting rf current on the coax outer shield (when that is the problem), but how could it not, at the same time, inhibit the rf current in the antenna leg it is attached to?

My apologies for fanning a religious war, but the original poster needs to know that not all things called baluns are, even if they are air wound... Sigh...

73, dave, wb0taq

K4IA wrote:

> Tom, N0SS has published an article on these newsgroups several times.
> Summarizing his measurements concludes that 1:1 coaxial balun with an
> excellent choking reactance for 10 through 20 meters can be made by winding
> 6 turns of RG-213 on a 4 inch pVC sewer pipe. For 40 or 30 meters use 12
> turns. Wind the turns as a single layer
> --
> Radio K4IA
> Craig "Buck"
> Fredericksburg, Virginia USA
>
> FISTS 6702 CC 788 Diamond 64
> K1# 470 K2# 2460
>
> Does anyone have a source for design info for homebrewed
> > 1:1 and 4:1 air-wound baluns?
> > >
> > >
> > Thanks, Brian w3rv

3379. Re: Better Antenna Question

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-19 20:24:57 UTC
From: theplanters95@aol.comnospam
Message-ID: <20020819162457.09212.00001378@mb-cs.aol.com>
Source record: 136320

Sorry. The antenna will be for use at my apartment and maybe portable. Main use will be on my balcony.

Randy

3380. design of GPS patch antenna using a given material (epsilon is known)

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-19 20:35:52 UTC
From: alpheratz at wanadoo dot fr <alpheratz@invalid.wanadoo.fr>
Message-ID: <ajrkr9aec1@wanadoo.fr>
Source record: 136321

Hello there !
I'm about to try to build a dielectric patch antenna from a copper-covered slice of insulator....Any one having links/advice so as to compute the size of the patch?
usage: peer through a small aperture in my car windscreen, about 4*3 inches.... the rest of the screen is totally shielding the 1575 Mhz signal
alpheratz (at) wanadoo(dot) fr
regards

3381. Antenna Switches: Opinions On ?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-19 21:18:54 UTC
From: Robert Rose <rgsrose@tiac.net>
Message-ID: <ajrnb5moo1@slb1.atl.mindspring.net>
Source record: 136322

Hi,

Have a new receiver, and have gotten in the habit of diconnecting my HF and VHF aerials whenever there is a
summer storm in the area. We tend to have many around here.

Not too worried about direct lightning hits, but am very concerned about induced voltages from "nearby" strikes,
and also static buildup. Antennas are receive only, and located in the attic (a discone, and a random-length wire for the HF).

The connecting and disconnecting has gotten to be a real pain, so, it looks like I am in the market for two antenna switches.

The units that have the the unused terminal grounded sounds like the way to go, certainly.

Smaller the Switch size, the better.

Would appreciate any opinions on, and experiences with, the four brands in the Universal Radio catalog, or on any others.

Alpha Delta
Daiwa
MFJ
Diamond (unused grounded?)

Much thanks,
Bob

3382. Re: Air-Wound Balun Design Info??

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-19 21:47:58 UTC
From: CAM <Cecil.A.Moore@ieee.org>
Message-ID: <3D61678E.B1DB4EF1@ieee.org>
Source record: 136323

Dave Allen wrote:
> My apologies for fanning a religious war, but the original poster needs to know
> that not all things called baluns are, even if they are air wound... Sigh...

When a common-mode choke is placed at a BAlanced to UNbalanced junction,
doesn't it become a balun by default?
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
------== Over 80,000 Newsgroups - 16 Different Servers! =-----

3383. Re: Scalar Electromagnetic Weapons

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-19 21:49:14 UTC
From: Walt Bertram <wbertram@optonline.net>
Message-ID: <3D6167DA.3BDF9C5E@optonline.net>
Source record: 136324
Cross-posted to: alt.ham-radio.eme,alt.ham-radio.hf,alt.ham-radio.vhf-uhf,alt.radio.scanner,rec.radio.amateur.antenna,rec.radio.amateur.misc,rec.radio.scanner

Oh, France! Yeah, that's that place we have to go to every 50 years or
so and bail your asses out! My father was there in 1918. Got his ass
shot at. My uncle was there in 1944, think he screwed a bunch of your
whores, wives, daughters, whatever. Mext time maybe we will stay home
and let you solve your problems by yourselves.

lucifer@eternal-flames.gov wrote:
>
> On Mon, 19 Aug 2002 18:10:22 +0100, "Alexander S. Wood"
> <alec_wood@dont.spam.me.ntlworld.com> wrote:
>
> >PS For those Americans with a similar knowledge of other countries to their
> >president, I'd better explain that 10 Downing Street is the residence of the
> >British Prime Minister, who is called Tony Blair - short for "Anthony" by
> >the way.
>
> For those Americans with an average standard of geographical
> education. The British Isles are that pretty little group of islands
> off the north coast of France.....
>
> What do you mean, "where's France" ?
>
> You must have heard of France... It's where that green statue in New
> York harbor came from.
>
> Old Nick.

3384. Re: Antenna Switches: Opinions On ?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-19 21:50:39 UTC
From: jgboyles@aol.com
Message-ID: <20020819175039.01702.00001050@mb-de.aol.com>
Source record: 136327

>Have a new receiver, and have gotten in the habit of diconnecting my HF and
>VHF aerials whenever there is a
>summer storm in the area.

>so, it looks
>like I am in the market for two antenna switches.

>Antennas are receive only, and located in the
>attic (a discone, and a random-length wire for the HF).

Hi Bob, A really simple way is: go to your local Radio Shack, get one of their Aluminum project boxes, about the size you want. Get as many single pole-double throw toggle or slide switches as you have antennas you want to ground, get appropriate connectors for the feedlines, and build your own. Take about an hour tops. Might cost $10 for the materials.
Since the antennas are in the attic, static buildup should be your only concern, and the above arrangement would handle it as well as the more expensive "store bought" switches. And you built it yourself.
73 Gary N4AST

3385. Re: Reassembling Ham IV rotator question

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-19 22:02:04 UTC
From: LRod-removethispart-@pobox.com
Message-ID: <3d615c49.738191@netnews.worldnet.att.net>
Source record: 136325
Cross-posted to: rec.radio.amateur.misc,rec.radio.amateur.antenna

On Sun, 18 Aug 2002 14:58:07 GMT, J <twoube@yahoo.com> wrote:

> I've repaired a "working" HamIV that was sold to me on Ebay, and have
> a question about reassembling the top bell section.
>
> I am aware that the 3 slots in the upper housing must be aligned with
> the 3 tabs on the ring gear assembly. However I am NOT sure how to
> align the little index in the inside top of the bell in relation to
> the indicator potentiometer assembly.

Just eyeball it. Get it close (move the pot arm a little if you have
to) and once you get power to it, it'll line right up.

Remember this; there are two kinds of hams: those who have had ball
bearings all over the floor, and those who have never taken apart a
HAM Series rotator.

LRod

Master Woodbutcher and seasoned termite

Shamelessly whoring my website since 1999

http://www.woodbutcher.net

3386. Re: Air-Wound Balun Design Info??

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-19 22:02:20 UTC
From: jgboyles@aol.com
Message-ID: <20020819180220.01702.00001051@mb-de.aol.com>
Source record: 136326

>When a common-mode choke is placed at a BAlanced to UNbalanced junction,
>doesn't it become a balun by default?

I sure hope so.
73 Gary N4AST

3387. Re: Scalar Electromagnetic Weapons

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-19 22:13:49 UTC
From: "Alexander S. Wood" <alec_wood@dont.spam.me.ntlworld.com>
Message-ID: <cye89.4572$_q2.28994@newsfep3-gui.server.ntli.net>
Source record: 136329
Cross-posted to: alt.ham-radio.eme,alt.ham-radio.hf,alt.ham-radio.vhf-uhf,alt.radio.scanner,rec.radio.amateur.antenna,rec.radio.amateur.misc,rec.radio.scanner

You wouldn't make a profit out of that though would you. Anyway, don't get the idea that there was any kind of moral portion to the US decision to enter the war. America has and only ever will act when it's own national (read financial) interests are at stake.

Alec

"Walt Bertram" <wbertram@optonline.net> wrote in message news:3D6167DA.3BDF9C5E@optonline.net...
> Oh, France! Yeah, that's that place we have to go to every 50 years or
> so and bail your asses out! My father was there in 1918. Got his ass
> shot at. My uncle was there in 1944, think he screwed a bunch of your
> whores, wives, daughters, whatever. Mext time maybe we will stay home
> and let you solve your problems by yourselves.
>
> lucifer@eternal-flames.gov wrote:
> >
> > On Mon, 19 Aug 2002 18:10:22 +0100, "Alexander S. Wood"
> > <alec_wood@dont.spam.me.ntlworld.com> wrote:
> >
> > >PS For those Americans with a similar knowledge of other countries to their
> > >president, I'd better explain that 10 Downing Street is the residence of the
> > >British Prime Minister, who is called Tony Blair - short for "Anthony" by
> > >the way.
> >
> > For those Americans with an average standard of geographical
> > education. The British Isles are that pretty little group of islands
> > off the north coast of France.....
> >
> > What do you mean, "where's France" ?
> >
> > You must have heard of France... It's where that green statue in New
> > York harbor came from.
> >
> > Old Nick.

3388. Re: Better Antenna Question

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-19 22:36:24 UTC
From: Fred Hambrecht <w4jle@charter.net>
Message-ID: <um2snbh2mjdidd@corp.supernews.com>
Source record: 136328

What is the size of the balcony, and how high above the ground?

"Theplanters95" <theplanters95@aol.comnospam> wrote in message
news:20020819162457.09212.00001378@mb-cs.aol.com...
> Sorry. The antenna will be for use at my apartment and maybe portable.
Main
> use will be on my balcony.
>
> Randy

3389. Re: Ultimate 80/160m directional antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-19 23:00:37 UTC
From: angie1@rout.co.uk
Message-ID: <eceadf6b.0208191500.408abdfc@posting.google.com>
Source record: 136330

> I'm sure "Fractenna" will be able to come up with a good design here. How
> about 6 inches of wire bent into a pretty snowflake shape.

lol - nice one :) Many thanks and 73's to all others who posted.

Anne

3390. Re: Solder-style RF connectors - Diagrams On How to Prepare Coax

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-19 23:47:36 UTC
From: George Kinzer <horseflygk@worldnet.att.net>
Message-ID: <ssf89.20421$Ke2.1658805@bgtnsc04-news.ops.worldnet.att.net>
Source record: 136331

Not Found
The requested URL /gregordy/Amateur Radio/Experimentation/Solde was not
found on this server.
bummer...

--
If first you don't succeed, do the same thing again...see what happens

3391. Re: 'Nother question about ladderline

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-19 23:51:14 UTC
From: Paul N3EOP <n3eop@arrl.or.callsign.net>
Message-ID: <Xns926FAB72ABC16n3eophotmailcom@64.164.98.7>
Source record: 136332

Cecil.A.Moore wrote:

> Twisting and soldering copperweld stranded wire is ugly. The
> individual wires are not well behaved.

Not if you tin the wire before you cut it. Coat a two inch section of wire with solder, and cut it in the middle. A propane torch and large diameter solder (rosin core, of course) makes short work of it.

3392. Re: Solder-style RF connectors - Diagrams On How to Prepare Coax

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-19 23:58:52 UTC
From: Mike Coslo <mcoslo@adelphia.net>
Message-ID: <3D61B072.7040605@adelphia.net>
Source record: 136333

George Kinzer wrote:

> Not Found
> The requested URL /gregordy/Amateur Radio/Experimentation/Solde was not
> found on this server.
> bummer...
>
>

The link word wrapped on you. Add rCoax.htm to the end of the addy, and
you'll get the page.

- Mike KB3EIA -

3393. Re: Movies involving amateur radio

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-20 00:50:55 UTC
From: secret_studio@charter.net
Message-ID: <3d619252.32120436@news.charter.net>
Source record: 136334
Cross-posted to:
alt.ham-radio,alt.ham-radio.vhf-uhf,alt.radio.amateur,rec.radio.amateur,rec.radio.amateur.antenna,rec.radio.amateur.misc

The name of the movie was "The Anderson Tapes."

73 DE PAUL N0YPS

On Mon, 19 Nov 2001 02:07:24 GMT, "Russ Thompson"
<russthom@nospam.home.com> wrote:

>When I was a novice (circa 1971) there was a movie about an armored car
>company heist in New York. Living next to the company was a young teen male
>in a wheel chair that called for help on his HW-101. That is all I remember
>about the movie, and can't remember the name. Sure would like to see the
>movie again. At 15, I thought the HW-101 was the cat's meow!
>
>DE KX5G
>
>

3394. Re: Superposition quiz

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-20 00:56:58 UTC
From: klocko@toad.net
Message-ID: <224d9cd4.0208191656.5706dd10@posting.google.com>
Source record: 136335

richardharrison@webtv.net (Richard Harrison) wrote in message
news:<21612-3D5FD885-110@storefull-2398.public.lawson.webtv.net>...
> Bill, N3WK wrote:
> "For example consider (2) 1-V batteries in series with a 1-ohm
> resistor."
>
> Short out one battery and the remaining 1-V battery puts one amp through
> the resistor. With two batteries you have 2-V and 2-A. It`s a
> no-brainer. 4-watts. You add the volts and you add the currents. Then,
> you multiply.

Sure, it's a no-brainer. Of course, you applied superposition to the
voltages and to the currents. I thought you had been arguing for
superposition of power values, though.

>
> So power is derived from superposition ...
>

I'm not sure what you're trying to say here. 73,
Bill N3WK

3395. Re: Antenna Switches: Opinions On ?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-20 00:58:57 UTC
From: 'Doc <w5lz@icok.net>
Message-ID: <3D61943D.8C499F21@icok.net>
Source record: 136336

Bob,
As long as the antennas are for receive ony, it
really doesn't take much of a switch at all. A simple
SPDT switch with appropriate connectors would work as
well as any of those you listed. If you don't want to
build a switch, I'd opt for the cheapest coaxial switch
I could find.
'Doc

3396. Re: Better Antenna Question

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-20 01:02:14 UTC
From: Reg Edwards <g4fgq.regp@btinternet.com>
Message-ID: <ajs4ek$65k$1@helle.btinternet.com>
Source record: 136338

Hello Randy,

I have no experience of the 5 USA antennas you mention. I do not even know what any of them look like. But please take the following seriously. You will be on the air much sooner if you don't buy any of them! If you do buy one, especially if you have no experience to compare it with, on balconies you will eventually be very disappointed. On the otherhand you will be very much the wiser.

Consider a figure of merit to be 6dB or or one S-unit. Ignore any performance differences of less than 0.5 dB.

Assuming you do not have a balcony as big as my small back yard and that you may occasionally wish to go portable, I judge the most important part of the radiating system will be the ground connection - if that is a worthy name for it. None of the multi-band antennas you mention will work as intended without a good ground electrode system. And none of them will work better than a simple length of wire associated with whatever ground system you can provide from your balcony.

Whatever antenna you may end up with an antenna tuner will be assential.

Invest in a tuner rather than a commercial antenna. An expensive all-singing, all-dancing tuner is not necessary because you can make one yourself. One tapped coil wound on an an empty, cardboard, toilet roll tube and one variable 200 or 300pF capacitor will do fine. Alligator or crocodile clips are the best inventions since sliced bread. On second thoughts the alligator clips may claim precedence.

The antenna can be an almost invisible, thin, plasic-insulated length of stranded (flexible) wire extended from the balcony. If you can extend it outwards to another building or tree all to the good. If not, then take it loosly up the outside of the building. Or if the balcony is high above ground level then allow the wire to dangle downwards towards the general direction of the ground. But outwards and upwards is always the best. I've tried it successfully in all configurations. On the higher frequencies, such as the 10m band, a wire loosely attached to a fishing rod works fine.

For the ground system, only the domestic hot+cold water plumbing plus central-heating plus all the 60Hz power wiring is available. But this makes quite a reasonable ground. On the lower frequencies there may be noise (crackles and pops). But there's nothing you can do about that on a balcony. That's life!

Be prepared to change the antenna wire length between bands. But that is a very simple matter. It takes the load off the tuner. Wire length with a tuner is very non-critical - any length longer than 0.2 wavelenghs will do

fine.

When portable, just throw the antenna wire over a tree. If near a stream or a pool of dirty or salty water the ground can consist of a submerged 12" square plate plus the vehicle plus anything else which might be available. A single ground rod is virtually useless unless in waterlogged polluted/contaminated ground.

The performance of small vertical antennas as described by manufacturers and salesmen is usually nonsense. There is nothing more efficient than a simple length of wire above a good ground. But it must be said that at about 21MHz and higher frequencies the roof of a vehicle makes a good, high efficient ground. (But you are also interested in lower freqs. So use a longer antenna wire).

If you MUST buy a commercial antenna for use in a restricted space, such as a balcony, then my recommendation is a Magloop tuned for three bands with a vaccuum variable capacitor. It does not need any ground. It is expensive but may not need a seperate tuner. From a radiating efficiency point of view there is nothing to choose between manufacturers. Choose the largest loop diameter available and consider only mechanical construction and reliability. Or make one yourself if you have the necessary facilities!

A restricted space does not handicap experimentation and ingenuity. Indeed it incites the best from radio amateurs. There's ample scope. Restrict power to 100 watts. Do not be misled by the adverts and old wives. Enjoy your DX!

==========
Regards from Reg G4FGQ,
a European radio amateur.
For FREE radio design and
educational software go to
http://www.g4fgq.com
==========

"Theplanters95" <theplanters95@aol.comnospam> wrote in message
news:20020819012538.16571.00002303@mb-ch.aol.com...
> Which of the following is the better antenna system for 40-10m?
>
> 1. Buddipole
> 2. MP-1 By Super Antenna
> 3. MFJ Mini Bug catcher
> 4. Hamsticks
> 5. Hustler with resonaters?
>
> Randy ka4nma

3397. Re: Antenna Switches: Opinions On ?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-20 01:02:15 UTC
From: Reg Edwards <g4fgq.regp@btinternet.com>
Message-ID: <ajs4em$65k$2@helle.btinternet.com>
Source record: 136337

"JGBOYLES" <jgboyles@aol.com> wrote in message
news:20020819175039.01702.00001050@mb-de.aol.com...
> >Have a new receiver, and have gotten in the habit of diconnecting my HF
and
> >VHF aerials whenever there is a
> >summer storm in the area.
>
> >so, it looks
> >like I am in the market for two antenna switches.
>
> >Antennas are receive only, and located in the
> >attic (a discone, and a random-length wire for the HF).
>
> Hi Bob, A really simple way is: go to your local Radio Shack, get one of
their
> Aluminum project boxes, about the size you want. Get as many single
> pole-double throw toggle or slide switches as you have antennas you want
to
> ground, get appropriate connectors for the feedlines, and build your own.
Take
> about an hour tops. Might cost $10 for the materials.
> Since the antennas are in the attic, static buildup should be your only
> concern, and the above arrangement would handle it as well as the more
> expensive "store bought" switches. And you built it yourself.
> 73 Gary N4AST

==========

There's nothing better or cheaper than a few alligator clips. ;o)

3398. Re: Radio Shack Discone Antenna Opinions ?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-20 01:15:38 UTC
From: secret_studio@charter.net
Message-ID: <3d619729.33358867@news.charter.net>
Source record: 136339

I've used a RS discone on a 20' rooftop mast for over 11 years, with terrific results.

I modified the antenna by adding the (then not included) top element to improve reception from 25-50 MHz. I had to do some "social engineering" with the parts department at Diamond Antennas (the manufacturer of the RS discone) to buy the top element, as they normally wouldn't sell it to anyone who hadn't purchased the Diamond version, but it was worth it. I believe that the RS version now includes the top element.

For the money, it's a fine receive antenna. Experiments with 2 meter transmit/receive went well too, despite a measured 1.7:1 SWR at 2 m. freqs.

It certainly has been durable; in over 11 years, I haven't lost one element, the antenna has been pretty corrosion resistant, and even a bird's nest at the top hasn't hurt performance too much.

I'd buy another one if I had to. It's a good antenna.

PaulOn Mon, 19 Aug 2002 12:26:01 -0400, "Robert Rose" <rgsrose@tiac.net> wrote:

>Hi,
>
>Have been using a 20 year old Antenna Specialists Model MONR 31 aerial in my
>attic for frequencies over
>30 MHz. They still apparently sell this model.
>
>Works O.K., but was wondering if the Radio Shack Catalog No.-Model 20-043
>"Outdoor Scanner/Ham DISCONE Antenna" "might" be better?
>
>Both antennas look fairly similar, with the radial arms, etc.
>
>Anyone have any experience with either of these? Opinions would be
>appreciated.
>
>Thanks,
>Bob
>

3399. Re: Scalar Electromagnetic Weapons

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-20 01:19:53 UTC
From: PawPaw <PawPaw@granpa.com>
Message-ID: <ZOg89.13917$I6.1162983@newsread1.prod.itd.earthlink.net>
Source record: 136340
Cross-posted to:
alt.ham-radio.eme,alt.ham-radio.hf,alt.radio.scanner,rec.radio.amateur.antenna,rec.radio.amateur.misc,rec.radio.scanner

No need to attack the Prez-

he's just trying to clean up his Daddy's mess :-)

"Alexander S. Wood" <alec_wood@dont.spam.me.ntlworld.com> wrote in message
news:V4a89.3098$_q2.17813@newsfep3-gui.server.ntli.net...
>
> "Fred Hambrecht" <w4jle@charter.net> wrote in message
> news:ulvvql3il3ura7@corp.supernews.com...
> > Andy Roonie mode on:
> > Did ga ever notice folks that attack Mr. Bush always have neat e-mail
> > addresses like Lucifer@eternal-flames.gov, wonder why that is? Roonie
mode
> > off.
> >
> <snip>
>
> Hi Fred
>
> My email address is not very neat. Then again, I don't attack Mr Bush - I
> just dare to question the direction in which he is leading us.
Unfortunately
> it is "us", since Mr Blair just does as he's told, as do most of the other
> NATO leaders. Wonder why. Is that a small globe of white light I see above
> 10 Downing St.............................
>
> Alec
>
> PS For those Americans with a similar knowledge of other countries to
their
> president, I'd better explain that 10 Downing Street is the residence of
the
> British Prime Minister, who is called Tony Blair - short for "Anthony" by
> the way.
>
>
>

3400. Re: Yaesu ATAS-100 antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-20 01:55:58 UTC
From: Paul N3EOP <n3eop@arrl.or.callsign.net>
Message-ID: <Xns926FC0985A84Fn3eophotmailcom@64.164.98.7>
Source record: 136341

<ckesler@chartermi.net> wrote in news:um0ph7q7uuqs81@corp.supernews.com:

> I have a Yaesu FT-100D which has some built in features for the
> ATAS-100. Has anyone used an ATAS-100 or heard anything good or bad
> about it?

It works very well on the car; easily the best mobile antenna I've ever had. (Not that I've had lots of antennas on the car.) However, remember that if you use it at home, you'll have to provide some sort of ground system for it. If you mount it on the roof, a couple long counterpoise wires should help a lot.

> I'm looking for a portable, multiple band, HF antenna that
> actually performs well.

So far, I've been unsucessful in finding something that works well at home, though I do admit I haven't tried the ATAS-100 anywhere but on the car. I've heard very good things about the Force 12 Sigma-5 antenna (vertical dipole) on 20-10 that I went ahead and ordered one a week or so ago. I also placed an order for 40 and 80 meter Isotrons, which I've also heard good things about.

> I bought a MFJ-1622 apartment antenna. I am not impressed with its
> performance. MFJ says that it works well on all bands from 2 meter to
> 40 meter. That's not true.

I haven't been all that impressed with most of MFJ's stuff. I've heard mixed things about their "Super Hi-Q Loop".

Before I buy anything, especially an antenna, I check the eHam.net reviews (http://www.eham.net/reviews/). Since they are user submitted, you get the good, the bad, and the ugly...

> The July QST had some plans for a nice portable HF... has anyone tried
> that?

It's a center-loaded vertical about 12' high. It should work rather nicely, provided you have a decent ground radial system.

3401. Re: 6 meter antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-20 02:02:52 UTC
From: Paul N3EOP <n3eop@arrl.or.callsign.net>
Message-ID: <Xns926FC1C391C30n3eophotmailcom@64.164.98.7>
Source record: 136342

ssapachee@webtv.net (apachee apachee1) wrote:

> I have a 13b2 2 meter antenna. ? i am wanting to make a 6 meter
> antenna out of it. Can someone help me out on this? Also wanting to
> know how many elements i can make out of it.

My guess is that you could probably make a 3 element beam from it,
assuming that you could get the elements to hold together. (Does it
have hollow elements, or solid rod elements?)

Best way is to sell it (assuming it works and is in decent shape) and
buy a decent 6m antenna. The Cushcraft A50-3S is $100, and will probably
work better than what you could make from the 13B2.

3402. Re: Ultimate 80/160m directional antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-20 02:38:06 UTC
From: Rick Karlquist <richard@karlquist.remove.this.com>
Message-ID: <iYh89.84135$983.97115@rwcrnsc53>
Source record: 136343

I have 20 acres, and I use the front 10 acres for beverages (currently
6 directions). The back 10 acres has 7 element vertical arrays on
80, and 160 under construction, with 20 miles of ground radials
currently laid.

The array theory is on my web site www.n6rk.com. I have put
a 40 meter version on the air. The 80 and 160 versions are
scaled up from that one.

Rick N6RK

"Anne Bolyn" <angie1@rout.co.uk> wrote in message
news:eceadf6b.0208170738.5b972291@posting.google.com...
> Hi
>
> I have access to 25 acres and want to erect the "ultimate" 160/80
directional
> antenna - either something physically rotatable or a phased array of wires
> trapsed around. Space not a problem and I have quite a few trees dotted
about
> to use if need be.
>
> I've considered buying four verticals and phasing them with one of those
switch
> boxes (can you do a similar thing with horizontal antennae?). Ground
systems
> would not be a problem. Have also seen those loops and beverage antennas.
>
> What could you reccommend please for the ultimate?
>
> 73's.

3403. Re: Tutorial #2

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-20 02:46:20 UTC
From: aunwin@fgi.net
Message-ID: <c4becf19.0208191846.40c97957@posting.google.com>
Source record: 136344

Richard Clark <kb7qhc@attbi.com> wrote in message
news:<7mjvluct2e1g4hpvgi9t3ljccbh869231e@4ax.com>...
> On 18 Aug 2002 05:34:47 -0700, aunwin@fgi.net (Art Unwin KB9MZ) wrote:
>
> >When modeling my antenna the drop of current is clearly shown.
> >If one assumes that the statement is correct then it is an easy step
> >to assume
> >that the energy that is not consumed in the coupling portion it will
> >be released
> >via radiation from the remaining portions of the dipole (resonator)
> >Thus there is a higher current flow in the remaining electrical
> >lengths of the dipole and thus provides for collinear gains.
>
> Hi Art,
>
> You are being too myopic by examining ONLY your antenna. This is the
> failure of your style in that you show no correlation to other models
> (and still refuse to release your own). In other words, what you
> describe above is commonplace for any similar sized structure. As you
> describe yourself as a poor modeler, I should point out this has been
> already confirmed by competent modelers.
>
> 73's
> Richard Clark, KB7QHC

O.K. Richard..you win.
Give me some time and I will find somebody local
who will generate a separate page for me as my son
is very busy.
Regards
Art KB9MZ.......XG

3404. Re: Better Antenna Question

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-20 04:30:46 UTC
From: Paul N3EOP <n3eop@arrl.or.callsign.net>
Message-ID: <Xns926FDAD6E925Cn3eophotmailcom@64.164.98.29>
Source record: 136345

theplanters95@aol.comnospam (Theplanters95) wrote:

> Which of the following is the better antenna system for 40-10m?
>
> 1. Buddipole
> 2. MP-1 By Super Antenna
> 3. MFJ Mini Bug catcher
> 4. Hamsticks
> 5. Hustler with resonaters?

You didn't say the application... mobile, portable, and "cliff dweller" (apartment patio/balcony) are all very different, and have very different "best" solutions.

If you are like me and are looking for apartment solutions, try to find something that isn't dependent on a ground (all your options listed, except for the Buddipole, are highly ground dependent). Quite a few people like the Hamsticks, especially in a dipole configuration.

3405. Question on Tuning Discone To TX on Aviation Band

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-20 05:22:05 UTC
From: mrcole100@aol.com
Message-ID: <403fdf8.0208192122.502185a1@posting.google.com>
Source record: 136346

I'm interested in determining the best way to tune a discone to transmit optimally on the aviation band. My understanding is that a quarter-inch radiator tuned to 123 MHz should be about 23 inches. Would the tuning be accomplished by adjusting the length of the discone whip, or is it more complicated than that? Also, would that length be measured to the top of the tuning coil or would it include the length of the tuning coil? I plan on purchasing a SWR meter to make this more precise, but wanted to see if it was possible using this method to get closer to the optimal length. The current length of the whip is about 28 inches from the tip of the whip to the top of the loading coil, which I would think is not optimal for the band. Thanks in advance.

Dave

3406. Re: Superposition quiz

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-20 05:49:29 UTC
From: Bill Nelson <billn@spock.peak.org>
Message-ID: <ajsl99$2md$2@quark.scn.rain.com>
Source record: 136347

Gene Fuller <W4SZzzzzz@att.net> wrote:
> Cecil,

I am not Cecil, but I did not see any real answers to your questions.
I will try to provide some answers.

> This brings up some additional questions.

> When the power engineers add, say, 10 megawatts to an existing 10
> megawatts what happens to all the extra power?

The additional 10 MW is not created. The new generator is brought up
to speed and frequency/voltage matched to the network. It is then switched
on-line, at which point the current generation capability is there if the
the excitation is turned up.

So the generator is initially just free wheeling (so to speak) and not
producing power. The excitation is increased so that generator starts to
share the current demand - which at the same time reduces the load on the
other generators on the network.

Once the loads are balanced (proportioned out between the generators
based on each generators current capability), the regulation can be
turned over to the automatic circuitry. Now, if the demand increases,
there will be a voltage sag - so the circuitry will increase the
excitation of all the generators and they produce more power. If the
demand decreases, there is an overvoltage situation and the excitation
to the generators is reduced.

These days, the complete startup/shutdown of a generator may be totally
automated. There is no reason why it couldn't be done.

> Am I required to turn on more lights in my house to absorb some of the
> extra power that is being forced into the line?

No, see above.

> Unless there is a very unusual situation I would expect the power
> "forced" into the line under your scenario to be exactly equal to the
> demand.

Yep, although the voltage does vary a bit. Note that the standard for
utility power is "nominal". There is a range of acceptable voltages.

If the load (current demand) becomes significantly higher than what can
be produced by the generators, then there is a serious voltage sag. The
result is termed a "brownout". This can progress to a "blackout" if not
corrected quickly enough - or if the sag becomes bad enough.

--
Bill Nelson (billn@peak.org)

3407. Re: Scalar Electromagnetic Weapons

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-20 05:54:58 UTC
From: lucifer@eternal-flames.gov
Message-ID: <12l3mugp55ovni96aqqvq9dgrevif6cnb9@4ax.com>
Source record: 136349
Cross-posted to: alt.ham-radio.eme,alt.ham-radio.hf,alt.ham-radio.vhf-uhf,alt.radio.scanner,rec.radio.amateur.antenna,rec.radio.amateur.misc,rec.radio.scanner

On Mon, 19 Aug 2002 17:49:14 -0400, Walt Bertram
<wbertram@optonline.net> wrote:

>Oh, France! Yeah, that's that place we have to go to every 50 years or
>so and bail your asses out! My father was there in 1918. Got his ass
>shot at. My uncle was there in 1944, think he screwed a bunch of your
>whores, wives, daughters, whatever. Mext time maybe we will stay home
>and let you solve your problems by yourselves.

Yeah! That's France. It usually takes you two or three years to find
the place, which means you always turn up late. ;-)

Good for your uncle. I regularly visit your side of the pond, to do
the same. Just trying to improve the gene pool over there you
understand. Though not with the whores.... Well you just never know
where they've been!

Y'have a nice day now.

Nick

3408. Re: Scalar Electromagnetic Weapons

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-20 05:54:59 UTC
From: lucifer@eternal-flames.gov
Message-ID: <cql3muc1ti6c55ac5dup0beb4vrk22f1di@4ax.com>
Source record: 136350
Cross-posted to: alt.ham-radio.eme,alt.ham-radio.hf,alt.ham-radio.vhf-uhf,alt.radio.scanner,rec.radio.amateur.antenna,rec.radio.amateur.misc,rec.radio.scanner

On Mon, 19 Aug 2002 23:13:49 +0100, "Alexander S. Wood"
<alec_wood@dont.spam.me.ntlworld.com> wrote:

>You wouldn't make a profit out of that though would you. Anyway, don't get
>the idea that there was any kind of moral portion to the US decision to
>enter the war.

That's not fair old son. I may have fun tweaking their tails a
little, but I like Americans and always enjoy my visits. They're a
generous people.

Don't judge them all by the odd loud-mouthed politician, we have just
as many of those over here.

>America has and only ever will act when it's own national
>(read financial) interests are at stake.

There's nothing wrong with that. When you get down to it,
national/financial interests, are usually the cause of wars.
We do - and have done - exactly the same over here.

Nick.

3409. Re: Superposition quiz

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-20 05:59:55 UTC
From: Bill Nelson <billn@spock.peak.org>
Message-ID: <ajslsr$2md$3@quark.scn.rain.com>
Source record: 136348

J. Harvey <JM002.Harvey_ANTI*SPAM_@sympatico.ca> wrote:
> Here's my quiz (don't worry, it's trivial):

> Take two '100 watt transmitters' and phase lock them out-of-phase. Connect
> the two transmitter outputs directly using a *very very short* jumper
> coaxial cable. How much power is in the cable ? In theory, according to my
> assumptions, net V is zero due to cancellation .: P is zero. Hmmm...
> Where did the 200 watts go?

No. Assuming lossless cable, the power traveling through the cable may
well be as much as 200 watts - with none of it being absorbed by the cable.
All the power being generated by the transmitters is then being absorbed
by those transmitters. More than likely, the transmitters will fail very
quickly.

--
Bill Nelson (billn@peak.org)

3410. Re: Chip's dark side

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-20 06:11:18 UTC
From: Bill Nelson <billn@spock.peak.org>
Message-ID: <ajsmi6$2md$4@quark.scn.rain.com>
Source record: 136351

> Fractal antenna elements are covered by pending patents and the U.S. patent
> 6,104,349. They are not, and are not planned, to be, sold to the radio amateur
> service. Instead, hams are encouraged to experiment for their own use without
> commercial sale or manufacture.

> Nathan Cohen, Ph.D.
> N1IR

"Pending patents" provide no protection for the inventor.

The only patent I have seen of yours only covers claimed methods of tuning
so-called fractal antennas. As such, it does not keep others from experiments
with fractals - even for commercial purposes.

Even if you could get a patent on design of fractal antennas, highly
unlikely, as the idea is rather obvious, the best you would be able to
do would be to patent certain specific designs - or innovative techniques
of construction.

--
Bill Nelson (billn@peak.org)

3411. Re: Tower resrtictions near an airport

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-20 06:21:55 UTC
From: Bill Nelson <billn@spock.peak.org>
Message-ID: <ajsn63$2md$5@quark.scn.rain.com>
Source record: 136352

Jim <yoda581@msn.com> wrote:
> Sorry, I should have explained myself more, but this won't be for an amateur
> antenna and I will be close to a small airport.

It depends on what you mean by "small airport".

I used to fly out of a small airport. There were three tall commercial
radio towers only 300 ft or so off to the side of the main runway. I
forget the height of the towers, but they were well over 200 feet tall.

The airport was there long before the towers were erected.

--
Bill Nelson (billn@peak.org)

3412. Re: Tutorial #2

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-20 06:41:48 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <0ap3mu8b0obhkkp5mgpc2ton0ps0f2s0e9@4ax.com>
Source record: 136353

On 19 Aug 2002 19:46:20 -0700, aunwin@fgi.net (Art Unwin KB9MZ) wrote:

>Richard Clark <kb7qhc@attbi.com> wrote in message
news:<7mjvluct2e1g4hpvgi9t3ljccbh869231e@4ax.com>...
>> On 18 Aug 2002 05:34:47 -0700, aunwin@fgi.net (Art Unwin KB9MZ) wrote:
>>
>> >When modeling my antenna the drop of current is clearly shown.
>> >If one assumes that the statement is correct then it is an easy step
>> >to assume
>> >that the energy that is not consumed in the coupling portion it will
>> >be released
>> >via radiation from the remaining portions of the dipole (resonator)
>> >Thus there is a higher current flow in the remaining electrical
>> >lengths of the dipole and thus provides for collinear gains.
>>
>> Hi Art,
>>
>> You are being too myopic by examining ONLY your antenna. This is the
>> failure of your style in that you show no correlation to other models
>> (and still refuse to release your own). In other words, what you
>> describe above is commonplace for any similar sized structure. As you
>> describe yourself as a poor modeler, I should point out this has been
>> already confirmed by competent modelers.
>>
>> 73's
>> Richard Clark, KB7QHC
>
> O.K. Richard..you win.
>Give me some time and I will find somebody local
>who will generate a separate page for me as my son
>is very busy.
>Regards
>Art KB9MZ.......XG

Hi Art,

I could do that as easily if you simply revealed your model.

73's
Richard Clark, KB7QHC

3413. Re: Question on Tuning Discone To TX on Aviation Band

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-20 06:55:54 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <47q3mugk6sp1on7dmoc67orf5244498ium@4ax.com>
Source record: 136354

On 19 Aug 2002 22:22:05 -0700, mrcole100@aol.com (David B. Cole)
wrote:

>I'm interested in determining the best way to tune a discone to
>transmit optimally on the aviation band. My understanding is that a
>quarter-inch radiator tuned to 123 MHz should be about 23 inches.
>Would the tuning be accomplished by adjusting the length of the
>discone whip, or is it more complicated than that? Also, would that
>length be measured to the top of the tuning coil or would it include
>the length of the tuning coil? I plan on purchasing a SWR meter to
>make this more precise, but wanted to see if it was possible using
>this method to get closer to the optimal length. The current length
>of the whip is about 28 inches from the tip of the whip to the top of
>the loading coil, which I would think is not optimal for the band.
>Thanks in advance.
>
>Dave

Hi Dave,

I presume your discone is one similar to the Radio Shack model;
especially when you mention the whip. The whip is an extension to
operate at 6M and is outside the standard design for discones.

Simply measure the skirt of the discone (the radials that slope down).
How long is any radial? Longer or about 23 inches? (probably) If
so, it well load up fine and act like any quarter wave vertical (with
a set of radials). Now, if any quarter wave vertical does not work
all that well, then neither will the discone. There is nothing to
really optimize a discone for except drivepoint impedance which at the
high end is dominated by the feed gap.

73's
Richard Clark, KB7QHC

3414. Re: Discone question

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-20 07:12:22 UTC
From: Owen Duffy <owen@oda.com.au>
Message-ID: <3D61EBD6.D41B114E@oda.com.au>
Source record: 136355

VHFRadioBuff wrote:
>
> Yesterday I moved my VHF/UHF discone antenna. It was on top of a 15 foot mast,
> which was attached to a wooden fencepost on my 7' tall wooden fence, a few feet
> from the side of my house. It performed about as expected, able to get into
> repeaters 20 - 30 miles away with no problem. Yesterday I moved it on my roof,
> above my 2m/70cm horizontally polarized yagi (5 elements on each) and my 3
> element 6m yagi. All of a sudden the receive has gone way down. A repeater
> about 20 miles away that used to come in at an S7 doesn't even show anything on
> the meter. The local repeater comes in fine, but it seems that the signal has
> dropped very slightly. Could the yagi's be interacting with the discone,
> possibly causing the signal to be reflected up and thus reducing the range of
> the antenna? I plan on moving the antenna back to where it was, but we're
> having some super hot days here in NJ so I can't get up onto the roof right
> now.

Some thoughts:

Have you verified that the repeater is operating normally?

You noted that receive is down, but didn't comment on tx performance!

Have you verified that the antenna and cable installation are not faulty
(bad connections, excessive loss)?

S meters on FM sets are rarely calibrated according to any pseudo
standard. The situation you describe might well be 8uV (S7) to 1uV
(S0)... don't assume anything like 6dB / S point.

You may just have located the antenna in a node of the standing wave
pattern in space, though the dead spot you describe does seem a bit
deep. Have you tried moving the antenna a little and observing the
effect on the weak repeater?

Discones, being broadbanded, are more likely to contribute to desensing
of a receiver with poor IMD performance / inadequate front end
selectivity (ie most equipment designed for the ham market where
software features are generally valued more than receiver performance -
if manufacturers got it right). Desense would not affect tx performance.

You may have excessive coupling / detuning with the other antennas. I
would not locate the discone with less than a quarter wave vertical
spacing between the lower end of the skirt and the yagi at the lowest
frequency (so if that was 50MHz, use at least 1.5m (5'). Comparitive
VSWR measurement before / after might reveal apparent change in the load
impedance.

Owen

> =-=-=-=-=-=-=-=-=-=-=-=-=-=-=-
> 73! de Andy KC2SSB (ex: KF4KHC/HL9HCT)
> Beachwood, NJ USA! Grid FM29vw
> http://vhfradiobuff.tripod.com

3415. Re: New tower = many questions

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-20 07:32:21 UTC
From: Bill Nelson <billn@spock.peak.org>
Message-ID: <ajsra5$2md$6@quark.scn.rain.com>
Source record: 136356

JWheeler <kd5bcu@yahoo.com> wrote:

> I didn't say that I wouldn't guy it. I just said my wife would prefer not
> having to look at the guy wires. I appreciate the suggestion of
> contesting.com. I will dive in there immediately.

Even 40 feet of 45G needs to be guyed - if your local basic wind speed rating is 70 mph with no icing. For 70 ft, you need at two sets of guys. The guy anchor points are at least 56 feet from the tower - for 3 guys per set.

If you want it strong, then you will have to use the specs for 110 mph winds - or even higher. These require the same anchor distances and number. But the square foot antenna rating decreases. For 110 mph winds, the allowable is less than 10 square feet for round tubing - much less for flat or rectangular tubing.

Get the Rohn documentation. It is well worth it.

--
Bill Nelson (billn@peak.org)

3416. Re: New tower = many questions

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-20 07:39:59 UTC
From: Bill Nelson <billn@spock.peak.org>
Message-ID: <ajsrof$2md$7@quark.scn.rain.com>
Source record: 136357

Fulano de Tal <therealexray@netscape.net> wrote:

> Later you say you want it free-standing. Depends a lot on the soil and
> how much load you want to top it with. If you want your insurance
> company to be happy, go by the book.

I cannot find anything in my Rohn data on 45G being allowed as a self-
standing tower.

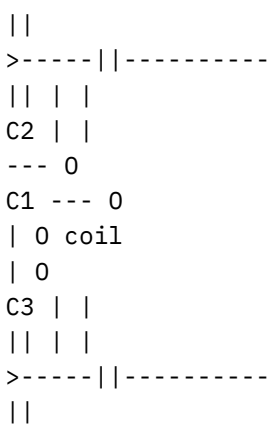
--
Bill Nelson (billn@peak.org)

3417. NMR coil detunes

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-20 11:19:23 UTC
From: Martin Kavec <martin.kavec@uku.fi>
Message-ID: <ajt8k2jau1@luotsi.uku.fi>
Source record: 136358
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.homebrew,sci.techniques.mag-resonance

Hello everybody,

I would like to ask you for explanation and possible solution for a p
roblem I face.
I made following brand new NMR coil:



This is a simple surface coil (loop of wire, since I post to a groups
where they might not be aware of this term) 3 cm diameter, made of round
copper wire (1.3mm diameter) and the capacitors are high quality nonma
gnetic trimmers made by Voltronics. The coil is powered by coaxial
cable (MIL-17/RG400) 50Ohm cable. The tune frequency is 200MHz. The coil
tunes fine and matches fine (though I don't know exactly on res
onance resistance).
The problem is that the coil detunes as soon as I move the coaxial cable.
Not a problem but a seek for information: I read that additional cap
acitor parallel to the coil wire, attached directly on the wire improves th
e coil homogeneity and the quality. How can I calculate the value of
such a capacitor.

Thank you and I appreciate any kind of help.

Martin Kavec

3418. Re: New tower = many questions

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-20 11:47:01 UTC
From: CAM <Cecil.A.Moore@ieee.org>
Message-ID: <3D622C35.9243D119@ieee.org>
Source record: 136359

Bill Nelson wrote:
>
> Fulano de Tal <therealexray@netscape.net> wrote:
>
> > Later you say you want it free-standing. Depends a lot on the soil and
> > how much load you want to top it with. If you want your insurance
> > company to be happy, go by the book.
>
> I cannot find anything in my Rohn data on 45G being allowed as a self-
> standing tower.

I have a chart from Rohn titled "Self-Supporting Towers - Allowable Antenna Areas (Sq.Ft.)". For instance, a self-supporting 45G tower of 40 feet will tolerate 5.1 sq.ft. of antenna in 70mph winds with no ice. With 1/2" of ice, it will tolerate zero sq.ft. of antenna, i.e. it will only tolerate itself. Take the winds up to 80mph and it may fall down.

This chart is Rohn drawing number A871266 RI dated 9-24-87. Unfortunately all the heights above 40 feet are torn off and missing.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
------== Over 80,000 Newsgroups - 16 Different Servers! =-----

3419. Re: New tower = many questions

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-20 11:58:24 UTC
From: CAM <Cecil.A.Moore@ieee.org>
Message-ID: <3D622EE0.7B486D3D@ieee.org>
Source record: 136360

CAM wrote:
> This chart is Rohn drawing number A871266 RI dated 9-24-87. Unfortunately
> all the heights above 40 feet are torn off and missing.

I forgot to say that the absolute limit for self-supporting Rohn 45G
towers is 45 feet. At 45 feet with 70mph winds and NO ice, it will
tolerate a 2.3 sq.ft. antenna. Note: Ice and 70mph winds are not
allowed at the same time.

I have a 30 foot Rohn 25G self-supporting tower with a 20m rotatable
dipole on it.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

3420. Re: Scalar Electromagnetic Weapons

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-20 12:02:12 UTC
From: AB8MQ <ab8mq@alt.net>
Message-ID: <ajtdmp$en1$3@pita.alt.net>
Source record: 136363
Cross-posted to:
alt.ham-radio.eme,alt.ham-radio.hf,alt.radio.scanner,rec.radio.amateur.antenna,rec.radio.amateur.misc,rec.radio.scanner

"PawPaw" <PawPaw@granpa.com> wrote in message
news:ZOg89.13917$I6.1162983@newsread1.prod.itd.earthlink.net...
> No need to attack the Prez-
>
> he's just trying to clean up his Daddy's mess :-)

Hopefully, he'll finish the job with Iraq and not pull out like his daddy did
there, and should've done to Barbara Bush.
>
> "Alexander S. Wood" <alec_wood@dont.spam.me.ntlworld.com> wrote in message
> news:V4a89.3098$_q2.17813@newsfep3-gui.server.ntli.net...
> >
> > "Fred Hambrecht" <w4jle@charter.net> wrote in message
> > news:ulvvql3il3ura7@corp.supernews.com...
> > > Andy Roonie mode on:
> > > Did ga ever notice folks that attack Mr. Bush always have neat e-mail
> > > addresses like Lucifer@eternal-flames.gov, wonder why that is? Roonie
> mode
> > > off.
> > >
> > <snip>
> >
> > Hi Fred
> >
> > My email address is not very neat. Then again, I don't attack Mr Bush - I
> > just dare to question the direction in which he is leading us.
> Unfortunately
> > it is "us", since Mr Blair just does as he's told, as do most of the other
> > NATO leaders. Wonder why. Is that a small globe of white light I see above
> > 10 Downing St.............................
> >
> > Alec
> >
> > PS For those Americans with a similar knowledge of other countries to
> their
> > president, I'd better explain that 10 Downing Street is the residence of
> the
> > British Prime Minister, who is called Tony Blair - short for "Anthony" by
> > the way.
> >
> >
> >
>

>

3421. Discone antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-20 12:34:44 UTC
From: Delporte Marc <marc.delporte@wanadoo.fr>
Message-ID: <ajtd4f$7fl$1@wanadoo.fr>
Source record: 136361

Hi

I'm looking for a "good" discone antenna for a AR 5000.

From now, I do have 3 candidates :

DA 3000 from AOR up to 2 GHz
AH 7000 from Icom up to 1.3 GHz
Discone from Diamond up to 1 GHz

The 3 antennas seem to be very similar ...

... and I do have the feeling that the choice is probably dictated
by the quality of fabrication and materials.

Any field experiences ?

Note : I'm only interest in the performance in RX in the segment 150
MHz to 1.8 GHz.

Thanks for your help

73'
F1GSN

3422. Re: Question on Tuning Discone To TX on Aviation Band

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-20 12:40:17 UTC
From: fractenna@aol.com
Message-ID: <20020820084017.18000.00001697@mb-fx.aol.com>
Source record: 136362

>I'm interested in determining the best way to tune a discone to
>transmit optimally on the aviation band. My understanding is that a
>quarter-inch radiator tuned to 123 MHz should be about 23 inches.
>Would the tuning be accomplished by adjusting the length of the
>discone whip, or is it more complicated than that? Also, would that
>length be measured to the top of the tuning coil or would it include
>the length of the tuning coil? I plan on purchasing a SWR meter to
>make this more precise, but wanted to see if it was possible using
>this method to get closer to the optimal length. The current length
>of the whip is about 28 inches from the tip of the whip to the top of
>the loading coil, which I would think is not optimal for the band.
>Thanks in advance.
>
>Dave
>

Hi Dave,

True discones don't have whips. The disc is a counterpoise for the broad band cone.

This whip portion you discuss replaces the disc and uses the cone as the second half of a dipole configuration. The cone does some degree of loading, so the whip can be --very roughly-- 10-15% shorter than a quarter wave. However, the antenna will be reasonably broad band anyway (like that) so you probably won't get any true advantage if the whip is in th ballpark. This is assuming a roughly 1/4 wave high cone.

If the cone is less than about 3/12 of a wave in height at that frequency then the whip will have to be longer than a 1/4 wave but, again, the dipole (which is what it is) will be fairly broadband as it is. You should be able to just leave it.

73,
Chip N1IR

3423. Re: NMR coil detunes - corrected drawing

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-20 13:25:37 UTC
From: Martin Kavec <martin.kavec@uku.fi>
Message-ID: <ajtg0o$c0m$1@luotsi.uku.fi>
Source record: 136364
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.homebrew,sci.techniques.mag-resonance

CAM wrote:

> Martin Kavec wrote:
>> I made following brand new NMR coil:
>
> One word of advice, Martin. When you do an ASCII drawing, do it in
> fixed font, e.g. Courier. There are many different proportional
> fonts out there. Unless everyone is using the same one as you,
> the drawings become unreadable.

Thanks a lot Cecil. You are right, the drawing looked terrible. This is
updated version.

```
||
>-----||----------
|| | |
C2 | |
--- O
C1 --- O
| O coil
| O
C3 | |
|| | |
>-----||----------
||
```

Martin

3424. Re: Superposition quiz

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-20 13:54:09 UTC
From: richardharrison@webtv.net
Message-ID: <9025-3D624A01-501@storefull-2395.public.lawson.webtv.net>
Source record: 136365

Bill, N3WK wrote:
"I am not sure what you`re trying to say here."

Superposition is a tool for simplifying circuit analysis. A simple application is one in which one source drives a current from a to b, and another source drives a current from b to a. Superposition allows you to take the difference in the currents and use it in Ohm`s law to calculate the voltage between a and b. Superposition just allowed you to calculate the currents from each source one at a time.

Knowing the a to b voltage and current in a resistor allows you to take their product as the power in the resistor. Superposition is only a step in a journey.

To find power delivered to a load by coax, you have an advantage of knowing the voltage to current ratio the waves see. It is the Zo of the coax. This fixes the voltage to current ratio of the forward and reflected waves. This has nothing to do with SWR in most cases.

SWR is likely to affect the load seen by a transmitter, but does not affect the impedance seen by the forward and reflected waves in most cases. The wave voltage to current ratio is simply Zo, coming or going.

Zo is controlled by construction of the line. This simplifies the math. It allows power to be added and subtracted.

Math is also simplified in the electric power company lines. Their voltage is usually held constant. This simplifies the math. It allows power to be added and subtracted. P=EI, and If E is a constant, P is proportional to I. Generators share loads in proportion to their current contributions.

Knowing how to use superposition is not necessary to calculate power flow in a transmission line. Just follow Bird`s instruction. Power to the load is forward power minus the reflected power.

BNest regards, Richard Harrison, KB5WZI

3425. Re: Cushcraft going out of business?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-20 14:34:05 UTC
From: w9gb <gregory.beat@attbi.com>
Message-ID: <xrs89.9708$aA.1981@sccrnsc02>
Source record: 136366

Based on sales and market size, I think Cushcraft is just reducing the size
of the product line.

You will still see many products for the commercial market (especially
VHF/UHF/SHF) that will be completely usable in the amateur allocations.

The number of new antennas for HF (big beams) and towers are decreasing -
thanks in no small part to the community antenna and zoning restrictions
around the country. The "disguise" antenna business is doing quite well
(for both commercial and amateur)

Greg
w9gb

"Dave Allen" <david_e_allen@agilent.com> wrote in message
news:3D502AA4.4970AD97@agilent.com...
> Recently Cushcraft sent a letter to their dealers saying they would no
> longer be supplying parts for antennas older than the R8 (I think). The
> letter was posted at one of their competitors' web sites (Butternut?).
>
> 73, dave allen, wb0taq, colorado
>

3426. Re: Superposition quiz

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-20 15:03:59 UTC
From: richardharrison@webtv.net
Message-ID: <5698-3D625A5F-551@storefull-2393.public.lawson.webtv.net>
Source record: 136367

In my most recent posting I wrote:
"P=EI, and if E is a constant, P is proportional to I."

In retrospect, some reader may say, this is a-c so P=EI cos theta. My simple assumption is that theta is zero, the power factor has been corrected, and cos theta is 1. I said powers could be added and subtracted, not apparent powers.

Best Regards, Richard Harrison, KB5WZI

3427. Re: Question on Tuning Discone To TX on Aviation Band

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-20 16:10:07 UTC
From: mrcole100@aol.com
Message-ID: <403fdf8.0208200810.339cf18f@posting.google.com>
Source record: 136368

Richard,

The discone is like the RS version and the cone radials measure about 31 inches, which is significantly longer than 23 inches. So what I think you're saying is that adjusting the length of the whip should have no bearing on the aviation band since it's only use is to extend performance for lower frequencies, and I'm already as tuned as I'm going to get. Thanks for the help.

Dave

Richard Clark <kb7qhc@attbi.com> wrote in message news:<47q3mugk6sp1on7dmoc67orf5244498ium@4ax.com>...
>
> Hi Dave,
>
> I presume your discone is one similar to the Radio Shack model;
> especially when you mention the whip. The whip is an extension to
> operate at 6M and is outside the standard design for discones.
>
> Simply measure the skirt of the discone (the radials that slope down).
> How long is any radial? Longer or about 23 inches? (probably) If
> so, it well load up fine and act like any quarter wave vertical (with
> a set of radials). Now, if any quarter wave vertical does not work
> all that well, then neither will the discone. There is nothing to
> really optimize a discone for except drivepoint impedance which at the
> high end is dominated by the feed gap.
>
> 73's
> Richard Clark, KB7QHC

3428. Re: Scalar Electromagnetic Weapons

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-20 16:11:06 UTC
From: BN <BN14275net@14275daynetBN.com>
Message-ID: <ajtpmkarl0@pita.alt.net>
Source record: 136269
Cross-posted to: alt.ham-radio.eme,alt.ham-radio.hf,alt.radio.scanner,rec.radio.amateur.antenna,rec.radio.amateur.misc,rec.radio.scanner,alt.cocksucker.roger-wiseman

"AB8MQ" <ab8mq@alt.net> wrote in message news:ajtdmp$en1$3@pita.alt.net...
>
> Hopefully, he'll finish the job with Iraq and not pull out like his daddy
did
> there, and should've done to Barbara Bush.
> >

Yet another profound philosophical deduction by Roger
"Curtains Boy" Wussman, holder of THREE college degrees,
at least according to him.

BN

3429. Appropriate Choke for 500-800 Mhz?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-20 16:20:29 UTC
From: hasan schiers <schiers@netins.net>
Message-ID: <ajtq8e$1e606l$1@ID-52642.news.dfncis.de>
Source record: 136270

We have a repeater in the presence of 250 Kw UHF TV transmitter. We are not experiencing any pronounced problems with our 2m repeater @ 300', but wanted to take all precautions. My questions:

1. What would be the proper toroid material and who to order it from?

2. What should be choked?

a. Main feedline to the antenna (at the duplexer, I would gather)?
b. Rx and Tx cables from the duplexer (at the input to the Rx and ouput of Tx) ?
c. Power cables to the repeater (as they enter the repeater case)?

TIA
--
hasan schiers, N0AN
schiers@netins.net

3430. Discone Grounding Question ?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-20 16:27:53 UTC
From: Robert Rose <rgsrose@tiac.net>
Message-ID: <ajtqlg$3v9$1@slb1.atl.mindspring.net>
Source record: 136271

Hi,

Thanks everyone for allthe help these past few weeks. getting back into the hobby after retiring, and
it seems like one question leads to many more. really appreciate all the help from everyone.

This is a really embarrasing one:

Was looking at the discone (receive only) I placed up in my attic some 20 years ago for receiving the over 30 MHz stuff.

Notice (now) that the three radial arms are connected in common to a plate, that's directly screwed to the metal
mast.

But I grounded the mast to a local waterpipe in the attic. No idea anymore why i did this, but "presumably"
the instructions said to do so?

So, let me ask-

Should this plate with the 3 arms be grounded up there to a water pipe ground at all?

Or, should the ONLY grounding be thru the coax shield back at the receiver end, and the mast assembly left ungrounded?

Really wondering now if I did it right all those years ago. Antenna has "worked," but never great.

Much thanks,
Bob

3431. Re: Question on Tuning Discone To TX on Aviation Band

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-20 16:43:40 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <pbs4mukbeljf2s47to1lbqcptm0nin73c9@4ax.com>
Source record: 136272

On 20 Aug 2002 09:10:07 -0700, mrcole100@aol.com (David B. Cole)
wrote:

>Richard,
>
>The discone is like the RS version and the cone radials measure about
>31 inches, which is significantly longer than 23 inches. So what I
>think you're saying is that adjusting the length of the whip should
>have no bearing on the aviation band since it's only use is to extend
>performance for lower frequencies, and I'm already as tuned as I'm
>going to get. Thanks for the help.
>
>Dave

Hi Dave,

You might want to visit:
http://www.qsl.net/kb7qhc/antenna/Discone/discone.htm
where I review how the variation of the skirt angle impacts the
drivepoint impedance across a wide frequency (it matters little if the
frequencies happen to be yours). It also employs the Smith Chart to
correlate this data.

73's
Richard Clark, KB7QHC

3432. Re: Superposition quiz

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-20 17:22:59 UTC
From: Dale Wiese <dwiese@lucent.com>
Message-ID: <3D627AF3.3040106@lucent.com>
Source record: 136273

J. Harvey wrote:

> Here's my quiz (don't worry, it's trivial):
>
> Take two '100 watt transmitters' and phase lock them out-of-phase. Connect
> the two transmitter outputs directly using a *very very short* jumper
> coaxial cable. How much power is in the cable ? In theory, according to my
> assumptions, net V is zero due to cancellation .: P is zero. Hmmm...
> Where did the 200 watts go?

It went into the blue smoke that came out the tops of both transmitters,
about the same time they stopped working... :)

3433. Re: Scalar Electromagnetic Weapons

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-20 19:52:24 UTC
From: Fred Hambrecht <w4jle@charter.net>
Message-ID: <um57frl39n2lf6@corp.supernews.com>
Source record: 136274
Cross-posted to:
alt.ham-radio.eme,alt.ham-radio.hf,alt.radio.scanner,rec.radio.amateur.antenna,rec.radio.amateur.misc,rec.radio.scanner

Do you practice at being a complete fool, or does it come naturally?

"AB8MQ" <ab8mq@alt.net> wrote in message news:ajtdmp$en1$3@pita.alt.net...
>
> "PawPaw" <PawPaw@granpa.com> wrote in message
> news:ZOg89.13917$I6.1162983@newsread1.prod.itd.earthlink.net...
> > No need to attack the Prez-
> >
> > he's just trying to clean up his Daddy's mess :-)
>
> Hopefully, he'll finish the job with Iraq and not pull out like his daddy
did
> there, and should've done to Barbara Bush.
> >
> > "Alexander S. Wood" <alec_wood@dont.spam.me.ntlworld.com> wrote in
message
> > news:V4a89.3098$_q2.17813@newsfep3-gui.server.ntli.net...
> > >
> > > "Fred Hambrecht" <w4jle@charter.net> wrote in message
> > > news:ulvvql3il3ura7@corp.supernews.com...
> > > > Andy Roonie mode on:
> > > > Did ga ever notice folks that attack Mr. Bush always have neat
e-mail
> > > > addresses like Lucifer@eternal-flames.gov, wonder why that is?
Roonie
> > mode
> > > > off.
> > > >
> > > <snip>
> > >
> > > Hi Fred
> > >
> > > My email address is not very neat. Then again, I don't attack Mr
Bush - I
> > > just dare to question the direction in which he is leading us.
> > Unfortunately
> > > it is "us", since Mr Blair just does as he's told, as do most of the
other
> > > NATO leaders. Wonder why. Is that a small globe of white light I see
above
> > > 10 Downing St.............................
> > >
> > > Alec

> > >
> > > PS For those Americans with a similar knowledge of other countries to
> > their
> > > president, I'd better explain that 10 Downing Street is the residence
of
> > the
> > > British Prime Minister, who is called Tony Blair - short for "Anthony"
by
> > > the way.
> > >
> > >
> > >
> >
> >
>

3434. Magnetic Loop ALA330 useful indoor ?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-20 20:20:56 UTC
From: Thierry Lombry <lombryt@hotmail.com>
Message-ID: <3d62a4b6_2@news.vo.lu>
Source record: 136275

Hi,
Living in an appartment in LX, 2d floor, I tied a long wire from the appartment to the end of my garden (about 10m across the appartment + 15m tied ◆ 45◆ up to a fence, see pic on http://www.astrosurf.com/lombry/qsl-longwire2.htm mid op page).
This wire captures a lot of severe QRM (a strong background noise at S5-7 on most HF bands) probably generated in the neighborhood), a QRM I do not experiment in my second QTH, an individual house located on top of hills in Belgium, at 100m from the nearest neighboor, where I installed a 40m longwire tied 3m high that gives excellent results.

So i would like to know if using another type of antenna, for example a magnetic loop like the ALA-330 (detail on http://www.wellbrook.uk.com/ALA330.html) I could resolve my QRM problem in LX and improve Q signals. Although the manufacturer recommands to place the M.L. 5m away from any building, I have to install it indoor, in the room located garden side.
Do you think such installation could give me better results that my current (short) long wire ?

The other solution will be to install a MFJ Interference & noise canceler. But I think that the new antenna will improve the strengh of signals and will reduce QRM by its design.

Thanks for comments.

73
Thierry
http://www.astrosurf.com/lombry/menu-qsl.htm

3435. Re: Superposition: was Re: Email to ...

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-20 21:59:49 UTC
From: VE9SRB <srbest@att.net>
Message-ID: <pZy89.3267$NZ.141919@bgtnsc05-news.ops.worldnet.att.net>
Source record: 136276

"Walter Maxwell" <w2du@iag.net> wrote in message
news:qcy79.9396$LO1.730556@newsread2.prod.itd.earthlink.net...
>
>> The forward voltage is determined by multiplying the source voltage by
the
> square root of the forward-power increase factor, which is 1/(1 - rho
> squared), where rho is the voltage reflection coefficient of the mismatch
> terminating a lossless line.
>
> 73, Walt
>

Actually, according to Johnson's derivation of eq. 4.23, the total steady state forward voltage is given by the sum of the forward source voltage [Eg Zo/(Zo + Zg)] plus all of the re-reflected voltages developed at the generator. Eq. 4.23 is an equation for the total voltage at any point x on the line, where this total voltage is given by the sum of the total forward voltage + the total rearward voltage. Johnson clearly states that the total forward voltage is given by the sum of all the forward voltage components and that the total rearward voltage is given by the sum of all the rearward voltage components. He does not mention power addition in this section.

You might also want to check the equation you gave above for forward voltage. I agree that the forward power equals delivered power (your source power) times 1/(1 - rho^2) as this is derived from the simple relationship Pdel = Pfwd - Pref. However, I'm not sure that Vfwd = Vtot Sqrt[(1/1-rho^2)]. While the forward power is greater than the delivered power, the total forward voltage is not always greater than the total voltage in the line as your equation would require.

Steve VE9SRB

3436. Re: Question on Tuning Discone To TX on Aviation Band

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-20 22:06:10 UTC
From: k1bqt@aol.com
Message-ID: <20020820180610.28619.00001409@mb-mn.aol.com>
Source record: 136277

>I'm interested in determining the best way to tune a discone to transmit optimally on the aviation band.<

My Diamond discone--same as RS--has no top section installed and it exhibits excellent SWR accross the entire aviation band (just checked it with my analyzer). Should be no problem transmitting through it whatsoever.

Rick K1BQT

3437. Re: Superposition quiz

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-20 22:22:26 UTC
From: CAM <Cecil.A.Moore@ieee.org>
Message-ID: <3D62C122.92A3E1DB@ieee.org>
Source record: 136279

Richard Harrison wrote:
> Zo is controlled by construction of the line. This simplifies the math.
> It allows power to be added and subtracted.

Let's be sure everyone understands there's no such thing as negative
power. The sign on the power (energy flow past a point) is simply a
convention indicating the direction of energy flow. Toward the load
is normally the plus direction and away from the load is normally
the negative direction. Forward power is toward the load. Reflected
power is away from the load. Forward power minus reflected power
equals power delivered to the load.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
------== Over 80,000 Newsgroups - 16 Different Servers! =-----

3438. Re: Appropriate Choke for 500-800 Mhz?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-20 22:24:33 UTC
From: CAM <Cecil.A.Moore@ieee.org>
Message-ID: <3D62C1A1.495BE471@ieee.org>
Source record: 136280

hasan schiers wrote:
>
> We have a repeater in the presence of 250 Kw UHF TV transmitter. We are not
> experiencing any pronounced problems with our 2m repeater @ 300', but wanted
> to take all precautions. My questions:
>
> 1. What would be the proper toroid material and who to order it from?
>
> 2. What should be choked?
>
> a. Main feedline to the antenna (at the duplexer, I would gather)?
> b. Rx and Tx cables from the duplexer (at the input to the Rx and ouput of
> Tx) ?
> c. Power cables to the repeater (as they enter the repeater case)?

I've noticed at vhf/uhf a lot of commercial companies simply coil up a
few turns of coax directly under the antenna.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

3439. Re: Air-Wound Balun Design Info??

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-20 22:24:36 UTC
From: kelly@dvol.com
Message-ID: <d22b54c3.0208201424.30a5aa7d@posting.google.com>
Source record: 136278

"Roger Leone" <arleoneSPAMBLOCK@inreach.com> wrote in message
news:<jNH79.1772$i16.203612279@news.inreach.com>...
> Brian:
>
> > Questions: Do air-wound baluns inherently have lower losses than
> > ferrite core baluns particularly under high SWR conditions?
>
> Ferrite or powdered iron cores do have some losses but choice of the right
> core material minimizes them. However, they are never as low loss as air.
> Also, air core baluns don't saturate as ferrite/powdered iron can, so you
> can put a lot of RF energy into them. With high SWR, I would suspect the
> air core balun would have an advantage.
>
>
That's my point.
>
>
>
> Over what bandwidths?
>
>
Preferably 7.0 thru 28.1 Mhz but 7.0 thru 21.1 would be fine.
>
>
> Bandwidth is the advantage ferrite/powdered iron cores provide. With higher
> permeability material you need fewer turns of wire to get the necessary
> inductance for good low frequency performance, and with fewer turns of wire
> there is less stray capacitance to limit high freq performance. They can
> give over 10:1 bandwidth. But with an air core balun you should be able to
> cover at least a 3:1 freq range. For a single band yagi, bandwidth is no
> problem.
>
>
Understood and agree 100%.
>
>
> Does anyone have a source for design info for homebrewed
> > 1:1 and 4:1 air-wound baluns?
>
> I have been using an air core balun for many years. It was a Bill Orr
> design from one of the first issues of Ham Radio Magazine from 1968 and was
> designed for 80 and 40 meters.
>
>

I should have it. Somewhere.
>
>
I haven't used it on 30 meters, but I am
> guessing it would be OK. There are 3 air core balun designs in his Beam
> Antenna Handbook covering .54 - 2.5 mHz, 7 - 25 mHz and 14 - 30 mHz. They
> are all 1:1 ratio using trifilar windings. I suspect you could omit the 3rd
> winding and go bifilar for 4:1 ratio with the same designs. If you want the
> details, let me know.
>
>
Forget I even mentioned 4:1 baluns . . .
>
>
I'm planning to raid the neighborhood HRO store tomorrow, maybe they
have the Orr tome, they have a half-decent bookshelf. I'll get back to
you if I can't scrounge the book from somewhere. Thanks a bunch Roger!
>
> 73,
>
> Roger K6XQ
>
>
w3rv

3440. Re: Air-Wound Balun Design Info??

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-20 22:29:00 UTC
From: kelly@dvol.com
Message-ID: <d22b54c3.0208201429.4d7df632@posting.google.com>
Source record: 136281

CAM <Cecil.A.Moore@ieee.org> wrote in message news:<3D61678E.B1DB4EF1@ieee.org>...
> Dave Allen wrote:
> > My apologies for fanning a religious war, but the original poster needs to know
> > that not all things called baluns are, even if they are air wound... Sigh...
>
> When a common-mode choke is placed at a BAlanced to UNbalanced junction,
> doesn't it become a balun by default?
>
>
. . . Yeah Cecil, as if the "original poster" doesn't know the
difference between a string of beads and a balun . . . sigh . . and he
ain't even an EE.

3441. Re: Air-Wound Balun Design Info??

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-20 22:40:03 UTC
From: kelly@dvol.com
Message-ID: <d22b54c3.0208201440.3cd1327f@posting.google.com>
Source record: 136282

"K4IA" <K4ia@novacoxmail.com> wrote in message
news:<vfS79.388103$DB.12970688@news1.east.cox.net>...
> Tom, N0SS has published an article on these newsgroups several times.
> Summarizing his measurements concludes that 1:1 coaxial balun with an
> excellent choking reactance for 10 through 20 meters can be made by winding
> 6 turns of RG-213 on a 4 inch pVC sewer pipe. For 40 or 30 meters use 12
> turns. Wind the turns as a single layer
> --
> Radio K4IA
> Craig "Buck"
> Fredericksburg, Virginia USA
>
>
I have his article archived. My particular application is a very light
& compact pack 'n go portable mutiband dipole, a big heavy RG-213 coax
choke won't work, a little air-wound balun should work. I should have
been more explicit when I posted. Tnx.

w3rv

3442. Re: Superposition quiz

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-20 22:42:15 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <3D62C5C7.7040705@eznec.com>
Source record: 136283

There is indeed negative power. Please read my recent posting on instantaneous and average power. It explains that when a load is anything except a pure resistance, the power is positive for part of its cycle (frequency twice that of V and I) and negative for the remainder. If you should choose to define positive current flow in the other direction, the power waveform simply flips over, and it's still positive for part of the cycle and negative for the remainder. You can see a graph of this in most circuits textbooks.

Even average power can be negative. Consider a 5 volt DC source in series with a 3 volt DC source, but connected so the voltages subtract. Connect a 2 ohm load to the pair. You can easily calculate that the current is one ampere, the power delivered by the 5 volt source is 5 watts, the power delivered by the 3 volt source is -3 watts, and the load resistor dissipates 5 - 3 = 2 watts. The power dissipated in the load equals the sum of the powers delivered by the sources, as it should be.

You'll calculate a negative power when dealing with some antenna arrays, where an element consumes a negative power. That is, it delivers power to the feed system rather than consuming it from the feed system.

Roy Lewallen, W7EL

CAM wrote:
> Richard Harrison wrote:
>
>>Zo is controlled by construction of the line. This simplifies the math.
>>It allows power to be added and subtracted.
>
>
> Let's be sure everyone understands there's no such thing as negative
> power. The sign on the power (energy flow past a point) is simply a
> convention indicating the direction of energy flow. Toward the load
> is normally the plus direction and away from the load is normally
> the negative direction. Forward power is toward the load. Reflected
> power is away from the load. Forward power minus reflected power
> equals power delivered to the load.

3443. It's a conspiracy

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-20 22:44:14 UTC
From: CAM <Cecil.A.Moore@ieee.org>
Message-ID: <3D62C63E.FB382A4E@ieee.org>
Source record: 136284

I got down to brass tacks today. I made an appointment with a Texas A&M EE professor, an expert in electromagnetics. I presented him with the following example that we have been discussing:

100w XMTR---50 ohm feedline---+---1/2WL 150 ohm feedline---50 ohm load

He agreed that Rho at the 50/150 impedance discontinuity is 0.5 but he said there are no steady-state reflections on the 50 ohm feedline from that impedance discontinuity. I said, "How can there not be any reflections from a Rho = 0.5 impedance discontinuity?" He said, "There's just not any." I wasted an hour of my time trying to explain wave cancellation to him. He said there was nothing to be canceled. He has apparently programmed himself to believe that reflections don't occur at all at the 50 ohm virtual impedance.

Seems to me, guys like him have abandoned reality in favor of their math models.

So here's a question for the gurus. When non-glare glass does its thing, where do the photons go that were canceled? The energy in photons can be turned into heat but it is my understanding that the energy in photons cannot simply disappear. Seems to me, the cancellation of the glare must make the picture either a little brighter or a little hotter.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

3444. Re: Superposition quiz

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-20 22:57:19 UTC
From: CAM <Cecil.A.Moore@ieee.org>
Message-ID: <3D62C94F.343BA86C@ieee.org>
Source record: 136286

Roy Lewallen wrote:
> Even average power can be negative. Consider a 5 volt DC source in
> series with a 3 volt DC source, but connected so the voltages subtract.
> Connect a 2 ohm load to the pair. You can easily calculate that the
> current is one ampere, the power delivered by the 5 volt source is 5
> watts, the power delivered by the 3 volt source is -3 watts, and the
> load resistor dissipates 5 - 3 = 2 watts. The power dissipated in the
> load equals the sum of the powers delivered by the sources, as it should be.

This doesn't contradict what I said, Roy. The sign indicates the
direction of positive energy flow, NOT that the energy is negative.
The -3 watts simply indicates that the battery is being charged
instead of being discharged.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

3445. Re: Discone Grounding Question ?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-20 22:59:26 UTC
From: 'Doc <w5lz@icok.net>
Message-ID: <3D62C9B8.6B6529AD@icok.net>
Source record: 136285

Bob,
I seriously doubt if having your antenna grounded
as you describe will hurt it's performance at all. It
may not have been the 'best' in the world, but that's
due more to it being inside than anything else.
'Doc

3446. Re: It's a conspiracy

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-20 23:32:24 UTC
From: "Peter O. Brackett" <ab4bc@ix.netcom.com>
Message-ID: <ajum8a$c8v$1@nntp9.atl.mindspring.net>
Source record: 136289

Cecil:

Heh, heh... Professors can't be wrong!

Did you ever calculate the "size" of a photon at a frequency corresponding
to a wavelength say of 80 meters?

--Peter K1PO

"CAM" <Cecil.A.Moore@ieee.org> wrote in message
news:3D62C63E.FB382A4E@ieee.org...
> I got down to brass tacks today. I made an appointment with a Texas A&M
> EE professor, an expert in electromagnetics. I presented him with the
> following example that we have been discussing:
>
> 100w XMTR---50 ohm feedline---+---1/2WL 150 ohm feedline---50 ohm load
>
> He agreed that Rho at the 50/150 impedance discontinuity is 0.5 but
> he said there are no steady-state reflections on the 50 ohm feedline
> from that impedance discontinuity. I said, "How can there not be any
> reflections from a Rho = 0.5 impedance discontinuity?" He said, "There's
> just not any." I wasted an hour of my time trying to explain wave
> cancellation to him. He said there was nothing to be canceled. He has
> apparently programmed himself to believe that reflections don't occur
> at all at the 50 ohm virtual impedance.
>
> Seems to me, guys like him have abandoned reality in favor of their
> math models.
>
> So here's a question for the gurus. When non-glare glass does its
> thing, where do the photons go that were canceled? The energy in
> photons can be turned into heat but it is my understanding that the
> energy in photons cannot simply disappear. Seems to me, the cancellation
> of the glare must make the picture either a little brighter or a little
> hotter.
> --
> cheers, CAM http://www.qsl.net/w5dxp
>
>
> -----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
> http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
> -----== Over 80,000 Newsgroups - 16 Different Servers! =-----

3447. Re: It's a conspiracy

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-20 23:56:34 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <mml5muo4t8a0ha34podl411ocjv18k127h@4ax.com>
Source record: 136287

On Tue, 20 Aug 2002 17:44:14 -0500, CAM <Cecil.A.Moore@ieee.org>
wrote:

>So here's a question for the gurus.

Hi Cecil,

You have queried every "guru" (or any who would answer) as to the
mysteries you perceived yourself to have mastered above and beyond
convention. You have also rejected EVERY ONE of that same (none
supported your thesis) crew.

You then go to the halls of academia, pester the faculty attempting to
teach them their business and then rejected EVERY ONE of (none
supported your thesis) them.

The baloney detector is pegged at:
>>5. Has anyone gone out of the way to disprove the claim, or has only
>>supportive evidence been sought?
>>This is the confirmation bias, or the tendency to seek confirmatory
>>evidence and to reject or ignore disconfirmatory evidence.

Conspiracy, Hmmm? Have you tried to contact Leonard Nimoy? I'll bet
this conundrum falls into the category of unsolved mysteries
surrounding the building of the pyramids. Do your reflected waves
bend spoons?

73's
Richard Clark, KB7QHC

3448. Re: Parallel Dipoles for 20 and 17?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-21 00:04:59 UTC
From: Bill Turner <w4wnt@carolina.rr.com>
Message-ID: <LOA89.30652$iP2.1477699@twister.southeast.rr.com>
Source record: 136288

You could feed two dipoles from the same coax if you arrange them 90 degrees apart to minimize interactions. I've done it with 40m/80m combinations. The frequencies are farther apart at 40/80, but it should be worth a try at 17/20m.

Good luck, wire is cheap...experiment!!

Bill, W4WNT
"Bill Meara" <n2cqr@clix.pt> wrote in message
news:3d60b0af.38696775@news.clix.pt...
> My efforts to use coaxial traps to convert my 17 meter rotatable
> dipole for 20 and 17 meter use didn't work out. So now I'm looking at
> other options.
>
> What do you guys think would happen if I tried to add a 20 meter
> dipole in parallel with he 17 meter wire element (using the same piece
> of coax)? The antennas would be very close together, separated only
> by the diameter of the fishing pole supports.
>
> Could someone run this antenna with modeling software to see if it
> would work. I'm concerned about the frequencies being so close...
>
>
> 73 de Bill CU2JL N2CQR
> Sao Miguel Island, The Azores, Portugal
> 37.7 N 25.7 W
> http://planeta.clix.pt/n2cqr

3449. Half Square

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-21 00:26:36 UTC
From: <>
Message-ID: <20020820202636.28500.00001626@mb-mr.aol.com>
Source record: 136290

Hi all:

Has anyone here used a half square antenna? It is sopose to give a low angle, horizontaly polorized wave when mounted just over 1/4 wl high.

Thanks,
Bob--KD8WU

U of M
GO BLUE!!!

3450. Re: It's a conspiracy

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-21 00:54:36 UTC
From: CAM <Cecil.A.Moore@ieee.org>
Message-ID: <3D62E4CC.A93D0B74@ieee.org>
Source record: 136292

"Peter O. Brackett" wrote:
> Cecil: Heh, heh... Professors can't be wrong!
>
> Did you ever calculate the "size" of a photon at a frequency corresponding
> to a wavelength say of 80 meters?

Are you saying its size is zero, Peter?
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

3451. Re: Superposition quiz

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-21 00:58:14 UTC
From: klocko@toad.net
Message-ID: <224d9cd4.0208201658.684e7b9d@posting.google.com>
Source record: 136291

richardharrison@webtv.net (Richard Harrison) wrote in message
news:<9025-3D624A01-501@storefull-2395.public.lawson.webtv.net>...
> Bill, N3WK wrote:
> "I am not sure what you`re trying to say here."
>
> Superposition is a tool for simplifying circuit analysis. A simple
> application is one in which one source drives a current from a to b, and
> another source drives a current from b to a. Superposition allows you to
> take the difference in the currents and use it in Ohm`s law to calculate
> the voltage between a and b. Superposition just allowed you to calculate
> the currents from each source one at a time.
>
> Knowing the a to b voltage and current in a resistor allows you to take
> their product as the power in the resistor. Superposition is only a step
> in a journey.
>
> To find power delivered to a load by coax, you have an advantage of
> knowing the voltage to current ratio the waves see. It is the Zo of the
> coax. This fixes the voltage to current ratio of the forward and
> reflected waves. This has nothing to do with SWR in most cases.
>
> SWR is likely to affect the load seen by a transmitter, but does not
> affect the impedance seen by the forward and reflected waves in most
> cases. The wave voltage to current ratio is simply Zo, coming or going.
>
> Zo is controlled by construction of the line. This simplifies the math.
> It allows power to be added and subtracted.

Again, this is not true in general, but for the case of finding power
delivered to a load by a transmission line.

> Math is also simplified in the electric power company lines. Their
> voltage is usually held constant. This simplifies the math. It allows
> power to be added and subtracted. P=EI, and If E is a constant, P is
> proportional to I. Generators share loads in proportion to their current
> contributions.

This one (and variations) has been told so many times that no one ever
questions it. I see two people, you and Cecil, quoting this but I
don't recall anyone ever verifying it. I'm extremely skeptical that
power transmission could be so simplistic. But I'm willing to learn,
so please give me the name of a paper or text where the simple
addition of power from multiple generators is explained.

73,
Bill N3WK

3452. Re: It's a conspiracy

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-21 01:00:04 UTC
From: richardharrison@webtv.net
Message-ID: <4208-3D62F424-682@storefull-2397.public.lawson.webtv.net>
Source record: 136300

CAM, W5DXP wrote:
"Seems to me, the cancellation of glare must make the picture either a little brighter or a little hotter."

My old professor got his Ph.D. at MIT and he would indubitably agree with Cecil. He steadfastly maintained that energy is neither created nor destroyed, but that the entropy of the universe is constantly increasing making acquisition more difficult.

Cecil`s wave interference can`t abolish the energy without a trace.

Berst regards, Richard Harrison, KB5WZI

3453. Re: It's a conspiracy

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-21 01:08:20 UTC
From: CAM <Cecil.A.Moore@ieee.org>
Message-ID: <3D62E804.F24AB1F1@ieee.org>
Source record: 136293

Richard Clark wrote:
> You have queried every "guru" (or any who would answer) as to the
> mysteries you perceived yourself to have mastered above and beyond
> convention.

I haven't mastered anything, Richard, I'm still asking questions. Lots of pieces just don't fit. Walter Maxwell gets raked over the coals for suggesting a virtual impedance can cause a reflection. Steve is allowed to use a reflection coefficient of 0.5 to calculate an un-reflected power when there isn't any reflected power. What gives?

In the following example, are there any reflections? If so, where are the reflections originating? The TV signal generator has a circulator that dissipates all reflections seen by the generator, i.e. there are no re-reflections from the generator.

TV signal---75 ohm coax---+---1/4WL shorted stub---
generator |
High Impedance TV Receiver

The 1/4WL shorted stub is providing a virtual open circuit. If a virtual impedance can cause things to happen, there shouldn't be any ghosting. Will there be any ghosting?
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
------== Over 80,000 Newsgroups - 16 Different Servers! =-----

3454. Re: Half Square

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-21 01:12:51 UTC
From: CAM <Cecil.A.Moore@ieee.org>
Message-ID: <3D62E913.4D340FFA@ieee.org>
Source record: 136295

Bob Colenso wrote:
> Has anyone here used a half square antenna? It is sopose to give a low angle,
> horizontaly polorized wave when mounted just over 1/4 wl high.

Yep, they work that way because they are really two 1/4WL verticals
spaced 1/2WL apart fed at their tops. The current maximum points
are at the highest points on the antenna which is a good thing.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

3455. Antenna Sought 10m/6m/2m/70cm

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-21 01:16:54 UTC
From: "Chip G." <n1mie@NOSPAM.snet.net>
Message-ID: <20082002211658252 9%n1mie@NOSPAM.snet.net>
Source record: 136294

Any ideas? I'm interested in the new Yaesu quad band, but doesn't seem worthwhile unless I can find an appropriate quad-band antenna...

Need one for 10m, 6m, 2m and 70cm.

Thanks,

--
N1MIE - FN31xm

3456. Re: Antenna Sought 10m/6m/2m/70cm

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-21 01:19:27 UTC
From: CAM <Cecil.A.Moore@ieee.org>
Message-ID: <3D62EA9F.F8CFAFE3@ieee.org>
Source record: 136296

"Chip G." wrote:
>
> Any ideas? I'm interested in the new Yaesu quad band, but doesn't seem
> worthwhile unless I can find an appropriate quad-band antenna...
>
> Need one for 10m, 6m, 2m and 70cm.

Does it only have one coaxial output?
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

3457. Re: Superposition quiz

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-21 01:22:39 UTC
From: richardharrison@webtv.net
Message-ID: <5698-3D62EB5F-614@storefull-2393.public.lawson.webtv.net>
Source record: 136298

Roy, W7EL wrote:
"There is indeed negative power."

At the end of a transmission line, when the load impedance is infinite (an open circuit) the reflection coefficient is 1 on an angle of zero. The incident and reflected voltages are in-phase and the load voltage is doubled. The currents, incident and reflected, are equal like the voltages, but are 180-degrees out of phase so they cancel.

From the extreme of an open circuit on the transmission line to a less extreme condition we can gather that when the load resistance is too high to match Zo of the transmission line but is finite, the behavior is similar but less severe. The sum of the forward and reflected voltages are in phase but the magnitude of their sum is less than double the incident voltage. The reflected current is phase reversed from the incident current but of lesser magnitude than the incident current, so the currents don`t cancel at the load.

If the load resistance is less than Zo, phase of the reflected voltage is reversed. Phase of the reflected current is unchanged.

When power is defined as the rate at which power is transferred past a point, reversal of its direction is considered as a negative.

A reflection from a mismatched load results in a 180-degree phase change of either the voltage or current, but not both. So one might say a positive voltage times a negative current is a "negative power" because it reverses the direction of power flow.

Note that this negative multiplication product does not take place during the alternations of an a-c voltage cycle. On the positive alternation you have a positive voltage times a positive current. On the negative alternation you have a negative voltage times a negative current and this product is positive just like a positive times a positive.

There are two power pulses during an a-c voltage cycle and both of them are positive.

Best regards, Richard Harrison, KB5WZI

3458. Re: Antenna Sought 10m/6m/2m/70cm

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-21 01:24:31 UTC
From: Bob Miller <bamiller@texas.net>
Message-ID: <LutiPQDfqP96Sh0QwFr0BJEiVIpm@4ax.com>
Source record: 136297

"Chip G." <n1mie@NOSPAM.snet.net> wrote:

>Any ideas? I'm interested in the new Yaesu quad band, but doesn't seem
>worthwhile unless I can find an appropriate quad-band antenna...
>
>Need one for 10m, 6m, 2m and 70cm.
>
>Thanks,

You might first want to check the antenna outlet(s) set-up on the back of the
set.

Bob
k5qwg

3459. Re: It's a conspiracy

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-21 01:51:51 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <tjs5mu87b0fgqsvrmjmgiqspinc443l48o@4ax.com>
Source record: 136299

On Tue, 20 Aug 2002 20:08:20 -0500, CAM <Cecil.A.Moore@ieee.org>
wrote:

> What gives?

Hi Cecil,

I'll tell ya what. If you cannot handle Bart's thought problem, then
you gotta be hiding from the obvious.

Now, let's see. Do you respond to the problem, or do you respond to
the suggestion of the problem?

73's
Richard Clark, KB7QJC

3460. Re: Antenna Sought 10m/6m/2m/70cm

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-21 02:29:40 UTC
From: Tad Danley <tdanley@nospamatearthlink.net>
Message-ID: <3D62FAFE.1BC70FF@earthlink.net>
Source record: 136301

"Chip G." wrote:

> Any ideas? I'm interested in the new Yaesu quad band, but doesn't seem
> worthwhile unless I can find an appropriate quad-band antenna...
>
> Need one for 10m, 6m, 2m and 70cm.

Mobile or base operation? And how well do you want it to perform?

I have a Yaesu FT-100D that I use mobile on those bands. For 6 and 10 meters ssb and fm I use Hamsticks with a quick disconnect so I can switch between them. They do a decent job, but I'm not aware of any antenna that would cover both bands due to the frequencies involved.

For 2/440 fm I use a dual band antenna. It is a compromise, but works OK for me - local repeaters and limited simplex range.

Good luck and 73,

--
Tad Danley, K3TD
mailto:tdanley@earthlink.net

Caution!
Anti-SPAM e-mail return address in use.

3461. Re: Discone antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-21 02:48:47 UTC
From: Tim <tthomps@no-spam-please.erols.com>
Message-ID: <ajuv2f$ag1$1@bob.news.rcn.net>
Source record: 136302

Delporte Marc wrote in message ...
> I'm looking for a "good" discone antenna for a AR 5000.
>
> From now, I do have 3 candidates :
>
> DA 3000 from AOR up to 2 GHz
> AH 7000 from Icom up to 1.3 GHz
> Discone from Diamond up to 1 GHz
>
> Any field experiences ?
>
> 73'
> F1GSN
>

I've used the Icom AH 7000 since 1988. I used it for receive only (100 MHZ through 900 MHZ) for the first 10 years, and then I became a ham and started using it on the 6 and 2 meter bands. No problems, it's very rugged.

73,
Tim KB3EKG

3462. Re: It's a conspiracy

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-21 03:01:20 UTC
From: richardharrison@webtv.net
Message-ID: <10863-3D630280-169@storefull-2394.public.lawson.webtv.net>
Source record: 136305

CAM, W5DXP wrote:
"Walter Maxwell gets raked over the coals for suggesting a virtual impedance can cause a reflection."

A hybrid ring is often used to connect two transmitters to a common load. Connections from the two transmitters each have two paths to the load port. Signals via both paths for a transmitter are in-phase at the load port.

Signals via both paths between transmitters are out-of-phase at the other transmitter port so they cancel. It`s a matter of producing a virtual short or open at each transmitter port for energy from the other transmitter but not for the energy output of that port`s transmitter. The energy isn`t abolished. It ultimately is consumed by the load.

The virtual impedance to each other`s energies isolates the transmitters from each other. The rejections are almost total reflections.

Best regards, Richard Harrison, KB5WZI

3463. Re: Antenna Sought 10m/6m/2m/70cm

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-21 03:03:13 UTC
From: Dale Parfitt <parinc@verizon.net>
Message-ID: <3D62FF37.40B79F1A@verizon.net>
Source record: 136303

"Chip G." wrote:

> Any ideas? I'm interested in the new Yaesu quad band, but doesn't seem
> worthwhile unless I can find an appropriate quad-band antenna...
>
> Need one for 10m, 6m, 2m and 70cm.
>
> Thanks,
>
> --
> N1MIE - FN31xm

Diamond makes the HV7A- you will need a diplexer for the rig end.

Dale W4OP

3464. Fan Dipole 160/80/40/20

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-21 03:06:52 UTC
From: Terry Crissman <tcrissman@simplynet.net>
Message-ID: <um60ttl5u39ae7@corp.supernews.com>
Source record: 136304

I've got a fan dipole up at 50 ft for 160/80/40/20 meters...all bands tune nicely except for 40 meters. Any ideas on why 40 won't tune?

thanks

Terry

3465. Re: It's a conspiracy

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-21 03:13:48 UTC
From: ZOOM <robert931@sympatico.ca>
Message-ID: <1zD89.15493$Px3.868211@news20.bellglobal.com>
Source record: 136307

If you can't see it you can't explain it.
Waves, photons etc are explained by theories. So what is a theory?
It's a conclusion about the behavior of something based on our experiences.
This does not mean that it's correct or wrong but it is they way we perceive
it.

Waves etc are still black magic. No one really knows how they work and if
anyone says they do then they are a liar!

"CAM" <Cecil.A.Moore@ieee.org> wrote in message
news:3D62C63E.FB382A4E@ieee.org...
> I got down to brass tacks today. I made an appointment with a Texas A&M
> EE professor, an expert in electromagnetics. I presented him with the
> following example that we have been discussing:
>
> 100w XMTR---50 ohm feedline---+---1/2WL 150 ohm feedline---50 ohm load
>
> He agreed that Rho at the 50/150 impedance discontinuity is 0.5 but
> he said there are no steady-state reflections on the 50 ohm feedline
> from that impedance discontinuity. I said, "How can there not be any
> reflections from a Rho = 0.5 impedance discontinuity?" He said, "There's
> just not any." I wasted an hour of my time trying to explain wave
> cancellation to him. He said there was nothing to be canceled. He has
> apparently programmed himself to believe that reflections don't occur
> at all at the 50 ohm virtual impedance.
>
> Seems to me, guys like him have abandoned reality in favor of their
> math models.
>
> So here's a question for the gurus. When non-glare glass does its
> thing, where do the photons go that were canceled? The energy in
> photons can be turned into heat but it is my understanding that the
> energy in photons cannot simply disappear. Seems to me, the cancellation
> of the glare must make the picture either a little brighter or a little
> hotter.
> --
> cheers, CAM http://www.qsl.net/w5dxp
>
>
> -----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
> http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
> -----== Over 80,000 Newsgroups - 16 Different Servers! =-----

3466. Re: It's a conspiracy

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-21 03:14:40 UTC
From: CAM <Cecil.A.Moore@ieee.org>
Message-ID: <3D6305A0.FBE45307@ieee.org>
Source record: 136306

Richard Clark wrote:
>
> On Tue, 20 Aug 2002 20:08:20 -0500, CAM <Cecil.A.Moore@ieee.org>
> wrote:
>
> > What gives?
>
> Hi Cecil,
>
> I'll tell ya what. If you cannot handle Bart's thought problem, then
> you gotta be hiding from the obvious.
>
> Now, let's see. Do you respond to the problem, or do you respond to
> the suggestion of the problem?

I guess Bart's posting hasn't yet appeared on my news server. I have
been replying directly by email.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

3467. Re: Question on Tuning Discone To TX on Aviation Band

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-21 03:24:19 UTC
From: mrcole100@aol.com
Message-ID: <403fdf8.0208201924.34f3b5fd@posting.google.com>
Source record: 136308

Thanks to Richard, Chip, and Rick for the help. I have an ICOM A22, which you guys probably know is an airband transceiver, connected to the discone through about 20 feet of RG-58. The discone is sitting on my balcony because I live in an apartment and I'm moving in the coming week, so it didn't make any sense to mount it. I live about 15 miles from Philly International and about 8 miles from Northeast Philly Airport. I can hear Northeast Tower clear as day and I can also hear both Philly Tower and Philly Approach when the squelch isn't set too high. My ability to pull in the Philly Tower and Approach end of the conversation surprised me. I also heard my instructor last night as he was flying in the pattern at my airport. I was actually able to talk to him for a few minutes. My airport is about 10 miles from my house. Other than raising the antenna I don't know whether I can improve my range. Would using RG-8 make a significant difference in performance? Thanks again.

Actually as I'm writing this I think I'm picking up transmissions from planes from planes landing at airports outside NYC, which is about 80 miles from me.

Dave
PP-ASEL

3468. Re: Question on Tuning Discone To TX on Aviation Band

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-21 03:40:56 UTC
From: Fred Hambrecht <w4jle@charter.net>
Message-ID: <um62ubn8bujf17@corp.supernews.com>
Source record: 136309

May I ask, what call sign did you use to make your transmission legal?

Fred
CP-ASMEL INST LJ & DC3 Type

"David B. Cole" <mrcole100@aol.com> wrote in message
news:403fdf8.0208201924.34f3b5fd@posting.google.com...
> I also heard my instructor last night as
> he was flying in the pattern at my airport. I was actually able to
> talk to him for a few minutes.
>
> Dave
> PP-ASEL

3469. Re: Superposition quiz

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-21 03:46:06 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <3D630CFE.5020803@eznec.com>
Source record: 136310

Hm, that's an interesting point of view. Because electrons are negative, there's no such thing as positive charge, so there's no such thing as positive current. It's really current, which can only be negative, moving in a negative direction.

You're much more fond of making such distinctions than I, so I'll leave them to you. I'm comfortable with calling a negative value of P a negative power, but whatever floats your boat. Just so long as you, and your readers, understand what you're talking about. Just remember, now. No positive current, either.

Roy Lewallen, W7EL

CAM wrote:
> Roy Lewallen wrote:
>
>>Even average power can be negative. Consider a 5 volt DC source in
>>series with a 3 volt DC source, but connected so the voltages subtract.
>>Connect a 2 ohm load to the pair. You can easily calculate that the
>>current is one ampere, the power delivered by the 5 volt source is 5
>>watts, the power delivered by the 3 volt source is -3 watts, and the
>>load resistor dissipates 5 - 3 = 2 watts. The power dissipated in the
>>load equals the sum of the powers delivered by the sources, as it should be.
>
>
> This doesn't contradict what I said, Roy. The sign indicates the
> direction of positive energy flow, NOT that the energy is negative.
> The -3 watts simply indicates that the battery is being charged
> instead of being discharged.

3470. Re: Scalar Electromagnetic Weapons

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-21 03:49:31 UTC
From: GarryDenke@Hotmail.com
Message-ID: <2a305a1f.0208201949.3a3f9717@posting.google.com>
Source record: 136311
Cross-posted to:
alt.ham-radio.eme,alt.ham-radio.hf,alt.radio.scanner,rec.radio.amateur.antenna,rec.radio.amateur.misc,rec.radio.scanner

> > British Prime Minister, who is called Tony Blair - short for "Anthony"

PROLOGUE

Fuck off Phar-Lap fake name wimp shit. Aaron Kim is right. The two special white stones, one dated Carboniferous, the other dated Cretaceous, in the two bows of Joseph Smith, Jr., are well known by the micropaleontologists of London's Natural History Museum. And dick suck, the golden plates of Joseph Smith, Jr. have already been geophysically located by Denoco Inc. of Texas geophysicists at Bratton Camp (Westbury) White Horse Eye. The two bows containing these two special white stones of Caddo Indian Tommyhawk are well known and published, well protected and well preserved, in Texas, dumbass. And Sun Angel Moroni's 16 Stonehenge Carboniferous and Cretaceous white stone samples were divided (melted)into 24 separate specimens embedded in said two bow arrows of Caddo Indian Tommyhawk. So fuck off because Aaron Kim is right. You don't know a fucking thing about this...

"Andelton" <dert3434@msn.com> wrote in message news:<a6w89.15148$I6.1300208@newsread1.prod.itd.earthlink.net>...

> Mr. Denke,
>
> So you know where the plates are located.

http://www.westwiltshire.gov.uk/
http://web.ukonline.co.uk/wildbunch/horse.htm
http://wiltshirewhitehorses.org.uk/oldwes.html
http://wiltshirewhitehorses.org.uk/wesmap.html

In the original Bratton Camp White Horse Eye, under the Ancient Mississippian (Lower Carboniferous) Limestone white stones from North American and European source areas identified below, said White Horse currently covered with several layers of portland concrete and paint. See and read above sites.

> Are you going to retrieve them or are they to remain hidden till a certain
> time?

Now's the time! BEFORE they are stolen by Osama bin Laden's London Cells on September 11, 2002! I am going to cause, with or without anyone's help, The Natural History Museum of London to TELL THE FUCKING TRUTH about Doctor Garry Whilhelm Denke's, Joseph Smith, Junior's, Sister Amelia Denke's, and Tommy (Tommyhawk) Littlepage's white Mississippian (Lower Carboniferous) geologic age stones (of

various sizes, shapes, textures, hardnesses, and source areas) in the Heel Stone ditch original backfill, which circles MY ark of MY testimony location, and the white Upper Chalk (Late Cretaceous) geologic age stones. Their (Natural History Museum's) micropaleontologists addresses and phone numbers are at URL: http://www.nhm.ac.uk/ They all know about this. THEY are trying to THIEF MY ARTIFACTS.

> I looked (searched the I.) for info on the special white stones of Caddo
> Indian Tommyhawk but couldn't find any. Obviously you know more than most on
> this subject and your background points to some possible knowledge that may
> not be readily available to all who are interested.

My three (3) sources of samples of the two (2) different types of white stones at Stonehenge and my three (3) sources of samples of the two (2) different types of white stones at Bratton (Westbury) White Horse Eye, United Kingdom, said White Horse Eye also being filled with the white Ancient Mississippian (Lower Carboniferous) geologic age stones (of various sizes, shapes, textures, hardnesses, and source areas), are discussed in brief below (I'm trying to just publish enough information to cause excavation by the right people, e.g., NOT Osama bin Laden's London Cells), which is why I have not downloaded all of my B.C. and A.D. tangible information onto a www site.

> Can you refer me to some credible information, your own site perhaps.

CALL THOSE LYING FUCKING WHORES! I gave you the phone number!

> Thanks for your time.

You're welcome.

"Garry Denke, Geologist" <GarryDenke@Hotmail.com> wrote in message news:2a305a1f.0208200726.2adc5008@posting.google.com...
Fuck off Phar-Lap fake name wimp shit. Aaron Kim is right. The two special white stones, one dated Carboniferous, the other dated Cretaceous, in the two bows of Joseph Smith, Jr., are well known by the micropaleontologists of London's Natural History Museum. And dick suck, the golden plates of Joseph Smith, Jr. have already been geophysically located by Denoco Inc. of Texas geophysicists at Bratton Camp (Westbury) White Horse Eye. The two bows containing these two special white stones of Caddo Indian Tommyhawk are well known and published, well protected and well preserved, in Texas, dumbass. And Sun Angel Moroni's 16 Stonehenge Carboniferous and Cretaceous white stone samples were divided (melted)into 24 separate specimens embedded in said two bow arrows of Caddo Indian Tommyhawk. So fuck off because Aaron Kim is right. You don't know a fucking thing about this...

FIRST STONES BROUGHT TO STONEHENGE: THE MISSISSIPPIAN AGE WHITE ELDERS

From: Garry Denke (GarryDenke@USA.Net)

To: Doug Weller (dweller@ramtops.demon.co.uk)

MESSAGE:

Firstly, nice try Douglas Weller but it is now known and published that Garry Denke is a degreed geologist who graduated from Arizona State University in 1977, in the top ten (10) of the ASU geology department class, that same Garry W. Denke who is currently President of Denoco Inc. of Texas, an active State of Texas corporation currently exploring for natural gas in East Texas, currently operating oil leases and wells in North Texas, and currently certified and bonded by the Railroad Commission of Texas http://www.rrc.state.tx.us, which you, Mark Purnell, Giles Miller, et al, have today again verified under the same RRC website. Secondly, as you know Douglas Weller, it is now known and published that United States geologist Garry Denke's ancestor, the German historian, antiquarian, and Doctor Garry Whilhelm Denke (b. April 19, 1622, Baden, Schwarzwald, Germany - d. February 19, 1699, Caddo confederacies, Texas), first discovered Mississippian geologic age Waulsort stones in the Waulsort (now called Aubrey) Holes and Hell (now called Heel) Stone circular ditch at Stonehenge, United Kingdom, in 1656. Thirdly, as you now know, Garry Denke's German to English translations have been corrected and edited herein from the previous authored texts of Garry Denke, as rewritten and verified by the Erodelphian Literary Society of Sigma Chi Fraternity, Arizona State University, North Texas Branch (August 9, 2002).

The authors of "Stonehenge in its landscape, twentieth-century excavations", English Heritage, 1995, referenced Professor Richard Atkinson's "hard white chalk rubble" excavated in the 1950's as being the original backfill of the Heelstone ditch at Stonehenge (Pages 171, 174). Their eolian Cretaceous geologic age "chalk" report covering this backfill was, and still is, a geological and micropaleontological lie. The Heelstone ditch, once known as Hell Stone ditch, and its backfill of Mississippian (Tournaisian) Waulsortian facies rocks (Waulsort stones) were first noticed to be different from the Cretaceous age white chalk common to Stonehenge, by German historian, antiquarian, and Doctor Garry Whilhelm Denke (b. April 19, 1622, Baden, Schwarzwald, Germany - d. February 19, 1699, Caddo confederacies, Texas), who using his medical magnifying glass compared identical physical properties of shape, texture, and hardness, and identical biological properties of fossilized creatures to Mississippian limestone common to the village of Waulsort, south of Namur, Dinant Basin, Belgium. Doctor Garry Denke's catalogued archived collection of samples from each of the Waulsort Holes and the Hell Stone ditch were preserved by the Caddo Indian (Tommy "Tommyhawk" Littlepage) of Young County, Texas, who in 1979 at the Dallas Production, Inc. #1 Littlepage Oil Well transferred said collection guardianship to Garry Denke.

Prior to the Erodelphian Literary Society preliminary 1976 Arizona State University micropaleontology of Professor Atkinson's "hard white chalk rubble" showing this Heelstone ditch backfill as not local Senonian (Late Cretaceous) Upper Chalk native to Stonehenge, but the elder Arundian (Lower Carboniferous) High Tor Limestone transported by the Neolithic builders from the Pembroke area, South Wales Coast. Sister Amelia Denke, kindergarten schoolmaster of Drums Elementary School, Drums, Pennsylvania, acquired labeled U.K./U.S Mail gathered samples of the Aubrey Holes (Waulsort Holes), Heel Stone (Hell Stone) ditch backfill, and the common Stonehenge chalk from the British antiquarian Colonel Hawley in 1961. Sister Amelia Denke who was in possession of the Denke Family Bible at the Drums Elementary School taught the Revelation of Jesus Christ's Sarsen stone and its four beasts (pictured at URL below), twenty and four white elders (microfossils) creatures, and ten thousand times ten thousand and thousands of thousands of white Cretaceous coccoliths (nannoplankton) creatures to Garry Denke, president of Sister Amelia's kindergarten class, who in turn passed the knowledge of the pictured big beast (Daniel's bear) and four beasts (lion head, ox calf head, wounded man face, USA's flying eagle), 24 white elder creatures, and 10,000 x 10,000 and 1000s of 1000s white coccolith creatures to his classmates. In 1970, at Our Lady of Grace Junior High School, in 1973 at Hazleton High School, and in 1974 at Indiana University of Pennsylvania, said elders (microfossils) were classified as shown in Table 1 below, under Sister Amelia's 1961 Collection.

http://photos.yahoo.com/bc/beckih@flash.net/vwp?.dir=/Travel&.dnm=101-0189_img.jpg&.src=ph&.view=t&.hires=t

Table 1.

First Found Mississippian Microfossils of the Aubrey Holes and Heelstone Ditch Backfill of Stonehenge, United Kingdom

Doctor Denke's 1656 Collection Sister Amelia's 1961 Collection

1) aclisina aclisina
2) aviculopecten aviculopecten
3) bellerophon bellerophon
4) caninia cornucopiae caninia cornucopiae
5) chondrites chondrites
6) cleiothyridina roissyi cleiothyridina roissyi
7) composita composita
8) conocardium conocardium
9) delepinea(daviesiella)destinezi delepinea(daviesiella)destinezi
10) euphemites euphemites
11) girvanella girvanella
12) hapsiphyllum(zaphrentis)konincki hapsiphyllum(zaphrentis)konincki
13) linoproductus linoproductus
14) megachonetes papilionaceus megachonetes papilionaceus
15) michelinia grandis michelinia grandis
16) mourlonia mourlonia
17) murchisonia murchisonia

18) palaeosmilia pallaeosmilia
19) plicochonetes plicochonetes
20) rhipidomella michelini rhipidomella michelini
21) schellwienella s. crenistria schellwienella s. crenistria
22) straparollus straparollus
23) syringopora syringopora
24) zoophycos zoophycos

[Table 1. Courtesy of Garry W. Denke]

From 1979 through 1985, Arizona State University, Sigma Chi Fraternity, and Denoco Inc. of Texas micropaleontologists verified and confirmed through an arduous comparison study financed with private funds by Garry W. Denke and Denoco Inc. of Texas, that said Sister Amelia Denke's Drums Elementary School kindergarten catalogued archived collection of the above identified white Mississippian microfossils were identical to said Doctor Garry Denke's Tommy "Tommyhawk" Littlepage catalogued archived collection of the above identified Mississippian microfossils shown in Table 1 above. In 1990, Eldorado Oil and Gas, Inc. made an independent examination by electron microscope of all the samples gathered by Doctor Garry Denke in 1656 and Colonel Hawley in 1961 and determined that there were no nannoplankton coccoliths in the stones from the Aubrey Holes and Heelstone ditch backfill. Furthermore, the samples of the white Cretaceous chalk from both the 1656 and 1961 collections at Stonehenge were identical, but when compared to Doctor Garry Denke's Westbury White Horse Eye collection of 1656, it was discovered that the Cretaceous nannoplankton coccoliths were more similar to the Cretaceous Austin Chalk coccoliths of East Texas Field which crops out in Plano, Texas. Each of the above Mississippian archived microfossils, with catalogue, were U.S. certified mailed in 1994 to all seven of the Silent Partner Owners listed in Table 2 below.

Table 2.

Silent Partner Owners, of the Archived Catalogued Microfossils and Nannoplankton from Stonehenge and Westbury White Horse Eye and Working Interest in and to the Ark of the Testimony, U.K.:

BEFORE EXCAVATION DAY

Silent Partner Owners: Fractional Percentage Amount:

1. Texas Hebrew Post 0.142857142 Working Interest
2. Playboy Magazine 0.142857143 Working Interest
3. The Texas Catholic Newspaper 0.142857143 Working Interest
4. American Atheist Newsletter 0.142857143 Working Interest
5. The Dallas Morning News 0.142857143 Working Interest
6. Dallas Observer 0.142857143 Working Interest
7. The Society of Exploration 0.142857143 Working Interest
Geophysicists, Inc. _____

1.000000000 Working Interest

[Table 2. Courtesy of Denoco Inc. of Texas]

Doctor Garry Denke's 1656 and Sister Amelia Denke's 1961 collections of the first stones of Stonehenge from inside and outside the Aubrey Holes and Heelstone ditch, and Doctor Garry Denke's collections of stones inside and outside the Bratton Camp White Horse Eye http://www.wiltshirewhitehorses.org.uk/westbury.html Westbury White Horse Eye, with catalogues, are archived in cased glass at the RRC Texas Oil Field in Baylor County, G'S US. Glass encasement was performed on December 1, 1993 by Fraco Services, Inc. of Holliday, Texas. The RRC website URL is http://www.rrc.state.tx.us/ and there is no entrance fee to see the oilfield of G'S US. Currrently under study at the laboratories of Denoco Inc. of Texas are the micropaleontological archived catalogued collections from 42 Waulsortian facies collection sites located in the Dinant Basin, south of Namur, Belgium, Pembroke, Derbyshire, the Pennines of England and Ireland, central France, Upper Banff Formation of Grotto Mountain, Alberta, Big Snowy Mountains of Montana, Boone Formation of Ozark Dome, Oklahoma, Sacramento Mountains of New Mexico, and the Llano Uplift of Texas, whereat the white Mississippian Chappel Reef limestone of RRC Texas Oil Field in Archer County, Revelation, crops out. Garry Denke, Geologist EIN'S TIN: 75-2554014 conclusion from his detailed micropaleontological comparison of the 42 collection sites located in the above listed areas shows all twenty-four (24) Mississippian elders named in Table 1 above being identical from all areas studied.

Call for papers.

http://photos.yahoo.com/bc/beckih@flash.net/vwp?.dir=/Travel&.dnm=Garry+and+his+favorite+stone.jpg&.src=ph&.view=t&.hires=t
ASU Devil's Den Garry Denke southwest of Stonehenge Heel Stone, United Kingdom. Photo courtesy Becki Lynn. Canon PowerShot S30.

Witnesses:

1. The Archaeology Channel (received email 8/9/02)
2. Archaeology Magazine (received email 8/9/02)
3. Biblical Archaeology (received email 8/9/02)
4. Journal of Paleontology (received email 8/9/02)
5. Council for British Archaeology (received email 8/9/02)
6. British Archaeology (received email 8/9/02)
7. The Natural History Museum (received email 8/9/02)

3471. Ocimba? Please Contact me Abe!

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-21 03:57:06 UTC
From: KC8SSG <crandall@ee.net>
Message-ID: <mcE89.129$73.2006@news>
Source record: 136313
Cross-posted to:
alt.ham-radio.marketplace,alt.ham-radio.vhf-uhf,rec.radio.amateur.antenna,rec.radio.amateur.equipment,rec.radio.swap

I was dealing with Abe. He had the logon like Ocimba.I had a computer crash
and lost his email.Please contact me Abe!
Rob KC8SSG

3472. Re: Superposition quiz

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-21 03:59:24 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <3D63101C.5030208@eznec.com>
Source record: 136312

Richard Harrison wrote:
> . . .
> A reflection from a mismatched load results in a 180-degree phase change
> of either the voltage or current, but not both. So one might say a
> positive voltage times a negative current is a "negative power" because
> it reverses the direction of power flow.
>

This is only true if the load is a pure resistance. The reflected voltage equals the forward voltage times the voltage reflection coefficient. The reflected current equals the forward current times the negative of the voltage reflection coefficient. The voltage reflection coefficient is (Zl - Z0) / (Zl + Z0). The magnitude of this complex quantity can be anywhere from zero to one, and it can have any angle. So the reflected voltage and current can have any angle relative to the forward voltage and current, not just 0 or 180 degrees. Assuming a real Z0, the forward voltage and current will be in phase, so the reflected voltage and current will have a relative phase angle of minus two times the angle of the reflection coefficient. This can be any angle, depending on the relationship between Z0 and Zl.

> Note that this negative multiplication product does not take place
> during the alternations of an a-c voltage cycle. On the positive
> alternation you have a positive voltage times a positive current. On the
> negative alternation you have a negative voltage times a negative
> current and this product is positive just like a positive times a
> positive.
>
> There are two power pulses during an a-c voltage cycle and both of them
> are positive.
> . . .

Sigh. This is true only if the load is purely resistive.

It's pretty obvious that my recent posting of the topic was either ignored, not understood, or disbelieved. I've done my best, so all I can do in addition is refer you to a circuits textbook. If you have either Van Valkenburg or Pearson and Maler, I can direct you to the appropriate page.

Roy Lewallen, W7EL

3473. Re: Superposition quiz

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-21 03:59:58 UTC
From: CAM <Cecil.A.Moore@ieee.org>
Message-ID: <3D63103E.B81DFE5A@ieee.org>
Source record: 136314

Roy Lewallen wrote:
>
> Hm, that's an interesting point of view. Because electrons are negative,
> there's no such thing as positive charge, so there's no such thing as
> positive current. It's really current, which can only be negative,
> moving in a negative direction.

We can blame Benjamin Franklin for that one. When I was at Texas A&M in the late 50's, I was taught positive current flow but was warned that the military used the more correct electron flow along with left hand rules. In transistor theory, I learned about hole flow.

> You're much more fond of making such distinctions than I, so I'll leave
> them to you. I'm comfortable with calling a negative value of P a
> negative power, but whatever floats your boat. Just so long as you, and
> your readers, understand what you're talking about. Just remember, now.
> No positive current, either.

Point is that the kind of power we are talking about is joules passing a point in one second. There's just not any negative joules in our transmission lines. Joules flowing past a point on their way to the load are by convention defined to be positive power. Joules flowing past that point on their way to the source have to be satisfied with the opposite of that convention, i.e. negative power. But the negative is all in the direction, not in the joules.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
------== Over 80,000 Newsgroups - 16 Different Servers! =-----

3474. Re: Air-Wound Balun Design Info??

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-21 04:06:54 UTC
From: n2ey@aol.com
Message-ID: <20020821000654.25779.00000094@mb-cb.aol.com>
Source record: 136315

In article <d22b54c3.0208201424.30a5aa7d@posting.google.com>, kelly@dvol.com (Brian Kelly) writes:

>Preferably 7.0 thru 28.1 Mhz but 7.0 thru 21.1 would be fine.

Three solutions:

1) Bead balun. Probably the lightest weight and if you use decent beads they won't saturate. But you want air, so....

2) Scale down the RG-213-on-4-inch pipe idea. Use 1-1/2 or 1-1/4 inch PVC pipe and RG-58 with a stranded center conductor. 11 or 12 turns close-wound in a single layer should be adequate to give 500 ohms reactance at 7 MHz. Diameter about two inches, length about 3-1/2 inches, weight a few ounces.

3) Trifilar-wind #14 speaker wire in a manner similar to 2). (This is the Orr design).

Now whether all this is worthwhile for a simple dipole is another question. Is this balun supposed to o at the dipole feedpoint? If so, I say forget it and just attach the coax.

With a beam you do NOT want any feedline radiation at all, for obvious reasons. But with a dipole, a little feedline radiation (if it happens at all) usually won't hurt anything.

73 de Jim, N2EY

3475. Re: Air-Wound Balun Design Info??

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-21 04:08:27 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <3D63123B.3060207@eznec.com>
Source record: 136316

For my lightweight portable antennas, I use 8-10 turns of RG-174 on a one inch or so O.D. toroid core of type 43 or one of the 70 series ferrites. The latter will give more impedance over the HF range. I also use this on my home antennas, and have had no trouble at power levels up to 300 watts or so.

You could wind the coax into an air-core choke following the procedure in the ARRL Handbook or Antenna Book (except that you should wind the coil like a coil of rope or an extension cord, not carefully spaced as mistakenly described in recent Antenna Books). One made from RG-174 using the RG-58 dimensions would be adequate. But this would be bulkier than the toroid solution unless you rewound it each time you used the antenna. It can also have a lot of wind resistance and be subject to snagging in trees and brush.

For those fussing about what a balun is, I suggest reading "Baluns: What They Are and How They Do It", in the ARRL Antenna Compendium, Vol. 1.

Roy Lewallen, W7EL

>
> I have his article archived. My particular application is a very light
> & compact pack 'n go portable mutiband dipole, a big heavy RG-213 coax
> choke won't work, a little air-wound balun should work. I should have
> been more explicit when I posted. Tnx.
>
>
> w3rv

3476. Re: It's a conspiracy

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-21 04:16:16 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <3D631410.3030607@eznec.com>
Source record: 136318

Do you mean that you can't use the equations in _Reference Data for Radio Engineers_ or the text of your choice to calculate exactly the forward, reverse, and total voltages and currents on each line segment and at the input and output?

If not, I suggest it as a good intellectual exercise, and not at all difficult for someone with college freshman engineering math skills. When you're done, you'll almost certainly have a much better understanding of how transmissions line work. And you're bound to get better answers than you will by posting the questions on this newsgroup, and probably better than asking most professors.

You did go to Texas A & M, didn't you?

Roy Lewallen, W7EL

CAM wrote:
> Richard Clark wrote:
>
>>You have queried every "guru" (or any who would answer) as to the
>>mysteries you perceived yourself to have mastered above and beyond
>>convention.
>
>
> I haven't mastered anything, Richard, I'm still asking questions. Lots
> of pieces just don't fit. Walter Maxwell gets raked over the coals
> for suggesting a virtual impedance can cause a reflection. Steve is
> allowed to use a reflection coefficient of 0.5 to calculate an un-
> reflected power when there isn't any reflected power. What gives?
>
> In the following example, are there any reflections? If so, where are
> the reflections originating? The TV signal generator has a circulator
> that dissipates all reflections seen by the generator, i.e. there
> are no re-reflections from the generator.
>
> TV signal---75 ohm coax---+---1/4WL shorted stub---
> generator |
> High Impedance TV Receiver
>
> The 1/4WL shorted stub is providing a virtual open circuit. If
> a virtual impedance can cause things to happen, there shouldn't
> be any ghosting. Will there be any ghosting?

3477. Re: It's a conspiracy

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-21 04:16:56 UTC
From: "George, W5YR" <w5yr@att.net>
Message-ID: <3D631437.B3A4B988@att.net>
Source record: 136317

And isn't that almost precisely how Walt Maxwell describes what happens in
a transmatch . . .though only with a single port?

73/72/oo, George W5YR - the Yellow Rose of Texas
Fairview, TX 30 mi NE of Dallas in Collin county EM13qe
Amateur Radio W5YR, in the 56th year and it just keeps getting better!
QRP-L 1373 NETXQRP 6 SOC 262 COG 8 FPQRP 404 TEN-X 11771 I-LINK 11735
Icom IC-756PRO #02121 Kachina 505 DSP #91900556 Icom IC-765 #02437

Richard Harrison wrote:

> Signals via both paths between transmitters are out-of-phase at the
> other transmitter port so they cancel. It`s a matter of producing a
> virtual short or open at each transmitter port for energy from the other
> transmitter but not for the energy output of that port`s transmitter.
> The energy isn`t abolished. It ultimately is consumed by the load.
>
> The virtual impedance to each other`s energies isolates the transmitters
> from each other. The rejections are almost total reflections.

3478. Re: It's a conspiracy

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-21 04:21:20 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <3D631540.4060008@eznec.com>
Source record: 136219

ZOOM wrote:
> If you can't see it you can't explain it.
> Waves, photons etc are explained by theories. So what is a theory?
> It's a conclusion about the behavior of something based on our experiences.
> This does not mean that it's correct or wrong but it is they way we perceive
> it.
>
> Waves etc are still black magic. No one really knows how they work and if
> anyone says they do then they are a liar!

. . . and after posting this wisdom, returns to watching his TV. Which was designed by people who couldn't possibly have understood what they were doing.

Zoom, you have a lot to learn. Take some classes and get some education, and you'll be amazed at how much you can understand and explain that you can't see. In the mean time, enjoy and marvel at that TV.

Roy Lewallen, W7EL

3479. Re: Superposition quiz

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-21 05:01:11 UTC
From: Fred Hambrecht <w4jle@charter.net>
Message-ID: <um67kr5t4o4q02@corp.supernews.com>
Source record: 136221

I was in the process of replying to your message, when my computer read
there was no such thing as power it just qui.....

"Roy Lewallen" <w7el@eznec.com> wrote in message
news:3D630CFE.5020803@eznec.com...
> Hm, that's an interesting point of view. Because electrons are negative,
> there's no such thing as positive charge, so there's no such thing as
> positive current. It's really current, which can only be negative,
> moving in a negative direction.
>
> You're much more fond of making such distinctions than I, so I'll leave
> them to you. I'm comfortable with calling a negative value of P a
> negative power, but whatever floats your boat. Just so long as you, and
> your readers, understand what you're talking about. Just remember, now.
> No positive current, either.
>
> Roy Lewallen, W7EL

3480. Re: Question on Tuning Discone To TX on Aviation Band

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-21 05:02:48 UTC
From: "W.G Ewald" <wgewald@att.net>
Message-ID: <hs76mu4j4l5bgdblcg52uq8e75id6ls10k@4ax.com>
Source record: 136220

On Tue, 20 Aug 2002 23:40:56 -0400, "Fred Hambrecht"
<w4jle@charter.net> wrote:

>May I ask, what call sign did you use to make your transmission legal?
>
>Fred
>CP-ASMEL INST LJ & DC3 Type

Unicom? No, that wouldn't be legal either...?

>
>"David B. Cole" <mrcole100@aol.com> wrote in message
>news:403fdf8.0208201924.34f3b5fd@posting.google.com...
>> I also heard my instructor last night as
>> he was flying in the pattern at my airport. I was actually able to
>> talk to him for a few minutes.
>>
>> Dave
>> PP-ASEL
>

3481. Re: Superposition quiz

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-21 07:24:27 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <3D63402B.6090907@eznec.com>
Source record: 136222

Food for thought: Forward and reverse power

This essay discusses transmitter models, forward and reverse power, what happens to reverse power when it encounters the source impedance, "mismatch loss", and recovering reverse power with a circulator.

In the following discussion I'm going to assume for simplicity that transmission line loss is zero.

When this is true, the average power furnished by the source (which I'll call the net average power) equals the average power delivered to the load. And previous analysis revealed that when Z0 is purely real, as it is when the line is lossless, we can separate the average power into "forward" and "reverse" components whose difference equals the net average power furnished by the source or delivered to the load. The average forward power can be computed from the forward travelling voltage and current waves, and the average reverse power can be computed from the reverse travelling voltage and current waves.

My commercial amateur HF transceiver is probably typical of modern rigs in that it produces a constant *forward* average power into varying load impedances -- provided the impedance isn't extreme enough to cause the rig to severely cut back its power output. I could combine the transmitter with a transmatch to make a system that would deliver a constant *net* average power into any load within the adjustment range of the matching network. Of course, the matching network would have to be adjusted each time the load impedance were changed.

It turns out that a linear model of my transmitter (without a transmatch) over its non-shutdown range is very simple -- it's just a voltage source in series with a resistance. This combination produces a constant average forward power into a transmission line connected to any load impedance, if the series resistance equals the characteristic impedance of the line. I'm going to present this without proof, although the calcuation is straightforward from fundamental transmission line equations. Any example you can devise will confirm it holds true.

I make no claim that the model circuit represents what's going on *inside* the transmitter. For one thing, a real transmitter will typically be more efficient than the model. However, if measurements and observations are limited to the outside of the transmitter, the model is very good (within the non-shutdown range). Although a real transmitter won't contain the model's resistance as a resistor, we will take a look at the model resistor's dissipation to see how it interacts with the "reverse" power.

The average forward power fPa fed into a line with (purely real) characteristic impedance R0 by a voltage source of RMS voltage Vrms in series with a resistance R0 is

fPa = Vrms^2 / (4 * R0)

So we can model a 100 watt forward, 50 ohm nominal transmitter as a 141.4 volt (100 * sqrt(2)) RMS voltage source in series with a 50 ohm resistance. If we connect this to a 50 ohm transmission line of any length, we can put on any load impedance we like, INCLUDING A SHORT OR OPEN CIRCUIT, and we'll have 100 watts of average forward power in the 50 ohm line. In terms of the impedance Zi = Ri + jXi looking into the line, and the source resistor and line's (assumed purely real) characteristic impedance of R0,

fPa = Vrms^2 / (4 * R0)

rPa = {Vrms^2 / (4 * R0)} * {[(Ri - R0)^2 + Xi^2)] / (Ri + R0)^2 + Xi^2]}

where fPa and rPa are the average forward and reverse power, respectively. The net average power from the source and into the load Pa = fPa - rPa. Another useful relationship, although it won't be used here, is that rPa/fPa = rho^2, where rho is the magnitude of the reflection coefficient at the load end of the R0 line.

Let's take a look at a few simple cases. Connect the "transmitter" through a half wavelength 50 ohm line to a load. (I'm choosing a half wavelength line just to make the input impedance easy to calculate. The forward and reverse powers are independent of the line length if the line is lossless as it is here.) So Zi = Zl, the load impedance on the far end of the line. Also notice that the forward power doesn't depend at all on Zi, hence Zl, so it will be 100 watts for all the following examples.

If Zl = 50 + j0, a matched load, then from the equation above, rPa = 0. If Zl = 100 + j0, one of the infinite number of possible loads causing a 2:1 SWR on the line, rPa = 11. If Zl = 25 + j0, another 2:1 SWR condition, rPa = 11. Zl = 37 + j28 is yet another (nearly) 2:1 load, and rPa = 11 as it should. It's easy to see that if the load is a pure reactance (Rl = 0), rPa = fPa = 100 watts, and if Rl = 0, rPa = 100 watts. If the load end of the cable is open circuited, Ri = Rl gets very large. Because it's much larger than R0 or Xi, the second bracketed quantity in the rPa equation approaches 1, so again rPa = fPa = 100 watts.

Although I've said that the "transmitter" model doesn't represent the inside of a transmitter, it does represent the inside of a signal generator, which typically does have a physical source resistor. It also represents, well, a voltage source in series with a resistor. Let's take a look at the resistor's dissipation.

Here, we can do a very simple analysis. As seen from the source resistance, the load Zi is simply Zl, since there's no impedance transformation by the half wavelength of transmission line. So the circuit is a simple voltage divider. From this we can do the following

calculations. Il = the current from the source, through the source resistor and through the load. (The current isn't transformed by the half wavelength line either.) With source resistor being R0, Ilrms = Vrms / (R0 + Zl). Power dissipated by R0 =

Pa(R0) = |Ilrms|^2 * R0 = (Vrms^2 * R0) / [(R0 + Rl)^2 + Xl^2]

and the power dissipated by the load =

Pa(Rl) = |Ilrms|^2 * Rl = (Vrms^2 * Rl) / [(R0 + Rl)^2 + Xl^2]

Note that the net average power disspated by the load Pa(R0) equals Pa(tx), the net average power produced by the "transmitter", which equals fPa - rPa. The net average power produced by the "transmitter's" voltage source Pa(src) is this amount plus the amount dissipated in the "transmitter's" source resistance, or Pa(R0) + Pa(Rl). The fraction of the total source power dissipated by the load is, from the above equations, frac Rl = Rl / (R0 + Rl). The fraction of the total power dissipated by the source resistor is frac R0 = R0 / (R0 + Rl).

From this, we can calculate:

Zl fPa rPa Pa(tx) Pa(src) Pa(R0) Pa(Rl) frac R0 frac Rl
50 + j0 100 0 100 200 100 100 0.50 0.50
100 + j0 100 11.1 88.9 133 44.4 88.9 0.33 0.67
25 + j0 100 11.1 88.9 267 178 88.9 0.67 0.33
37 +/-j28(*)100 11.4 88.6 209 120 88.6 0.58 0.42
0 +/-j50 100 100 0 200 200 0 1.00 0
0 +/-j100 100 100 0 80.0 80.0 0 1.00 0
0 + j0 100 100 0 0 0 0 - -
infinite 100 100 0 0 0 0 - -

(*) For any Zl that causes exactly a 2:1 SWR, rPa will equal 11.1 and Pa(Rl) = 88.9. The values shown for 37 +/-j28 are slightly different because this impedance doesn't result in quite exactly a 2:1 SWR.

For the second, third, and fourth entries, the SWR is 2:1. The forward and reverse powers are the same for all three, and the source impedance (50 ohms) is the same for all the above cases. So here we have three cases where the reverse powers are the same, and the impedance match looking back toward the source is the same (1:1), yet the dissipation in the source resistor Pa(R0) is very different. The obvious conclusion is the THE POWER DISSIPATED IN THE SOURCE RESISTANCE ISN'T DETERMINED DIRECTLY BY THE SOURCE MATCH, THE SWR, OR THE REVERSE POWER. Otherwise it would be the same in all three cases, since all these quantities are the same for all three.

Not only that, but notice the last two cases. Here, the reverse power is a full 100 watts. The source match is 1:1. Yet *none* of this reverse power is dissipated in the source resistance. In fact, no power at all is dissipated in the source resistance. THE REVERSE POWER IS NOT DISSIPATED IN OR ABSORBED BY THE SOURCE RESISTANCE. The source resistor does dissipate power when the load is purely reactive, since the current

is non-zero. But you can see the dissipation bears no relationship to the amount of reverse power.

I personally don't have a compulsion to understand where this power "goes". The power is actually a function of time, and here we're only looking at the average power. We've calculated "forward" and "reverse" power from the forward and reverse travelling voltage and current waves. The "reality" of these moving waves of time varying or average power can be argued ether way. While the nature of the voltage and current waves when encountering an impedance discontinuity is well understood, we're lacking a model of what happens to this "reverse power" we've calculated. And ascribing to it the same characteristics of reflection as for voltage and current invariably lead to demonstrably wrong conclusions. ANY MODEL PRESENTED TO ACCOUNT FOR WHAT HAPPENS TO "FORWARD" AND "REVERSE" POWER AT TRANSMISSION LINE ENDS HAD BETTER GIVE RESULTS THAT AGREE WITH THE ABOVE TABLE. Othewise, it's wrong. The values in the above table can be measured and confirmed.

A final observation about this analysis is that the average power dissipated by the load resistance is the same for all three cases where the SWR is 2:1 (see note *). In fact, it will be this value for any impedance resulting in a 2:1 SWR on the cable (reflection coefficient magnitude of 1/3). The ratio of the load power when the load is matched (100 watts) and when mismatched (88.9 watts for 2:1 SWR) is termed the "mismatch loss". It has nothing to do with cable loss -- in the above example, the transmission line has no loss at all, yet the mismatch loss for 2:1 SWR is about 0.5 dB. There's no part of the circuit we can point to which is dissipating the "missing" 11.1 watts, because "mismatch loss" doesn't represent dissipation anywhere. It's simply a measure of the amount of power we could have had if we had matched the load versus what we get with a mismatched load. If we use a transmatch at the source or load, we can obtain the full 100 watts in the same load resistor from the same "transmitter", reducing the "mismatch loss" to zero. (Or we can consider the transmatch to have "mismatch gain" compensating for the "mismatch loss".) Mismatch loss is a useful concept when dealing with fixed impedance sources, but not when the impedance is adjustable. And it should never be confused with actual dissipation anywhere in the circuit, as it often is.

Some inventive people have supposed they can separate forward and reverse power with a circulator. That really sounds attractive, particularly with an open or short circuited load. In that condition, the forward and reverse powers are each 100 watts, yet the transmitter (or the transmitter voltage source) doesn't have to produce any power at all. If we could separate the forward and reverse powers and deliver them to loads, we'd have 200 watts of free power. Even just one of them would give us 100 watts to sell back to the power company. Expect to find something about this in some future April first posting. Seriously, though, if we put a circulator in the line, the source would see a perfect match, so the transmitter would produce a net average power of 100 watts, 100 forward and zero reverse. Past the circulator, there

would be 100 watts forward and 100 reverse like before (presuming an open or short circuit at the load end of the line). 100 watts would exit the circulator's "reverse" port. I'll leave it to the philosophers to argue whether that 100 watts is the 100 watts produced by the generator or the 100 watts of "reverse" power past the circulator. The fact is that 100 watts went into the line/circulator/load system, and 100 watts came out. No surprise there. But don't expect to get one microwatt more than that out of the system, no matter how clever you are.

Roy Lewallen, W7EL

3482. Re: New tower = many questions

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-21 07:51:09 UTC
From: Bill Nelson <billn@spock.peak.org>
Message-ID: <ajvgpd$j0n$3@quark.scn.rain.com>
Source record: 136223

CAM <Cecil.A.Moore@ieee.org> wrote:
>>
>> I cannot find anything in my Rohn data on 45G being allowed as a self-
>> standing tower.

> I have a chart from Rohn titled "Self-Supporting Towers - Allowable Antenna
> Areas (Sq.Ft.)". For instance, a self-supporting 45G tower of 40 feet will
> tolerate 5.1 sq.ft. of antenna in 70mph winds with no ice. With 1/2" of ice,
> it will tolerate zero sq.ft. of antenna, i.e. it will only tolerate itself.
> Take the winds up to 80mph and it may fall down.

> This chart is Rohn drawing number A871266 RI dated 9-24-87. Unfortunately
> all the heights above 40 feet are torn off and missing.

I don't have any of that chart series in my catalog. Are those the solid
or hollow legs. There is a large difference in the supporting capability
of the two types of legs.

--
Bill Nelson (billn@peak.org)

3483. Re: It's a conspiracy

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-21 08:08:27 UTC
From: Bill Nelson <billn@spock.peak.org>
Message-ID: <ajvhpr$j0n$4@quark.scn.rain.com>
Source record: 136224

CAM <Cecil.A.Moore@ieee.org> wrote:
> I got down to brass tacks today. I made an appointment with a Texas A&M
> EE professor, an expert in electromagnetics. I presented him with the
> following example that we have been discussing:

> 100w XMTR---50 ohm feedline---+---1/2WL 150 ohm feedline---50 ohm load

> He agreed that Rho at the 50/150 impedance discontinuity is 0.5 but
> he said there are no steady-state reflections on the 50 ohm feedline
> from that impedance discontinuity. I said, "How can there not be any
> reflections from a Rho = 0.5 impedance discontinuity?" He said, "There's
> just not any." I wasted an hour of my time trying to explain wave
> cancellation to him. He said there was nothing to be canceled. He has
> apparently programmed himself to believe that reflections don't occur
> at all at the 50 ohm virtual impedance.

> Seems to me, guys like him have abandoned reality in favor of their
> math models.

Think about this. What happens at the input end of that 1/2 wavelength
150 ohm line when it is connected to the 50 ohm load? In other words,
what is the impedance looking into the input end of the line?

--
Bill Nelson (billn@peak.org)

3484. Re: Question on Tuning Discone To TX on Aviation Band

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-21 10:33:41 UTC
From: k1bqt@aol.com
Message-ID: <20020821063341.10550.00001667@mb-cr.aol.com>
Source record: 136225

> I was actually able to
talk to him for a few minutes.<

Hope you used multicom and not an airport frequency! :)

3485. Re: It's a conspiracy

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-21 10:42:45 UTC
From: k1bqt@aol.com
Message-ID: <20020821064245.10550.00001668@mb-cr.aol.com>
Source record: 136226

>Waves etc are still black magic. No one really knows how they work and if anyone says they do then they are a liar!<

The thing about science is, you don't get to conjure up anything unless you can successfully interweave it with everything else mathematically. That's where perceptual psychology and science part company. Of course, as we've seen here, even the "math" connection is open to debate on occassion.

Rick K1BQT

3486. Re: Scalar Electromagnetic Weapons

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-21 11:49:18 UTC
From: AB8MQ <ab8mq@alt.net>
Message-ID: <ajvvdj$la1$4@pita.alt.net>
Source record: 136227
Cross-posted to: alt.ham-radio.eme,alt.ham-radio.hf,alt.radio.scanner,rec.radio.amateur.antenna,rec.radio.amateur.misc,rec.radio.scanner,alt.cocksucker.geno-paris

"BungholeNurse" <BN14275net@14275daynetBN.com> wrote in message
news:ajtpmkarl0@pita.alt.net...
>
> "AB8MQ" <ab8mq@alt.net> wrote in message news:ajtdmp$en1$3@pita.alt.net...
> >
> > Hopefully, he'll finish the job with Iraq and not pull out like his daddy
> did
> > there, and should've done to Barbara Bush.
> > >
>
> Yet another profound [Whaaaaaaaaahhhhhh!!!!!]

And yet, the front-line duty chickenshit Bunghole Nurse Wugeno still can't explain
his Dishonorable Discharge.

3487. Re: Scalar Electromagnetic Weapons

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-21 11:59:37 UTC
From: AB8MQ <ab8mq@alt.net>
Message-ID: <ajvvdn$la1$8@pita.alt.net>
Source record: 136228
Cross-posted to:
alt.ham-radio.eme,alt.ham-radio.hf,alt.radio.scanner,rec.radio.amateur.antenna,rec.radio.amateur.misc,rec.radio.scanner

"Fred Hambrecht" <w4jle@charter.net> wrote in message
news:um57frl39n2lf6@corp.supernews.com...

Path:
news.alt.net!news.maxwell.syr.edu!newsfeed.frii.net!newsfeed.frii.net!140.99.99.19
4.MISMATCH!newsfeed1.easynews.com!easynews.com!easynews!sn-xit-02!sn-xit-01!sn-pos
t-01!supernews.com!corp.supernews.com!not-for-mail
From: "Fred Hambrecht" <w4jle@charter.net>
Newsgroups:
alt.ham-radio.eme,alt.ham-radio.hf,alt.radio.scanner,rec.radio.amateur.antenna,rec
.radio.amateur.misc,rec.radio.scanner
Subject: Re: Scalar Electromagnetic Weapons
Date: Tue, 20 Aug 2002 15:52:24 -0400
Organization: Posted via Supernews, http://www.supernews.com
Message-ID: <um57frl39n2lf6@corp.supernews.com>
References: <28sulu8c5b0sbgkllil092e2l9bv3nn543@4ax.com>
<xTP79.4290$027.15028@newsfep3-gui.server.ntli.net>
<5hpvluot7kl38nefvad3ga0nlfvdmnk3ib@4ax.com> <ulvvql3il3ura7@corp.supernews.com>
<V4a89.3098$_q2.17813@newsfep3-gui.server.ntli.net>
<ZOg89.13917$I6.1162983@newsread1.prod.itd.earthlink.net>
<ajtdmp$en1$3@pita.alt.net>
X-Priority: 3
X-MSMail-Priority: Normal
X-Newsreader: Microsoft Outlook Express 6.00.2600.0000
X-MimeOLE: Produced By Microsoft MimeOLE V6.00.2600.0000
X-Complaints-To: newsabuse@supernews.com
Lines: 60
Xref: news alt.ham-radio.eme:1084 alt.ham-radio.hf:7832 alt.radio.scanner:158859
rec.radio.amateur.antenna:178825 rec.radio.amateur.misc:193551
rec.radio.scanner:236521

Poor Coward, so afraid of me he has to forge and hide.
> Do you practice at being a complete fool, or does it come naturally?

Do you practice at diddling kids or is it a family trait? Now go suck on Big
Juilie's
hanging turd from her asshole, suckboy Chason.

> "AB8MQ" <ab8mq@alt.net> wrote in message news:ajtdmp$en1$3@pita.alt.net...
> >
> > "PawPaw" <PawPaw@granpa.com> wrote in message
> > news:ZOg89.13917$I6.1162983@newsread1.prod.itd.earthlink.net...
> > > No need to attack the Prez-
> > >

> > > he's just trying to clean up his Daddy's mess :-)
> >
> > Hopefully, he'll finish the job with Iraq and not pull out like his daddy
> did
> > there, and should've done to Barbara Bush.
> > >
> > > "Alexander S. Wood" <alec_wood@dont.spam.me.ntlworld.com> wrote in
> message
> > > news:V4a89.3098$_q2.17813@newsfep3-gui.server.ntli.net...
> > > >
> > > > "Fred Hambrecht" <w4jle@charter.net> wrote in message
> > > > news:ulvvql3il3ura7@corp.supernews.com...
> > > > > Andy Roonie mode on:
> > > > > Did ga ever notice folks that attack Mr. Bush always have neat
> e-mail
> > > > > addresses like Lucifer@eternal-flames.gov, wonder why that is?
> Roonie
> > > mode
> > > > > off.
> > > > >
> > > > <snip>
> > > >
> > > > Hi Fred
> > > >
> > > > My email address is not very neat. Then again, I don't attack Mr
> Bush - I
> > > > just dare to question the direction in which he is leading us.
> > > Unfortunately
> > > > it is "us", since Mr Blair just does as he's told, as do most of the
> other
> > > > NATO leaders. Wonder why. Is that a small globe of white light I see
> above
> > > > 10 Downing St.............................
> > > >
> > > > Alec
> > > >
> > > > PS For those Americans with a similar knowledge of other countries to
> > > their
> > > > president, I'd better explain that 10 Downing Street is the residence
> of
> > > the
> > > > British Prime Minister, who is called Tony Blair - short for "Anthony"
> by
> > > > the way.
> > > >
> > > >
> > > >
> > >
> > >
> >

>
>

3488. Re: It's a conspiracy

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-21 12:31:13 UTC
From: 'Doc <w5lz@icok.net>
Message-ID: <3D6387F9.EFDAE4F3@icok.net>
Source record: 136229

```
Roy wrote:
>
------------------------
> You did go to Texas A & M, didn't you?
>
> Roy Lewallen, W7EL
------------------------

Now that's a low blow!
'Doc
```

3489. Re: 'Nother question about ladderline

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-21 12:40:27 UTC
From: cprstn54zz@att.net
Message-ID: <3d638754.87695234@news-server.optonline.net>
Source record: 136230

On Sat, 17 Aug 2002 07:27:14 -0500, CAM <Cecil.A.Moore@ieee.org>
wrote:
>> (3) What is an OK way to secure it to wood framing? A staple or tack
>> in the middle of the plastic?
>How about: drill and thread the hole in the wood and use nylon screws?
>Small tacks shouldn't have much effect.

Hmmm. That is surprising. What adverse thing could happen if I used
steel staples? After all, who really knows what has been hammered
into the wood framing you are running near?

I thought the only problem was coupling with a substantial conductor
running parallel to the ladderline for several feet where the distance
between was less than a couple of inches.

(1) At one spot on my wood antenna mast, I intended to hook a window
of the insulated ladderline over a light steel hook screwed into the
wood -- for support and wind stability. Is this a no-no?

(2) The ladderline will pass just under (actually just touching) a two
square foot steel (anti-squirrel) chickenwire screen over a gable
vent, perpendicular to it. Is this a no-no?

(3) Can the ladderline come close to or rest against insulated house
wiring running perpendicular to the ladderline?

Ken KC2JDY

Ken
(to reply via email
remove "zz" from address)

3490. Re: It's a conspiracy

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-21 12:47:49 UTC
From: CAM <Cecil.A.Moore@ieee.org>
Message-ID: <3D638BF5.754C34E0@ieee.org>
Source record: 136231

Roy Lewallen wrote:
> Do you mean that you can't use the equations in _Reference Data for
> Radio Engineers_ or the text of your choice to calculate exactly the
> forward, reverse, and total voltages and currents on each line segment
> and at the input and output?

Of course I can, Roy, but they don't tell me anything about TV reflections. Those equations don't answer my question about TV ghosting. Those equations only apply to continuous waves with no modulation. My question about TV ghosting is a simple one. Will there be ghosting or not when a shorted stub of an odd number of 1/4 wavelengths is attached to a TV receiver. If there is ghosting, then the stub is not providing an open circuit at the TV terminals.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

3491. Re: Air-Wound Balun Design Info??

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-21 12:48:17 UTC
From: Dan Richardson <k6mhe@mendolink.com>
Message-ID: <0u27muoteu0ste82odjqmdm2u19all9ros@4ax.com>
Source record: 136232

On Tue, 20 Aug 2002 21:08:27 -0700, Roy Lewallen <w7el@eznec.com>
wrote:

>(except that you should wind the
>coil like a coil of rope or an extension cord, not carefully spaced as
>mistakenly described in recent Antenna Books)

Okay Roy, I've got to ask. Why?

Danny, K6MHE

3492. Re: Superposition quiz

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-21 13:06:26 UTC
From: CAM <Cecil.A.Moore@ieee.org>
Message-ID: <3D639052.EB1542D5@ieee.org>
Source record: 136233

Roy Lewallen wrote:
> I make no claim that the model circuit represents what's going on
> *inside* the transmitter.

Don't your calculations depend on what's going on *inside* the transmitter?

> For the second, third, and fourth entries, the SWR is 2:1. The forward
> and reverse powers are the same for all three, and the source impedance
> (50 ohms) is the same for all the above cases. So here we have three
> cases where the reverse powers are the same, and the impedance match
> looking back toward the source is the same (1:1), yet the dissipation in
> the source resistor Pa(R0) is very different. The obvious conclusion is
> the THE POWER DISSIPATED IN THE SOURCE RESISTANCE ISN'T DETERMINED
> DIRECTLY BY THE SOURCE MATCH, THE SWR, OR THE REVERSE POWER. Otherwise
> it would be the same in all three cases, since all these quantities are
> the same for all three.

And that's why I chose to switch to a signal generator equipped with a
circulator which dissipates all the reflected power in a resistor no
matter what the phase. Driving a system with such a signal generator
applies Ockham's razor, cuts through the confusion, and reveals exactly
what happens to the individual energy components.

Please perform your calculations with the above suggested signal generator
and see what your results are.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
------== Over 80,000 Newsgroups - 16 Different Servers! =-----

3493. Re: New tower = many questions

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-21 13:08:29 UTC
From: CAM <Cecil.A.Moore@ieee.org>
Message-ID: <3D6390CD.EF7CB361@ieee.org>
Source record: 136234

Bill Nelson wrote:
>
> CAM <Cecil.A.Moore@ieee.org> wrote:
> > This chart is Rohn drawing number A871266 RI dated 9-24-87. Unfortunately
> > all the heights above 40 feet are torn off and missing.
>
> I don't have any of that chart series in my catalog. Are those the solid
> or hollow legs. There is a large difference in the supporting capability
> of the two types of legs.

I'm assuming hollow but the bottom of the chart is torn and missing.
That's where the notes were.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

3494. Re: It's a conspiracy

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-21 13:12:14 UTC
From: CAM <Cecil.A.Moore@ieee.org>
Message-ID: <3D6391AE.9B4EDE7E@ieee.org>
Source record: 136235

Bill Nelson wrote:
> Think about this. What happens at the input end of that 1/2 wavelength
> 150 ohm line when it is connected to the 50 ohm load? In other words,
> what is the impedance looking into the input end of the line?

The virtual impedance is 50 ohms, Bill, but nothing magic happens
at a virtual impedance. Reflections only happen at actual impedances.
That's what all the steady-state oriented folk have forgotten and
it has turned into an Old Wives' Tale.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

3495. Re: Superposition quiz

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-21 13:24:17 UTC
From: richardharrison@webtv.net
Message-ID: <5884-3D639481-41@storefull-2394.public.lawson.webtv.net>
Source record: 136240

Roy Lewallen wrote:
"This is only true if the load is a pure resistance."

That`s right. I was making the simple case.

I wrote:
"There are two power pulses during an a-c voltage cycle and both of them are positive."

Roy wrote:
"Sigh. This is true only if the load is purely resistive."

Power is purely resistive by definition. Voltage drop across a resistance is in-phase with the current through the resistance, no matter what the reactance in the circuit.

Best regards, Richard Harrison, KB5WZI

3496. Re: 'Nother question about ladderline

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-21 13:29:30 UTC
From: CAM <Cecil.A.Moore@ieee.org>
Message-ID: <3D6395BA.47F4C9DF@ieee.org>
Source record: 136236

Ken wrote:
> Hmmm. That is surprising. What adverse thing could happen if I used
> steel staples?

I don't know anything about steel staples. That's why I didn't mention
them.

> (2) The ladderline will pass just under (actually just touching) a two
> square foot steel (anti-squirrel) chickenwire screen over a gable
> vent, perpendicular to it. Is this a no-no?

The steel screen will tend to "short-circuit" the transmission line
fields. That's why ladder-line should be kept 3+ inches away from
anything electrically or magnetically conductive. These are not DC
voltages/currents that we are dealing with.

> (3) Can the ladderline come close to or rest against insulated house
> wiring running perpendicular to the ladderline?

Insulated house wiring will distort the ladder-line's electric fields.
Again, keep ladder-line 3+ inches away from anything conductive.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
------== Over 80,000 Newsgroups - 16 Different Servers! =-----

3497. Re: Air-Wound Balun Design Info??

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-21 13:33:36 UTC
From: CAM <Cecil.A.Moore@ieee.org>
Message-ID: <3D6396B0.1392AB9C@ieee.org>
Source record: 136237

Dan Richardson wrote:
>
> On Tue, 20 Aug 2002 21:08:27 -0700, Roy Lewallen <w7el@eznec.com>
> wrote:
>
> >(except that you should wind the
> >coil like a coil of rope or an extension cord, not carefully spaced as
> >mistakenly described in recent Antenna Books)
>
> Okay Roy, I've got to ask. Why?

In other words, if we are trying to create inductive reactance, why
doesn't that coil of coax follow the same boundary conditions as a
coil of bare wire? If we coil the two end loops on top of each
other, aren't we providing a capacitive path around the inductance?
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

3498. Re: Tutorial #2

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-21 13:38:33 UTC
From: aunwin@fgi.net
Message-ID: <c4becf19.0208210538.2fa18672@posting.google.com>
Source record: 136238

aunwin@fgi.net (Art Unwin KB9MZ) wrote in message
news:<c4becf19.0208170652.79737773@posting.google.com>...
snip

> The combination provides for a much superior radiator than
> previously known
Best ragards
> Art Unwin..KB9MZ.....XG
>
THIS IS NOT TRUE AS STATED!

I have some explaining to do.
When I set out on this project my target was basically to improve
on what was on the market at that time, and many years have since
passed by.
The antenna I was comparing against was the conventional tribander and
loop.
Since those days a better antenna came out that has provision for
shortening or lengthening the radiators. Assuming that the moveable
element design has no losses my antenna does NOT exhibit MEASURABLE
GAIN gain, which on this thread is considered to be > 1 db.
In an hour or so (after breakfast,) I will post the programing
that I used, 'warts and all' so all can play with it. I will also post
a program where I used two elements as a beam and was able to reduce
radiator length by over 3 feet
per side.(Faulty programing ?)

Posting it for all seems to be the best way of gaining finality. So
many years have gone by, I'm getting older and more screwed up by
holding on to thoughts
that may have been explanable at the time of inception but cannot in
the present day climate.

Regards

Art Unwin KB9MZ......XG

3499. Re: It's a conspiracy

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-21 13:39:43 UTC
From: CAM <Cecil.A.Moore@ieee.org>
Message-ID: <3D63981F.7EACBC19@ieee.org>
Source record: 136239

Richard Clark wrote:
> Hi Cecil,
> I'll tell ya what. If you cannot handle Bart's thought problem, then
> you gotta be hiding from the obvious.

Here's my earlier reply to Bart from my "sent messages" folder. Perhaps
you missed it.
****
Bart Rowlett wrote:
> Now imagine the wavefront encounters an open circuit. Obviously the
> transmission line current will be zero at the boundary since there's
> no place for charge to go. The voltage is not constrained to be any
> particular value however. In order to satisfy the underlying physics,
> usually expressed as Maxwells curl equations, the voltage at the open
> circuit which is initially zero, will rise to twice the wave amplitude
> upon arrival of the wavefront. You can think of this voltage boost as
> coming from the extinguishing of the current (Faraday's law: curl E =
> - dB/dt).
>
> Let's now examine the situation a short distance from the open
> circuit. The current is infinitesimal and the voltage is twice the
> 'forward' voltage. The rate of energy transfer, V*I equals zero and
> the entire energy stored is in the electric field, since no magnetic
> field is present. The total energy stored per unit length is twice
> that as in the 'forward' wave alone but there is no power transfer
> occurring in the region between the open circuit and the 'reverse'
> wavefront!!!!!

Bart, you and I are using different models. Your's may work but so does
mine. Here's what my reflection model says about that open circuit.

forward reflected
o--->-----> <---o--------->
I+ V+ I- V-

I+ * V+ = P+ V+/I+ = Z0 V+ = V- I- = -(I+)

I- * V- = P- V-/I- = Z0

Itot = I+ + I- = 0 Vtot = V+ + V- = 2 * V+ = 2 * V-

Vtot * Itot = 0w because there is no energy flow through the open circuit.

Everything is perfectly consistent with reflection mechanics.
****
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
------== Over 80,000 Newsgroups - 16 Different Servers! =-----

3500. Re: Superposition quiz

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-21 13:55:57 UTC
From: CAM <Cecil.A.Moore@ieee.org>
Message-ID: <3D639BED.69E41D57@ieee.org>
Source record: 136242

Richard Harrison wrote:
> Power is purely resistive by definition.

This statement is not aimed at any particular person. It appears
that many people have forgotten the boundary conditions existing
in their models and have adopted those models as reality itself.
Every model has its limitations. When we forget those limitations,
we are positioning ourselves outside of this universe.

An instance in point: The steady-state model of a transmission
line will not handle TV reflections. If TV reflections are the
problem to be solved, a steady-state model that requires continuous
invariant unmodulated signals is not the model to choose to use.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
------== Over 80,000 Newsgroups - 16 Different Servers! =-----

3501. Re: New tower = many questions

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-21 13:56:23 UTC
From: 'Doc <w5lz@icok.net>
Message-ID: <3D639BEF.794D13AE@icok.net>
Source record: 136241

Bill,
That's for the 'standard' 45G with hollow legs.
'Doc

3502. Re: It's a conspiracy

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-21 13:59:57 UTC
From: Mike Luther <mike.luther@ziplog.com>
Message-ID: <3D639CDD.DBFD0D56@ziplog.com>
Source record: 136243

Well ..

'Doc wrote:

> Roy wrote:
> >
> ------------------------
> > You did go to Texas A & M, didn't you?
> >
> > Roy Lewallen, W7EL
> ------------------------
>
> Now that's a low blow!
> 'Doc

He could have made the appointment to meet him off campus, but one would suppose he went to Texas A & M for the meeting ...

GDRFC ..

3503. Re: Half Square

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-21 14:33:39 UTC
From: Dean Craft <w4ihk@mindspring.com>
Message-ID: <ak08ertpj1@slb6.atl.mindspring.net>
Source record: 136244

Bob Colenso wrote in message
<20020820202636.28500.00001626@mb-mr.aol.com>...
>Hi all:
>
>Has anyone here used a half square antenna? It is sopose to give a low
.angle, horizontaly polorized wave when mounted just over 1/4 wl high.
>
>Thanks,
>Bob--KD8WU
>

As you look into this antenna, ignore the guru's that tell you that it will not work correctly unless fed at the lower end of one of the vertical elements like a Bob Tail curtain. No radial field required; can be mounted at whatever height you have available. I could reach up and touch the (weighted lightly) ends of mine without difficulty. Worked great for about 3 years until the trees ate it! Read Paul Carr's (N4PC) CQ September 1994 article 'A DX Antenna For 40 Meters'. Great antenna!

Dean -- W4IHK

3504. Re: It's a conspiracy

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-21 14:39:43 UTC
From: 'Doc <w5lz@icok.net>
Message-ID: <3D63A615.2388AAF4@icok.net>
Source record: 136245

Bill,
!! The light bulb finally came on !! Sometimes
you(I) can't see the forest for the trees, I hate it
when that happens.
'Doc

3505. Re: It's a conspiracy

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-21 14:46:29 UTC
From: BillS <BillS@austin.rr.com>
Message-ID: <3D63A7C5.74B48450@austin.rr.com>
Source record: 136247

CAM wrote:
<SNIP>

> ISo here's a question for the gurus. When non-glare glass does its
> thing, where do the photons go that were canceled? The energy in
> photons can be turned into heat but it is my understanding that the
> energy in photons cannot simply disappear. Seems to me, the cancellation
> of the glare must make the picture either a little brighter or a little
> hotter.
> --
>

The photons are reflected in a random manner (scattered) versus reflecting
coherently back into your eye.
BillS

3506. Re: It's a conspiracy

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-21 15:01:24 UTC
From: richardharrison@webtv.net
Message-ID: <4736-3D63AB44-41@storefull-2393.public.lawson.webtv.net>
Source record: 136248

George, W5YR wrote:
"And isn`t that almost precisely how Walt Maxwell describes what happens
in a transmatch...though only with a single port?

Wouldn`t surprise me because from Walt`s postings and correspondence, I
think Walt has it right, though I`ve never seen a copy of "Reflections".

Best regards, Richard Harrison, KB5WZI

3507. Re: Parallel Dipoles for 20 and 17?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-21 15:08:14 UTC
From: M1nn0w <1c3d0g@att.net>
Message-ID: <y1O89.23775$Ke2.1857851@bgtnsc04-news.ops.worldnet.att.net>
Source record: 136246

I have a fan antenna that I built for 20, 17, & 15 meters. The SWR is virtually flat (after much raising and lowering) The antenna does radiate. How well???? I have no idea. I have worked all states CW on 20. Last evening with nothing else on the band I worked New Zealand on 15. I have worked many other stations on 17 so I know it gets out. I just haven't figured how to measure how well it does. It's fed with coax and each antenna is seperated by about 11 inches. It's about 40 feet in the air.

John (WB2TQC)

3508. Re: Superposition quiz

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-21 15:30:52 UTC
From: richardharrison@webtv.net
Message-ID: <4737-3D63B22C-7@storefull-2393.public.lawson.webtv.net>
Source record: 136250

CAM wrote:
"The steady-state model of a transmission line will not handle TV reflections."

It`s well known that the way to handle TV reflections is wrapping a chewing gum tin-foil wrapper around the twinlead and sliding it to a point which minimizes the ghost.

Best regards, Richard Harrison, KB5WZI

3509. Re: It's a conspiracy

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-21 15:32:19 UTC
From: CAM <Cecil.A.Moore@ieee.org>
Message-ID: <3D63B283.BE8E2191@ieee.org>
Source record: 136249

BillS wrote:
> The photons are reflected in a random manner (scattered) versus reflecting
> coherently back into your eye.

How does coherent wave cancellation cause incoherence?
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

3510. Re: Superposition quiz

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-21 15:48:38 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <3D63B656.3050203@eznec.com>
Source record: 136251

CAM wrote:

>Don't your calculations depend on what's going on *inside* the
transmitter?

Provided that the transmitter somehow furnishes 100 watts of forward power, the voltages, currents, and powers beyond the transmitter don't depend on the transmitter at all. That was one of the points I tried to make in an earlier posting but obviously failed to do so. You can replace my "transmitter" with any crazy model you'd like which furnishes 100 watts of forward power, and if you do the calculations correctly you'll get the same results I did. Only the powers dissipated by the source resistor and furnished by the internal voltage source, included to illustrate some points I made, depend on what's inside the transmitter. After all, those components are, as I explained, inside the "transmitter".

> And that's why I chose to switch to a signal generator equipped with a
> circulator which dissipates all the reflected power in a resistor no
> matter what the phase. Driving a system with such a signal generator
> applies Ockham's razor, cuts through the confusion, and reveals exactly
> what happens to the individual energy components.

Adding a circulator adds a factor to simple and straightforward calculations that makes it easy to conceal and misunderstand what's going on. If you'll read carefully what I just posted, you'll see exactly how much power is supplied by the source and the "transmitter", how much is dissipated in the source and load resistors, and how much forward, reverse, and net average power is traversing the line. In other words, "exactly what happens to the individual energy components". There should be no confusion. The circulator is an obscuring factor, not a simplifying one. It certainly doesn't come anywhere near to representing a typical amateur transmitter.

>
> Please perform your calculations with the above suggested signal generator
> and see what your results are.

I've done them -- they're in the posting you just read. The results are exactly the same regardless of the transmitter, provided only that it furnishes 100 watts of forward power -- except, of course, the dissipation of the internal source resistor and the power furnished by the internal source. If you get different results with your "transmitter", then one of us has done our calculations wrong. I welcome corrections to all my postings, so please point out any errors you find in the course of this exercise.

Roy Lewallen, W7EL

3511. Re: Ultimate 80/160m directional antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-21 15:57:01 UTC
From: "Alexander S. Wood" <alec_wood@dont.spam.me.ntlworld.com>
Message-ID: <uNO89.2515$nJ.15848@newsfep3-gui.server.ntli.net>
Source record: 136252

"Rick Karlquist" <richard@karlquist.remove.this.com> wrote in message
news:iYh89.84135$983.97115@rwcrnsc53...
> I have 20 acres, and I use the front 10 acres for beverages <snip>

10 acres of beverages.........that's some beer delivery. I laid all my cans
and bottles side by side and could barely cover 1 square yard.

10 acres of beer....ooooooooooohhhhhhhhhhhhhhhhhhh
yyyyyyyeeeeeeeessssssssss

3512. Re: Superposition quiz

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-21 15:57:17 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <3D63B85D.2020900@eznec.com>
Source record: 136253

Richard Harrison wrote:

> . . .

> Power is purely resistive by definition. Voltage drop across a
> resistance is in-phase with the current through the resistance, no
> matter what the reactance in the circuit.

Depends on who's doing the defining. My experience is that the term power is often used in the sense you mean, the average power, which can do work. However, power can be used to mean the rate of energy transfer. In a reactive circuit, energy is being transferred back and forth each cycle of the time-domain power waveform even if no work is being done. Therefore, there is power in each direction even though its average can be zero. A good illustration of this is in Pearson and Maler's _Introductory Circuit Analysis_. Check whatever circuits text you have on your shelf and I'm sure you'll find a similar illustration.

A short quote from Pearson and Maler, discussing the power waveform in a circuit with complex load:

"Figure 5.14 shows voltage, current, and power as a function of time. At those instants of time at which power is negative, energy is flowing to the left in Fig. 5.13."

Roy Lewallen, W7EL

3513. Re: It's a conspiracy

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-21 16:06:04 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <9pe7mus1kvsl68c493kegagc84go6jtsoa@4ax.com>
Source record: 136254

On Tue, 20 Aug 2002 22:14:40 -0500, CAM <Cecil.A.Moore@ieee.org>
wrote:

>> Now, let's see. Do you respond to the problem, or do you respond to
>> the suggestion of the problem?
>
>I guess Bart's posting hasn't yet appeared on my news server. I have
>been replying directly by email.

Hi Cecil,

I can't admit to being surprised:
response to the suggestion = 1;
response to the problem = 0

Apparently you are not confident enough in your theories to move out
of the rarefied treats you toss our way.

73's
Richard Clark, KB7QHC

3514. Re: It's a conspiracy

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-21 16:07:54 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <cse7mu83src9mtjrqrj2ctepoklsfgne2f@4ax.com>
Source record: 136255

On Wed, 21 Aug 2002 08:39:43 -0500, CAM <Cecil.A.Moore@ieee.org>
wrote:

>> Now, let's see. Do you respond to the problem, or do you respond to
>> the suggestion of the problem?
>
>Bart, you and I are using different models.

Hi Cecil,

I can't admit to being surprised:
response to the suggestion = 2;
response to the problem = 0

Apparently you are not confident enough in your theories to move out
of the rarefied treats you toss our way.

73's
Richard Clark, KB7QHC

3515. Re: It's a conspiracy

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-21 16:09:02 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <ehe7mu4mitgcdnogoao0n3eocchol0huh7@4ax.com>
Source record: 136256

On Wed, 21 Aug 2002 08:12:14 -0500, CAM <Cecil.A.Moore@ieee.org>
wrote:

>The virtual impedance is 50 ohms, Bill, but nothing magic happens
>at a virtual impedance. Reflections only happen at actual impedances.

Hi Cecil,

Hmmm, a curious statement if ever from the supporter of Walt's virtual
short - and they both use the same math (sic).

73's
Richard Clark, KB7QHC

3516. Re: Fan Dipole 160/80/40/20

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-21 16:15:04 UTC
From: StarGazer <pti@capnet.com>
Message-ID: <3D63BC88.3D7CBC8A@capnet.com>
Source record: 136260

How broadbanded is it on each of the bands?

Terry Crissman wrote:

> I've got a fan dipole up at 50 ft for 160/80/40/20 meters...all bands tune
> nicely except for 40 meters. Any ideas on why 40 won't tune?
>
> thanks
>
> Terry

3517. Re: Air-Wound Balun Design Info??

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-21 16:20:26 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <3D63BDCA.1050609@eznec.com>
Source record: 136257

Years ago I rented a vector impedance meter for doing a consulting job. While I had it, I wound coax into various size coils and measured their impedances. The coils were wound as I described in my posting. The impedance of such a coil is that of a broadly resonant circuit, providing a very good impedance over about three bands, and a moderately good impedance over nearly the whole HF range. I wrote up the dimensions and method, which were published in the ARRL Handbook and later picked up by the Antenna Book.

A few years ago, someone unknown to me who didn't understand how the baluns worked decided that the shunt capacitance was a bad thing. (It's actually essential to the creation of the resonant circuit which is responsible for the high impedance.) The folks at the ARRL were convinced, and the text was changed to specify a winding technique to minimize the shunt capacitance. This would raise the resonant frequency of the loop and reduce the balun's effectiveness at the design frequency by lowering the impedance. I found out about the change just a couple of months ago via this newsgroup, where I was surprised to be told that I couldn't be right about how to wind them because the Antenna Book says to do it differently! I've pointed out the problem to Dean Straw, the Antenna Book editor, and he'll have it changed back in the next edition. Hopefully the Handbook will follow suit if it's been changed.

The latest Handbook I have is 1997 and the latest Antenna Book the 17th Edition. The text in both is correct -- the change was made sometime between when they were published and now.

Roy Lewallen, W7EL

Dan Richardson wrote:
> On Tue, 20 Aug 2002 21:08:27 -0700, Roy Lewallen <w7el@eznec.com>
> wrote:
>
>
>>(except that you should wind the
>>coil like a coil of rope or an extension cord, not carefully spaced as
>>mistakenly described in recent Antenna Books)
>
>
> Okay Roy, I've got to ask. Why?
>
> Danny, K6MHE
>

3518. Re: Air-Wound Balun Design Info??

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-21 16:26:10 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <3D63BF22.5020101@eznec.com>
Source record: 136258

Shunt capacitance doesn't "provide a path around" the inductor. It interacts in an interesting way to form a parallel resonant circuit which, at resonance, has a much higher impedance than the inductor alone. Ain't electronics cool? Putting two impedances in parallel make an impedance higher than either of them!

We aren't trying to create inductive reactance, we're trying to create a high impedance. Provided that the impedance is high enough, the sign of the impedance is irrelevant.

Roy Lewallen, W7EL

CAM wrote:
>
> In other words, if we are trying to create inductive reactance, why
> doesn't that coil of coax follow the same boundary conditions as a
> coil of bare wire? If we coil the two end loops on top of each
> other, aren't we providing a capacitive path around the inductance?

3519. Re: Parallel Dipoles for 20 and 17?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-21 16:34:54 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <3D63C12E.5030506@eznec.com>
Source record: 136261

If you somehow devise a method to measure its performance, you'll find that it's nearly identical to a conventional dipole on each band. People work plenty of DX with antennas of much lower efficiency, and some even brag about their antennas. I've worked and confirmed all states (and worked 33 countries over a few years) on 40 meters with 1.5 watts and simple antennas, and this is by no means extraordinary. People have worked much more with considerably less, and anyone with 100 watts and 1.5% efficient antenna can do the same.

Incidentally, I worked YJ8OT in New Hebrides on 40 meters with 1.5 watts to a bent dipole made of #28 hookup wire stapled to the top of the attic, 16 feet off the ground. Got a QSL card, too. And that wasn't because the antenna was great -- compared to a good outside dipole at a reasonable height, it was truly crappy.

Roy Lewallen, W7EL

M1nn0w wrote:
> I have a fan antenna that I built for 20, 17, & 15 meters. The SWR is
> virtually flat (after much raising and lowering) The antenna does radiate.
> How well???? I have no idea. I have worked all states CW on 20. Last evening
> with nothing else on the band I worked New Zealand on 15. I have worked many
> other stations on 17 so I know it gets out. I just haven't figured how to
> measure how well it does. It's fed with coax and each antenna is seperated
> by about 11 inches. It's about 40 feet in the air.
>
> John (WB2TQC)

3520. Re: Superposition quiz

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-21 16:35:46 UTC
From: richardharrison@webtv.net
Message-ID: <3228-3D63C162-45@storefull-2397.public.lawson.webtv.net>
Source record: 136262

Roy Lewallen wrote:
"The results are exactly the same regardless of the transmitter,
provided only that it furnishes 100 watts of forward power---."

It`s interesting that a transmitter with an internal voltage of 141.4
and an internal resistance of 50 matches the 50-ohm coax so that the
70.7 volts across the coax produces a forward power of 100 watts
regardless of the load at the end of the coax.

This says nothing of the power taken from the transmitter as the
reflected power subtracts from the forward power. If no power is taken
by the load, none is supplied by the transmitter to a lossless line once
the line fills with energy.

Best regards, Richard Harrison, KB5WZI

3521. Re: Half Square

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-21 16:37:57 UTC
From: Larry Moss <larrymoss@citcom.net>
Message-ID: <ak0fah$e9tu$1@news3.infoave.net>
Source record: 136259

They do work well, the only problem is the single band limitation. I used
off and on over the years with good results. During the low part of last sun
spot cycle worked Jordan on 30 Meters using one and 50 watts. Give it a try.
Larry W4LM
"Bob Colenso" <bcolenso@aol.com..nospam> wrote in message
news:20020820202636.28500.00001626@mb-mr.aol.com...
> Hi all:
>
> Has anyone here used a half square antenna? It is sopose to give a low
angle,
> horizontaly polorized wave when mounted just over 1/4 wl high.
>
> Thanks,
> Bob--KD8WU
>
> U of M
> GO BLUE!!!

3522. Re: Superposition quiz

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-21 16:46:53 UTC
From: richardharrison@webtv.net
Message-ID: <3228-3D63C3FD-46@storefull-2397.public.lawson.webtv.net>
Source record: 136265

Roy Lewallen wrote:
"In a reactive circuit, energy is being transferred back and forth each cycle of the time-domain power waveform even if no work is done."

The name for apparent power flow which is devoid of watts is: "Volt Amperes Reactive" or simply "VARs".

Best regards, Richard Harrison, KB5WZI

3523. Re: Parallel Dipoles for 20 and 17?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-21 16:58:02 UTC
From: M1nn0w <1c3d0g@att.net>
Message-ID: <uEP89.23881$Ke2.1861202@bgtnsc04-news.ops.worldnet.att.net>
Source record: 136263

Roy,
My point exactly. I'm not a purist. I just want to talk to
people. I put up my antennas where I can. I try to get the most bang for the
buck while keeping it as simple as possible. My antennas work OK for me. The
enjoyement (frustration) I get is from the experimentation. I've been back
to active in the hobby for a little over two years now and this is the
fourth or fifth antenna that I have run with. It's about the best because I
can work multi band without a tuner. Being an avid reader of this NG I
think DOC expresses it best when he says. Just build it and see. To which
I'll add, If it doesn't work take it down and build it again.

John (WB2TQC)

3524. Re: Superposition quiz

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-21 17:03:53 UTC
From: M1nn0w <1c3d0g@att.net>
Message-ID: <ZJP89.23887$Ke2.1865529@bgtnsc04-news.ops.worldnet.att.net>
Source record: 136264

Geez I'm glad I'm not as intelligent about this stuff as you guys are. I get a headache just trying to figure out what you are talking about. Never mind ducking the barbs and arrows flying round. :)

John (WB2TQC)

3525. TUTORIAL #3 FINAL

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-21 17:26:56 UTC
From: aunwin@fgi.net
Message-ID: <c4becf19.0208210926.66e7be06@posting.google.com>
Source record: 136266

Continuing from the previous tutorial the antenna can be seen as
1. a loop
2. a dipole
Dealing with the loop portion first the main considerations are as
follows.
a. The loop must be oblong shaped for maximum coupling
b. Because of the mishapen loop, instead of repeating the normal 5/50
pF
capacitor it would be wise to increase the starting point capacitance
to 10/12 pF. (The choice here also determines whether it is broad
band or narrow band in nature)
c For simplicity we will place the variable capacitor on the opposite
side to the dipole, recognising that a more suitable place may be
found to decrease electrical stresses.
Now we are able to apply the loop to a program to find dia of
material used
for the given spacing or width to obtain constant impedance at a
fixed feed point for the frequency range required, which when using
capacitor values can be laborious. I chose to use a constant impedance
which gave me a common SWR
i.e.constant impedance.(adjusting later for a suitable balun)
Now one can follow the same procedure by adding the dipole to the
loop and again choose a point feed at the dipole center and run the
program again
for a common swr across the frequency spectrum under review.
Lastly we can add different points of feed using a feeding method of
your choice, either in the same plain or just hanging down as is
conventional.

The following program shows combination of above programs based on 2
inch
common members (looking at my engineering notes the idea was to weld
such an antenna for test purposes. Notes suggest dipole length of
around 200 inches ???)An unsolved mystery showing up some 6 years
later)
The computor user can go directly to one program which can readily be
seen by adding lines preceded by (;) or omit lines referring to the
dipole portion.

```
Name ' constEL '

Over ground
30 MHz
8 6061-T1 wires inches
```

```
L1 = 91.82553
x = 42.82553
K = 10.23438
y= x-K
z= 40.7748
h= 820

1 0 L1 h 0 x h 2
1 0 x h 0 y h 2
1 10 y h 0 y h 2
1 0 -y h 0 -x h 2
1 0 -x h 0 -L1 h 2
1 0 x h 6 x h 2
1 6 x h 6 -x h 2
1 6 -x h 0 -x h 2

; 1 0 x h -6 x h 2
; 1 -6 h -z 0 h 2
; 0 -x h -6 -x h 2
; -6 -x h -z 0 h 2

1 source
wire 3 ,center
impedance load
wire 7, center, 1 220

Results
impedance 122-j3
load loss 0.3%
efficiency 99.7%
Radiation peak 5.98 db @ 173 deg
So I don't lose every thing I will continue
on another postwith other sample programs.

I understand that NEC4 has the capability of using impedance

My program is AO which is quite old but still nice to have.
As an exercise use you own figures if you can for member lengths etc
```

3526. Re: Superposition quiz

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-21 17:45:14 UTC
From: n7ws_at_yahoo.com
Message-ID: <3d63d040.9120039@news.triconet.org>
Source record: 136267

On Wed, 21 Aug 2002 00:24:27 -0700, Roy Lewallen <w7el@eznec.com>
wrote:

|Food for thought: Forward and reverse power

Roy,

I've been following your "Food for Thought" series with interest. So
far, I've been "keeping" them in my newsreader but it occurs to me
that perhaps you should publish them on you web site.

Just a "thought".

Wes

3527. Re: Superposition quiz

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-21 17:52:54 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <3D63D376.1050107@eznec.com>
Source record: 136268

That's a good reason for keeping all related postings to one thread,
rather than continually creating new threads as some people like to do.
Keeping all related postings to one thread makes it easy for folks like
John -- all they have to do is ignore the thread that gives them headaches.

Roy Lewallen, W7EL

M1nn0w wrote:
> Geez I'm glad I'm not as intelligent about this stuff as you guys are. I get
> a headache just trying to figure out what you are talking about. Never mind
> ducking the barbs and arrows flying round. :)
>
> John (WB2TQC)
>
>
>

3528. Re: Parallel Dipoles for 20 and 17?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-21 17:54:54 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <3D63D3EE.2040306@eznec.com>
Source record: 136119

I heartily endorse that philosophy.

Roy Lewallen, W7EL

M1nn0w wrote:
> Roy,
> My point exactly. I'm not a purist. I just want to talk to
> people. I put up my antennas where I can. I try to get the most bang for the
> buck while keeping it as simple as possible. My antennas work OK for me. The
> enjoyement (frustration) I get is from the experimentation. I've been back
> to active in the hobby for a little over two years now and this is the
> fourth or fifth antenna that I have run with. It's about the best because I
> can work multi band without a tuner. Being an avid reader of this NG I
> think DOC expresses it best when he says. Just build it and see. To which
> I'll add, If it doesn't work take it down and build it again.
>
> John (WB2TQC)

3529. Re: Superposition quiz

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-21 17:55:14 UTC
From: CAM <Cecil.A.Moore@ieee.org>
Message-ID: <3D63D402.95DE4804@ieee.org>
Source record: 136120

Roy Lewallen wrote:
> Adding a circulator adds a factor to simple and straightforward
> calculations that makes it easy to conceal and misunderstand what's
> going on.

On the contrary, Roy, it makes it virtually impossible to conceal what's going on. With a Thevenin source, people keep hopping back and forth between the wave model and the circuit model and can probably prove anything in the world.

With the signal generator, the source is always supplying a constant 100 watts into a constant 50 ohms. Any and all reflections are being dissipated by the circulator. It's a perfect example for figuring out what is really going on. If there are real reflections, the circulator load resistor gets hot. Phantom energy in phantom waves can't do that.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

3530. Ham flavored Linux :)

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-21 18:12:21 UTC
From: newsguy <harpoon32@yahoo.com>
Message-ID: <ak0l6i01d7f@enews2.newsguy.com>
Source record: 136126

Just wanting to know if one Linux distro is favored over others in regard to Amatuer radio and electronics usefulness ? So far I am liking Debian, just looking for others ideas please.
Thanks!

3531. Re: Superposition quiz

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-21 18:17:15 UTC
From: CAM <Cecil.A.Moore@ieee.org>
Message-ID: <3D63D92B.F11D0DF@ieee.org>
Source record: 136121

Roy Lewallen wrote:
>
> Richard Harrison wrote:
> > Power is purely resistive by definition. Voltage drop across a
> > resistance is in-phase with the current through the resistance, no
> > matter what the reactance in the circuit.
>
> Depends on who's doing the defining. My experience is that the term
> power is often used in the sense you mean, the average power, which can
> do work. However, power can be used to mean the rate of energy transfer.
> In a reactive circuit, energy is being transferred back and forth each
> cycle of the time-domain power waveform even if no work is being done.
> Therefore, there is power in each direction even though its average can
> be zero. A good illustration of this is in Pearson and Maler's
> _Introductory Circuit Analysis_. Check whatever circuits text you have
> on your shelf and I'm sure you'll find a similar illustration.

Power engineers use the term "Reactive Power" and assign the dimension "vars"
when the voltage and current are 90 degrees out of phase. They use the term
"Real Power" and assign the dimensions of "watts" when the voltage and
current are in phase. They don't charge customers for Var-hours. The orthogonal
sum of watts and vars is volt-amps. V * I * cos(theta) = watts,
V * I * sin(theta) = vars, V * I = volt-amps.

> A short quote from Pearson and Maler, discussing the power waveform in a
> circuit with complex load:
>
> "Figure 5.14 shows voltage, current, and power as a function of time. At
> those instants of time at which power is negative, energy is flowing to
> the left in Fig. 5.13."

The sign of the power is negative by convention because the energy is
flowing to the left which, by convention, is the *negative direction*.
It's just a convention. Is money leaving your bank account negative money
or is it just traveling in the opposite direction from money arriving at
your bank account? How can one tell a negative dollar from a positive one
except by direction?
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
------== Over 80,000 Newsgroups - 16 Different Servers! =-----

3532. Re: It's a conspiracy

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-21 18:19:21 UTC
From: CAM <Cecil.A.Moore@ieee.org>
Message-ID: <3D63D9A9.BBDDE8FD@ieee.org>
Source record: 136122

Richard Clark wrote:
>
> On Tue, 20 Aug 2002 22:14:40 -0500, CAM <Cecil.A.Moore@ieee.org>
> wrote:
>
> >> Now, let's see. Do you respond to the problem, or do you respond to
> >> the suggestion of the problem?
> > >
> > >I guess Bart's posting hasn't yet appeared on my news server. I have
> > >been replying directly by email.
>
> Hi Cecil,
>
> I can't admit to being surprised:
> response to the suggestion = 1;
> response to the problem = 0
>
> Apparently you are not confident enough in your theories to move out
> of the rarefied treats you toss our way.

I don't know what you are talking about, Richard. If Bart has posted anything
to this newsgroup in the past week, it has not made it to my server yet.
Perhaps you could send me a copy of Bart's new posting.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

3533. Re: It's a conspiracy

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-21 18:24:54 UTC
From: CAM <Cecil.A.Moore@ieee.org>
Message-ID: <3D63DAF6.D8A7384@ieee.org>
Source record: 136123

Richard Clark wrote:
>
> CAM <Cecil.A.Moore@ieee.org> wrote:
>
> >The virtual impedance is 50 ohms, Bill, but nothing magic happens
> >at a virtual impedance. Reflections only happen at actual impedances.
>
> Hi Cecil,
>
> Hmmm, a curious statement if ever from the supporter of Walt's virtual
> short - and they both use the same math (sic).

Richard, you are confused about what my position is. I don't support
Walt's virtual short except as a shorthand rule of thumb. My above
statement is supportive of Steve's side of the argument. Walt has
posted why he thinks I am wrong about this. You sure seem to miss
(or fail to understand) a lot of posts.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

3534. Re: Superposition quiz

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-21 18:34:15 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <3D63DD27.3000107@eznec.com>
Source record: 136125

Richard Harrison wrote:
> Roy Lewallen wrote:
> "The results are exactly the same regardless of the transmitter,
> provided only that it furnishes 100 watts of forward power---."
>
> It`s interesting that a transmitter with an internal voltage of 141.4
> and an internal resistance of 50 matches the 50-ohm coax so that the
> 70.7 volts across the coax produces a forward power of 100 watts
> regardless of the load at the end of the coax.

Yes, I hadn't realized that until quite recently, and with some surprise.

> This says nothing of the power taken from the transmitter as the
> reflected power subtracts from the forward power. If no power is taken
> by the load, none is supplied by the transmitter to a lossless line once
> the line fills with energy.

Yep. In the steady state with an open, short, or purely reactive load, we have 100 watts forward and 100 watts reverse, but no real power being supplied by the transmitter. It's interesting to see how that comes about. When we first turn on the transmitter, it sees only 50 ohms, so it delivers 100 watts of net average, or "real" power to the line. When the reflected voltage and current waves arrive at the input, they combine with the outgoing waves in such a way that the voltages of the forward and reflected waves add to zero (the line input looks like an open circuit), the currents add to zero (the line input looks like a short circut), or the voltage and current are in quadrature (the line input looks like a pure reactance). The one you get depends on the line termination and length. As soon as the reflected wave arrives to cause this input condition, the line is fully "charged" and the transmitter no longer furnishes any real power, since the transmitter now sees an open circuit, short circuit, or pure reactance. The 100 watts forward and 100 watts reverse (which is a total energy of 100 watts * the round trip time) remain on the theoretical lossless line forever. Unless the impedance seen by the transmitter is an open circuit, though, the transmitter will have to continue supplying current to the line. This current will produce dissipation in any real internal series resistance, requiring the internal source to produce real power equal to this dissipation. No net average power exits the "transmitter's" terminals, though.

Roy Lewallen, W7EL

3535. Re: It's a conspiracy

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-21 18:35:37 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <1jn7mu4fo8smkbo8tnqe7ejo44jpi9h7hf@4ax.com>
Source record: 136124

On Wed, 21 Aug 2002 13:24:54 -0500, CAM <Cecil.A.Moore@ieee.org>
wrote:

> you are confused

:-)

3536. Re: Superposition quiz

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-21 18:36:49 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <3D63DDC1.6000205@eznec.com>
Source record: 136127

Suit yourself. Hopefully the analysis I presented is complete, clear, and accurate. In spite of the lack of a circulator to help out. You do it your way and I'll do it mine, and as long as we get the same results either is fine.

Roy Lewallen, W7EL

CAM wrote:
> Roy Lewallen wrote:
>
>>Adding a circulator adds a factor to simple and straightforward
>>calculations that makes it easy to conceal and misunderstand what's
>>going on.
>
>
> On the contrary, Roy, it makes it virtually impossible to conceal what's
> going on. With a Thevenin source, people keep hopping back and forth
> between the wave model and the circuit model and can probably prove
> anything in the world.
>
> With the signal generator, the source is always supplying a constant
> 100 watts into a constant 50 ohms. Any and all reflections are being
> dissipated by the circulator. It's a perfect example for figuring out
> what is really going on. If there are real reflections, the circulator
> load resistor gets hot. Phantom energy in phantom waves can't do that.

3537. Re: Air-Wound Balun Design Info??

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-21 18:37:39 UTC
From: CAM <Cecil.A.Moore@ieee.org>
Message-ID: <3D63DDF3.A66D840D@ieee.org>
Source record: 136129

Roy Lewallen wrote:
>
> Shunt capacitance doesn't "provide a path around" the inductor. It
> interacts in an interesting way to form a parallel resonant circuit
> which, at resonance, has a much higher impedance than the inductor
> alone. Ain't electronics cool? Putting two impedances in parallel make
> an impedance higher than either of them!
>
> We aren't trying to create inductive reactance, we're trying to create a
> high impedance. Provided that the impedance is high enough, the sign of
> the impedance is irrelevant.

Disclaimer: I'm not arguing, just trying to understand why you are right
and others are wrong.

What is the resonant frequency and bandwidth of the parallel resonant circuit
you are creating? It will be inductive on one side and capacitive on the other
side. Can such a circuit have a 10/1 bandwidth or is this a narrow band
solution?

When we wind turns of coax on a toroid to create a choke, we carefully avoid
adding capacitance between the turns. Why is this any different? Can we stop
worrying about capacitance when we wind coax on toroids? Jerry Sevick
says capacitance between turns of coax on a toroid is to be avoided. Is
he wrong? Can we wind turns on a toroid until we achieve parallel resonance?
--
thanks & 73, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
------== Over 80,000 Newsgroups - 16 Different Servers! =-----

3538. Re: It's a conspiracy

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-21 18:38:40 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <qln7mu4ppmcj6p9lir9ndi5nr1cu8smf4c@4ax.com>
Source record: 136128

On Wed, 21 Aug 2002 13:19:21 -0500, CAM <Cecil.A.Moore@ieee.org>
wrote:

>Richard Clark wrote:
>>
>> On Tue, 20 Aug 2002 22:14:40 -0500, CAM <Cecil.A.Moore@ieee.org>
>> wrote:
>>
>> >> Now, let's see. Do you respond to the problem, or do you respond to
>> >> the suggestion of the problem?
>> >
>> >I guess Bart's posting hasn't yet appeared on my news server. I have
>> >been replying directly by email.
>>
>> Hi Cecil,
>>
>> I can't admit to being surprised:
>> response to the suggestion = 1;
>> response to the problem = 0
>>
>> Apparently you are not confident enough in your theories to move out
>> of the rarefied treats you toss our way.
>
>I don't know what you are talking about, Richard. If Bart has posted anything
>to this newsgroup in the past week, it has not made it to my server yet.
>Perhaps you could send me a copy of Bart's new posting.

Hi Cecil,

I can't admit to being surprised:
response to the suggestion = 3;
response to the problem = 0

73's
Richard Clark, KB7QHC

3539. Re: Superposition quiz

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-21 18:47:11 UTC
From: n7ws_at_yahoo.com
Message-ID: <3d63df0e.2797271@news.triconet.org>
Source record: 136130

On Wed, 21 Aug 2002 00:24:27 -0700, Roy Lewallen <w7el@eznec.com> wrote:

|Food for thought: Forward and reverse power
[snip]

|The average forward power fPa fed into a line with (purely real)
|characteristic impedance R0 by a voltage source of RMS voltage Vrms in
|series with a resistance R0 is
|
| fPa = Vrms^2 / (4 * R0)
|
|So we can model a 100 watt forward, 50 ohm nominal transmitter as a
|141.4 volt (100 * sqrt(2)) RMS voltage source in series with a 50 ohm
|resistance. If we connect this to a 50 ohm transmission line of any
|length, we can put on any load impedance we like, INCLUDING A SHORT OR
|OPEN CIRCUIT, and we'll have 100 watts of average forward power in the
|50 ohm line. In terms of the impedance Zi = Ri + jXi looking into the
|line, and the source resistor and line's (assumed purely real)
|characteristic impedance of R0,

Does "any length" include zero?
|
| fPa = Vrms^2 / (4 * R0)
|
| rPa = {Vrms^2 / (4 * R0)} * {[(Ri - R0)^2 + Xi^2)] / (Ri + R0)^2 + Xi^2]}

I think you left out a bracket... shouldn't it be:

rPa = {Vrms^2 / (4 * R0)} * {[(Ri - R0)^2 + Xi^2)] / [(Ri + R0)^2 + Xi^2]}

3540. Re: Parallel Dipoles for 20 and 17?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-21 18:48:43 UTC
From: CAM <Cecil.A.Moore@ieee.org>
Message-ID: <3D63E08B.CCAB25C2@ieee.org>
Source record: 136131

M1nn0w wrote:
> If it doesn't work take it down and build it again.

Dear Lord, no! It it doesn't work, educate yourself as to what is wrong and make it work. Give a man a fish and he will survive for another day. Teach a man to fish and he just might die of old age.

For instance, some ham sent me an email because his 20m dipole fed with 450 ohm ladder-line wouldn't work with his built-in auto-tuner even on 20m. I explained how he needed to cut his ladder-line to a multiple of 1/2WL on 20m. He did so and all the 20m problems went away. IMO, always use a non-working antenna as a learning experience.

The above ham finally chose a compromise length for his ladder-line which allowed his auto-tuner to work on 20m, 17m, and 15m giving him a three-band antenna for the price of a single band antenna.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

3541. Re: Superposition quiz

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-21 18:56:28 UTC
From: CAM <Cecil.A.Moore@ieee.org>
Message-ID: <3D63E25C.F5932FF7@ieee.org>
Source record: 136132

Roy Lewallen wrote:
> Unless the
> impedance seen by the transmitter is an open circuit, though, the
> transmitter will have to continue supplying current to the line. This
> current will produce dissipation in any real internal series resistance,
> requiring the internal source to produce real power equal to this
> dissipation. No net average power exits the "transmitter's" terminals,
> though.

One of my points exactly, Roy. That's why the signal generator with the circulator load for reflected power is so effective in determining what is happening. No impossible Thevenin equivalent source mucking up the works and tempting people to switch from the wave model to the circuit model in midstream.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
------== Over 80,000 Newsgroups - 16 Different Servers! =-----

3542. Re: It's a conspiracy

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-21 19:01:23 UTC
From: CAM <Cecil.A.Moore@ieee.org>
Message-ID: <3D63E383.739AD7A2@ieee.org>
Source record: 136133

Richard Clark wrote:
>
> CAM <Cecil.A.Moore@ieee.org> wrote:
>
> > you are confused
>
> :-)

When you have no valid response, use a smiley face? How about a
clue about how and why you are confused? I have responded to every
posting that Bart has made that has made it to my ISP news server.
What motive do you have for accusing me of being non-responsive?
Are you hoping that if you say it enough times, someone will
believe it?
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
------== Over 80,000 Newsgroups - 16 Different Servers! =-----

3543. Re: Superposition quiz

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-21 19:02:57 UTC
From: CAM <Cecil.A.Moore@ieee.org>
Message-ID: <3D63E3E1.965CD4D2@ieee.org>
Source record: 136134

Roy Lewallen wrote:
> Suit yourself. Hopefully the analysis I presented is complete, clear,
> and accurate. In spite of the lack of a circulator to help out. You do
> it your way and I'll do it mine, and as long as we get the same results
> either is fine.

I agree with that, Roy. The difference is that my approach doesn't tempt
anyone to switch models in mid-stream.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

3544. Re: It's a conspiracy

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-21 19:04:23 UTC
From: BillS <BillS@austin.rr.com>
Message-ID: <3D63E437.948F7048@austin.rr.com>
Source record: 136139

I did not mean to infer that the reflected waves were coherent waves. Perhaps I should have said the direction/angle in which the photons reflect is near equal with the regular glare glass.
BillS

CAM wrote:

> BillS wrote:
> > The photons are reflected in a random manner (scattered) versus reflecting
> > coherently back into your eye.
>
> How does coherent wave cancellation cause incoherence?
> --
> cheers, CAM http://www.qsl.net/w5dxp
>
> -----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
> http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
> -----== Over 80,000 Newsgroups - 16 Different Servers! =-----

3545. Re: It's a conspiracy

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-21 19:08:22 UTC
From: CAM <Cecil.A.Moore@ieee.org>
Message-ID: <3D63E526.E0D959AF@ieee.org>
Source record: 136136

Richard Clark wrote:
> I can't admit to being surprised:
> response to the suggestion = 3;
> response to the problem = 0

Richard, I didn't realize until now that you prefer a, "Who's On First",
Abbott and Costello skit. Please find another straight man. I have no
idea what the above posting means. I have responded to the problem with
a model that differs from Bart's. If you can point out some problem with
my reflection model, I will be glad to explain it to you and change it
if I am wrong.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
------== Over 80,000 Newsgroups - 16 Different Servers! =-----

3546. TUTORIAL final,final

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-21 19:10:34 UTC
From: aunwin@fgi.net
Message-ID: <c4becf19.0208211110.5674f6f9@posting.google.com>
Source record: 136135

From the previous tutorial we can see that the program actually did
not reflect
a 20 meter dipole. This length can be controlled by inserting for L1 a
figure close to say 200 inches and allowing other dimensions to float
for the computor to determine.

The previous program shows that even using a dipole of half the
expected 20 meter dipole, exceptable figures can still be obtained
even for an antenna that provides for HALF of the normal turning
radius.
Disregarding the said 'advantage' it brings the possibility of
doubling the frequency range by adding a switch at the dipole ends
plus an alternative switched in matching system seems compelling
The frequency range of 14/30 MHz is chosen to maintain the bi
directional feature. If one supplied a capacitor with a greater range
for use then
the bi directional feature is lost to a multi lobe formation at the
extreme frequencies but allows use of frequencies outside the chosen
range.

The following is a program for two element beam with only the driver
having
a variable capacitor

```
Name hold1
over ground
28.50 MHz
15 wires 6061-T1 wires inches

L1 = 110.1097
L2 = 100
L3 = 100
y = 38.85992
x = 54.6559
z = 2.902669
h = 820
h3 =780.0508
h2 = 820
h1 = 826.5495
a = 5.964849
s1 = 44.02934
s2 = 100.6065
s22 = s2 + a
x3 = 43.99287
x1 = 43.98962
```

```
s11 = 35.97721

1 0 L1 h 0 x h 1
1 0 x h 0 y h 1
1 0 y h 0 -y h 1
1 0 -y h 0 -x h 1
1 -x h 0 -L1 h 1

;1 0 x h 6 x h 1
; 1 6 -x h 6 -x h 1
; 1 6 -x h 0 -x h 1
1 0 y h -4 y h 1
1 -4 y h -z 0 h3 1
1 0 -y h -4 -y h 1
1 -4 -y h -z 0 h3 1
1 s1 L2 h1 s1 x1 h1 1
1 s1 x1 h1 s1 -x1 h1 1
1 s1 -x1 h1 s1 -L2 h1 1
; 1 s1 x1 h1 s11 x1 h1 1;
; 1 s11 x1 h1 s11 -x1 h1 1
;1 s11 -x1 h1 s1 -x1 h1 1
1 s2 L3 h1 s2 x3 h1 1
1 s2 x3 h1 s2 -x3 h1 1
1 s2 -x3 h1 s2 -L3 h1 1

1 source
wire 3,center
1 load
impedance load
wire7, 1 220

results
impedance 122-j3
swr 1.63
efficiency 99.7%
radiation peak 173 deg @5.99 dbd gain

I threw the above in to see effects of just loading
the driven element. For 3 element with all having a load
change to 3 loads in above. Note again the 'short'
elements , suggest user insert for L1 = 200 fixed length

; 1 s2 x3 h1 s22 x3 h1 1
; 1 s22 x3 h1 s22 -x3 h1 1
; 1 s22 -x3 h1 s2 -x3 h1 1
The above 3 lines are continuation of program.
Note. I could not find my original programs of 6 years ago but I see
no reason why the above should no be used

Best regards
Art Unwin KB9MZ.....XG
```

3547. Re: Fan Dipole 160/80/40/20

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-21 19:15:25 UTC
From: nm5k@wt.net
Message-ID: <25eb70d7.0208211115.73e599d4@posting.google.com>
Source record: 136137

"Terry Crissman" <tcrissman@simplynet.net> wrote in message
news:<um60ttl5u39ae7@corp.supernews.com>...
> I've got a fan dipole up at 50 ft for 160/80/40/20 meters...all bands tune
> nicely except for 40 meters. Any ideas on why 40 won't tune?
>
> thanks
>
> Terry

It's probably coupling to the 80 m antenna. To test, unhook one of the legs of the 40m antenna and swing it away at a different angle. Did the SWR make a drastic change? If not, try the other side. Once you find the side that is critical, try moving it slightly away from the offending other wire. If you can't do this, you will need to do some more wire trimming. You can get a decent match, but it will take a little tweaking. Where is the 40 antenna resonant? What is the SWR at that point? If it's resonant in within the band, but still a high SWR, you have a coupling problem. It's almost sure that the problem is the 40 legs coupling with the 80 or 160 legs. The shorter 20 legs should be having no real effect. Don't worry about the 20 antenna. I'd be looking at the relation to the 80/40 legs first. If you do have a coupling problem, and can't move the wires, slightly vary the feedpoint of the 40 antenna a few inches either way. IE: add to one side, but not the other. Varying the center point will let you match the antenna to the coax like a crude gamma match of sorts. But it's better to get the legs away from the offending other wires. If you have coupling between legs, it will effect the pattern a bit, and usually you will notice less usable bandwidth. MK

3548. Re: Fan Dipole 160/80/40/20

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-21 19:21:23 UTC
From: CAM <Cecil.A.Moore@ieee.org>
Message-ID: <3D63E833.8DD3136B@ieee.org>
Source record: 136138

Terry Crissman wrote:
> I've got a fan dipole up at 50 ft for 160/80/40/20 meters...all bands tune
> nicely except for 40 meters. Any ideas on why 40 won't tune?

The other dipoles are interfering with the 40m dipole, mutual coupling, etc.
If you don't have one, borrow an MFJ 259B antenna analyzer and find out what
the feedpoint impedance is on 40m at resonance. If it's not resonant on 40m,
find out what is the closest frequency to 40m on which it is resonant. That
will probably indicate what you need to do.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

3549. Re: It's a conspiracy

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-21 19:42:42 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <ger7muolm8u67b44l5ttllcfjfsu34cop2@4ax.com>
Source record: 136140

On Wed, 21 Aug 2002 14:08:22 -0500, CAM <Cecil.A.Moore@ieee.org>
wrote:

>Richard Clark wrote:
>> I can't admit to being surprised:
>> response to the suggestion = 3;
>> response to the problem = 0
>
> I have responded to the problem with
>a model that differs from Bart's.

I can't admit to being surprised:
response to the suggestion = 4;
response to the problem = 0

73's
Richard Clark, KB7QHC

3550. Re: Air-Wound Balun Design Info??

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-21 20:18:23 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <3D63F58F.40505@eznec.com>
Source record: 136141

CAM wrote:
> . . .
> What is the resonant frequency and bandwidth of the parallel resonant circuit
> you are creating? It will be inductive on one side and capacitive on the other
> side. Can such a circuit have a 10/1 bandwidth or is this a narrow band
> solution?

Hm. Thought I had posted that not too long ago on this newsgroup. And thought I just said that the baluns are good over about three bands. The resonant frequency of the circuit is centered in the recommended frequency range. The bandwidth varies among the various sizes, but in all cases is sufficient to provide more than 500 ohms or so of impedance over the three recommended bands. I've only been able to locate some of the original data, but here's the impedance of one of the configurations, 10 feet of RG-58, 7 turns, recommended for 10 MHz, and also as the best compromise for the full 3.5 - 30 MHz range:

Freq MHz Z ohms

2 128
3.5 244
7 854
10 10.8k
14 848
21 351
30 198

Impedance at resonance, 9.9 MHz, is 12.7k ohms. As you can see, the impedance is adequate for standard applications from 7 - 14 MHz. It's marginal beyond that, but still provides some choking action. The other day I posted an extreme example of an unbalanced dipole, with nearly all the current in one leg of the dipole and a very heavy current on the feedline. Inserting just a 200 ohm balun at the feedpoint of this antenna restores the current on the "cold" side of the dipole to 84% of the current on the "hot" side and reduces the feedline current to 24% of the "hot" side current. Not perfect, but a great improvement over the orginal severe imbalance.

But like most designers of RF circuits, I prefer to use resistive ferrites for broadband applications, because they'll give you a high impedance over several decades. This goes for broadband transformers as well as baluns. In your spare time, tear apart a TV balun and measure the impedance of a turn or two around the core at VHF. Bet it looks like a resistor. I know for sure you'll find lots of low frequency ferrites in broadband applications in Tektronix products, and not just the portions I've designed.

If you've got something like the MFJ antenna analyzer, you should be able to make measurements similar to the ones above. See for yourself. Then get out your Coke bottles and see if you can do better. (Actually, I fairly recently came across some measurements of just that, which were posted on the web. Sorry, I don't recall the URL. As I recall they're comparable to what I got from the flat coils. He also took advantage of the coil's self resonance. So one way is as good as the other if done right.)

> When we wind turns of coax on a toroid to create a choke, we carefully avoid
> adding capacitance between the turns. Why is this any different? Can we stop
> worrying about capacitance when we wind coax on toroids? Jerry Sevick
> says capacitance between turns of coax on a toroid is to be avoided. Is
> he wrong? Can we wind turns on a toroid until we achieve parallel resonance?

Who's "we"? Depends entirely on what you're using the choke for. Chokes are used for many applications, each with its own requirements. Why do you suppose there are so many sizes, shapes, and materials that they're made from? Shunt capacitance lowers the resonant frequency of the choke. In many applications this is undesirable. In others, such as this one, it's definitely desirable. And if you're trying to make a resonant circuit, it's essential.

It's not clear to me why so many people insist that a balun's impedance has to be inductive. What's the evidence for this? All it does is force you to operate your balun well below resonance where the impedance is lower. I personally wind my baluns on low-frequency ferrite cores. Their impedance is hardly reactive at all -- it's nearly purely resistive, so they don't display any perceptive resonance. This gives me a high impedance over a very wide bandwidth, easily covering the full HF range, and VHF to boot. Shunt capacitance will lower the impedance, but not enough that I've ever had to do anything to avoid it. If you insist on having capacitive reactance only, you've got to use something like 60 series ferrite and settle for much less impedance -- or powdered iron and settle for even less. Then it becomes really tough to get enough impedance without making the thing resonant, if you insist on avoiding resonance. One note, however -- if a lot of power is involved, a resistive toroid balun can overheat even though the fractional power loss is negligible from a radiation standpoint. In that case you're stuck with having to use a more inductive, less resistive material. Or use something like the air core balun that has a large surface area and very high impedance at the point where it's resistive.

Sorry, I won't attempt to explain what Sevick says.

Roy Lewallen, W7EL

3551. Re: Superposition quiz

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-21 20:19:54 UTC
From: tdonaly@aol.com
Message-ID: <20020821161954.09135.00002012@mb-cs.aol.com>
Source record: 136142

Wes wrote,
>
>On Wed, 21 Aug 2002 00:24:27 -0700, Roy Lewallen <w7el@eznec.com>
>wrote:
>
>|Food for thought: Forward and reverse power
>
>
>Roy,
>
>I've been following your "Food for Thought" series with interest. So
>far, I've been "keeping" them in my newsreader but it occurs to me
>that perhaps you should publish them on you web site.
>
>Just a "thought".
>
>Wes
>

That's a very good suggestion.

Tom Donaly KA6RUH

3552. Re: Superposition quiz

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-21 20:27:24 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <3D63F7AC.8020704@eznec.com>
Source record: 136143

None of the currents, voltages, powers, or dissipations change if the transmission line length is zero. But sure as the world, some fussbudget will whine that there's nothing for the forward and reverse power to flow in. If you can live with that, you can use a zero length line.

Thanks very much for the correction. After some of the responses I've seen, I feared that no one had bothered to read what I wrote, let alone understand it. It's encouraging to know that at least one of the postings was scrutinized that carefully.

Roy Lewallen, W7EL

Wes wrote:
> On Wed, 21 Aug 2002 00:24:27 -0700, Roy Lewallen <w7el@eznec.com> wrote:
>
> |Food for thought: Forward and reverse power
> [snip]
>
> |The average forward power fPa fed into a line with (purely real)
> |characteristic impedance R0 by a voltage source of RMS voltage Vrms in
> |series with a resistance R0 is
> |
> | fPa = Vrms^2 / (4 * R0)
> |
> |So we can model a 100 watt forward, 50 ohm nominal transmitter as a
> |141.4 volt (100 * sqrt(2)) RMS voltage source in series with a 50 ohm
> |resistance. If we connect this to a 50 ohm transmission line of any
> |length, we can put on any load impedance we like, INCLUDING A SHORT OR
> |OPEN CIRCUIT, and we'll have 100 watts of average forward power in the
> |50 ohm line. In terms of the impedance Zi = Ri + jXi looking into the
> |line, and the source resistor and line's (assumed purely real)
> |characteristic impedance of R0,
>
> Does "any length" include zero?
> |
> | fPa = Vrms^2 / (4 * R0)
> |
> | rPa = {Vrms^2 / (4 * R0)} * {[(Ri - R0)^2 + Xi^2)] / (Ri + R0)^2 + Xi^2]}
>
> I think you left out a bracket... shouldn't it be:
>
> rPa = {Vrms^2 / (4 * R0)} * {[(Ri - R0)^2 + Xi^2)] / [(Ri + R0)^2 + Xi^2]}
>

3553. Re: Superposition quiz

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-21 21:01:16 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <3D63FF9C.6040709@eznec.com>
Source record: 136145

Thanks for the suggestion. For the time being, I've just made them available to download as text files. You'll find them at ftp://eznec.com/pub/Food for Thought/.

Roy Lewallen, W7EL

Wes wrote:
> On Wed, 21 Aug 2002 00:24:27 -0700, Roy Lewallen <w7el@eznec.com>
> wrote:
>
> |Food for thought: Forward and reverse power
>
>
> Roy,
>
> I've been following your "Food for Thought" series with interest. So
> far, I've been "keeping" them in my newsreader but it occurs to me
> that perhaps you should publish them on you web site.
>
> Just a "thought".
>
> Wes

3554. Re: Antenna Sought 10m/6m/2m/70cm

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-21 21:01:34 UTC
From: rhatley <rhatley@zero.net>
Message-ID: <bpv7muolqc9sdeee8adlnldla358lv2eti@4ax.com>
Source record: 136144

KMA26500 Log Periodic
www.kmaantennas.com

rh

On Wed, 21 Aug 2002 01:16:54 GMT, "Chip G." <n1mie@NOSPAM.snet.net>
wrote:

>Any ideas? I'm interested in the new Yaesu quad band, but doesn't seem
>worthwhile unless I can find an appropriate quad-band antenna...
>
>Need one for 10m, 6m, 2m and 70cm.
>
>Thanks,

3555. Re: Superposition quiz

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-21 21:01:42 UTC
From: n7ws_at_yahoo.com
Message-ID: <3d63f897.9335937@news.triconet.org>
Source record: 136146

On Wed, 21 Aug 2002 13:27:24 -0700, Roy Lewallen <w7el@eznec.com> wrote:

|None of the currents, voltages, powers, or dissipations change if the
|transmission line length is zero. But sure as the world, some fussbudget
|will whine that there's nothing for the forward and reverse power to
|flow in. If you can live with that, you can use a zero length line.

Uh oh, I hope I'm not the fussbudget when I ask what happens with a zero length line and an open circuit load. I imagine a 141 V source in series with 50 ohm and nothing else. The way I see it, I1 = 0. Your table shows both 100W forward and 100W reverse with zero dissipation either place, but I'm having a hard time visualizing these two powers. I realize your math predicts what your table shows so what am I missing?

|
|Thanks very much for the correction. After some of the responses I've
|seen, I feared that no one had bothered to read what I wrote, let alone
|understand it. It's encouraging to know that at least one of the
|postings was scrutinized that carefully.

I must say that I often ignore a lot of threads until I see your postings, then I read 'em (your's anyway). Seems like I always learn something.

Wes

3556. Re: Antenna Sought 10m/6m/2m/70cm

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-21 21:14:00 UTC
From: NI4L <ni4l@charter.net>
Message-ID: <3D640298.3030401@charter.net>
Source record: 136147

Try this he will make you what ever you want. He really did me a good
job on a 6-20 meter antenna.
http://www.qsl.net/w4kma/

Chip G. wrote:

>Any ideas? I'm interested in the new Yaesu quad band, but doesn't seem
>worthwhile unless I can find an appropriate quad-band antenna...
>
>Need one for 10m, 6m, 2m and 70cm.
>
>Thanks,
>

--
NI4L CUSTOM RESONANT DIPOLE
LEGAL LIMIT ++ CUSTOM MADE CENTER FED DIPOLE
Made with the same components used by our military forces today
Custom made to YOUR FREQUENCY of operation
Let me take the hassle out of making a RESONANT DIPOLE for you.
Click here for more info... http://www.angelfire.com/nb/ni4l/

3557. Re: Better Antenna Question

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-21 21:20:04 UTC
From: theplanters95@aol.comnospam
Message-ID: <20020821172004.21722.00002977@mb-cg.aol.com>
Source record: 136149

>>What is the size of the balcony, and >>how high above the ground?

The balcony is on the ground floor and is 8ft by 8ft. The only tree nearby is
5 feet tall!

Randy

3558. Re: Air-Wound Balun Design Info??

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-21 21:20:17 UTC
From: Reg Edwards <g4fgq.regp@btinternet.com>
Message-ID: <ak106g$1o5$1@helle.btinternet.com>
Source record: 136150

Every solenoid, whether it is used as a tank coil, a choke, a helical antenna, or bent round to form a toroid, has self capacitance which resonates with the self inductance.

When there are more than just a few turns on a solenoid the capacitance between turns forms an insignificant fraction of the total capacitance. Why? Because the resulting end-to-end capacitance is 1/Nth of the capacitance between two adjacent turns and so is very small. The little bits are all in series. That the turn-to-turn capacitance is the only capacitance is an old wives tale repeated by people who don't think about it.

Nearly all the self capacitance of a multi-turn, close-eound solenoid is similar to that between the two halves of solid cylinder of the same dimensions as the coil. It is, of course, distributed along its length. The effective capacitance, considered as a lump across the ends of the coil, is calculable and so is the resonant frequency.

The resonant frequency of a solenoid choke or balun can easily be measured with an antenna analyser. At HF it has a very high Q. But because the impedance is very high a choke is effective over a very wide band.

Regards, Reg

3559. Re: Ham flavored Linux :)

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-21 21:24:46 UTC
From: Juerg Tschirren <juerg-tschirren@uiowa.edu>
Message-ID: <ak10da$3dk$1@server05.icaen.uiowa.edu>
Source record: 136186

SuSE (http://www.suse.com) comes with a lot of software (7 CDs, 1 DVD),
and it has an own ham section when you install packages (at least the
professional edition, I did not check the personal edition). See
http://www.suse.com/us/private/products/suse_linux/i386/packages_professional/index.html
for a list of packages.

73 de Juerg
AB0WH

newsguy wrote:

> Just wanting to know if one Linux distro is favored over others in regard
> to
> Amatuer radio and electronics usefulness ? So far I am liking Debian,
> just looking for others ideas please.
> Thanks!

3560. Re: Superposition quiz

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-21 21:31:08 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <3D64069C.1090307@eznec.com>
Source record: 136151

Picky, picky. Ok, connect a little itty bitty line for the power to bounce around on. Then remove it. Nothing changes. The energy (200 watts * round trip time) was put onto the line when the transmitter was first turned on, then it just bounces back and forth forever without ever otherwise reacting to the outside world. Hm, better yet, fire up the transmitter, get the transmission line charged up, then disconnect it and set it on the table over by the can of beer. Now you've got your open circuit without a cable *and* 100 watts bouncing back and forth in the cable.

Seriously, without the cable there's no forward power and no reverse power. And it makes absolutely no difference at all. With or without the cable, the "transmitter" is producing no power. And you're right, I1 = 0.

Roy Lewallen, W7EL

Wes wrote:
> On Wed, 21 Aug 2002 13:27:24 -0700, Roy Lewallen <w7el@eznec.com> wrote:
>
> |None of the currents, voltages, powers, or dissipations change if the
> |transmission line length is zero. But sure as the world, some fussbudget
> |will whine that there's nothing for the forward and reverse power to
> |flow in. If you can live with that, you can use a zero length line.
>
> Uh oh, I hope I'm not the fussbudget when I ask what happens with a zero length
> line and an open circuit load. I imagine a 141 V source in series with 50 ohm
> and nothing else. The way I see it, I1 = 0. Your table shows both 100W forward
> and 100W reverse with zero dissipation either place, but I'm having a hard time
> visualizing these two powers. I realize your math predicts what your table shows
> so what am I missing?
>
> |
> |Thanks very much for the correction. After some of the responses I've
> |seen, I feared that no one had bothered to read what I wrote, let alone
> |understand it. It's encouraging to know that at least one of the
> |postings was scrutinized that carefully.
>
> I must say that I often ignore a lot of threads until I see your postings, then
> I read 'em (your's anyway). Seems like I always learn something.
>
>
> Wes

3561. Re: Ham flavored Linux :)

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-21 21:34:04 UTC
From: Eamon Skelton <Xnospam@oceanfree.net>
Message-ID: <c011ka.rc7.ln@mylinuxbox.net>
Source record: 136148

In article <ak0l6i01d7f@enews2.newsguy.com>, newsguy wrote:
> Just wanting to know if one Linux distro is favored over others in regard to
> Amatuer radio and electronics usefulness ? So far I am liking Debian, just
> looking for others ideas please.
> Thanks!

A little OT for this NG but anyway...

It shouldn't really matter which distro you use.
A lot of radio amateurs use Debian. I
use Linux From Scratch or Slackware.

Check out: http://radio.linux.org.au

73, Ed. EI9GQ.

--
Remove 'X' to reply via e-mail.
http://homepage.eircom.net/~ei9gq
Linux 2.4.19

3562. Re: Air-Wound Balun Design Info??

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-21 21:50:10 UTC
From: CAM <Cecil.A.Moore@ieee.org>
Message-ID: <3D640B12.C6AA2DAF@ieee.org>
Source record: 136152

Roy Lewallen wrote:
> It's not clear to me why so many people insist that a balun's impedance
> has to be inductive.

I forget who it was on this newsgroup who insisted that chokes should be inductive rather than resistive and thus prefers some other material over #77. It seemed to me from his posting that the choice was inductive (lower loss) Vs resistive (higher loss). Thanks for enlightening me.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

3563. WB9ETG ?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-21 21:56:19 UTC
From: Reg Edwards <g4fgq.regp@btinternet.com>
Message-ID: <ak12a3$55t$1@helle.btinternet.com>
Source record: 136153

Is there a radio amateur currently using the call WB9ETG ?

Or could that call be bogus ? I have good reasons for the enquiry.

Thank you.
Reg, G4FGQ

3564. Re: WB9ETG ?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-21 22:02:11 UTC
From: Crazy George <munschNO@attglobal.net.SPAM>
Message-ID: <3d641239_4@news1.prserv.net>
Source record: 136154

Reg:
QRZ says it is a current call. Unless you happen to turn up someone who knows the guy, that's probably as good as you can get. From:
http://www.qrz.com/callsign

WB9ETG
JEFFERY E GLASS
317 EUREKA AVE
GENOA IL 60135
USA
--
Crazy George
Remove NO and SPAM from return address
Reg Edwards <g4fgq.regp@btinternet.com> wrote in message
news:ak12a3$55t$1@helle.btinternet.com...
> Is there a radio amateur currently using the call WB9ETG ?
>
> Or could that call be bogus ? I have good reasons for the enquiry.
>
> Thank you.
> Reg, G4FGQ
>
>
>
>

3565. Re: Superposition quiz

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-21 22:03:42 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <3D640E3E.10609@eznec.com>
Source record: 136155

Roy Lewallen wrote:
> Picky, picky. Ok, connect a little itty bitty line for the power to
> bounce around on. Then remove it. Nothing changes. The energy (200 watts
> * round trip time) . . .

Correction. That should be 100 watts * round trip time.

Roy Lewallen, W7EL

3566. Re: Tutorial #2

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-21 22:13:21 UTC
From: aunwin@fgi.net
Message-ID: <c4becf19.0208211413.1b38040a@posting.google.com>
Source record: 136156

aunwin@fgi.net (Art Unwin KB9MZ) wrote in message
news:<c4becf19.0208210538.2fa18672@posting.google.com>...
> aunwin@fgi.net (Art Unwin KB9MZ) wrote in message
news:<c4becf19.0208170652.79737773@posting.google.com>...
> snip
>
> > The combination provides for a much superior radiator than
> > previously known
> Best ragards
> > Art Unwin..KB9MZ.....XG
> >
> THIS IS NOT TRUE AS STATED!
>
> I have some explaining to do.
> When I set out on this project my target was basically to improve
> on what was on the market at that time, and many years have since
> passed by.
> The antenna I was comparing against was the conventional tribander and
> loop.
> Since those days a better antenna came out that has provision for
> shortening or lengthening the radiators. Assuming that the moveable
> element design has no losses my antenna does NOT exhibit MEASURABLE
> GAIN gain, which on this thread is considered to be > 1 db.
> In an hour or so (after breakfast,) I will post the programing
> that I used, 'warts and all' so all can play with it. I will also post
> a program where I used two elements as a beam and was able to reduce
> radiator length by over 3 feet
> per side.(Faulty programing ?)
>
> Posting it for all seems to be the best way of gaining finality. So
> many years have gone by, I'm getting older and more screwed up by
> holding on to thoughts
> that may have been explanable at the time of inception but cannot in
> the present day climate.
>
> Regards
>
> Art Unwin KB9MZ......XG

In my haste to get the previous statement on the web I forgot to
mention the following which is so important when one talks of "gain"
i.e gain over what?
In the past tutorials I likened the similarity to the simple loop
antenna.

In a standard loop case,what you have is the minimum size for 30/10 Mhz.
(And minimum gain)
There are no set conditions on the length of that part that energizes the loop
by coupling. This extreme brings certain disadvantages but the antenna is still operable.
Advantages are obtained versus more room reguired to rotate when this
coupled energizer (a dipole in my case) is lengthened to 200 inches, and there is no restriction to increasing the dipole length even more, but as always with advantages, one has to weigh accompanying disadvantages.
Though many would have seen this when looking at the models presented I felt
it was most important to bring special attention to his added variable, and is also the reason why I chose a shorter dipole versus the 200" that I suggested in earlier posts.
Best regards

Art Unwin KB9MZ.....XG

3567. Re: Air-Wound Balun Design Info??

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-21 22:19:18 UTC
From: nm5k@wt.net
Message-ID: <25eb70d7.0208211419.6ff20541@posting.google.com>
Source record: 136157

CAM <Cecil.A.Moore@ieee.org> wrote in message news:<3D6396B0.1392AB9C@ieee.org>...
> Dan Richardson wrote:
> >
> > On Tue, 20 Aug 2002 21:08:27 -0700, Roy Lewallen <w7el@eznec.com>
> > wrote:
> >
> > >(except that you should wind the
> > >coil like a coil of rope or an extension cord, not carefully spaced as
> > >mistakenly described in recent Antenna Books)
> >
> > Okay Roy, I've got to ask. Why?
>
> In other words, if we are trying to create inductive reactance, why
> doesn't that coil of coax follow the same boundary conditions as a
> coil of bare wire? If we coil the two end loops on top of each
> other, aren't we providing a capacitive path around the inductance?

I wonder about this myself. I was reading results from this page:
http://www.k1ttt.net/technote/airbalun.html,
and it seems to indicate that winding the chokes as a coil is
preferred as far as higher frequency use. Less interwinding
capacitance, and better choking at high frequencies. Now, myself, I
have made them both ways, and both seem to work, but I never made any
comparisons. Being I used both types mainly at the design frequency, I
probably wouldn't notice any difference. I do note that the
instructions for my 20-10m A4S say to wind the choke as a coil, but I
don't know if that advice is due to actual testing. I assume they must
have done some..?? But anyway, from what I read on the above web page,
it would seem a coiled choke would be better than a bunched one. At
least on the higher frequencies used. MK

3568. Re: Fan Dipole 160/80/40/20

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-21 22:29:11 UTC
From: Dave Allen <david_e_allen@agilent.com>
Message-ID: <3D641437.7080401@agilent.com>
Source record: 136160

I would suspect the 20m leg(s) rather than 80m. I have an 80 / 40 vee
and they get along fine. The "general" rule (ie the way it seems to
work) is that going past two bands is asking for trouble.

And it could be the 160m antenna looking like a 3/2 wave antenna for
"53m" which is throwing the 40m legs off.

dave, wb0taq

Mark Keith wrote:

>"Terry Crissman" <tcrissman@simplynet.net> wrote in message
news:<um60ttl5u39ae7@corp.supernews.com>...
>
>>I've got a fan dipole up at 50 ft for 160/80/40/20 meters...all bands tune
>>nicely except for 40 meters. Any ideas on why 40 won't tune?
>>
>>thanks
>>
>>Terry
>>
>
>It's probably coupling to the 80 m antenna.
>

3569. Re: Superposition quiz

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-21 22:29:19 UTC
From: Reg Edwards <g4fgq.regp@btinternet.com>
Message-ID: <ak147udoq1@paris.btinternet.com>
Source record: 136158

The whole concept of reflected power is a load of completely unecessary nonsense.

That's why nobody can understand what it's all about.

In any case, if anybody imagines he knows what the reflected steady-state power might be of what use is that 'vital' snippet of information ?

But no doubt someone will come in with the usual never-ending circular argument. ;o)

Regards, Reg, G4FGQ.

3570. Looking for a good 10 meter vertical

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-21 22:38:09 UTC
From: Jon Eckert <jpeckert@execpc.com>
Message-ID: <3d64140d$0$1427$272ea4a1@news.execpc.com>
Source record: 136159

Hi, I'm looking for a good 10 meter vertical to go on the roof. I have a Solarcon AR99 up now and that works fairly well, just wondering if there is something out there that works better and how much better is it as compared to the AR99. Thanks, Jon W9JPE

3571. Re: Air-Wound Balun Design Info??

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-21 22:44:37 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <3D6417D5.5040605@eznec.com>
Source record: 136161

The impedances reported on that page are quite similar to the ones I saw with the flat coils. What makes them better?

Roy Lewallen, W7EL

Mark Keith wrote:
>
> I wonder about this myself. I was reading results from this page:
> http://www.k1ttt.net/technote/airbalun.html,
> and it seems to indicate that winding the chokes as a coil is
> preferred as far as higher frequency use. Less interwinding
> capacitance, and better choking at high frequencies. Now, myself, I
> have made them both ways, and both seem to work, but I never made any
> comparisons. Being I used both types mainly at the design frequency, I
> probably wouldn't notice any difference. I do note that the
> instructions for my 20-10m A4S say to wind the choke as a coil, but I
> don't know if that advice is due to actual testing. I assume they must
> have done some..?? But anyway, from what I read on the above web page,
> it would seem a coiled choke would be better than a bunched one. At
> least on the higher frequencies used. MK

3572. Re: WB9ETG ?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-21 22:58:29 UTC
From: Reg Edwards <g4fgq.regp@btinternet.com>
Message-ID: <ak15ul$k9k$1@knossos.btinternet.com>
Source record: 136162

Thank you Crazy George, plus another private e-mail, for your rapid response. I am satisfied both call and person are quite genuine. I trust no offense has been caused by this little publicity of the call-holder's details.

Regards to all, Reg, G4FGQ

3573. Re: Air-Wound Balun Design Info??

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-22 00:06:47 UTC
From: n2ey@aol.com
Message-ID: <20020821200647.28714.00000198@mb-cc.aol.com>
Source record: 136163

In article <3D63F58F.40505@eznec.com>, Roy Lewallen <w7el@eznec.com> writes:

>And
>thought I just said that the baluns are good over about three bands.

It took a while, but it finally dawned on me that "three bands" in this context means about a 2:1 frequency rane, not 4:1.

>The
>resonant frequency of the circuit is centered in the recommended
>frequency range. The bandwidth varies among the various sizes, but in
>all cases is sufficient to provide more than 500 ohms or so of impedance
>over the three recommended bands. I've only been able to locate some of
>the original data, but here's the impedance of one of the
>configurations, 10 feet of RG-58, 7 turns, recommended for 10 MHz, and
>also as the best compromise for the full 3.5 - 30 MHz range:
>
>Freq MHz Z ohms
>
> 2 128
> 3.5 244
> 7 854
> 10 10.8k
> 14 848
> 21 351
> 30 198
>
>Impedance at resonance, 9.9 MHz, is 12.7k ohms. As you can see, the
>impedance is adequate for standard applications from 7 - 14 MHz. It's
>marginal beyond that, but still provides some choking action.

10 feet wound into a 7 turn coil works out to about a 5-1/2 inch diameter coil. Apparent inductance at 2 MHz is about 10.2 uH (negelcting self-capacitance)

What if we wound that 10 feet of RG-58 into a solenoid? Using a 3 inch form and close-winding, we'll have a little less than 13 turns and the inductance will be about 8.4 uH. But the self-resonant frequency will be much higher.

Neglecting self-capacitance, the impedance of an 8.4 uH solenoid will be:

2 105
3.5 185
7 370
14 740
21 1480

Has anybody actually made a solenoid like this and measured its impedance?

I did some tests on a smaller coil that I happened to have. 2 inch diameter, 2 inch winding length, about 9-1/4 turns, inductance about 3.2 uH. Dip meter says it self-resonates at 56 MHz. This little coil uses less than 5 feet of RG-58 and would only be adequate on 20 (barely) and above.

Looking at all this it becomes clear why beads and toroids are so popular ;-)

73 de Jim, N2EY

3574. Re: Fan Dipole 160/80/40/20

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-22 00:08:18 UTC
From: dplatt@radagast.org
Message-ID: <um8ari3cj4nre0@corp.supernews.com>
Source record: 136164

>I would suspect the 20m leg(s) rather than 80m. I have an 80 / 40 vee
>and they get along fine. The "general" rule (ie the way it seems to
>work) is that going past two bands is asking for trouble.

My own is a three-wire 40/20/10, with each wire being suspended from the next-longer one using 5" flat-fiberglass spacers. It's an inverted V, top at 25', ends at around 12'.

I didn't have any trouble trimming it to resonance in all three bands (having an antenna analyzer handy made it a lot easier than it would have been otherwise).

The only quirk I've noticed is that the third-harmonic resonance on the 40 wire is well outside the 15-meter band - I suspect this is due to coupling with the 20-meter dipole. It's close enough that my rig's ATU can cope, though, so it's not a big deal.

Can't do a thing on 30 or 17 or 12, though - the SWR is sky-high.

--
Dave Platt <dplatt@radagast.org> AE6EO
Hosting the Jade Warrior home page: http://www.radagast.org/jade-warrior
I do _not_ wish to receive unsolicited commercial email, and I will boycott any company which has the gall to send me such ads!

3575. Re: Superposition quiz

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-22 00:11:26 UTC
From: n7ws_at_yahoo.com
Message-ID: <3d642920.21762563@news.triconet.org>
Source record: 136165

On Wed, 21 Aug 2002 14:31:08 -0700, Roy Lewallen <w7el@eznec.com> wrote:

|Picky, picky. Ok, connect a little itty bitty line for the power to
|bounce around on.

Ah ha. You just need to amend your original statement to read:

"So we can model a 100 watt forward, 50 ohm nominal transmitter as a
141.4 volt (100 * sqrt(2)) RMS voltage source in series with a 50 ohm
resistance. If we connect this to a 50 ohm transmission line of any
length greater than zero, ..."

then all of us fussbudgets, nitpickers and curmudgeons (except maybe for Reg and
Cecil <g>) will be happy.

3576. Re: Air-Wound Balun Design Info??

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-22 00:25:20 UTC
From: n7ws_at_yahoo.com
Message-ID: <3d642c61.22595277@news.triconet.org>
Source record: 136166

On Wed, 21 Aug 2002 21:20:17 +0000 (UTC), "Reg Edwards"
<g4fgq.regp@btinternet.com> wrote:

|Every solenoid, whether it is used as a tank coil, a choke, a helical
|antenna, or bent round to form a toroid, has self capacitance which
|resonates with the self inductance.
|
|When there are more than just a few turns on a solenoid the capacitance
|between turns forms an insignificant fraction of the total capacitance.
|Why? Because the resulting end-to-end capacitance is 1/Nth of the
|capacitance between two adjacent turns and so is very small. The little bits
|are all in series. That the turn-to-turn capacitance is the only capacitance
|is an old wives tale repeated by people who don't think about it.

Right. Also, to paraphrase the reference below, "When there are a lot of
closely-spaced turns (where wives would guess the turn-to-turn capacitance is
high) the voltage-phase difference between adjacent turns is very small so
essentially the capacitance is shorted." (He didn't say the wives part.)

See: "Filters and an Oscillator Using a New Solenoid Model", by Randy Rhea,
Applied Microwave and Wireless, November 2000, pp. 30-42.

|
|Nearly all the self capacitance of a multi-turn, close-eound solenoid is
|similar to that between the two halves of solid cylinder of the same
|dimensions as the coil. It is, of course, distributed along its length. The
|effective capacitance, considered as a lump across the ends of the coil, is
|calculable and so is the resonant frequency.
|
|The resonant frequency of a solenoid choke or balun can easily be measured
|with an antenna analyser. At HF it has a very high Q. But because the
|impedance is very high a choke is effective over a very wide band.
|---
|Regards, Reg
|
|

3577. Re: Ham flavored Linux :)

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-22 00:27:37 UTC
From: Wayne Faris <ke0bz@arrl.net>
Message-ID: <3D642FF9.8741A492@arrl.net>
Source record: 136167

newsguy wrote:

> Just wanting to know if one Linux distro is favored over others in regard to
> Amatuer radio and electronics usefulness ? So far I am liking Debian, just
> looking for others ideas please.
> Thanks!

All are generally just as usefull. Some are more user friendly than others.
One thing that makes Debian stand out is that it runs great on old IBM PS-2
machines (like my Model 95). These old monsters are about the most rf immune
machines around and are perfect for around the ham shack. Just my 2 cents
worth.

Wayne L. Faris, KEï¿½BZ

3578. Re: Superposition quiz

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-22 00:35:41 UTC
From: richardharrison@webtv.net
Message-ID: <4736-3D6431DD-101@storefull-2393.public.lawson.webtv.net>
Source record: 136168

Reg, G4FGQ wrote:
"The whole concept of reflected power is a load of completely unnecessary nonsesse."

Surely Reg has used trough lines and Lecher lines to determine frequency, matching, etc. He may even have used a Bird wattmeter or an equivalent.

If there were no reflections, there would be no SWR to produce those maxima and minima which are handily measured with a trough (slotted) line.

Best regards, Richard Harrison, KB5WZI

3579. Hustler 6BVT vertical

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-22 01:16:03 UTC
From: vswrref@hotmail.com
Message-ID: <3d643a80.656875@national-news.stargate.net>
Source record: 136169

Hi all!

Wondering if anybody is currently using, or has used the Hustler 6BVT HF vertical and what your thoughts, likes and dislikes of it, are. How does it work on the bands, with or without the radials. Looking forrward to seeing the posts.

Jeff Y.

3580. Re: New tower = many questions

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-22 02:04:03 UTC
From: aunwin@fgi.net
Message-ID: <c4becf19.0208211804.5446998b@posting.google.com>
Source record: 136170

May I share with you what happened years ago with my fold over Rohn
45.
It failed when being folded over. The failure occured on the upper
most corner
where the member failed under tension with all the characteristic
'necking'
before failure. I then did the necessary engineering calculations only
to find there was no safety factor designed in which leaves you very
much at the mercy
of quality factors and control on incoming steel and unconcious
stresses imposed
before and during assembly.If the design was to be used under
conditions where people are expected to be in the area such as a hoist
a safety factor of at least 3 would have to be designed in. Rohn can
design with zero safety factor since it is expected that no one will
be in the near vicinity. The fold over design was later corrected by
the addition of stress bearing plates.
Another thing to be concerned with when looking at wind tables is to
remember
that at any time a high gust of wind can occur over the maximum
specified.
Since you live in an area where storms occur how are you going to
justify
1. a gust did not occur
2. Your construction met all engineering requirements of the tower
manufacturer
so that liability can be assigned to him.
3 That structural damage did not occur when the tower was initially
blown over.
4.Everything would have been O.K. if the child had not wandered under
it.

If the tower is not going to be guyed I would at least halve the
intended height.
Think more than twice before you proceed. What do you really regard as
the most valuable to you other than the tower height. Possibly your
family will be right up there.
Art Unwin KB9MZ......XG

May I "Chester Alderman" <calderman@cox.net> wrote in message
news:<HHz79.63229$Pb.2294167@news2.east.cox.net>...
> JW....
>
> Your planning on a REAL disaster, for sure. A Rohn 45 is not a small
> tower and the only way you can install it safely is by knowing exactly what

> you are doing!!!! You want it to survive strong winds; you want it to
> survive a tornado, yet you do not want to put guy wires on it!!!
>
> Two things I suggest you do BEFORE you consider doing anything with
> those tower sections. One is to go to www.contesting.com and look in the
> TowerTalk reflector, read back for several months everything you can about
> the Rohn 45, THEN put these same questions to that very knowledgale group.
> Then, do not take their answers as gospil, go to the Rohn web site and read
> their published information on the Rohn 45.
>
> The main point about putting up a tower is YOU NEVER DO ANYTHING EXCEPT
> INSTALL IT EXACTLY THE WAY THE MANUFACTURER SPECIFIES!!! Tower manufacturers
> had professional engineers design these things and us AMATEUR's do not know
> how to do it better than those engineers do. Don't go 'cheap' or one day
> your going to have it laying on top of your house.
>
> Be safe, do a good job, and then enjoy your tower for a long time.
>
> 73,
> Tom/W4BQF
>
>
>
> "JWheeler" <kd5bcu@yahoo.com> wrote in message
> news:ultflvos7ioe14@corp.supernews.com...
> > I have just become the proud new owner of about 70 feet of Rohn 45.
> The
> > reason I have this new tower is that a tornado blew it over. It was the
> > property of my local club until said tornado came through a couple of
> years
> > ago and nicely deposited most of it in a stand of pine trees. There is
> > remained until a few weeks ago. It started out as about 190 feet, but
> only
> > about 150 of those could be salvaged. Another member of the club and I,
> > being the only current club members needing towers, divided up the
> salvaged
> > sections. I hope, in the next few weeks, to host a tower raising party.
> > Before that time comes, I need to do a good deal of research. I am pretty
> > sure there are a good number of experts who frequent this forum (good
> > amateurs are welcome, too). All of the basic nightmares have started
> coming
> > to mind now that I have it sitting in the backyard. What if it falls!!!
> > Ok, none of that. I want to be sure to over compensate when this thing
> goes
> > in. I am going to have a custom tilt-over base made since I have a
> > friend/fellow ham who works for a local utility company and can call in a
> > few favors with the guys at the machine shop. Why spend mega-bucks when
> you
> > can have a better-than-retail version built on the cheap (maybe even
> free)?

> > Right?
> > At any rate:
> > 1. What do I need to look at to make sure this thing stays up until
> I'm
> > ready for it to come down?
> > a. What dimensions do I need to start with on the hole? Ball
> > park estimates are okay. I plan to go bigger than the average suggestions
> > just to be sure.
> > b. What are some good suggestions on types of material for
> this
> > custom base plate?
> > c. At 70 feet, does this thing need to be guyed? Please say
> > no... my wife won't be happy if she has to look at my ugly (her words)
> tower
> > AND deal with the presence of guy wires in her yard.
> > d. What's the easiest way to stand one of these things up?
> > z. What have I missed? .
> >
> > I know that windload is going to be an issue. I currently have a 10
> > element 2 meter beam, but may add a 2nd beam to have a stacked array. I
> may
> > also decide to part with both beams and opt instead for an array of
> stacked
> > 4 element quads. My current HF antenna is the standard inverted-V, but I
> > hope in the near future to add a triband beam to the mix. I will also
> > anchor one corner of an 80 meter full wave loop on a leg of the tower. If
> > possible, I'm going to erect this thing far enough away from the house
> that,
> > if it does fall, it won't land on any structure, but as stated above, I
> want
> > to be sure it won't fall from anything short of direct intervention from
> > God.
> > I live in East Texas, where thunderstorms are not uncommon. High
> winds
> > often accompany these storms. Then, there is the occasional tornado, such
> > as the one I have to thank (?) for my new tower. To the naked eye, these
> > tower sections are in remarkable condition knowing what they have gone
> > through. I look forward to any and all advice.
> >
> > Thanks in advance,
> >
> > JWheeler
> > KC5AV
> >
> > I'm sure I've taken an ultra-simple look at this, so be gentle
> >
> >

3581. Re: TUTORIAL final,final

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-22 02:16:44 UTC
From: 'Doc <w5lz@icok.net>
Message-ID: <3D644971.7D2DC82A@icok.net>
Source record: 136171

Art,
After going through your program results, connecting all
the dots, all I get is a picture of 'Goofy'. I'm waiting
for the next installment of your tutorial. I'll bet that
one will be a picture of 'Elmer Fudd'! I like 'Elmer'.
'Doc

3582. Re: Ocimba? Please Contact me Abe!

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-22 02:23:59 UTC
From: ocibma@aol.com
Message-ID: <20020821222359.03718.00002687@mb-fq.aol.com>
Source record: 136172

immmmm hereeeee abe please reply know about crasdhes ha ha

3583. Re: Superposition quiz

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-22 03:11:18 UTC
From: Bart Rowlett <bart@wb6hqk.ampr.org>
Message-ID: <3D645656.CD753046@wb6hqk.ampr.org>
Source record: 136173

CAM wrote:
>
> Richard Harrison wrote:
> > Zo is controlled by construction of the line. This simplifies the math.
> > It allows power to be added and subtracted.
>
> Let's be sure everyone understands there's no such thing as negative
> power.

Power is defined as the time rate of change of the energy contained
within a closed system. Most systems have the property that energy can
either increase or decrease. Therefore power can be either positive,
negative or zero.

bart
wb6hqk

3584. Re: Air-Wound Balun Design Info??

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-22 03:20:29 UTC
From: nm5k@wt.net
Message-ID: <25eb70d7.0208211920.1c5190e1@posting.google.com>
Source record: 136174

Roy Lewallen <w7el@eznec.com> wrote in message
>
> A few years ago, someone unknown to me who didn't understand how the
> baluns worked decided that the shunt capacitance was a bad thing. (It's
> actually essential to the creation of the resonant circuit which is
> responsible for the high impedance.) The folks at the ARRL were
> convinced, and the text was changed to specify a winding technique to
> minimize the shunt capacitance. This would raise the resonant frequency
> of the loop and reduce the balun's effectiveness at the design frequency
> by lowering the impedance. I found out about the change just a couple of
> months ago via this newsgroup, where I was surprised to be told that I
> couldn't be right about how to wind them because the Antenna Book says
> to do it differently! I've pointed out the problem to Dean Straw, the
> Antenna Book editor, and he'll have it changed back in the next edition.
> Hopefully the Handbook will follow suit if it's been changed.

Ok, That page I pointed out earlier must be the info you refer to. I
got you now. It is the faulty info it seems. MK

3585. Re: Superposition quiz

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-22 03:21:53 UTC
From: CAM <Cecil.A.Moore@ieee.org>
Message-ID: <3D6458D1.EC9496F7@ieee.org>
Source record: 136176

Reg Edwards wrote:
> In any case, if anybody imagines he knows what the reflected steady-state
> power might be of what use is that 'vital' snippet of information ?

Reflected power causes a quarterwave transformer to work.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

3586. Re: Air-Wound Balun Design Info??

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-22 03:22:19 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <3D6458EB.8070006@eznec.com>
Source record: 136175

N2EY wrote:
> . . .
> Neglecting self-capacitance, the impedance of an 8.4 uH solenoid will be:
>
> 2 105
> 3.5 185
> 7 370
> 14 740
> 21 1480
>
> Has anybody actually made a solenoid like this and measured its impedance?
> . . .

Yep. See http://www.k1ttt.net/technote/airbalun.html.

Roy Lewallen, W7EL

3587. Re: Superposition quiz

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-22 03:27:34 UTC
From: tdonaly@aol.com
Message-ID: <20020821232734.07529.00002478@mb-ct.aol.com>
Source record: 136177

Wes wrote,
>
>On Wed, 21 Aug 2002 14:31:08 -0700, Roy Lewallen <w7el@eznec.com> wrote:
>
>|Picky, picky. Ok, connect a little itty bitty line for the power to
>|bounce around on.
>
>Ah ha. You just need to amend your original statement to read:
>
>"So we can model a 100 watt forward, 50 ohm nominal transmitter as a
>141.4 volt (100 * sqrt(2)) RMS voltage source in series with a 50 ohm
>resistance. If we connect this to a 50 ohm transmission line of any
>length greater than zero, ..."
>
>then all of us fussbudgets, nitpickers and curmudgeons (except maybe for Reg
>and
>Cecil <g>) will be happy.
>

Does it really matter what the characteristic impedance of an infinitesimal
transmission line is?

Tom Donaly KA6RUH

3588. Re: TUTORIAL final,final

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-22 03:30:08 UTC
From: tdonaly@aol.com
Message-ID: <20020821233008.07529.00002481@mb-ct.aol.com>
Source record: 136178

'Doc wrote,
>
>Art,
> After going through your program results, connecting all
>the dots, all I get is a picture of 'Goofy'. I'm waiting
>for the next installment of your tutorial. I'll bet that
>one will be a picture of 'Elmer Fudd'! I like 'Elmer'.
> 'Doc
>
>

Y'know Doc, everyone hates a smartass.
73,
Tom Donaly KA6RUH

3589. Re: Superposition quiz

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-22 03:33:33 UTC
From: CAM <Cecil.A.Moore@ieee.org>
Message-ID: <3D645B8D.6E3D3FC9@ieee.org>
Source record: 136179

Bart Rowlett wrote:
>
> CAM wrote:
> >
> > Richard Harrison wrote:
> > > Zo is controlled by construction of the line. This simplifies the math.
> > > It allows power to be added and subtracted.
> >
> > Let's be sure everyone understands there's no such thing as negative
> > power.
>
> Power is defined as the time rate of change of the energy contained
> within a closed system. Most systems have the property that energy can
> either increase or decrease. Therefore power can be either positive,
> negative or zero.

Point is that power is a scalar, like water is a scalar. Have
you ever seen a bucket of negative water?
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
------== Over 80,000 Newsgroups - 16 Different Servers! =-----

3590. Re: Air-Wound Balun Design Info??

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-22 05:21:39 UTC
From: nm5k@wt.net
Message-ID: <25eb70d7.0208212121.7553156b@posting.google.com>
Source record: 136180

Roy Lewallen <w7el@eznec.com> wrote in message news:<3D6417D5.5040605@eznec.com>...
> The impedances reported on that page are quite similar to the ones I saw
> with the flat coils. What makes them better?
>
> Roy Lewallen, W7EL

He said he saw a difference between the two types of windings. I
didn't directly compare his impedances with yours. I quote:
"Whencompared to the single-layer version of the same diameter and
number
of turns, the bunched baluns show a large downward shift in parallel
self-resonance frequency and poor choking reactance at the
higherfrequencies.
"
Is this the same test, or info, from a few years ago that you didn't
agree with? MK

3591. Re: Fan Dipole 160/80/40/20

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-22 05:39:49 UTC
From: nm5k@wt.net
Message-ID: <25eb70d7.0208212139.5c020f21@posting.google.com>
Source record: 136181

Dave Allen <david_e_allen@agilent.com> wrote in message
news:<3D641437.7080401@agilent.com>...
> I would suspect the 20m leg(s) rather than 80m. I have an 80 / 40 vee
> and they get along fine. The "general" rule (ie the way it seems to
> work) is that going past two bands is asking for trouble.
>
> And it could be the 160m antenna looking like a 3/2 wave antenna for
> "53m" which is throwing the 40m legs off.
>
> dave, wb0taq

Dunno... I have made dozens of these antennas over the years. Not a single time have I seen a coupling problem on one band caused by a higher band element. It's always been from a lower band one. In my cases with 40m problems, it's almost always been coupling to the 80m legs. But many of those times I wasn't using 160m, so couldn't comment on that. I always start tuning from the lowest band, and go up one by one. You can have about as many bands as you want, but being as coupling is much more likely between some elements, that means you will have to tweak the wire for a better match on some bands, IE: offset the feedpoint slightly. Starting from the high band and dropping will be like a dog chasing it's tail. The tweaks you make to the lower antenna effect the higher in many cases, and it's a never ending chase. This will almost never be a problem starting low, and going up band by band.
Or move the wire to a different location and try. And you can expect the pattern to be altered some with the coupling to other legs. But the antenna will still be very efficient on all it's tuned bands. With two dipoles at right angles, there is almost zero coupling. I've had "other band" legs break, or fall down, and make no difference at all to the other band when at right angles. MK

3592. Re: Superposition quiz

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-22 06:15:15 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <3D648173.2070105@eznec.com>
Source record: 136182

From Pearson and Maler's _Introductory Circuit Analysis_:

"For our conventions the power to the right [in a simple circuit] is

p = vi = VI*cos(omega*t + phiv)*cos(omega*t + phii)"

From Van Valkenburg' _Network Analysis_:

"The rate at which energy is being absorbed is the power given by

p = dw/dt = v(t)/i(t) W (watts)

. . . For the voltage and current references shown, a positive p
indicates a flow of energy into the network, negative p out of the
network. . .

[for the steady state and a resistive load, power is]

pR = RIm^2*sin^2(omega*t) W

[and for steady state and a capacitive load, power is]

pC = (Vm*sin(omega*t))*(C*Vm*omega*cos(omega*t))"

Are these what you call a scalar?

Roy Lewallen, W7EL

CAM wrote:
> Point is that power is a scalar, like water is a scalar. Have
> you ever seen a bucket of negative water?

3593. lightning protection and general grounding questions...

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-22 06:36:53 UTC
From: Andreas Hofmann <andreash23@hotmail.com>
Message-ID: <3d648682$1@news.microsoft.com>
Source record: 136183

I was reading up in the "Antenna book" and a couple of posts as well. Some of my questions remain. Here is the context:

I have a multiband dipole outside and currently just take the coax through the window, that is not going to fly in the winter season. No ground yet. I am thinking of routing the coax to the back of my ham desk on teh outside of the house, then go through the wall. This is where a grounding switch should be, so the antenna is grounded if not in use. Also, at the same point the main station ground is going to leave my shack and lead to the ground (7ft on the outside wall) where a copper water pipe will be driven into the ground.

Questions:
1. I would like to use a coax switch to ground the antenna if not in use. The MFJ 1704 has a built-in lightning surge protector. Is it safe (in terms of lightning protection) to set this switch into the ground position (and disconnect the TX side if I go away from my shack for longer periods)?

2. Is it safe to use a combined safety and station ground (HF)? Would be nice if I just had to connect all my equipment with the ground on the coax switch (which is grounded) and be done... In case of a lightning, I am worried that I damage my equipment though. How can this be handled correclty?

Thanks for you tips in advance,

Andreas, KU7T

3594. Re: Superposition quiz

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-22 06:58:46 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <3D648BA6.5000107@eznec.com>
Source record: 136184

I'll leave it to the mathematicians and philosophers (the latter not lacking on this group) to discuss the different sizes of zero.

Roy Lewallen, W7EL

Tdonaly wrote:
>
> Does it really matter what the characteristic impedance of an infinitesimal
> transmission line is?

3595. Re: Air-Wound Balun Design Info??

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-22 07:31:28 UTC
From: post_to_usenet@hotmail.com
Message-ID: <b6b4e772.0208212331.33ac0eb8@posting.google.com>
Source record: 136185

Just guessing...

I have never worked with tubes, but something I remember to have read as usual practice is about multi winding chokes with enough distance between the windings to make them work separately and be effective at different frequency ranges. Something like:

```
___
_)
_)
_)
_)
|
|_
_)
___)
```

Could this be used for a multiband antenna? Could you coil 6 turns for the upper bands and then leave some distance (10~15") and make a second 12 turns coil on the same PVC pipe for the lower bands?

Unfortunately I do not have access any more to the HP impedance analyzer at my faculty's measurement lab, but it seems a nice way of learning to spend a couple of evenings playing with different coil forms / combinations / etc. By the way: If I managed to get access again to the analyzer, how do you measure the common mode impedance? Do you parallel the inner and outer conductors in the coax and use it as a single impedance?

Toni

3596. Re: Air-Wound Balun Design Info??

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-22 08:20:45 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <3D649EDD.3010005@eznec.com>
Source record: 136187

My objection was that the original dimensions I had given were still present in the _Antenna Book_, but the directions for winding them had been altered. This would produce an inferior result.

The text you quote isn't comparing a balun of the "coil-of-rope" type at resonance to a solenoidal one at resonance. As you can see from the web site information and what I posted, both methods give approximately comparable results when each is done correctly.

Roy Lewallen, W7EL

Mark Keith wrote:
> Roy Lewallen <w7el@eznec.com> wrote in message news:<3D6417D5.5040605@eznec.com>...
>
>>The impedances reported on that page are quite similar to the ones I saw
>>with the flat coils. What makes them better?
>>
>>Roy Lewallen, W7EL
>
>
> He said he saw a difference between the two types of windings. I
> didn't directly compare his impedances with yours. I quote:
> "Whencompared to the single-layer version of the same diameter and
> number
> of turns, the bunched baluns show a large downward shift in parallel
> self-resonance frequency and poor choking reactance at the
> higherfrequencies.
> "
> Is this the same test, or info, from a few years ago that you didn't
> agree with? MK

3597. Looking for datasheet for AP-8A

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-22 09:51:09 UTC
From: Igor <maillist@rts-ukraine.com>
Message-ID: <ak2bpk$30es$1@pandora.alkar.net>
Source record: 136188

Hello All,

I am going to buy the multiband vertical AP-8A. I have an offer for reasonable price for 4 years old antenna which was not in use at all.

But I was not able to find any datasheet/description on cushcraft's web.

As far as I understood this antenna is obsolete now and R8 is a new model.

Can anybody send me an information on Ap-8A (bands, bandwidths, SWRs, maximum input power, installation requirements/restrictions, etc) as well as personal impression from this antenna.

Regards & 73,
Igor (ur5eoa)

3598. FS: Kraus and Marhefka: Antennas for all Applications

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-22 10:14:01 UTC
From: fractenna@aol.com
Message-ID: <20020822061401.28630.00001591@mb-mn.aol.com>
Source record: 136189

This is the 3rd edition of 'Kraus'. Brand new. Hardcover. $135 List. Selling for $75. U Pay Shipping.

Reason for selling: need many copies of 'Kraus' and used, first edition copies meet my present needs.

E-mail response please.

73,
Chip N1IR

3599. 603 beam and tower 4sale

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-22 10:43:59 UTC
From: Jeff <j.dauphinais@worldnet.att.net>
Message-ID: <Pf399.5862$NZ.325423@bgtnsc05-news.ops.worldnet.att.net>
Source record: 136190
Cross-posted to: rec.radio.amateur.equipment,rec.radio.amateur.antenna,rec.radio.amateur.homebrew,rec.radio.amateur.misc

I have for sale 1 full size "HY-Gain" beam 10 meters. fully assembled for your inspection. 13' Boom and longest element is 22' $100.00 I also have a steel tower totaling 25'. this is in 3 sections 1 10 foot st8 and 1 5foot st8 and 1 10 foot top section. I don't not have a rotator. $50.00. pickup only from Nashua,NewHampshire. I am selling these because they are to big for my new QTH. This beam has spent a large portion of its life in storage. 73's Jeff AA1GR

3600. Discone Theory Question ?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-22 11:20:45 UTC
From: Robert Rose <rgsrose@tiac.net>
Message-ID: <ak2hl2$60l$1@slb5.atl.mindspring.net>
Source record: 136191

Hello:

This is one of those just-wondering tyoe of questions:

My 20 year old Antenna Specialists Discone (receive only; I use for >30 MHz) has 3 radial arms,

I see that "many" of new ones on the market now, e.g., the Radio Shack version, has considerably more.

Could anyone explain the advantages, if any, of the greater number? Three usually enough?

In one of my previous Discone questions, I was advised that it makes no difference if the arms are truly grounded in the conventional manner at the antenna via a wire to a water pipe as an example, OR not.

Trying to understand a bit more on this. Is it that a "virtual" ground, or image" is set up by the arms?

I guess what I don't understand is how they can function 'exactly' the same if they are grounded, OR not grounded.

Seems like there would be "some" (small?) difference between doing so, or not doing so, even if not required.

Might someone explain the theory, a little, for me?

Much thanks,
Bob

3601. Ubdate: Wanted--Kraus Edition 1 (Used)

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-22 11:36:26 UTC
From: fractenna@aol.com
Message-ID: <20020822073626.19565.00001941@mb-mf.aol.com>
Source record: 136192

Thanks for the OM's who sold me the copies. I am now looking for an additional 5. The going rate on the used book links is about $40, so I can go there if needed. If you want to part with yours in the next 3 weeks or so, please drop me an e-mail.

Thanks!

73,
Chip N1IR

3602. Re: Superposition quiz

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-22 11:39:44 UTC
From: richardharrison@webtv.net
Message-ID: <3228-3D64CD80-120@storefull-2397.public.lawson.webtv.net>
Source record: 136193

CAM, W5DXP wrote:
"---there is no such thing as negative power."

Sure is. Ten to the minus tenth power is the same as one over ten to the plus ten.

If power is defined as the rate of doing work, wouldn`t negative power be the rate of undoing it?

Seems negative power is arbitrary. Take an automobile ammeter. Charging is marked plus. Discharging is marked minus. Were the meter marked battery, it would make sense to label the discharge rate as plus for load current delivery.

Best regards, Richard Harrison, KB5WZI

3603. Re: lightning protection and general grounding questions...

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-22 12:46:26 UTC
From: richardharrison@webtv.net
Message-ID: <19116-3D64DD22-129@storefull-2398.public.lawson.webtv.net>
Source record: 136194

Andreas, KU7T wrote:
"---the main ground lead is going to leave my shack and lead to the ground (7 ft on the outside wall) where a copper water pipe will be driven in the ground."

Use approved clamps for connections to grounded rods and pipes. Connect the driven pipe to the structure`s electrical ground at the power meter as required by code.

Lightning exposure is via the exterior of the coax shield. Ground this at the power meter ground or as second choice at your station ground before entering the building with it.

What you with the coax after it`s grounded outside the station doesn`t make much difference to the lightning protection. If you ground coax at the electric power meter ground, it`s best to approximately share the path of electrical service to the shack to minimize difference in induced currents between electric service and coax to your radio. This minimizes voltage across the radio.

If you don`t ground the coax outside, lightning could share the impedance between the station and its ground. This could expose the station to very high potentials.

Best regards, Richard Harrison, KB5WZI

3604. Re: Looking for a good 10 meter vertical

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-22 13:23:43 UTC
From: Dennis Kaylor <k4oxg@tampabay.rr.com>
Message-ID: <3D64E5B9.3E5B6663@tampabay.rr.com>
Source record: 136195

hey jon
i have used ringo rangers and other types of verticals on 10 meters and they still dont perform as well as my antron 99
if yours isnt working as well as you think it should try replacing the coax with a better grade of coax something like RG213 or 9913f
would be good
have fun

Jon Eckert wrote:

> Hi, I'm looking for a good 10 meter vertical to go on the roof. I have a
> Solarcon AR99 up now and that works fairly well, just wondering if there
> is something out there that works better and how much better is it as
> compared to the AR99. Thanks, Jon W9JPE

3605. Re: Paint my antenna?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-22 13:25:59 UTC
From: cprstn54zz@att.net
Message-ID: <3d64dc2b.174950156@news-server.optonline.net>
Source record: 136196

On Mon, 24 Jun 2002 14:09:15 GMT, cprstn54zz@att.net (Ken) wrote:
>I need to make a Comet GP-15 8' tri-bander a little less obvious.
>What is a good camo color where sky is the background from one side
>and trees from the other? I can't paint each side with a different
>scheme, since it can be seen from 360 degrees. I was thinking a
>light-medium grey. Anyone know a specific brand/color that did a good
>job for them?

I got a nice result starting with Moorgard latex acrylic in
"Sapphireberry" ($10/qt). To a half-pint of this I added 15 drops of
lamp black universal colorant.

I prefer a brush to spraying because with a skinny antenna, you waste
around 75% of the spray paint. Moreover, no one can see the brush
marks except the birds.

Ken KC2JDY

Ken
(to reply via email
remove "zz" from address)

3606. Re: lightning protection and general grounding questions...

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-22 13:45:21 UTC
From: cprstn54zz@att.net
Message-ID: <3d64e708.177731250@news-server.optonline.net>
Source record: 136197

On Wed, 21 Aug 2002 23:36:53 -0700, "Andreas Hofmann"
<andreash23@hotmail.com> wrote:
>I was reading up in the "Antenna book" and a couple of posts as well. Some
>of my questions remain.

I too am putting my shack together and think I learned a thing or two
along the way that might be correct and might be helpful. Much of the
published information is incomplete, inapplicable, overly general or
misleading. My conclusions:

(1) Forget about lightning protection. You don't need it unless you
need to transmit in a thunderstorm. Just disconnect your antenna. Or
you can use a switch to disconnect your antenna when not in use. The
MFJ_ will also provide surge protection against current induced by
nearby strikes if you forget. Run the switch ground to your house
ground, just like the surge protector on your PC. This will also
ground your coax sheathing, in case your other equipment does not do
this -- which it probably does.

(2) Your one-pipe RF ground is woefully inadequate. Forget about an
RF ground because with a balanced antenna you probably won't need it.
If you want an RF ground, think in terms of a field of 8 pipes in a 10
ft square strapped together with copper ribbon or heavy braid. Also,
7 ft can be problematic and you should use copper ribbon. So, try
your rig without the RF ground before you commit to a big job.

To do the job absolutely the best way -- like a commercial broadcaster
-- is a large and expensive job. Also, it is usually unnecessary.

Ken KC2JDY

Ken
(to reply via email
remove "zz" from address)

3607. Re: TUTORIAL final,final

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-22 13:46:16 UTC
From: derekbales@aol.com
Message-ID: <b5dee4b5.0208220546.6a055c99@posting.google.com>
Source record: 136198

'Doc <w5lz@icok.net> wrote in message news:<3D644971.7D2DC82A@icok.net>...
> Art,
> After going through your program results, connecting all
> the dots, all I get is a picture of 'Goofy'. I'm waiting
> for the next installment of your tutorial. I'll bet that
> one will be a picture of 'Elmer Fudd'! I like 'Elmer'.
> 'Doc

DOC WHY DONT YOU CRAWL BACK UNDER THE STONE YOU CAME FROM,YOU NEVER
STICK YOUR HEAD ABOVE THE PARAPET AND JOIN IN DEBATES,YET YOU ARE
QUICK TO ATTACK THOSE WHO HAVE THE COURAGE TO DO SO.SOME OF US OUTSIDE
OF THE US ARE HOPING ART WILL FOLLOW THROUGH TO DISCUSS HIS OTHER
PATENT ON CAPACATIVE COUPLING,AND SCUM LIKE YOU ARE NOT HELPING.

TO ART I SAY MORE STRENGTH TO YOUR ELBOW AND STICK IN THERE

ARE THERE NO OTHERS IN THIS GROUP WITH A SENSE OF FAIR PLAY TO STAMP
ON THIS BUG

DEREK BALES

3608. Re: lightning protection and general grounding questions...

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-22 13:47:55 UTC
From: cprstn54zz@att.net
Message-ID: <3d64eb50.178827421@news-server.optonline.net>
Source record: 136199

On Thu, 22 Aug 2002 13:45:21 GMT, cprstn54zz@att.net (Ken) wrote:
>The MFJ_ will also provide surge protection against current induced by
>nearby strikes if you forget.

That should be the MFJ-1702C ($24.95).

Ken KC2JDY

Ken
(to reply via email
remove "zz" from address)

3609. M 2 7&10-30 log Periodic, Info Please

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-22 14:08:17 UTC
From: k2at@comcast.net
Message-ID: <d17f349.0208220608.459d35f2@posting.google.com>
Source record: 136200

Just purchased a used M2 7&10-30 log periodic and have to have a few questions answered with respect to assembly. If u will send me ur email address, I will make contact back to u with specifics. Tnx. Mel. K2AT@Comcast.net K2at

3610. Re: lightning protection and general grounding questions...

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-22 14:20:41 UTC
From: Andreas Hofmann <andreash23@hotmail.com>
Message-ID: <3d64f339$1@news.microsoft.com>
Source record: 136201

That answers 1. I can just use the coax switch with lightning protection to ground the ant in the case I am not using the station. I do not intent to operated around thunderstorms, and here, in the Pacific Northwest, we do not have many anyway.

for 2. I am still puzzled. I know that a dipole does not need a counterpoise. I still think I should have a ground on every piece of equipment, I think this is called the safety ground. Now can I just use the case of the coax switch (which will be grounded either via copper water pipe outside or connection to house ground) as my safety ground and connect all devices? I should be able to. No?

3. A run to my house ground will be way longer than just drive a ground rod into the ground under my windows (6 - 7ft). Would be the ground rod a good compromise or DO I REALLY HAVE to connect to the house ground?

Thanks again.
Andreas

"Ken" <cprstn54zz@att.net> wrote in message
news:3d64e708.177731250@news-server.optonline.net...
> On Wed, 21 Aug 2002 23:36:53 -0700, "Andreas Hofmann"
> <andreash23@hotmail.com> wrote:
> >I was reading up in the "Antenna book" and a couple of posts as well.
Some
> >of my questions remain.
>
> I too am putting my shack together and think I learned a thing or two
> along the way that might be correct and might be helpful. Much of the
> published information is incomplete, inapplicable, overly general or
> misleading. My conclusions:
>
> (1) Forget about lightning protection. You don't need it unless you
> need to transmit in a thunderstorm. Just disconnect your antenna. Or
> you can use a switch to disconnect your antenna when not in use. The
> MFJ_ will also provide surge protection against current induced by
> nearby strikes if you forget. Run the switch ground to your house
> ground, just like the surge protector on your PC. This will also
> ground your coax sheathing, in case your other equipment does not do
> this -- which it probably does.
>
> (2) Your one-pipe RF ground is woefully inadequate. Forget about an
> RF ground because with a balanced antenna you probably won't need it.
> If you want an RF ground, think in terms of a field of 8 pipes in a 10
> ft square strapped together with copper ribbon or heavy braid. Also,

> 7 ft can be problematic and you should use copper ribbon. So, try
> your rig without the RF ground before you commit to a big job.
>
> To do the job absolutely the best way -- like a commercial broadcaster
> -- is a large and expensive job. Also, it is usually unnecessary.
>
> Ken KC2JDY
>
> Ken
> (to reply via email
> remove "zz" from address)

3611. Re: Superposition quiz

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-22 14:30:03 UTC
From: tdonaly@aol.com
Message-ID: <20020822103003.07612.00002949@mb-ct.aol.com>
Source record: 136202

>
>Bart Rowlett wrote:
>>
>> CAM wrote:
>> >
>> > Richard Harrison wrote:
>> > > Zo is controlled by construction of the line. This simplifies the math.
>> > > It allows power to be added and subtracted.
>> >
>> > Let's be sure everyone understands there's no such thing as negative
>> > power.
>>
>> Power is defined as the time rate of change of the energy contained
>> within a closed system. Most systems have the property that energy can
>> either increase or decrease. Therefore power can be either positive,
>> negative or zero.
>
>Point is that power is a scalar, like water is a scalar. Have
>you ever seen a bucket of negative water?
>--
>cheers, CAM

So scalars are limited to being positive, real numbers, now. My, how
physics has changed. And, since when has a bucket of water become
a scalar field? And, finally, why did Mr. Poynting use a minus sign in his
famous, and much abused theorum?

Tom Donaly KA6RUH

3612. Re: Looking for datasheet for AP-8A

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-22 15:10:22 UTC
From: AC6V <ac6v@amsat.org>
Message-ID: <y9799.85$Ic7.25260@news2.west.cox.net>
Source record: 136203

The AP-8A Manual is on line at URL:
http://www.cushcraft.com/support/pdf/951435.pdf
However it is in pdf format.
Get Acrobat 5.0 at URL:
http://www.adobe.com/products/acrobat/readstep2.html

--
I Doubt, Therefore I Might Be
73 From AC6V, Rod In Oceanside, CA
http://ac6v.com
==========
"Igor" <maillist@rts-ukraine.com> wrote in message
news:ak2bpk$30es$1@pandora.alkar.net...
> Hello All,
>
> I am going to buy the multiband vertical AP-8A. I have an offer for
> reasonable price for 4 years old antenna which was not in use at all.
>
> But I was not able to find any datasheet/description on cushcraft's web.
>
> As far as I understood this antenna is obsolete now and R8 is a new model.
>
> Can anybody send me an information on Ap-8A (bands, bandwidths, SWRs,
> maximum input power, installation requirements/restrictions, etc) as well
as
> personal impression from this antenna.
>
> Regards & 73,
> Igor (ur5eoa)
>
>
>
>
>
>

3613. Re: lightning protection and general grounding questions...

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-22 15:35:49 UTC
From: cprstn54zz@att.net
Message-ID: <3d6501b8.184563406@news-server.optonline.net>
Source record: 136204

On Thu, 22 Aug 2002 07:20:41 -0700, "Andreas Hofmann"
<andreash23@hotmail.com> wrote:

>for 2. I am still puzzled. I know that a dipole does not need a
>counterpoise. I still think I should have a ground on every piece of
>equipment, I think this is called the safety ground. Now can I just use the
>case of the coax switch (which will be grounded either via copper water pipe
>outside or connection to house ground) as my safety ground and connect all
>devices? I should be able to. No?
>
>3. A run to my house ground will be way longer than just drive a ground rod
>into the ground under my windows (6 - 7ft). Would be the ground rod a good
>compromise or DO I REALLY HAVE to connect to the house ground?

I don't know how north in the Pacific northwest you are, but in the
USA in most places all your safety grounds have to be tied together so
that there is only one ground for the building. All my equipment and
the coax sheathing are grounded to the A/C ground.

Why drive a rod in the ground to handle a surge that your A/C ground
can handle? The same considerations apply: Your dipole is a length
of wire and your house wiring is a length of wire on the same order of
magnitude. Both will have current induced in them by a nearby strike.
If the house ground works for your PC's surge protector, Why wouldn't
it work for your antenna?

If you were looking to protect against a direct hit, THEN you would
need a few ground rods and heavy braid and a fancy discharge
protector. I believe you would still have to tie the ground rods into
your house ground.

Ken KC2JDY

Ken
(to reply via email
remove "zz" from address)

3614. Re: Hustler 6BVT vertical

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-22 15:55:47 UTC
From: rong@computer.net
Message-ID: <3d65097c.3266080@news.computer.net>
Source record: 136205

vswrref@hotmail.com (Jeff Y.) wrote:

>Hi all!
>
>Wondering if anybody is currently using, or has used the Hustler 6BVT
>HF vertical and what your thoughts, likes and dislikes of it, are.
>How does it work on the bands, with or without the radials. Looking
>forrward to seeing the posts.
>
>
>Jeff Y.
==========

Hi Jeff,

I've had a 5BTV (80, 40, 20, 15, & 10) since I've been licensed (1980),
and it has given me no problems in the 22 years it has been up. It's mounted on
a 3 foot piece of inch & a half pipe which is driven 2 feet into the ground in
my backyard. I have no ground radials. Within the first 2 years of using it, I
accomplished WAS, WAC, and DXCC (100 countries). I think it's a great antenna
for a vertical.

****
Ron Goldstein.....KA2IIA
STAY YOUNG---DRIVE A VINTAGE 427 CORVETTE.
KEEP YOUR MIND ACTIVE---BECOME AN AMATEUR RADIO OPERATOR.

REMEMBER, THERE ARE NO STRANGERS IN AMATEUR RADIO, ONLY FRIENDS
THAT WE HAVE NOT YET MET.
rong@computer.net******ka2iia@arrl.net

3615. Re: lightning protection and general grounding questions...

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-22 16:29:29 UTC
From: richardharrison@webtv.net
Message-ID: <12221-3D651169-33@storefull-2392.public.lawson.webtv.net>
Source record: 136206

Andreas, KU7T wrote:
"---Do I really have to connect to the house ground?"

It`s the law in most jurisdictions. Purpose is to minimize voltage difference between grounds. No. 6 AWG is usually specified as the minimum connecting wire size between ground rods, pipes, etc.

Best regards, Richard Harrison, KB5WZI

3616. Question About J-Pole

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-22 16:45:36 UTC
From: fiddelhead@hotmail.com
Message-ID: <Xns92728C006C953fiddelheadhotmailcom@198.164.200.20>
Source record: 136207

I have heard that a J-pole for 2 metres use is not entirely omni-directional. Is it true there is a "side" of the J-Pole that has a weeker spot to it, or a side that produces better performance? If so, can someone tell me which side is the "weaker" side?

Thank you.

73's

3617. Re: Parallel Dipoles for 20 and 17?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-22 16:46:32 UTC
From: M1nn0w <1c3d0g@att.net>
Message-ID: <Iz899.26081$Ke2.1972973@bgtnsc04-news.ops.worldnet.att.net>
Source record: 136208

CAM,
I'm sorry. I forget that sometimes folks take things quite literally. I meant that one should, indeed, try to determine what is wrong and correct it. I do that by the trial and error method. I read what I can in books and here in the NG/Internet and I go forth and apply what I have learned. We all know that what works well for one person may not for another. I build the antenna as described and hang it up. If it doesn't work I take it down and try to figure out what could be different. Maybe my soil conditions are different, Maybe it's too high (Doubt it) or too low. Maybe my radiation pattern is skewed due to proximity of the house or other antennas. It's probably the most inefficient method of doing it but it floats my boat and keeps me interested in the project at hand. Once I get it to work I generally start looking for a way to replace it :)

John (WB2TQC)

CAM wrote in message <3D63E08B.CCAB25C2@ieee.org>...
>M1nn0w wrote:
>> If it doesn't work take it down and build it again.
>
>Dear Lord, no! It it doesn't work, educate yourself as to what is
>wrong and make it work. Give a man a fish and he will survive for
>another day. Teach a man to fish and he just might die of old age.

3618. Re: TUTORIAL final,final

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-22 16:50:33 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <6q5amug1nsgt7e0r2u26pm98dmsi6o2q2p@4ax.com>
Source record: 136209

On 21 Aug 2002 12:10:34 -0700, aunwin@fgi.net (Art Unwin KB9MZ) wrote:

>results
>impedance 122-j3
>swr 1.63
>efficiency 99.7%
>radiation peak 173 deg @5.99 dbd gain

Hi Art,

Perhaps if you normalized your work to dBi instead of dBd, then you
would not come up with so many offbeat claims.

The impedance seems exceptionally high for a coupled antenna.
However, as AO is not a package I've used for a number of years, the
data you provide is lost on me. Perhaps you can translate some of the
more cogent details:
Ground Conductivity: ______
A wire list with x,y,z co-ordinates of each wire's two ends: ______
Size of each wire (diameter): ______
Source placement (which wire, where on wire): ______
Load placement (which wire, where on wire): ______

73's
Richard Clark, KB7QHC

3619. Re: Discone Theory Question ?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-22 17:19:39 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <pg7amu0lhjskmqe764kda61bqh9rt7andc@4ax.com>
Source record: 136210

On Thu, 22 Aug 2002 07:20:45 -0400, "Robert Rose" <rgsrose@tiac.net>
wrote:

>
>Could anyone explain the advantages, if any, of the greater number? Three
>usually enough?

Hi Robert,

The discone is half of a biconical, vertical dipole. Half
structurally, but still a full dipole in that there are two elements,
the disc and the cone.

The disc in some way mimics a ground plane (or ground if you will) in
that it offers an image of the missing upper conical section (the half
that is literally missing as a physical structure). Now, having
called it a ground plane may be suggestive/confusing as there is no
requirement that it be attached to a ground wire, or the shield of the
transmission line (either is an option, though rarely encountered).
It could as easily be described/called a top hat to a fat monopole
(except we are driving that hat).

Back to the first description. The biconical antenna is structured
much like two ice-cream cones tips' converging on the drivepoint.
This structure of antenna is the fundamental form for the derivation
of dipole characteristics. As such, it is a very fat dipole and a
broadband antenna for that reason. To qualify as "fat" to obtain
those widebanded properties requires that the wire skeleton offer an
equivalent surface area in place of a solid cone (which the skeleton
approximates).

The two solid cones coming together at the drivepoint offers a tapered
leaky waveguide that matches across frequencies from 3:1 to 10:1 or
more - DEPENDING on that same amount of equivalent surface area.
This, then, translates into more spokes equals more coverage (and the
corresponding less spokes...).

How many spokes are enough? Your 3 seemed to have satisfied you for
years. Adding more would offer a consistently flat response over
greater frequencies, but perhaps none that concern you. Certainly if
you add them, you will note no improvement to speak of if you are not
already suffering from SWR (there will be no increase in gain, so
nothing to mention there either).

73's
Richard Clark, KB7QHC

3620. Re: Superposition quiz

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-22 17:21:06 UTC
From: richardharrison@webtv.net
Message-ID: <12221-3D651D82-36@storefull-2392.public.lawson.webtv.net>
Source record: 136211

Tom, KA6RUH wrote:
"So scalars are limited to being positive, real numbers, now."

No one argues that because we have red beans all beans are red.

In Bird Electronic Corporation`s VSWR paper is written:
"A simple algebraic subtraction (Pfwd - Prefl) yields the net power delivered to the load."

Bird wattmeters are in operation in abundance around the world even though the U.S. Government tried to prohibit their export due to the meter`s effectiveness. As you read this, someone somewhere is calculating watts using the Bird.

The Bird contains no magic. What`s true for the Bird is true for similar measurements.

You can`t succeed in arguing it doesn`t work. It does. Instead of wasting time denying the truth of Bird`s assertion, you would better spend your time learning that what you see is what you get.

Best regards, Richard Harrison, KB5WZI

3621. Re: Question About J-Pole

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-22 17:48:19 UTC
From: johan <j.blaak@home.nl>
Message-ID: <Ct999.166743$uV1.13122181@zwoll1.home.nl>
Source record: 136212

i was once told that the j pole has a kind of direction to it.
the weakspot is behind the 1/2 wavelength.
this means that the " stub " side is the better side.
(sorry for the bad english)
<fiddelhead@hotmail.com> schreef in bericht
news:Xns92728C006C953fiddelheadhotmailcom@198.164.200.20...
> I have heard that a J-pole for 2 metres use is not entirely omni-
> directional. Is it true there is a "side" of the J-Pole that has a weeker
> spot to it, or a side that produces better performance? If so, can
someone
> tell me which side is the "weaker" side?
>
> Thank you.
>
> 73's

3622. Re: TUTORIAL final,final

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-22 17:55:50 UTC
From: richardharrison@webtv.net
Message-ID: <12220-3D6525A6-124@storefull-2392.public.lawson.webtv.net>
Source record: 136213

Richard Clark wrote:
"Perhaps if you normalized your work to dBi instead of dBd, then you would not come up with so many offbeat claims."

What difference would less than 2.2 db make? It`s all the same if you state the reference.

We built our antennas first to 1 / 65 scale. Then we measured the performance. It`s easy at that small size. As built, full scale, they worked liked the models.

Of course, ground conditions and environment make a difference. That`s true of full-scale antennas too.

Best regards, Richard Harrison, KB5WZI

3623. Re: Superposition quiz

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-22 18:17:21 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <3D652AB1.3070005@eznec.com>
Source record: 136214

Roy Lewallen wrote:

>. . .

> From Van Valkenburg' _Network Analysis_:
>
> "The rate at which energy is being absorbed is the power given by
>
> p = dw/dt = v(t)/i(t) W (watts)

Correction. That should, of course, be v(t)*i(t). My mistake, not Van Valkenburg's.

Roy Lewallen, W7EL

3624. Re: Hustler 6BVT vertical

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-22 18:21:21 UTC
From: IE <m9191@abc.se>
Message-ID: <us8amu8gkj1rh457kemae36tfiu4aat3f4@4ax.com>
Source record: 136215

Hi,

I have used the 6BVT for four years. First I had it mounted on ground and last two years 3 meters above with radials going out from the low point of the antenna. (Just above the roof of a building and wall mounted). Radials are going in all directions.

Compared to my beam it is a big difference (the beam is much, much better). And for 80 meter I never use it (very narrow and not good compared to my wire antennas), But I like it since it is easy to play with. On 30 and 40 I use it a lot and have worked many DX.

This fall I will add more radials to it since I have not been fair to the antenna. I have about 8 radials today in different lengths and with very weak copper wire. I think I can get much more out of this antenna with better radials and thicker wire.

The SWR is good on all bands. I have tuned the 80 meter part to 3.500 and SWR is low there as well. But SWR is one thing. I still prefer a wire dipole on 80. It is a question of S-units in difference.

I am very impressed of the possibillity for the antenna to take care of hard wind. First years I was nervous but today I trust the antenna in all WX.

This antenna is connected to the 2nd antenna connector on a TS870 so I have never used it for higher power then 70-80 W. That power it takes care of.

Earlier I have had other verticals. I can't say for sure this one works better but I feel so.

I have a computer LAN in the same building and this antenna picks up more radiation from the LAN and TV-sets than a dipole or a beam.

In conclusion I like the antenna and think it is a nice multiband vertical. I should have done the work with radials earlier. My feeling are that it worked better ground mounted, due to grounding, then 3 meters up. This antenna will stay with me for years.

On Thu, 22 Aug 2002 15:55:47 GMT, rong@computer.net (Ron Goldstein--KA2IIA) wrote:

>vswrref@hotmail.com (Jeff Y.) wrote:
>
>>Hi all!
>>
>>Wondering if anybody is currently using, or has used the Hustler 6BVT

>>HF vertical and what your thoughts, likes and dislikes of it, are.
>>How does it work on the bands, with or without the radials. Looking
>>forrward to seeing the posts.
>>
>>
>>Jeff Y.
>==========
>Hi Jeff,
>
> I've had a 5BTV (80, 40, 20, 15, & 10) since I've been licensed (1980),
>and it has given me no problems in the 22 years it has been up. It's mounted on
>a 3 foot piece of inch & a half pipe which is driven 2 feet into the ground in
>my backyard. I have no ground radials. Within the first 2 years of using it, I
>accomplished WAS, WAC, and DXCC (100 countries). I think it's a great antenna
>for a vertical.
>**********
> Ron Goldstein.....KA2IIA
> STAY YOUNG---DRIVE A VINTAGE 427 CORVETTE.
> KEEP YOUR MIND ACTIVE---BECOME AN AMATEUR RADIO OPERATOR.
>
>REMEMBER, THERE ARE NO STRANGERS IN AMATEUR RADIO, ONLY FRIENDS
> THAT WE HAVE NOT YET MET.
> rong@computer.net******ka2iia@arrl.net

3625. Modeling coax attached to an antenna in EZNEC

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-22 18:22:09 UTC
From: Douglas Stinson <douglas-stinson@attbi.com>
Message-ID: <lZ999.197894$UU1.36529@sccrnsc03>
Source record: 136216

When modeling an antenna which will be fed by a coax cable, should one include the shield of the cable as a wire? The purpose of this would be to include the effect of currents flowing down the outside of the cable.

For example, a J-pole is often modeled in EZNEC with a source bridging the two legs of the antenna. Should one also include a wire from one end of the source down to ground?

At least for some antennas modeling with and without this "extra" wire leads to vastly different radiation patterns and impedance.

3626. Re: TUTORIAL final,final

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-22 18:37:26 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <k2camucm5tvji2275o2t8gmnj8etlevrhm@4ax.com>
Source record: 136217

On Thu, 22 Aug 2002 12:55:50 -0500 (CDT), richardharrison@webtv.net
(Richard Harrison) wrote:

>Richard Clark wrote:
>"Perhaps if you normalized your work to dBi instead of dBd, then you
>would not come up with so many offbeat claims."
>
>What difference would less than 2.2 db make? It`s all the same if you
>state the reference.
>

Hi Richard,

It is not the 2.2 dB, it is the difference of application. Art
compares his design to designs that are not a dipole; as such dBd is
spurious.

If I add 2.2dB to his observed:
>>radiation peak 173 deg @5.99 dbd gain
for an 8.2dBi, it is still 1.5 dB below the NBS Yagi IFF both Art and
I are talking about the same criteria (and given dBd, that is
unlikely).

73's
Richard Clark, KB7QHC

3627. Re: Question About J-Pole

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-22 18:44:23 UTC
From: Douglas Stinson <douglas-stinson@attbi.com>
Message-ID: <bia99.32633$aA.8159@sccrnsc02>
Source record: 136218

When I modeled the j-pole in EZNEC I found a SLIGHT asymmetry, with the lightly less radiation in the direction of the stub, presumably because the currents are almost but not exactly equal in both legs. From a practical standpoint, the difference seems negligible. I've heard people report larger differences with real antennas, but I've often wondered if this had more to due with the feedline than anything else.

<fiddelhead@hotmail.com> wrote in message news:Xns92728C006C953fiddelheadhotmailcom@198.164.200.20...
> I have heard that a J-pole for 2 metres use is not entirely omni-
> directional. Is it true there is a "side" of the J-Pole that has a weeker
> spot to it, or a side that produces better performance? If so, can someone
> tell me which side is the "weaker" side?
>
> Thank you.
>
> 73's

3628. Re: TUTORIAL final,final

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-22 19:00:04 UTC
From: richardharrison@webtv.net
Message-ID: <19116-3D6542C4-166@storefull-2398.public.lawson.webtv.net>
Source record: 136070

Richard Clark wrote:
"It is not the 2.2 dB, it is the difference of application."

Art listed some specifications some time ago. I wrote then that his list needed refinement. Here are some items his list might cover, not in any particular order, or complete, or without surplus. It`s just a start:

1. Frequency
2. Gain
3. Polarization
4. Pattern
5. Bandwidth
6. Impedance
7. Power handling
8. Steering
9. Construction
10. Environment
11. Efficiency
12. Size
13. Cost
14. Ease
15. Probability of success

Someone can add or subtract from this list and prioritize the items according to the application.

Best regards, Richard Harrison, KB5WZI

3629. Fractal Antenna for sale

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-22 19:44:44 UTC
From: fractena@yahoo.com
Message-ID: <653d2ee5.0208221144.4aa42d89@posting.google.com>
Source record: 136069

I have for sale one fractal antenna, operating on the HF frequencies.
Used for about 1 year, in good shape. Email for information.

3630. Re: Modeling coax attached to an antenna in EZNEC

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-22 20:21:01 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <3D6547AD.7050201@eznec.com>
Source record: 136071

Bingo. Yes, you should include the wire representing the outside of the coax, and yes, you'll see that the J-Pole pattern is affected. (You'll also find that ground plane antennas are subject to the same problem.)

The problem is that to be truly accurate, you'll have to model the actual path to ground. That would be from the antenna to the rig, then however the RF gets to ground from there. This is often impossible, but some experimenting with the model will at least show you the general magnitude of effects you could have.

To add a "current balun" to the system, insert a "load" in the shield wire. Its impedance should be the impedance of the balun. If you don't know what the balun's impedance is, use 500 ohms or so as a ballpark estimate. It won't matter if it's R, X, or a combination. You'll find that for a J-Pole or ground plane, you might need two baluns, one at the feedpoint and one about a quarter wavelength below.

Roy Lewallen, W7EL

Douglas Stinson wrote:
> When modeling an antenna which will be fed by a coax cable, should one
> include the shield of the cable as a wire? The purpose of this would be to
> include the effect of currents flowing down the outside of the cable.
>
> For example, a J-pole is often modeled in EZNEC with a source bridging the
> two legs of the antenna. Should one also include a wire from one end of the
> source down to ground?
>
> At least for some antennas modeling with and without this "extra" wire leads
> to vastly different radiation patterns and impedance.
>
>

3631. Re: Superposition quiz

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-22 20:29:13 UTC
From: tdonaly@aol.com
Message-ID: <20020822162913.22041.00001440@mb-cb.aol.com>
Source record: 136072

>
>Tom, KA6RUH wrote:
>"So scalars are limited to being positive, real numbers, now."
>
>No one argues that because we have red beans all beans are red.
>
>In Bird Electronic Corporation`s VSWR paper is written:
>"A simple algebraic subtraction (Pfwd - Prefl) yields the net power
>delivered to the load."
>
>Bird wattmeters are in operation in abundance around the world even
>though the U.S. Government tried to prohibit their export due to the
>meter`s effectiveness. As you read this, someone somewhere is
>calculating watts using the Bird.
>
>The Bird contains no magic. What`s true for the Bird is true for similar
>measurements.
>
>You can`t succeed in arguing it doesn`t work. It does. Instead of
>wasting time denying the truth of Bird`s assertion, you would better
>spend your time learning that what you see is what you get.
>
>Best regards, Richard Harrison, KB5WZI
>

Who said that Bird wattmeters don't work? I'm sure they do just
exactly what the manufacturer represents them to do.

A puzzled Tom Donaly, KA6RUH.

3632. Re: Fractal Antenna for sale

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-22 20:36:49 UTC
From: Fred Hambrecht <w4jle@charter.net>
Message-ID: <umair5iu2mpr53@corp.supernews.com>
Source record: 136074

Dear Doktor Cohan:
I am the curator of a museum here for products that combined viable ideas with less than stellar results. For example we have the first container of Chicken Ice Cream (Patent Pending). The creator noted that fried chicken and Ice Cream were both great sellers and was sure combining the two would make him a fortune.

Would you be interested in donating your famous (Patent Pending, (c), (R) fractal amateur antenna? Unfortunately we have not yet received 501.C3 status and your donation would not be tax deductible. It will be mounted with a plaque with your name "Donated by Dr. Nathan Chip N1IR Fractenna Phil Et. All Cohen Ph.D." and will be displayed with copies of your e-mails relating to fractal antennas. The e-mails exhibit will be delayed as we have less than 200,000 Square feet.

Please advise us of your decision as soon as possible as we are also considering a motor driven pogo stick.

"Fractal Antennas" <fractena@yahoo.com> wrote in message news:653d2ee5.0208221144.4aa42d89@posting.google.com...
> I have for sale one fractal antenna, operating on the HF frequencies.
> Used for about 1 year, in good shape. Email for information.

3633. Re: Fractal Antenna for sale

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-22 20:37:05 UTC
From: Fulano de Tal <therealexray@netscape.net>
Message-ID: <3D654B71.A3579FA3@netscape.net>
Source record: 136073

Fractal Antennas wrote:
>
> I have for sale one fractal antenna, operating on the HF frequencies.
> Used for about 1 year, in good shape. Email for information.

Is it the pocket model?
-BM

3634. Re: Air-Wound Balun Design Info??

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-22 20:50:05 UTC
From: n2ey@aol.com
Message-ID: <9f4bfe89.0208221250.d2178ae@posting.google.com>
Source record: 136075

Roy Lewallen <w7el@eznec.com> wrote in message news:<3D6458EB.8070006@eznec.com>...
> N2EY wrote:
> > . . .
> > Neglecting self-capacitance, the impedance of an 8.4 uH solenoid will be:
> >
> > 2 105
> > 3.5 185
> > 7 370
> > 14 740
> > 21 1480
> >
> > Has anybody actually made a solenoid like this and measured its impedance?
> > . . .
>
> Yep. See http://www.k1ttt.net/technote/airbalun.html.

TNX, Roy - but that's for baluns using RG-213. W3RV is looking for compact and light - RG-58 size. (RG-8X would be nice but it's foam and not the best stuff for coiling). Maybe somebody with an analyzer and some '58/U can make a few tests...

Looking at the K1TTT info, it seems to me that the 'solenoid' (single layer) design has some advantages over the 'pancake' (bunched) design. For the same amount of coax, 'pancake' design does give more impedance at a lower frequency. But it does so at the expense of bandwidth.

Consider the two '8 turn 6-5/8 inch' sets of numbers. The solenoid design gives an impedance greater than 500 ohms from 6 MHz to 24 MHz - a 4:1 frequency ratio that covers 40, 30, 20, 17 and 15 meters. The same coax in a pancake design gives an impedance greater than 500 ohms from 4 to 10 MHz - only a 2.5:1 frequency ratio.

73 de Jim, N2EY

3635. Re: Superposition quiz

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-22 21:04:25 UTC
From: "Ian White, G3SEK" <G3SEK@ifwtech.co.uk>
Message-ID: <0Nanc5LZHVZ9EAC9@ifwtech.co.uk>
Source record: 136076

Richard Harrison wrote:

>In Bird Electronic Corporation`s VSWR paper is written:
>"A simple algebraic subtraction (Pfwd - Prefl) yields the net power
>delivered to the load."

Once again:

What the Bird manual fails to mention is that when the load is
mismatched, the indicated values of forward and reflected power are both
wrong, because the meter is not being operated into the load impedance
for which it was calibrated.

But by subtracting these two wrong readings, you get the *correct* value
for the net power delivered to the load!

This is quite a surprising result, and the reason is far less obvious
than you seem to think. It's explained in 'Reflections I' at the end of
Chapter 3.

--
73 from Ian G3SEK 'In Practice' columnist for RadCom (RSGB)
Editor, 'The VHF/UHF DX Book'
http://www.ifwtech.co.uk/g3sek

3636. Re: Looking for a good 10 meter vertical

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-22 21:10:33 UTC
From: ld751@yahoo.com
Message-ID: <3d12c96e.0208221310.ee4b99f@posting.google.com>
Source record: 136077

Jon Eckert <jpeckert@execpc.com> wrote in message
news:<3d64140d$0$1427$272ea4a1@news.execpc.com>...
> Hi, I'm looking for a good 10 meter vertical to go on the roof. I have a
> Solarcon AR99 up now and that works fairly well, just wondering if there
> is something out there that works better and how much better is it as
> compared to the AR99. Thanks, Jon W9JPE

Check out the Imax 2000. A very nice antenna that out performs the
A-99 due to it being a 5/8 wave. The A-99 is only a 1/2 wave and the
Imax doesn't require a ground plane. You may need to trim it a little
or use a tuner to get it right on for 10m, but outta the box, it
should perform fairly well.

3637. Re: Superposition quiz

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-22 21:13:24 UTC
From: richardharrison@webtv.net
Message-ID: <3228-3D6553F4-161@storefull-2397.public.lawson.webtv.net>
Source record: 136078

Tom, KA6RUH wrote:
"I`m sure they (Bird wattmeters) do just exactly what the manufacturer represents them to do."

Good. So am I. Bird wrote:
"A simple algebraic subtraction (P forward - P reflected) yields the power delivered to the load.

That`s a description of forward power and reflected power in the 50-ohm coax, which the wattmeter indicates. It is not specific to the Bird wattmeter. With a dfifferent directional coupler you could calaulate the difference of indicated forward and reflected powers and make the same measurement, the same way you make it with the Bird.

Were the forward and reverse powers not simple scalar powers, the Bird wattmeter would not work the way it does. The fact that Zo is nearly resistive forces the current in a single direction on the transmission line to be in-phase with the voltage which causes the current to flow.

Best regards, Richard Harrison, KB5WZI

3638. Re: Fractal Antenna for sale

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-22 21:53:46 UTC
From: k3bu@aol.com
Message-ID: <20020822175346.04886.00003264@mb-cu.aol.com>
Source record: 136079

>
>I have for sale one fractal antenna, operating on the HF frequencies.
>Used for about 1 year, in good shape. Email for information.
>
>

Was the operation successful? Were there any new HF frequencies produced? Was it Ceasarian?

Used for a year, sounds like all fractal magnetics electrons were all used up, any gain left?

How good is the shape?

Inquiring minds or never minds wants to now.

Bada BUm

3639. Re: Superposition quiz

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-22 21:55:06 UTC
From: richardharrison@webtv.net
Message-ID: <4736-3D655DBA-271@storefull-2393.public.lawson.webtv.net>
Source record: 136082

Ian, G3SEK wrote:
"But by subtracting these two wrong readings, you get the "correct"
value for the net power delivered to the load!"

I am sure Walt Maxwell got it right in "Reflections".

When errors cancel to give the "correct" result, I say HOORAY!

Bird only included a warning about affecting the line length at VHF by inserting the wattmeter when the line had a high VSWR. That can give a significant error. They suggest making the wattmeter a part of a 1/2-wave line. Something I had all our technicians do long before Bird published the suggestion. They may have got the idea from me for all I know.

Bird has no need to warn when two wrongs make a right.

Best regards, Richard Harrison, KB5WZI

3640. Re: Fractal Antenna for sale

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-22 22:02:43 UTC
From: 'Doc <w5lz@icok.net>
Message-ID: <3D655F81.133268BA@icok.net>
Source record: 136080

Fred,
Do you have pictures of the motor driven pogo stick?
'Doc

3641. Re: TUTORIAL final,final

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-22 22:08:45 UTC
From: 'Doc <w5lz@icok.net>
Message-ID: <3D6560EB.FD546D1B@icok.net>
Source record: 136081

Does that mean I can forget about the picture
of 'Elmer Fudd'?
'Doc

3642. Re: Superposition quiz

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-22 22:48:09 UTC
From: Gene Fuller <W4SZzzzzz@att.net>
Message-ID: <3D656A3D.CB19FF65@att.net>
Source record: 136083

Hi Tom,

You appear to be a really knowledgeable guy. Your posts are always
coherent and informative.

Therefore I am a bit surprised you don't already know Rule Number One
for this newsgroup.

1. Don't Mess with Richard's Bird!

73,
Gene, W4SZ

Tdonaly wrote:
>
> >
> >Tom, KA6RUH wrote:
> >"So scalars are limited to being positive, real numbers, now."

[snip]

> >You can`t succeed in arguing it doesn`t work. It does. Instead of
> >wasting time denying the truth of Bird`s assertion, you would better
> >spend your time learning that what you see is what you get.
> >
> >Best regards, Richard Harrison, KB5WZI
>
> Who said that Bird wattmeters don't work? I'm sure they do just
> exactly what the manufacturer represents them to do.
>
> A puzzled Tom Donaly, KA6RUH.

3643. Re: Hustler 6BVT vertical

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-22 22:53:23 UTC
From: Dan/W4NTI <w4nti@mindspringnospam.com>
Message-ID: <ak3pvhuhi1@slb3.atl.mindspring.net>
Source record: 136084

I had the 4BTV for many years. I assume it is basically the same as the 6BTV other than a few more bands.

Actually I had the 5BTV. It had the KW 80m resonator.

I agree...it is not good on 80m anywhere. Its too short you know.

On 40 I found it worked out quite well. In Germany, when I was DA2LJ, I used the 4BTV sticking out of the top floor attic window in the roof. Ran one radial per band. Worked gangbusters. Of course it was 110 feet in the air at that time...hi.

Back stateside I used it in my backyard by putting it on a 10 foot pole. Then running a screen of interconnected chicken wire as a above ground counterpoise. Seemed to do quite well that way too.

The worst situation I used it in was ground mounting with no radials.

Hope that helps.

Dan/W4NTI

"IE" <m9191@abc.se> wrote in message
news:us8amu8gkj1rh457kemae36tfiu4aat3f4@4ax.com...
> Hi,
>
> I have used the 6BVT for four years. First I had it mounted on ground
> and last two years 3 meters above with radials going out from the low
> point of the antenna. (Just above the roof of a building and wall
> mounted). Radials are going in all directions.
>
> Compared to my beam it is a big difference (the beam is much, much
> better). And for 80 meter I never use it (very narrow and not good
> compared to my wire antennas), But I like it since it is easy to play
> with. On 30 and 40 I use it a lot and have worked many DX.
>
> This fall I will add more radials to it since I have not been fair to
> the antenna. I have about 8 radials today in different lengths and
> with very weak copper wire. I think I can get much more out of this
> antenna with better radials and thicker wire.
>
> The SWR is good on all bands. I have tuned the 80 meter part to 3.500
> and SWR is low there as well. But SWR is one thing. I still prefer a
> wire dipole on 80. It is a question of S-units in difference.
>
> I am very impressed of the possibillity for the antenna to take care
> of hard wind. First years I was nervous but today I trust the antenna

> in all WX.
>
> This antenna is connected to the 2nd antenna connector on a TS870 so I
> have never used it for higher power then 70-80 W. That power it takes
> care of.
>
> Earlier I have had other verticals. I can't say for sure this one
> works better but I feel so.
>
> I have a computer LAN in the same building and this antenna picks up
> more radiation from the LAN and TV-sets than a dipole or a beam.
>
> In conclusion I like the antenna and think it is a nice multiband
> vertical. I should have done the work with radials earlier. My feeling
> are that it worked better ground mounted, due to grounding, then 3
> meters up. This antenna will stay with me for years.
>
>
>
>
> On Thu, 22 Aug 2002 15:55:47 GMT, rong@computer.net (Ron
> Goldstein--KA2IIA) wrote:
>
> >vswrref@hotmail.com (Jeff Y.) wrote:
> >
> >>Hi all!
> >>
> >>Wondering if anybody is currently using, or has used the Hustler 6BVT
> >>HF vertical and what your thoughts, likes and dislikes of it, are.
> >>How does it work on the bands, with or without the radials. Looking
> >>forrward to seeing the posts.
> >>
> >>
> >>Jeff Y.
> >>===
> >Hi Jeff,
> >
> > I've had a 5BTV (80, 40, 20, 15, & 10) since I've been licensed (1980),
> >and it has given me no problems in the 22 years it has been up. It's
mounted on
> >a 3 foot piece of inch & a half pipe which is driven 2 feet into the
ground in
> >my backyard. I have no ground radials. Within the first 2 years of using
it, I
> >accomplished WAS, WAC, and DXCC (100 countries). I think it's a great
antenna
> >for a vertical.
> >**
> > Ron Goldstein.....KA2IIA
> > STAY YOUNG---DRIVE A VINTAGE 427 CORVETTE.

> > KEEP YOUR MIND ACTIVE---BECOME AN AMATEUR RADIO OPERATOR.
> >
> >REMEMBER, THERE ARE NO STRANGERS IN AMATEUR RADIO, ONLY FRIENDS
> > THAT WE HAVE NOT YET MET.
> > rong@computer.net******ka2iia@arrl.net
>

3644. Re: Looking for a good 10 meter vertical

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-22 22:55:05 UTC
From: Dan/W4NTI <w4nti@mindspringnospam.com>
Message-ID: <ak3q2ftgg1@slb2.atl.mindspring.net>
Source record: 136085

I would agree. The 5/8is a better system. However the A99 is no slouch.
If you DONT trim the A99 it will work on 10/15 and I heard it does on 12
also. Don't know about that tho.

Dan/W4NTI

"2LD751" <ld751@yahoo.com> wrote in message
news:3d12c96e.0208221310.ee4b99f@posting.google.com...
> Jon Eckert <jpeckert@execpc.com> wrote in message
news:<3d64140d$0$1427$272ea4a1@news.execpc.com>...
> > Hi, I'm looking for a good 10 meter vertical to go on the roof. I have a
> > Solarcon AR99 up now and that works fairly well, just wondering if there
> > is something out there that works better and how much better is it as
> > compared to the AR99. Thanks, Jon W9JPE
>
> Check out the Imax 2000. A very nice antenna that out performs the
> A-99 due to it being a 5/8 wave. The A-99 is only a 1/2 wave and the
> Imax doesn't require a ground plane. You may need to trim it a little
> or use a tuner to get it right on for 10m, but outta the box, it
> should perform fairly well.

3645. Re: Fractal Antenna for sale

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-22 22:57:53 UTC
From: Fred Hambrecht <w4jle@charter.net>
Message-ID: <umar3lp1pcjubc@corp.supernews.com>
Source record: 136086

Sure do Doc. Check this out

http://www.bpmlegal.com/wpogo.html

This guy even tells you how it works and of course it is patented as well.

"'Doc" <w5lz@icok.net> wrote in message news:3D655F81.133268BA@icok.net...
>
>
> Fred,
> Do you have pictures of the motor driven pogo stick?
> 'Doc

3646. Ladderline & Mast

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-22 23:04:30 UTC
From: Rezster <dbm@[remove]>
Message-ID: <Xns9272ADD28FB68dbmremovefisinet@148.78.248.75>
Source record: 136087

After all the responses on my ladderline situation, I've decided to erect a steel mast..30' on my roof...far enough away to use up the excess line. Now, with what do I secure the ladderline to the mast and to the roof?

3647. Re: Superposition quiz

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-23 00:03:59 UTC
From: tdonaly@aol.com
Message-ID: <20020822200359.08498.00002050@mb-mb.aol.com>
Source record: 136088

Gene wrote,
>
>Hi Tom,
>
>You appear to be a really knowledgeable guy. Your posts are always
>coherent and informative.
>
>Therefore I am a bit surprised you don't already know Rule Number One
>for this newsgroup.
>
>
> 1. Don't Mess with Richard's Bird!
>
>
>73,
>Gene, W4SZ
>

Hi Gene,
I'm learning, I'm learning. He just "proved" that, because his
Bird
works the way the manufacturer says it does, that the power flow in an
electromagnetic wave in a transmission line has magnitude, but not direction.
That's a new one on me, and as soon as I finish typing this, I'm going to send
a nasty note to a certain electromagnetics theorist telling him that he is
wrong,
and the reason I know he is is because of Richard Harrison's Bird. There ought

to be a law against all these dang academic theorists with their lying ways
telling
gullible hams, like me, untruths, fabrications, and real stretchers.

73,
Tom Donaly, KA6RUH

3648. Re: Fractal Antenna for sale

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-23 00:21:19 UTC
From: Irv Finkleman <finkirv@shaw.ca>
Message-ID: <3D657FDB.20C00A1D@shaw.ca>
Source record: 136089

Fred Hambrecht wrote:
>
> Sure do Doc. Check this out
>
> http://www.bpmlegal.com/wpogo.html
>
> This guy even tells you how it works and of course it is patented as well.
>
> "'Doc" <w5lz@icok.net> wrote in message news:3D655F81.133268BA@icok.net...
> >
> >
> > Fred,
> > Do you have pictures of the motor driven pogo stick?
> > 'Doc

Darnit Fred! Now I'm going to have to spend a
couple days touring that site. What a gas!
I did note that they have thus far omitted the
fractal -- or maybe it's just a matter of time!

--
Diagnosed Type II Diabetes March 5 2001
Beating it with diet and exercise!
297/215/210 (to be revised lower)
58"/43"(!)/44" (already lower too!)

Visit my FINALLY UPDATED website at
http://members.shaw.ca/finkirv/

Irv Finkleman,
Grampa/Ex-Navy/Old Fart/Ham Radio VE6BP
Calgary, Alberta, Canada

3649. Re: TUTORIAL final,final

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-23 00:21:36 UTC
From: tdonaly@aol.com
Message-ID: <20020822202136.08498.00002053@mb-mb.aol.com>
Source record: 136090

'Doc wrote,
>
> Does that mean I can forget about the picture
>of 'Elmer Fudd'?
> 'Doc
>

It means that when people read what passes for humor in your latest posts, they feel a sense of disgust not unmixed with pity for the poverty of wit that inspired it.

Tom Donaly KA6RUH

3650. Re: Fan Dipole 160/80/40/20

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-23 00:55:51 UTC
From: nm5k@wt.net
Message-ID: <25eb70d7.0208221655.17ed2750@posting.google.com>
Source record: 136091

dplatt@radagast.org (Dave Platt) wrote in message
>
> The only quirk I've noticed is that the third-harmonic resonance on
> the 40 wire is well outside the 15-meter band - I suspect this is due
> to coupling with the 20-meter dipole. It's close enough that my rig's
> ATU can cope, though, so it's not a big deal.

Thats fairly normal I think. I notice that quite a bit. I just stick a small tuner inline if I'm going to work 15. Rigs are more picky on the SWR these days, so anything over 2:1 starts getting notice. Back in the older days with the tube rigs, it was not critical at all, and most didn't worry about it as long as the loading was within range. I know I didn't even use an SWR meter at all when I first started out. I just tried to load the rig. If it loaded within range, good enough. My old valiant I once had would load a very wide range. I can run my old drake T4XB or my TS-830 at 3:1 SWR all day if the loading is in range. Not quite that easy these days with the picky solid state finals. MK

3651. Re: Fractal Antenna for sale

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-23 01:09:23 UTC
From: MD <ve3tmt@rac.ca>
Message-ID: <xTf99.7374$sY3.1584385@news20.bellglobal.com>
Source record: 136092

"Fractal Antennas" <fractena@yahoo.com> wrote in message
news:653d2ee5.0208221144.4aa42d89@posting.google.com...
> I have for sale one fractal antenna, operating on the HF frequencies.
> Used for about 1 year, in good shape. Email for information.

Are we going to get into this useless BS all over again. What a waste of
bandwidth.

3652. Re: Superposition quiz

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-23 01:33:44 UTC
From: gaschafer@attbi.com
Message-ID: <3d6590bc.7572510@netnews.attbi.com>
Source record: 136093

On Thu, 22 Aug 2002 16:55:06 -0500 (CDT), richardharrison@webtv.net (Richard Harrison) wrote:

>Ian, G3SEK wrote:
>"But by subtracting these two wrong readings, you get the "correct"
>value for the net power delivered to the load!"
>
>I am sure Walt Maxwell got it right in "Reflections".
>
>When errors cancel to give the "correct" result, I say HOORAY!
>
>Bird only included a warning about affecting the line length at VHF by
>inserting the wattmeter when the line had a high VSWR. That can give a
>significant error. They suggest making the wattmeter a part of a
>1/2-wave line. Something I had all our technicians do long before Bird
>published the suggestion. They may have got the idea from me for all I
>know.
>
>Bird has no need to warn when two wrongs make a right.
>
>Best regards, Richard Harrison, KB5WZI
>

As I am sure you know, by not having the Bird meter be part of a 1/2 wavelength line in a high
swr feed line does not cause a meter reading error by itself. But changing the length of feed line
by inserting the meter and it not being a part of an additional half wavelength line, detunes the
transmitter. That changes the power out and thus the error.

As was stated before the Bird meter does not measure forward and reflected power directly.
You can easily prove it with an open circuit (no load) connected to the meter. The meter will
read the same forward reading as reflected reading. Turn the transmitter up so the meter reads
100 watts.
100 watts forward minus 100 watts reflected is zero power delivered to the load. But there is
no 100 watts reflected as the meter shows. There can be significant errors in reflected power
readings as swr goes up.

Regards
Gary K4FMX

3653. Re: TUTORIAL final,final

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-23 01:35:47 UTC
From: aunwin@fgi.net
Message-ID: <c4becf19.0208221735.664cb863@posting.google.com>
Source record: 136094

Richard Clark <kb7qhc@attbi.com> wrote in message
news:<6q5amug1nsgt7e0r2u26pm98dmsi6o2q2p@4ax.com>...
> On 21 Aug 2002 12:10:34 -0700, aunwin@fgi.net (Art Unwin KB9MZ) wrote:
>
> >results
> >impedance 122-j3
> >swr 1.63
> >efficiency 99.7%
> >radiation peak 173 deg @5.99 dbd gain
>
> Hi Art,
>
> Perhaps if you normalized your work to dBi instead of dBd, then you
> would not come up with so many offbeat claims.
>
> The impedance seems exceptionally high for a coupled antenna.
> However, as AO is not a package I've used for a number of years, the
> data you provide is lost on me. Perhaps you can translate some of the
> more cogent details:
> Ground Conductivity: ______
> A wire list with x,y,z co-ordinates of each wire's two ends: ______
> Size of each wire (diameter): ______
> Source placement (which wire, where on wire): ______
> Load placement (which wire, where on wire): ______
>
> 73's
> Richard Clark, KB7QHC

Sorry Richard, I have presented all that I am capable of
Nothing more to say, no more hoops to jump thru.I need a rest.
Nothing but nothing seems to satisfy you and you have agreed with nothing
that I have given you. I gave my honest best
I will try again, maybe next year, the normal cycle that I have tried before
with this group.
Art Unwin.....KB9MZ......XG

3654. Re: Fractal Antenna for sale

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-23 02:23:12 UTC
From: Fred Hambrecht <w4jle@charter.net>
Message-ID: <umb74javvqkb8e@corp.supernews.com>
Source record: 136095

What some consider a waste of bandwidth, others view as entertainment.

Sure beats the heck out of the 1 + 1 = 4 debates. You now know the thread title, ignore it as you go by.

Why is it you have this burning need to play bandwidth cop? Get a hobby.

"MD" <ve3tmt@rac.ca> wrote in message news:xTf99.7374$sY3.1584385@news20.bellglobal.com...
>
> "Fractal Antennas" <fractena@yahoo.com> wrote in message
> news:653d2ee5.0208221144.4aa42d89@posting.google.com...
> > I have for sale one fractal antenna, operating on the HF frequencies.
> > Used for about 1 year, in good shape. Email for information.
>
> Are we going to get into this useless BS all over again. What a waste of
> bandwidth.
>
>

3655. Re: Hustler 6BVT vertical

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-23 02:27:50 UTC
From: vswrref@hotmail.com
Message-ID: <3d659d45.3206663@national-news.stargate.net>
Source record: 136096

Hi Ron!

Thanks for the input. I'm trying to get an idea on what direction I
want to take on putting an antenna up. Nothing fancy, just something
to get me back on the air.

Jeff Y.

On Thu, 22 Aug 2002 15:55:47 GMT, rong@computer.net (Ron
Goldstein--KA2IIA) wrote:

>vswrref@hotmail.com (Jeff Y.) wrote:
>
>>Hi all!
>>
>>Wondering if anybody is currently using, or has used the Hustler 6BVT
>>HF vertical and what your thoughts, likes and dislikes of it, are.
>>How does it work on the bands, with or without the radials. Looking
>>forrward to seeing the posts.
>>
>>
>>Jeff Y.
>==
>Hi Jeff,
>
> I've had a 5BTV (80, 40, 20, 15, & 10) since I've been licensed (1980),
>and it has given me no problems in the 22 years it has been up. It's mounted on
>a 3 foot piece of inch & a half pipe which is driven 2 feet into the ground in
>my backyard. I have no ground radials. Within the first 2 years of using it, I
>accomplished WAS, WAC, and DXCC (100 countries). I think it's a great antenna
>for a vertical.
>**
> Ron Goldstein.....KA2IIA
> STAY YOUNG---DRIVE A VINTAGE 427 CORVETTE.
> KEEP YOUR MIND ACTIVE---BECOME AN AMATEUR RADIO OPERATOR.
>
>REMEMBER, THERE ARE NO STRANGERS IN AMATEUR RADIO, ONLY FRIENDS
> THAT WE HAVE NOT YET MET.
> rong@computer.net******ka2iia@arrl.net

3656. Re: Hustler 6BVT vertical

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-23 02:32:44 UTC
From: vswrref@hotmail.com
Message-ID: <3d659e19.3418781@national-news.stargate.net>
Source record: 136097

Hi!

Thanks for the input. Sounds like the vertical is working pretty
well.

I'm debating between this and the DX-77 because I want a tilt over. I
know the 6BVT isn't a tilt over but that doesn't mean I can improvise.
:)

Again, thanks for the input and I'll have more to digest.

Jeff

On Thu, 22 Aug 2002 18:21:21 GMT, IE <m9191@abc.se> wrote:

>Hi,
>
>I have used the 6BVT for four years. First I had it mounted on ground
>and last two years 3 meters above with radials going out from the low
>point of the antenna. (Just above the roof of a building and wall
>mounted). Radials are going in all directions.
>
>Compared to my beam it is a big difference (the beam is much, much
>better). And for 80 meter I never use it (very narrow and not good
>compared to my wire antennas), But I like it since it is easy to play
>with. On 30 and 40 I use it a lot and have worked many DX.
>
>This fall I will add more radials to it since I have not been fair to
>the antenna. I have about 8 radials today in different lengths and
>with very weak copper wire. I think I can get much more out of this
>antenna with better radials and thicker wire.
>
>The SWR is good on all bands. I have tuned the 80 meter part to 3.500
>and SWR is low there as well. But SWR is one thing. I still prefer a
>wire dipole on 80. It is a question of S-units in difference.
>
>I am very impressed of the possibillity for the antenna to take care
>of hard wind. First years I was nervous but today I trust the antenna
>in all WX.
>
>This antenna is connected to the 2nd antenna connector on a TS870 so I
>have never used it for higher power then 70-80 W. That power it takes
>care of.
>
>Earlier I have had other verticals. I can't say for sure this one
>works better but I feel so.

>
>I have a computer LAN in the same building and this antenna picks up
>more radiation from the LAN and TV-sets than a dipole or a beam.
>
>In conclusion I like the antenna and think it is a nice multiband
>vertical. I should have done the work with radials earlier. My feeling
>are that it worked better ground mounted, due to grounding, then 3
>meters up. This antenna will stay with me for years.
>
>
>
>
>On Thu, 22 Aug 2002 15:55:47 GMT, rong@computer.net (Ron
>Goldstein--KA2IIA) wrote:
>
>>vswrref@hotmail.com (Jeff Y.) wrote:
>>
>>>Hi all!
>>>
>>>Wondering if anybody is currently using, or has used the Hustler 6BVT
>>>HF vertical and what your thoughts, likes and dislikes of it, are.
>>>How does it work on the bands, with or without the radials. Looking
>>>forrward to seeing the posts.
>>>
>>>
>>>Jeff Y.
>>==
>>Hi Jeff,
>>
>> I've had a 5BTV (80, 40, 20, 15, & 10) since I've been licensed (1980),
>>and it has given me no problems in the 22 years it has been up. It's mounted on
>>a 3 foot piece of inch & a half pipe which is driven 2 feet into the ground in
>>my backyard. I have no ground radials. Within the first 2 years of using it, I
>>accomplished WAS, WAC, and DXCC (100 countries). I think it's a great antenna
>>for a vertical.
>>**
>> Ron Goldstein.....KA2IIA
>> STAY YOUNG---DRIVE A VINTAGE 427 CORVETTE.
>> KEEP YOUR MIND ACTIVE---BECOME AN AMATEUR RADIO OPERATOR.
>>
>>REMEMBER, THERE ARE NO STRANGERS IN AMATEUR RADIO, ONLY FRIENDS
>> THAT WE HAVE NOT YET MET.
>> rong@computer.net******ka2iia@arrl.net
>

3657. Re: Hustler 6BVT vertical

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-23 02:37:55 UTC
From: vswrref@hotmail.com
Message-ID: <3d659f03.3652491@national-news.stargate.net>
Source record: 136098

Hi Dan,

Thanks for the info. So the ground mount gave you problems. Hmmmm,
kinda strange since others I've talked with said it worked best ground
mounted but a real burden when elevated. Maybe ground conditions are
a big factor as well.

I'm debating between this and the DX-77 because of the tilt over. I
know the 6BTV ins't a tilt over but I can always rig that up if I need
to. More info to ponder. Thanks again, Dan!

Jeff Y.

On Thu, 22 Aug 2002 17:53:23 -0500, "Dan/W4NTI"
<w4nti@mindspringnospam.com> wrote:

>I had the 4BTV for many years. I assume it is basically the same as the
>6BTV other than a few more bands.
>
>Actually I had the 5BTV. It had the KW 80m resonator.
>
>I agree...it is not good on 80m anywhere. Its too short you know.
>
>On 40 I found it worked out quite well. In Germany, when I was DA2LJ, I
>used the 4BTV sticking out of the top floor attic window in the roof. Ran
>one radial per band. Worked gangbusters. Of course it was 110 feet in the
>air at that time...hi.
>
>Back stateside I used it in my backyard by putting it on a 10 foot pole.
>Then running a screen of interconnected chicken wire as a above ground
>counterpoise. Seemed to do quite well that way too.
>
>The worst situation I used it in was ground mounting with no radials.
>
>Hope that helps.
>
>Dan/W4NTI
>
>"IE" <m9191@abc.se> wrote in message
>news:us8amu8gkj1rh457kemae36tfiu4aat3f4@4ax.com...
>> Hi,
>>
>> I have used the 6BVT for four years. First I had it mounted on ground
>> and last two years 3 meters above with radials going out from the low
>> point of the antenna. (Just above the roof of a building and wall
>> mounted). Radials are going in all directions.

>>
>> Compared to my beam it is a big difference (the beam is much, much
>> better). And for 80 meter I never use it (very narrow and not good
>> compared to my wire antennas), But I like it since it is easy to play
>> with. On 30 and 40 I use it a lot and have worked many DX.
>>
>> This fall I will add more radials to it since I have not been fair to
>> the antenna. I have about 8 radials today in different lengths and
>> with very weak copper wire. I think I can get much more out of this
>> antenna with better radials and thicker wire.
>>
>> The SWR is good on all bands. I have tuned the 80 meter part to 3.500
>> and SWR is low there as well. But SWR is one thing. I still prefer a
>> wire dipole on 80. It is a question of S-units in difference.
>>
>> I am very impressed of the possibillity for the antenna to take care
>> of hard wind. First years I was nervous but today I trust the antenna
>> in all WX.
>>
>> This antenna is connected to the 2nd antenna connector on a TS870 so I
>> have never used it for higher power then 70-80 W. That power it takes
>> care of.
>>
>> Earlier I have had other verticals. I can't say for sure this one
>> works better but I feel so.
>>
>> I have a computer LAN in the same building and this antenna picks up
>> more radiation from the LAN and TV-sets than a dipole or a beam.
>>
>> In conclusion I like the antenna and think it is a nice multiband
>> vertical. I should have done the work with radials earlier. My feeling
>> are that it worked better ground mounted, due to grounding, then 3
>> meters up. This antenna will stay with me for years.
>>
>>
>>
>>
>> On Thu, 22 Aug 2002 15:55:47 GMT, rong@computer.net (Ron
>> Goldstein--KA2IIA) wrote:
>>
>> >vswrref@hotmail.com (Jeff Y.) wrote:
>> >
>> >>Hi all!
>> >>
>> >>Wondering if anybody is currently using, or has used the Hustler 6BVT
>> >>HF vertical and what your thoughts, likes and dislikes of it, are.
>> >>How does it work on the bands, with or without the radials. Looking
>> >>forrward to seeing the posts.
>> >>
>> >>

>> >>Jeff Y.
>> >==========
>> >Hi Jeff,
>> >
>> > I've had a 5BTV (80, 40, 20, 15, & 10) since I've been licensed (1980),
>> >and it has given me no problems in the 22 years it has been up. It's
>mounted on
>> >a 3 foot piece of inch & a half pipe which is driven 2 feet into the
>ground in
>> >my backyard. I have no ground radials. Within the first 2 years of using
>it, I
>> >accomplished WAS, WAC, and DXCC (100 countries). I think it's a great
>antenna
>> >for a vertical.
>> >**********
>> > Ron Goldstein.....KA2IIA
>> > STAY YOUNG---DRIVE A VINTAGE 427 CORVETTE.
>> > KEEP YOUR MIND ACTIVE---BECOME AN AMATEUR RADIO OPERATOR.
>> >
>> >REMEMBER, THERE ARE NO STRANGERS IN AMATEUR RADIO, ONLY FRIENDS
>> > THAT WE HAVE NOT YET MET.
>> > rong@computer.net******ka2iia@arrl.net
>>
>
>

3658. Re: Modeling coax attached to an antenna in EZNEC

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-23 02:51:23 UTC
From: Douglas Stinson <douglas-stinson@attbi.com>
Message-ID: <Kqh99.125826$983.179504@rwcrnsc53>
Source record: 136099

Thanks for the quick response -- nice to have some confirmation -- will
settle some arguments here!

"Roy Lewallen" <w7el@eznec.com> wrote in message
news:3D6547AD.7050201@eznec.com...
> Bingo. Yes, you should include the wire representing the outside of the
> coax, and yes, you'll see that the J-Pole pattern is affected. (You'll
> also find that ground plane antennas are subject to the same problem.)
>
> The problem is that to be truly accurate, you'll have to model the
> actual path to ground. That would be from the antenna to the rig, then
> however the RF gets to ground from there. This is often impossible, but
> some experimenting with the model will at least show you the general
> magnitude of effects you could have.
>
> To add a "current balun" to the system, insert a "load" in the shield
> wire. Its impedance should be the impedance of the balun. If you don't
> know what the balun's impedance is, use 500 ohms or so as a ballpark
> estimate. It won't matter if it's R, X, or a combination. You'll find
> that for a J-Pole or ground plane, you might need two baluns, one at the
> feedpoint and one about a quarter wavelength below.
>
> Roy Lewallen, W7EL
>
> Douglas Stinson wrote:
> > When modeling an antenna which will be fed by a coax cable, should one
> > include the shield of the cable as a wire? The purpose of this would be
to
> > include the effect of currents flowing down the outside of the cable.
> >
> > For example, a J-pole is often modeled in EZNEC with a source bridging
the
> > two legs of the antenna. Should one also include a wire from one end of
the
> > source down to ground?
> >
> > At least for some antennas modeling with and without this "extra" wire
leads
> > to vastly different radiation patterns and impedance.
> >
> >
>

3659. Re: Superposition quiz

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-23 03:22:29 UTC
From: richardharrison@webtv.net
Message-ID: <12220-3D65AA75-185@storefull-2392.public.lawson.webtv.net>
Source record: 136100

Gary, K4FMX wrote:
"As was stated before the Bird does not measure forward and reflected power directly."

A speedometer measures neither miles nor hours. It never the less indicates MPH.

All measurement devices have limited range and even more limited accuracy.

Bird suggests limiting reflected power to 10% of forward power for accuracy.

Process instruments have zero and span adjustments for calibration over a limited range. It`s unreasonable and fruitless to expect more.

Best regards, Richard Harrison, KB5WZI

3660. Re: Superposition quiz

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-23 04:01:44 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <3D65B3A8.3050306@eznec.com>
Source record: 136101

Richard Harrison wrote:
> . . .
> Bird suggests limiting reflected power to 10% of forward power for
> accuracy.
> . . .

Hm, that limits it to 2:1 SWR or less.

Roy Lewallen, W7EL

3661. Re: Fractal Antenna for sale

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-23 04:33:03 UTC
From: 'Doc <w5lz@icok.net>
Message-ID: <3D65BAFA.7E3C9AE6@icok.net>
Source record: 136102

Fred,
I love it! How did I ever miss that the
first time around? (LOL)
'Doc

3662. Re: Hustler 6BVT vertical

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-23 04:48:39 UTC
From: IE <m9191@abc.se>
Message-ID: <05fbmuge277309dgtv2qdaa2h78r7cl4id@4ax.com>
Source record: 136103

Sorry for the misspelling in the message. It might gave some missunderstandings. Just to be sure: My impression is that it worked better placed directly on ground.

I mounted it higher since I liked to have it up from pets and children.

My grounding is mostly sand based so it is not the best for a vertical. Still this one seems to work better directly on the ground. When I had it placed so I had no radials but a 2 meter metal tube right down as grounding.

Today I have, beside the radials, a 4 meter copper pipe down in the sand as well,

Good luck with your choise.

3663. Re: Superposition quiz

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-23 05:09:59 UTC
From: n7ws@nowhere.com
Message-ID: <3d65c1d8.52022258@news.triconet.org>
Source record: 136104

On Thu, 22 Aug 2002 16:55:06 -0500 (CDT), richardharrison@webtv.net (Richard Harrison) wrote:

|Ian, G3SEK wrote:
|"But by subtracting these two wrong readings, you get the "correct"
|value for the net power delivered to the load!"
|
|I am sure Walt Maxwell got it right in "Reflections".
|
|When errors cancel to give the "correct" result, I say HOORAY!

The $200,000 HP8510C that I used to use had lots of "errors" too. Source match less than perfect, coupler directivity and coupling factors less than perfect, receiver tracking less than perfect, etc...

But by measuring known standards and thus determining these errors, they could be subtracted from the measured data to give the "correct" result. I always said Hooray too and wasn't troubled at all knowing that my equipment wasn't perfect.

The corrected answers seemed good enough to me.

Wes

3664. Re: Fractal Antenna for sale

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-23 05:12:20 UTC
From: n7ws@nowhere.com
Message-ID: <3d65c423.52609812@news.triconet.org>
Source record: 136105

On Thu, 22 Aug 2002 21:09:23 -0400, "MD" <ve3tmt@rac.ca> wrote:

|Are we going to get into this useless BS all over again.

Yes.

3665. Re: Hustler 6BVT vertical

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-23 05:19:30 UTC
From: vswrref@hotmail.com
Message-ID: <3d65c50f.13393836@national-news.stargate.net>
Source record: 136106

Hi!

Ok on the followup. That clears things up a bit. Like I say, it
appears that others are having good results ground mounted and
without radials then adding radials later for the lower bands.

The ground here is dry and sandy. Las Vegas, NV, what would you
expect? :) At least this gives me some idea on the direction I want
to take.

Jeff Y.

On Fri, 23 Aug 2002 04:48:39 GMT, IE <m9191@abc.se> wrote:

>
>
>Sorry for the misspelling in the message. It might gave some
>missunderstandings. Just to be sure: My impression is that it worked
>better placed directly on ground.
>
>I mounted it higher since I liked to have it up from pets and
>children.
>
>My grounding is mostly sand based so it is not the best for a
>vertical. Still this one seems to work better directly on the ground.
>When I had it placed so I had no radials but a 2 meter metal tube
>right down as grounding.
>
>Today I have, beside the radials, a 4 meter copper pipe down in the
>sand as well,
>
>Good luck with your choise.
>

3666. Re: Fractal Antenna for sale

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-23 05:26:42 UTC
From: Fred Hambrecht <w4jle@charter.net>
Message-ID: <umbhsocctka06d@corp.supernews.com>
Source record: 136107

Her is another neat one, a Hyper speed antenna that lets you send
communication signals faster than light.

http://www.delphion.com/details?pn=US06025810__

It would appear you can patent an antenna regardless of how nutty the idea
is.

"'Doc" <w5lz@icok.net> wrote in message news:3D65BAFA.7E3C9AE6@icok.net...
>
>
> Fred,
> I love it! How did I ever miss that the
> first time around? (LOL)
> 'Doc

3667. microwave antenna, my home page

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-23 06:21:10 UTC
From: mateusz mazur <mefis@pit.gda.pl>
Message-ID: <ak4ki9$9gc$1@korweta.task.gda.pl>
Source record: 136108

visit my page
www.republika.pl/mateuszmazur
m.m.

3668. Re: Superposition quiz

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-23 07:39:12 UTC
From: "Ian White, G3SEK" <G3SEK@ifwtech.co.uk>
Message-ID: <2V0n6GGgaeZ9EASe@ifwtech.co.uk>
Source record: 136113

Richard Harrison wrote:
>
>Bird has no need to warn when two wrongs make a right.
>
But before that, "one wrong makes a wrong"! Certainly it has led you into some naive assumptions about how your Bird works.

Doesn't it trouble you that with any mismatched load, the forward and reflected "power" readings are both WRONG? Isn't it just a little bit curious that the difference between those two wrong readings comes out correct?

Doesn't it suggest that the whole thing is deeper than you thought? ... and certainly deeper than the Bird manual reveals.

--
73 from Ian G3SEK 'In Practice' columnist for RadCom (RSGB)
Editor, 'The VHF/UHF DX Book'
http://www.ifwtech.co.uk/g3sek

3669. Re: Superposition quiz

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-23 08:16:41 UTC
From: Bill Nelson <billn@spock.peak.org>
Message-ID: <ak4r19kcm3@quark.scn.rain.com>
Source record: 136109

Richard Harrison <richardharrison@webtv.net> wrote:

> Good. So am I. Bird wrote:
> "A simple algebraic subtraction (P forward - P reflected) yields the
> power delivered to the load.

> That`s a description of forward power and reflected power in the 50-ohm
> coax, which the wattmeter indicates. It is not specific to the Bird
> wattmeter. With a dfifferent directional coupler you could calaulate the
> difference of indicated forward and reflected powers and make the same
> measurement, the same way you make it with the Bird.

That does not mean that either flow of power is negative. That is
simply a matter of convention - so that we can indicate the direction
of flow relative to some reference.

If there were such a thing as negative power, then I would expect that
it could be generated and stored. Such a power source, if hooked up to
a resistor, would cool it.

--
Bill Nelson (billn@peak.org)

3670. Re: Air-Wound Balun Design Info??

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-23 08:35:30 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <3D65F3D2.3070609@eznec.com>
Source record: 136110

Unfortunately I don't have my data from the original measurements using RG-213. (My measurements were done in 1985.) I do, however, have some graphs of RG-58 flat coils of two lengths and various numbers of turns. Of these, the best had just over a 3:1 frequency range at the 500 ohm points. I see from K1TTT's data that he was able to achieve 4:1 with one configuration and nearly that with another. The other two, though, were less than 3:1. So I'm not entirely convinced that the flat coil is inherently more narrow than the solenoid if wound with the same type of coax and carefully optimized. It might be -- if so, I'd estimate a ratio of about 3:4, flat:solenoid for bandwidth.

I do like the flat approach because it's fast, simple, and low weight and bulk. But there certainly is more than one way to make an effective air core balun. And if maximum bandwidth is the goal, other methods might well be better.

Whatever method is chosen, though, I believe you'll find that the maximum bandwidth will be achieved if you make use of self resonance, and don't try to restrict yourself to the region where the device is inductive or to prevent resonance.

Roy Lewallen, W7EL

N2EY wrote:
>
> TNX, Roy - but that's for baluns using RG-213. W3RV is looking for
> compact and light - RG-58 size. (RG-8X would be nice but it's foam and
> not the best stuff for coiling). Maybe somebody with an analyzer and
> some '58/U can make a few tests...
>
> Looking at the K1TTT info, it seems to me that the 'solenoid' (single
> layer) design has some advantages over the 'pancake' (bunched) design.
> For the same amount of coax, 'pancake' design does give more impedance
> at a lower frequency. But it does so at the expense of bandwidth.
>
> Consider the two '8 turn 6-5/8 inch' sets of numbers. The solenoid
> design gives an impedance greater than 500 ohms from 6 MHz to 24 MHz -
> a 4:1 frequency ratio that covers 40, 30, 20, 17 and 15 meters. The
> same coax in a pancake design gives an impedance greater than 500 ohms
> from 4 to 10 MHz - only a 2.5:1 frequency ratio.
>
> 73 de Jim, N2EY

3671. Re: Superposition quiz

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-23 08:46:05 UTC
From: Bill Nelson <billn@spock.peak.org>
Message-ID: <ak4sockcm4@quark.scn.rain.com>
Source record: 136111

Wes <n7ws_at_yahoo.com> wrote:
> On Wed, 21 Aug 2002 00:24:27 -0700, Roy Lewallen <w7el@eznec.com> wrote:

> |
> | rPa = {Vrms^2 / (4 * R0)} * {[(Ri - R0)^2 + Xi^2)] / (Ri + R0)^2 + Xi^2]}

> I think you left out a bracket... shouldn't it be:

> rPa = {Vrms^2 / (4 * R0)} * {[(Ri - R0)^2 + Xi^2)] / [(Ri + R0)^2 + Xi^2]}

Neither one is correct. There is a problem with the ")" right after
the first Xi^2 term. There is at least one other bracketing problem as well
in the first equation.

--
Bill Nelson (billn@peak.org)

3672. Re: Superposition quiz

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-23 08:57:25 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <3D65F8F5.4080108@eznec.com>
Source record: 136112

Bill Nelson wrote:
> . . .
> If there were such a thing as negative power, then I would expect that
> it could be generated and stored. Such a power source, if hooked up to
> a resistor, would cool it.

Stored negative energy? Contemplate the ice cubes in your freezer.

Roy Lewallen, W7EL

** It's time to turn off the dark sinks and go to bed.

3673. How?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-23 10:52:28 UTC
From: John Smith <someone@micro$oft.com>
Message-ID: <ak53p5$6v8$1@newstoo.ericsson.se>
Source record: 136114

> ... for sale one fractal antenna ... in good shape.

Uh!??????????

Pardon me, but how can a Fractal (or Meander) antenna POSSIBLY be in good shape? It's a bit like the famous British politician who said "... and Britain is not an island, you know!", or "for sale, parakeets, on higher perches".

B.R. from Anony Mouse (Harry Lippitz, really, but I don't want to publish my name.)

3674. Re: Superposition quiz

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-23 12:12:29 UTC
From: CAM <Cecil.A.Moore@ieee.org>
Message-ID: <3D6626AD.892E2F5B@ieee.org>
Source record: 136115

Gary Schafer wrote:
>
> On Thu, 22 Aug 2002 16:55:06 -0500 (CDT), richardharrison@webtv.net
> (Richard Harrison) wrote:
>
> >Ian, G3SEK wrote:
> >"But by subtracting these two wrong readings, you get the "correct"
> >value for the net power delivered to the load!"
> >
> >I am sure Walt Maxwell got it right in "Reflections".
> >
> >When errors cancel to give the "correct" result, I say HOORAY!
> >
> >Bird only included a warning about affecting the line length at VHF by
> >inserting the wattmeter when the line had a high VSWR. That can give a
> >significant error. They suggest making the wattmeter a part of a
> >1/2-wave line. Something I had all our technicians do long before Bird
> >published the suggestion. They may have got the idea from me for all I
> >know.
> >
> >Bird has no need to warn when two wrongs make a right.
> >
> >Best regards, Richard Harrison, KB5WZI
> >
>
> As I am sure you know, by not having the Bird meter be part of a 1/2
> wavelength line in a high
> swr feed line does not cause a meter reading error by itself. But
> changing the length of feed line
> by inserting the meter and it not being a part of an additional half
> wavelength line, detunes the
> transmitter. That changes the power out and thus the error.
>
> As was stated before the Bird meter does not measure forward and
> reflected power directly.
> You can easily prove it with an open circuit (no load) connected to
> the meter. The meter will
> read the same forward reading as reflected reading. Turn the
> transmitter up so the meter reads
> 100 watts.
> 100 watts forward minus 100 watts reflected is zero power delivered to
> the load. But there is
> no 100 watts reflected as the meter shows. There can be significant
> errors in reflected power

> readings as swr goes up.

That's easily understood. Add 1/2WL of open circuited lossless 50 ohm coax and you will have the same reflections as the open-circuited Bird is reading. The Bird assumes it is in a 50 ohm environment. According to reflection mechanics, the forward and reflected phasors at an open circuit look like:

```
forward reflected
o--->------> <---o---------->
I+ V+ I- V-
```

The sampled current in the Bird equals zero. The sampled voltage equals 2V. Just as it would if it were looking into a 1/2WL open circuited feedline.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

3675. Re: Superposition quiz

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-23 12:19:07 UTC
From: CAM <Cecil.A.Moore@ieee.org>
Message-ID: <3D66283B.ED4B6EC4@ieee.org>
Source record: 136116

Tdonaly wrote:
> So scalars are limited to being positive, real numbers, now. My, how
> physics has changed. And, since when has a bucket of water become
> a scalar field? And, finally, why did Mr. Poynting use a minus sign in his
> famous, and much abused theorum?

Tom, would you take some isolated negative RF power and show me how to generate
a negative RF field strength with it. I've got this idea for a broadcast station.
It seems to me the FCC doesn't require a license for a broadcast station that
is putting out a negative field strength and radio receivers should be able
to receive its signal just fine.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

3676. Re: Scalar Electromagnetic Weapons

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-23 12:19:12 UTC
From: "Alexander S. Wood" <alec_wood@dont.spam.me.ntlworld.com>
Message-ID: <LQp99.480$a8.11082@newsfep3-gui.server.ntli.net>
Source record: 136020
Cross-posted to: alt.ham-radio.eme,alt.ham-radio.hf,alt.ham-radio.vhf-uhf,alt.radio.scanner,rec.radio.amateur.antenna,rec.radio.amateur.misc,rec.radio.scanner

Yeah well Nick, let's face it, during Desert Storm the Iraquis couldn't kill any of our guys, so they got a trigger-happy Yank to do it for them. Of course it wasn't the trigger happy Yank's (yet to apologise or be held accountable) fault, but likewise the Swiss cable-car downed by the show-off doing aerobatics, and many others in between. Even the "friendly" Afghans have to start running when they see the Yanks coming.

Let's face it, if you are not yourself American then you are a legitimate target, wether you be ally or enemy. But since the casualties of this US foreign policy are not themselves Americans, I don't suppose it matters much to your average US citizen.

Alec

<lucifer@eternal-flames.gov> wrote in message
news:gqc2mu8nrk688hhnh3mehdrir1pek3psu2@4ax.com...
> On Mon, 19 Aug 2002 18:10:49 +0100, "Alexander S. Wood"
> <alec_wood@dont.spam.me.ntlworld.com> wrote:
>
> >That said, I don't believe that the US have yet perfected such a weapon,
if
> >they had we would all know about it. America's "national security
> >requirements" would have required its use on all of us by now for daring
to
> >question "Dubbya".
>
> Are you suggesting an over generosity in the use of 'friendly fire' ?
>
> Surely not....
>
>

3677. Re: Fractal Antenna for sale

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-23 12:28:10 UTC
From: "Alexander S. Wood" <alec_wood@dont.spam.me.ntlworld.com>
Message-ID: <m_p99.482$a8.10976@newsfep3-gui.server.ntli.net>
Source record: 136118

The link given below does not work, please repost it. I have a feeling Chip will want to check it for patent violation. After all it is almost certain to contain a snowflake shaped object at its core.

Alec

"Fred Hambrecht" <w4jle@charter.net> wrote in message news:umbhsocctka06d@corp.supernews.com...
> Her is another neat one, a Hyper speed antenna that lets you send
> communication signals faster than light.
>
> http://www.delphion.com/details?pn=US06025810__
>
> It would appear you can patent an antenna regardless of how nutty the idea
> is.
>
>
> "'Doc" <w5lz@icok.net> wrote in message news:3D65BAFA.7E3C9AE6@icok.net...
> >
> >
> > Fred,
> > I love it! How did I ever miss that the
> > first time around? (LOL)
> > 'Doc
>
>

3678. Re: Fractal Antenna for sale

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-23 12:29:20 UTC
From: "Alexander S. Wood" <alec_wood@dont.spam.me.ntlworld.com>
Message-ID: <m_p99.483$a8.10976@newsfep3-gui.server.ntli.net>
Source record: 136019

"MD" <ve3tmt@rac.ca> wrote in message
news:xTf99.7374$sY3.1584385@news20.bellglobal.com...
>
> "Fractal Antennas" <fractena@yahoo.com> wrote in message
> news:653d2ee5.0208221144.4aa42d89@posting.google.com...
> > I have for sale one fractal antenna, operating on the HF frequencies.
> > Used for about 1 year, in good shape. Email for information.
>
> Are we going to get into this useless BS all over again.

I hope so

Alec

3679. Re: Hustler 6BVT vertical

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-23 12:29:22 UTC
From: Bob Miller <bamiller@texas.net>
Message-ID: <ISpmPeAmREl5g=jIf3VmVg68CXZN@4ax.com>
Source record: 136117

vswrref@hotmail.com (Jeff Y.) wrote:

>Hi Dan,
>
>Thanks for the info. So the ground mount gave you problems. Hmmmm,
>kinda strange since others I've talked with said it worked best ground
>mounted but a real burden when elevated. Maybe ground conditions are
>a big factor as well.

He said he tried it ground mounted w/no radials.

Bob
>
>I'm debating between this and the DX-77 because of the tilt over. I
>know the 6BTV ins't a tilt over but I can always rig that up if I need
>to. More info to ponder. Thanks again, Dan!
>
>
>Jeff Y.
>
>
>
>On Thu, 22 Aug 2002 17:53:23 -0500, "Dan/W4NTI"
><w4nti@mindspringnospam.com> wrote:
>
>>I had the 4BTV for many years. I assume it is basically the same as the
>>6BTV other than a few more bands.
>>
>>Actually I had the 5BTV. It had the KW 80m resonator.
>>
>>I agree...it is not good on 80m anywhere. Its too short you know.
>>
>>On 40 I found it worked out quite well. In Germany, when I was DA2LJ, I
>>used the 4BTV sticking out of the top floor attic window in the roof. Ran
>>one radial per band. Worked gangbusters. Of course it was 110 feet in the
>>air at that time...hi.
>>
>>Back stateside I used it in my backyard by putting it on a 10 foot pole.
>>Then running a screen of interconnected chicken wire as a above ground
>>counterpoise. Seemed to do quite well that way too.
>>
>>The worst situation I used it in was ground mounting with no radials.
>>
>>Hope that helps.
>>

>>Dan/W4NTI
>>
>>"IE" <m9191@abc.se> wrote in message
>>news:us8amu8gkj1rh457kemae36tfiu4aat3f4@4ax.com...
>>> Hi,
>>>
>>> I have used the 6BVT for four years. First I had it mounted on ground
>>> and last two years 3 meters above with radials going out from the low
>>> point of the antenna. (Just above the roof of a building and wall
>>> mounted). Radials are going in all directions.
>>>
>>> Compared to my beam it is a big difference (the beam is much, much
>>> better). And for 80 meter I never use it (very narrow and not good
>>> compared to my wire antennas), But I like it since it is easy to play
>>> with. On 30 and 40 I use it a lot and have worked many DX.
>>>
>>> This fall I will add more radials to it since I have not been fair to
>>> the antenna. I have about 8 radials today in different lengths and
>>> with very weak copper wire. I think I can get much more out of this
>>> antenna with better radials and thicker wire.
>>>
>>> The SWR is good on all bands. I have tuned the 80 meter part to 3.500
>>> and SWR is low there as well. But SWR is one thing. I still prefer a
>>> wire dipole on 80. It is a question of S-units in difference.
>>>
>>> I am very impressed of the possibillity for the antenna to take care
>>> of hard wind. First years I was nervous but today I trust the antenna
>>> in all WX.
>>>
>>> This antenna is connected to the 2nd antenna connector on a TS870 so I
>>> have never used it for higher power then 70-80 W. That power it takes
>>> care of.
>>>
>>> Earlier I have had other verticals. I can't say for sure this one
>>> works better but I feel so.
>>>
>>> I have a computer LAN in the same building and this antenna picks up
>>> more radiation from the LAN and TV-sets than a dipole or a beam.
>>>
>>> In conclusion I like the antenna and think it is a nice multiband
>>> vertical. I should have done the work with radials earlier. My feeling
>>> are that it worked better ground mounted, due to grounding, then 3
>>> meters up. This antenna will stay with me for years.
>>>
>>>
>>>
>>>
>>> On Thu, 22 Aug 2002 15:55:47 GMT, rong@computer.net (Ron
>>> Goldstein--KA2IIA) wrote:
>>>

>>> >vswrref@hotmail.com (Jeff Y.) wrote:
>>> >
>>> >>Hi all!
>>> >>
>>> >>Wondering if anybody is currently using, or has used the Hustler 6BVT
>>> >>HF vertical and what your thoughts, likes and dislikes of it, are.
>>> >>How does it work on the bands, with or without the radials. Looking
>>> >>forrward to seeing the posts.
>>> >>
>>> >>
>>> >>Jeff Y.
>>> >>==========
>>> >Hi Jeff,
>>> >
>>> > I've had a 5BTV (80, 40, 20, 15, & 10) since I've been licensed (1980),
>>> >and it has given me no problems in the 22 years it has been up. It's
>>mounted on
>>> >a 3 foot piece of inch & a half pipe which is driven 2 feet into the
>>ground in
>>> >my backyard. I have no ground radials. Within the first 2 years of using
>>it, I
>>> >accomplished WAS, WAC, and DXCC (100 countries). I think it's a great
>>antenna
>>> >for a vertical.
>>> >**********
>>> > Ron Goldstein.....KA2IIA
>>> > STAY YOUNG---DRIVE A VINTAGE 427 CORVETTE.
>>> > KEEP YOUR MIND ACTIVE---BECOME AN AMATEUR RADIO OPERATOR.
>>> >
>>> >REMEMBER, THERE ARE NO STRANGERS IN AMATEUR RADIO, ONLY FRIENDS
>>> > THAT WE HAVE NOT YET MET.
>>> > rong@computer.net******ka2iia@arrl.net
>>>
>>
>>

3680. Re: Ladderline & Mast

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-23 12:31:40 UTC
From: "Alexander S. Wood" <alec_wood@dont.spam.me.ntlworld.com>
Message-ID: <lcq99.490$a8.11520@newsfep3-gui.server.ntli.net>
Source record: 136021

Cable ties would be good, but if you want you could try fishing line, wool, very long sausages, tails cut from stray dogs, or whatever you can find. Main thing is to stop it flopping about.

Alec

"Rezster" <dbm@[remove]fisi.net> wrote in message news:Xns9272ADD28FB68dbmremovefisinet@148.78.248.75...
> After all the responses on my ladderline situation, I've decided to erect a
> steel mast..30' on my roof...far enough away to use up the excess line.
> Now, with what do I secure the ladderline to the mast and to the roof?

3681. Losses in insulating materials

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-23 12:52:24 UTC
From: Jean Cesario <jean.cesario1@libertysurf.fr>
Message-ID: <3D663008.163B82D1@libertysurf.fr>
Source record: 136022

Hi everybody

I'm wondering about losses in antennas made of standard "domestic" stranded or solid copper wire, insulated with polyvinyl chloride. I built several decametric antennas, from simple dipoles to a cubical quad, with these kinds of wires, 1.5 or 2.5 square millimeters. The results where satisfying. They probably would be better with naked wire, but how much, and how long ? It seems to me important to avoid surface corrosion and consecutive HF resistance increase and mechanical strenght decrease.

I never found practical informations about this matter. Can anybody help ?

73 de Jean F8BXG

3682. What am I emitting on 80M?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-23 13:03:18 UTC
From: cprstn54zz@att.net
Message-ID: <3d663141.262268750@news-server.optonline.net>
Source record: 136023

I am putting 100 watts at 80M into a shortened inverted-V dipole with center 40 ft up. The only contacts I have been able to make are after dark to a densely populated area 20-30 miles to the west, behind a nearby hill that blocks line-of-sight to the contacts.

Is my signal going straight up and these folks are seeing scatter off my pillar of RF? Will scatter travel that far?

Ken KC2JDY

Ken
(to reply via email
remove "zz" from address)

3683. AM DXing: Why I know so little that.....

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-23 13:21:04 UTC
From: FACE <AFaceInTheCrowd@today.net>
Message-ID: <1cccmuc8onj2dd68t94l2ngh24ebtt5q8c@4ax.com>
Source record: 136025

I come hat in hand with some specs and ask if they are reasonable for
an AM DXer radio.

These are from the AM specs section of a Yamaha cr1020 receiver, circa
1977:

AM SECTION
tuning range: 525 to 1605 khz
Sensitivity (IHF, bar antenna) : 300 ï¿½V/m 49 dB/m
Selectivity (1,000 khz): 30 dB
Signal to noise Ratio: 50 dB (at 80 dB/m)
Image rejection (1000 kHz): 55 dB
IF rejection (1000 kHz): 40 dB
Spurious Rejection (1000 kHz): 55 dB
Total Harmonic Distortion: 0.4 % (for 80 dB/m)
AM Tuner Output Level Impedance(30% mod at Rec Out): 120 mV/6.5 kQ

Now, I understand the tuning range and some of the terms but not the
quantifications.....and that's it. :-)
Do you people see anything particularly bad or good there?

The receiver has a 10 inch analog tuning dial and needle dialed meters
for signal strength and tuning.

Also, the unit has a 6" ferrite bar swing-out antenna on the back
which I will try to increase the sensitivity of with a long
wire(suggestions appreciated on that last). It has a single pole AM
antenna input terminal and ground terminal.

I am 2/3 towards the edge of one of the largest metropolises in the US
which has been called the 'the most wired' city so I will have
competition getting propagated waves (I think).

My goal is to get most of the clear-channel AM BCB(Broadcast Band?)
stations on the Eastern seaboard. Is this realistic?

Thank you,

FACE

3684. Re: New Dedicated Radio Ham NewsGroup, FTP and WebSite

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-23 13:34:23 UTC
From: "Dave Williams (NNTP)" <dave.williams@nomail.totalise.co.uk>
Message-ID: <1030109663.29996.0.nnrp-07.3e3112b1@news.demon.co.uk>
Source record: 136026

Hi,

Is up now. I just updated some routing configuration, so you should be
able to access all OK.

All feedback welcomed.

Dave

"Eskay" <Nospamve3jua@rac.ca> wrote in message
news:3D665E4C.1CF42F89@rac.ca...
> When??????????
> Eskay
>
> "Dave Williams (NNTP)" wrote:
>
> > Just for your info, a new Radio Ham domain is available which includes a
> > newsgroup and FTP server.
> >
> > Web www.radio-ham.org
> > News news.radio-ham.org
> > FTP ftp.radio-ham.org
> >
> > Hope its of interest.
> >
> > Dave
>

3685. Re: Looking for a good 10 meter vertical

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-23 13:36:20 UTC
From: Dennis Kaylor <k4oxg@tampabay.rr.com>
Message-ID: <3D663A61.18D54C8A@tampabay.rr.com>
Source record: 136029

hey dan
i have used mine on 10-12-15-17
will tune on 20 but doesnt radiate
and mine is only about 7-8 feet off the ground at the base and i have no radials
on it

Dan/W4NTI wrote:

> I would agree. The 5/8is a better system. However the A99 is no slouch.
> If you DONT trim the A99 it will work on 10/15 and I heard it does on 12
> also. Don't know about that tho.
>
> Dan/W4NTI
>
> "2LD751" <ld751@yahoo.com> wrote in message
> news:3d12c96e.0208221310.ee4b99f@posting.google.com...
> > Jon Eckert <jpeckert@execpc.com> wrote in message
> news:<3d64140d$0$1427$272ea4a1@news.execpc.com>...
> > > Hi, I'm looking for a good 10 meter vertical to go on the roof. I have a
> > > Solarcon AR99 up now and that works fairly well, just wondering if there
> > > is something out there that works better and how much better is it as
> > > compared to the AR99. Thanks, Jon W9JPE
> >
> > Check out the Imax 2000. A very nice antenna that out performs the
> > A-99 due to it being a 5/8 wave. The A-99 is only a 1/2 wave and the
> > Imax doesn't require a ground plane. You may need to trim it a little
> > or use a tuner to get it right on for 10m, but outta the box, it
> > should perform fairly well.

3686. Connector Question ?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-23 13:37:41 UTC
From: Robert Rose <rgsrose@tiac.net>
Message-ID: <ak5e1p$6mt$1@slb5.atl.mindspring.net>
Source record: 136027

Hi,

Installing a new discone (receive only) in attic.

The connector on the antenna is one of those 239 varieties which, as I understand it, is generally
used for <30 MHz.

As I will be hopefully trying to pull stations in up to about 1.5 GHz, I'm wondering if
I should try to midify it to an "N" ? Or, will the loss thru it (up to the 1.5 GHz) be so minimal as to be essentially meaningless?

The ends of my coax to my receiver, and my receivers input are presently "N's"
My coax is the large diameter (0.4 inch) CQ 106 / LMR 400 type.

Thanks,
Bob

3687. Re: AM DXing: Why I know so little that.....

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-23 13:58:50 UTC
From: Fulano de Tal <therealexray@netscape.net>
Message-ID: <3D663F9A.F20FE207@netscape.net>
Source record: 136028

FACE wrote:
>
> I come hat in hand with some specs and ask if they are reasonable for
> an AM DXer radio.
>
> These are from the AM specs section of a Yamaha cr1020 receiver, circa
> 1977:

> Do you people see anything particularly bad or good there?

I'm going to skip the specs part and move on to actual reception. Tuners/receivers from the 70s take a pretty bad rap across the board for being deaf on AM and that opinion is somewhat justified. I have a Sansui 8080db and for a couple of years I figured it was 'normal'. But, I gave it a good alignment - yes, it was WAAAAY out of whack - and it turned into a tolerable AM receiver.

> Also, the unit has a 6" ferrite bar swing-out antenna on the back
> which I will try to increase the sensitivity of with a long
> wire(suggestions appreciated on that last). It has a single pole AM
> antenna input terminal and ground terminal.

An external random-length wire, as long and as high as you can get it, will outperform the ferrite bar many times over. The downside of this is overload by local broadcast stations. You mention living in Metropolis so that could indeed be a limiting factor. There's no specs listed to quantify this...they only tell ya the good things. Overload on BCB is a problem in almost all consumer-grade solid-state gear from the 70s when you want to use a good antenna. Its still worth a try. Leave it disconnected when not in use to avoid static build up or surge problems from nearby storms. Don't depend on gadgets to totally protect your receiver's front-end in this regard.
>
> I am 2/3 towards the edge of one of the largest metropolises in the US

> My goal is to get most of the clear-channel AM BCB(Broadcast Band?)
> stations on the Eastern seaboard. Is this realistic?

If you're in LA, no. If you're in Baltimore, sure. Of course nighttime only with some degree of fading.

Good luck,
Bill

3688. Re: What am I emitting on 80M?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-23 14:43:25 UTC
From: richardharrison@webtv.net
Message-ID: <13083-3D664A0D-28@storefull-2394.public.lawson.webtv.net>
Source record: 136031

Ken, KC2JDY wrote:

"I am putting 100 watts at 80M into a shortened inverted-V dipole with the center 40 ft up. The only contacts I have been able to make are after dark to a densely populated area 20-30 miles to the west of a hill that blocks line-of-sight to the contacts.

Is my signal going straight up and these folks are seeing scatter off my pillar of RF? Will scatter travel that far?"

My response will be as if these were genuine questions.

Your direct path is blocked but nighttime radio contacts are possible. This is normal at 80 meters. Surface attenuation of signals is high.

No ionospheric propagation during daytime hours. At night the ionosphere changes to an effective reflecting layer with relatively low loss so you can make the 30-mile trip with nearly vertical incidence signals. The "skip distance" is very short.

Scatter is good for much greater distances than 30 miles. But, loss is very high and requires high ERP. Scatter would work during daylight hours. Yours doesn`t.

Best regards, Richard Harrison, KB5WZI

3689. Re: Superposition quiz

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-23 14:52:10 UTC
From: n7ws@nowhere.com
Message-ID: <3d664655.85944602@news.triconet.org>
Source record: 136030

On Fri, 23 Aug 2002 08:46:05 +0000 (UTC), Bill Nelson <billn@spock.peak.org>
wrote:

|Wes <n7ws_at_yahoo.com> wrote:
|> On Wed, 21 Aug 2002 00:24:27 -0700, Roy Lewallen <w7el@eznec.com> wrote:
|
|> |
|> | rPa = {Vrms^2 / (4 * R0)} * {[(Ri - R0)^2 + Xi^2)] / (Ri + R0)^2 + Xi^2]}
|
|> I think you left out a bracket... shouldn't it be:
|
|> rPa = {Vrms^2 / (4 * R0)} * {[(Ri - R0)^2 + Xi^2)] / [(Ri + R0)^2 + Xi^2]}
|
|Neither one is correct. There is a problem with the ")" right after
|the first Xi^2 term. There is at least one other bracketing problem as well
|in the first equation.

Okay, how about:

(Vrms^2/(4*Ro))*(((Ri-Ro)^2 + Xi^2)/((Ri+Ro)^2 + Xi^2))

I think that's why they invented Mathcad <g>

3690. Re: Superposition quiz

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-23 15:14:56 UTC
From: tdonaly@aol.com
Message-ID: <20020823111456.25404.00002555@mb-fz.aol.com>
Source record: 136032

>
>Tdonaly wrote:
>> So scalars are limited to being positive, real numbers, now. My, how
>> physics has changed. And, since when has a bucket of water become
>> a scalar field? And, finally, why did Mr. Poynting use a minus sign in his
>> famous, and much abused theorum?
>
>Tom, would you take some isolated negative RF power and show me how to
>generate
>a negative RF field strength with it. I've got this idea for a broadcast
>station.
>It seems to me the FCC doesn't require a license for a broadcast station that
>
>is putting out a negative field strength and radio receivers should be able
>to receive its signal just fine.
>--
>cheers, CAM http://www.qsl.net/w5dxp
>

If you're talking about the E field, it's a vector. If you're talking about
the H field,
it's also a vector. If you combine them according to Poynting to find the
direction
of energy flow, that's also a vector. If a vector is pointed one way it's
positive, if
turned 180 degrees, negative. There's a device that deals with negative field
strength, it's called a receiving antenna. If you don't care which direction
your
watts are going you can signify the fact by taking the magnitude only, but the
power
from your transmitter will still have a magnitude and a direction.
73,
Tom Donaly, KA6RUH

(P.S. E X H is a vector. If it had been E dot H it would have been just
another
number without direction in space, a scalar.)

3691. Re: What am I emitting on 80M?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-23 15:18:36 UTC
From: newsguy <harpoon32@yahoo.com>
Message-ID: <ak5joo0229d@enews1.newsguy.com>
Source record: 136036

I am still studying for my license, but it seems to me your antenna is to
low for the band you are operating on.

"Ken" <cprstn54zz@att.net> wrote in message
news:3d663141.262268750@news-server.optonline.net...
> I am putting 100 watts at 80M into a shortened inverted-V dipole with
> center 40 ft up. The only contacts I have been able to make are after
> dark to a densely populated area 20-30 miles to the west, behind a
> nearby hill that blocks line-of-sight to the contacts.
>
> Is my signal going straight up and these folks are seeing scatter off
> my pillar of RF? Will scatter travel that far?
>
> Ken KC2JDY
>
> Ken
> (to reply via email
> remove "zz" from address)

3692. Re: TUTORIAL #3 FINAL

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-23 15:21:40 UTC
From: aunwin@fgi.net
Message-ID: <c4becf19.0208230721.27c80a2a@posting.google.com>
Source record: 136033

aunwin@fgi.net (Art Unwin KB9MZ) wrote in message
news:<c4becf19.0208210926.66e7be06@posting.google.com>...
> Continuing from the previous tutorial the antenna can be seen as
snip
> The following program shows combination of above programs based on 2
> inch
> common members (looking at my engineering notes the idea was to weld
> such an antenna for test purposes. Notes suggest dipole length of
> around 200 inches ???)An unsolved mystery showing up some 6 years
> later)

How time flies. I have now retrieved an ealier notebook which solves
and adds closure for me to the above.

The welded antenna WAS 200 inches in length, the weld being made to
provide for good connections with the loop efficiency in mind and with
no changes of member diameters that can affect later efforts of
computor programing
.The robustness of this 2 inch aluminum tubing was also to provide for
an EXTENSION of the coupling length which INCLUDED the original
loop,and also used the same capacitor which in this case I used one
that had the maximum range possible.
Thus I had two loops with a common capacitor to examine the
effects on radiation BEYOND that implied by use of the smaller loop
alone. I might also add that I use fishing poles as support members
for wire sizez that I may choose I.E.the wire lays on the inside of
the pole.(Adjustment must be made for the dielectric in the normal
case but with this antenna wire length is not a factor.
A rather unique feature if I may say myself, which removes the 'cut
and try'
burden that all hams must carry.)This makes things so much easier for
the experimentor and now allows be to get rid of the large stockpile
of aluminum that I have procured over many years.

Art

3693. Re: Fractal Antenna for sale

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-23 15:31:49 UTC
From: Irv Finkleman <finkirv@shaw.ca>
Message-ID: <3D665541.BDB3A835@shaw.ca>
Source record: 136034

MD wrote:
>
> "Fractal Antennas" <fractena@yahoo.com> wrote in message
> news:653d2ee5.0208221144.4aa42d89@posting.google.com...
> > I have for sale one fractal antenna, operating on the HF frequencies.
> > Used for about 1 year, in good shape. Email for information.
>
> Are we going to get into this useless BS all over again. What a waste of
> bandwidth.

But so much fun! Is bandwidth still a problem?
It was with an 8 meg 286, a 1200 baud modem,
4 megs Ram, and a 10 meg harddrive -- but
nowadays? Smile. Let's have a little fun --
perhaps with a gas fired pogo type self
elevating tower!
--
Diagnosed Type II Diabetes March 5 2001
Beating it with diet and exercise!
297/215/210 (to be revised lower)
58"/43"(!)/44" (already lower too!)

Visit my FINALLY UPDATED website at
http://members.shaw.ca/finkirv/

Irv Finkleman,
Grampa/Ex-Navy/Old Fart/Ham Radio VE6BP
Calgary, Alberta, Canada

3694. Re: How?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-23 15:33:18 UTC
From: Irv Finkleman <finkirv@shaw.ca>
Message-ID: <3D66559B.36B6BB6E@shaw.ca>
Source record: 136035

John Smith wrote:
>
> > ... for sale one fractal antenna ... in good shape.
>
> Uh!??????????
>
> Pardon me, but how can a Fractal (or Meander) antenna POSSIBLY be in good
> shape? It's a bit like the famous British politician who said "... and
> Britain is not an island, you know!", or "for sale, parakeets, on higher
> perches".
>
> B.R. from Anony Mouse (Harry Lippitz, really, but I don't want to publish my
> name.)

The more you bash it the better it gets! The limiting
factor (or nearly so) is when it is trashed and compacted
into a near 50 ohm resistor!
--
Diagnosed Type II Diabetes March 5 2001
Beating it with diet and exercise!
297/215/210 (to be revised lower)
58"/43"(!)/44" (already lower too!)

Visit my FINALLY UPDATED website at
http://members.shaw.ca/finkirv/

Irv Finkleman,
Grampa/Ex-Navy/Old Fart/Ham Radio VE6BP
Calgary, Alberta, Canada

3695. Re: Modeling coax attached to an antenna in EZNEC

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-23 15:38:32 UTC
From: Bibby <bibby@attbi.com>
Message-ID: <YFs99.132514$983.205466@rwcrnsc53>
Source record: 136037

Doug, you have hit on what is possibly the central weakness of most antenna modeling programs available today. None of them address the issue of feeding the antenna.

Take for example the NEC core. It places a voltage on, or inserts a current at, the sub-section adjacent to the feed-point. It doesn't care how you feed it. One could model a gamma/tee match but you just move the problem to feeding the match.

Much of the early work, which is when accurate measurements were made, was done on monopoles over a semi-infinite ground-plane. The measurements and theory agree reasonably well. In fact, as modeling has become better the agreement has got better - which speaks well of/for the measurements. With this assurance, antenna modelers then appeal to 'image-theory' to say that a dipole is a the combination of a monopole and a perfect reflection of itself. Not bad, but we have a good model for feeding a monopole that doesn't transfer well to a dipole. The hole in the infinite plane through which the monopole emerges can be modeled well. It is often referred to as a "magnetic frill". No-one has ever demonstrated a dipole excited by a magnetic frill!

So your question is on the cutting edge of the state-of-the-art in this area. I will be interested to read other comments.

Malcolm, W1/GW3NJY

"Douglas Stinson" <douglas-stinson@attbi.com> wrote in message news:lZ999.197894$UU1.36529@sccrnsc03...
> When modeling an antenna which will be fed by a coax cable, should one
> include the shield of the cable as a wire? The purpose of this would be to
> include the effect of currents flowing down the outside of the cable.
>
> For example, a J-pole is often modeled in EZNEC with a source bridging the
> two legs of the antenna. Should one also include a wire from one end of
the
> source down to ground?
>
> At least for some antennas modeling with and without this "extra" wire
leads
> to vastly different radiation patterns and impedance.
>
>

3696. Re: AM DXing: Why I know so little that.....

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-23 15:40:35 UTC
From: Irv Finkleman <finkirv@shaw.ca>
Message-ID: <3D66574F.FA8A7497@shaw.ca>
Source record: 136038

FACE wrote:
>
> I come hat in hand with some specs and ask if they are reasonable for
> an AM DXer radio.
>
> These are from the AM specs section of a Yamaha cr1020 receiver, circa
> 1977:
>
The CR1020, in it's day, and even today, was a very nice
receiver. I have the CR1000 -- still running, but it is
FM only. The CR1020 was not designed for AM DXing.
It was intended for good clear reception of a good local
signal with a minimum of distortion -- not a distant
signal. Sorry -- nice receiver for HI FI application,
but lousy for DX!

--
Diagnosed Type II Diabetes March 5 2001
Beating it with diet and exercise!
297/215/210 (to be revised lower)
58"/43"(!)/44" (already lower too!)

Visit my FINALLY UPDATED website at
http://members.shaw.ca/finkirv/

Irv Finkleman,
Grampa/Ex-Navy/Old Fart/Ham Radio VE6BP
Calgary, Alberta, Canada

3697. Re: Superposition quiz

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-23 16:08:47 UTC
From: Dick Carroll <dixie@townsqr.com>
Message-ID: <ak5mmfqkt0@208.206.142.73>
Source record: 136039

Bill Klocko wrote:
>
> I remember enough from my power course years ago to bet that the power
> company doesn't just throw a switch to bring one generator on-line
> with another. I would bet they carefully match the power factor (the
> phase angle between voltage and current) of one generator to the power
> factor of the other. In other words, they add the in-phase voltages
> and currents.
>

Don't know how the power company does it, but in the 60's on the Nike Herc site where they had installed new HIPAR radar with three 250KW gensets we used to syncphase them to bring a second genset online. The control panel had a light that flashed at varying speed depending on how far apart the gensets phases were. The slower the light flash, the closer together the phasing. Adjustment of the engine speed of the oncoming genset brought the phases together. When the light got so slow it went out, you hit the ON button and brought the second genset online. If you missed, you got a big BANG and tripped breakers.
We also phased them to the commercial power line the same way to change to genset power alone.

Dick

3698. Re: New Dedicated Radio Ham NewsGroup, FTP and WebSite

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-23 16:09:48 UTC
From: Eskay <Nospamve3jua@rac.ca>
Message-ID: <3D665E4C.1CF42F89@rac.ca>
Source record: 136024

When??????????
Eskay

"Dave Williams (NNTP)" wrote:

> Just for your info, a new Radio Ham domain is available which includes a
> newsgroup and FTP server.
>
> Web www.radio-ham.org
> News news.radio-ham.org
> FTP ftp.radio-ham.org
>
> Hope its of interest.
>
> Dave

3699. Re: Hustler 6BVT vertical

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-23 16:20:54 UTC
From: Dan/W4NTI <w4nti@mindspringnospam.com>
Message-ID: <ak5nbb$1ud$1@slb3.atl.mindspring.net>
Source record: 136040

Unless you have a VERY GOOD GROUND under the vertical most of the radiation
will just heat the near vicinity soil.

Good ground meaning bunches of radials. Many studies have been made on this
subject over the years,

A good compromise is a counterpoise above ground system, which is what I
described to you earlier.

The 4/6BTV is basically a 1/4 wave electrical radiator. Don't confuse this
with, say, the GAP which is a center fed vertical dipole for all practical
purposes. Which btw, is a much better design than ANY 1/4 waver.

Dan/W4NTI

"Jeff Y." <vswrref@hotmail.com> wrote in message
news:3d659f03.3652491@national-news.stargate.net...
> Hi Dan,
>
> Thanks for the info. So the ground mount gave you problems. Hmmmm,
> kinda strange since others I've talked with said it worked best ground
> mounted but a real burden when elevated. Maybe ground conditions are
> a big factor as well.
>
> I'm debating between this and the DX-77 because of the tilt over. I
> know the 6BTV ins't a tilt over but I can always rig that up if I need
> to. More info to ponder. Thanks again, Dan!
>
>
> Jeff Y.
>
>
>
> On Thu, 22 Aug 2002 17:53:23 -0500, "Dan/W4NTI"
> <w4nti@mindspringnospam.com> wrote:
>
> >I had the 4BTV for many years. I assume it is basically the same as the
> >6BTV other than a few more bands.
> >
> >Actually I had the 5BTV. It had the KW 80m resonator.
> >
> >I agree...it is not good on 80m anywhere. Its too short you know.
> >
> >On 40 I found it worked out quite well. In Germany, when I was DA2LJ, I
> >used the 4BTV sticking out of the top floor attic window in the roof.
Ran

> >one radial per band. Worked gangbusters. Of course it was 110 feet in
the
> >air at that time...hi.
> >
> >Back stateside I used it in my backyard by putting it on a 10 foot pole.
> >Then running a screen of interconnected chicken wire as a above ground
> >counterpoise. Seemed to do quite well that way too.
> >
> >The worst situation I used it in was ground mounting with no radials.
> >
> >Hope that helps.
> >
> >Dan/W4NTI
> >
> >"IE" <m9191@abc.se> wrote in message
> >news:us8amu8gkj1rh457kemae36tfiu4aat3f4@4ax.com...
> >> Hi,
> >>
> >> I have used the 6BVT for four years. First I had it mounted on ground
> >> and last two years 3 meters above with radials going out from the low
> >> point of the antenna. (Just above the roof of a building and wall
> >> mounted). Radials are going in all directions.
> >>
> >> Compared to my beam it is a big difference (the beam is much, much
> >> better). And for 80 meter I never use it (very narrow and not good
> >> compared to my wire antennas), But I like it since it is easy to play
> >> with. On 30 and 40 I use it a lot and have worked many DX.
> >>
> >> This fall I will add more radials to it since I have not been fair to
> >> the antenna. I have about 8 radials today in different lengths and
> >> with very weak copper wire. I think I can get much more out of this
> >> antenna with better radials and thicker wire.
> >>
> >> The SWR is good on all bands. I have tuned the 80 meter part to 3.500
> >> and SWR is low there as well. But SWR is one thing. I still prefer a
> >> wire dipole on 80. It is a question of S-units in difference.
> >>
> >> I am very impressed of the possibillity for the antenna to take care
> >> of hard wind. First years I was nervous but today I trust the antenna
> >> in all WX.
> >>
> >> This antenna is connected to the 2nd antenna connector on a TS870 so I
> >> have never used it for higher power then 70-80 W. That power it takes
> >> care of.
> >>
> >> Earlier I have had other verticals. I can't say for sure this one
> >> works better but I feel so.
> >>
> >> I have a computer LAN in the same building and this antenna picks up
> >> more radiation from the LAN and TV-sets than a dipole or a beam.

> >>
> >> In conclusion I like the antenna and think it is a nice multiband
> >> vertical. I should have done the work with radials earlier. My feeling
> >> are that it worked better ground mounted, due to grounding, then 3
> >> meters up. This antenna will stay with me for years.
> >>
> >>
> >>
> >>
> >> On Thu, 22 Aug 2002 15:55:47 GMT, rong@computer.net (Ron
> >> Goldstein--KA2IIA) wrote:
> >>
> >> >vswrref@hotmail.com (Jeff Y.) wrote:
> >> >
> >> >>Hi all!
> >> >>
> >> >>Wondering if anybody is currently using, or has used the Hustler 6BVT
> >> >>HF vertical and what your thoughts, likes and dislikes of it, are.
> >> >>How does it work on the bands, with or without the radials. Looking
> >> >>forrward to seeing the posts.
> >> >>
> >> >>
> >> >>Jeff Y.
> >> >>==========
> >> >Hi Jeff,
> >> >
> >> > I've had a 5BTV (80, 40, 20, 15, & 10) since I've been licensed
(1980),
> >> >and it has given me no problems in the 22 years it has been up. It's
> >mounted on
> >> >a 3 foot piece of inch & a half pipe which is driven 2 feet into the
> >ground in
> >> >my backyard. I have no ground radials. Within the first 2 years of
using
> >it, I
> >> >accomplished WAS, WAC, and DXCC (100 countries). I think it's a great
> >antenna
> >> >for a vertical.
> >> >**********
> >> > Ron Goldstein.....KA2IIA
> >> > STAY YOUNG---DRIVE A VINTAGE 427 CORVETTE.
> >> > KEEP YOUR MIND ACTIVE---BECOME AN AMATEUR RADIO OPERATOR.
> >> >
> >> >REMEMBER, THERE ARE NO STRANGERS IN AMATEUR RADIO, ONLY FRIENDS
> >> > THAT WE HAVE NOT YET MET.
> >> > rong@computer.net******ka2iia@arrl.net
> >>
> >
> >
>

3700. [ABSE] Electric torture elec-tor.wav - elec_tor.wav (0/2)

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-23 16:27:06 UTC
From: secret_studio@charter.net
Message-ID: <3d6661f1.41440988@news.charter.net>
Source record: 136041

Borrowed from the film "The S.S. Experiment." Topless woman gets
zapped and screams piteously. Not my own recording, but a "must-have"
for electro-S&M fans.

3701. Re: Losses in insulating materials

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-23 16:34:00 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <77pcmugam362ki9j674r7jtf2nnai0gere@4ax.com>
Source record: 136042

On Fri, 23 Aug 2002 14:52:24 +0200, Jean Cesario
<jean.cesario1@libertysurf.fr> wrote:

>Hi everybody
>
>I'm wondering about losses in antennas made of standard "domestic"
>stranded or solid copper wire, insulated with polyvinyl chloride. I
>built several decametric antennas, from simple dipoles to a cubical
>quad, with these kinds of wires, 1.5 or 2.5 square millimeters. The
>results where satisfying.

This would be normal.

>They probably would be better with naked wire,

Maybe different, but not better.

>but how much, and how long ? It seems to me important to avoid surface
>corrosion and consecutive HF resistance increase and mechanical strenght
>decrease.

Not a problem. Corrosion on the surface of an antenna is cosmetic
(will not affect performance). Corrosion on antenna contacts is
another and more serious matter. Dry, clean, and tighten connections;
and then seal them from water. [contacts also include where elements
- like tubing - are joined together]

>
>I never found practical informations about this matter. Can anybody help
>?
>
>73 de Jean F8BXG

73's
Richard Clark, KB7QHC

3702. Re: Fractal Antenna for sale

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-23 16:55:09 UTC
From: dan <danlx@execpc.com>
Message-ID: <3d6668dc$0$1429$272ea4a1@news.execpc.com>
Source record: 136043

On 22 Aug 2002 12:44:44 -0700, fractena@yahoo.com (Fractal Antennas)
wrote:

>I have for sale one fractal antenna, operating on the HF frequencies.
>Used for about 1 year, in good shape. Email for information.

Oh goody, more playing with the buffoon*. Watch your fingers kids,
keep them out of the cage. Dear, set up the lawn chairs, I'm going to
buy more popcorn. You see it is kind of like watching all three
stooges rolled into one buffoon.

*See previous posts for definition of buffoon.

Maybe someone will post a schedule so we will not miss an episode.
Dan
N9JBF

I've rambled enough, back to the rocking chair. ZZZZZZZZZ
Remove left x for e-mail reply.

3703. Re: What am I emitting on 80M?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-23 17:00:01 UTC
From: StarGazer <pti@capnet.com>
Message-ID: <3D666A11.EBD12D91@capnet.com>
Source record: 136044

Not at all. Mine is only 24' high and I get out real good. Austrailia,
Hawaii, etc.

newsguy wrote:

> I am still studying for my license, but it seems to me your antenna is to
> low for the band you are operating on.
>
> "Ken" <cprstn54zz@att.net> wrote in message
> news:3d663141.262268750@news-server.optonline.net...
> > I am putting 100 watts at 80M into a shortened inverted-V dipole with
> > center 40 ft up. The only contacts I have been able to make are after
> > dark to a densely populated area 20-30 miles to the west, behind a
> > nearby hill that blocks line-of-sight to the contacts.
> >
> > Is my signal going straight up and these folks are seeing scatter off
> > my pillar of RF? Will scatter travel that far?
> >
> > Ken KC2JDY
> >
> > Ken
> > (to reply via email
> > remove "zz" from address)

3704. Re: Ladderline & Mast

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-23 17:13:57 UTC
From: Greg <gtaylor4@tamu.edu>
Message-ID: <ak5qgr$q7$1@news.tamu.edu>
Source record: 136047

"Rezster" <dbm@[remove]fisi.net> wrote in message
news:Xns9272ADD28FB68dbmremovefisinet@148.78.248.75...
> After all the responses on my ladderline situation, I've decided to erect
a
> steel mast..30' on my roof...far enough away to use up the excess line.
> Now, with what do I secure the ladderline to the mast and to the roof?

You'll need something for recommended separation - (twice line spacing???).
A couple of QTHs ago I cobbled together some standoffs from PVC....W5KJ

3705. Re: What am I emitting on 80M?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-23 17:30:28 UTC
From: cprstn54zz@att.net
Message-ID: <3d666c5b.277398015@news-server.optonline.net>
Source record: 136045

On Fri, 23 Aug 2002 10:18:36 -0500, "newsguy" <harpoon32@yahoo.com>
wrote:
>I am still studying for my license, but it seems to me your antenna is to
>low for the band you are operating on.

I am still studying for my next one.

80M and 160M dipoles are usually mounted too low, resulting in a
propagation pattern known as NVIS, which means your signal is more or
less going straight up. Nevertheless, an appreciable amount of it
does more than warm up clouds, especially in winter. With an amp, you
probably have a decent enough rig that is cost effective for casual
(non-contesting) use.

The alternative -- a homongous vertical or dipole 250 ft up -- is not
only expensive but impossible for most of us. There are folks here
who have a couple of acres filled with over $30,000 worth of serious
antenna hardware who must find we antenna-challenged hams mildly
amusing.

I believe Richard KB5WZI is correct -- that my signal is reflecting
off the ionosphere even though it is hitting the layer almost at 90
degrees -- just like light off a mirror.

However, he does not explain why no one beyond 30 miles seems to hear
me. If I am bouncing strongly off the ionosphere to 30 miles behind my
hill, I should be good to around 800 miles.

Ken KC2JDY

Ken
(to reply via email
remove "zz" from address)

3706. Re: What am I emitting on 80M?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-23 17:33:14 UTC
From: Gary McAdams <g.m.mcadams@worldnet.att.net>
Message-ID: <ulu99.507$p%3.37249@bgtnsc05-news.ops.worldnet.att.net>
Source record: 136046

Ken <cprstn54zz@att.net> wrote in message
news:3d663141.262268750@news-server.optonline.net...
> I am putting 100 watts at 80M into a shortened inverted-V dipole with
> center 40 ft up. The only contacts I have been able to make are after
> dark to a densely populated area 20-30 miles to the west, behind a
> nearby hill that blocks line-of-sight to the contacts.
>
> Is my signal going straight up and these folks are seeing scatter off
> my pillar of RF? Will scatter travel that far?
>

Ken,

What you have there is a cloudwarmer. You are mostly correct
in your conclusion that most of your signals are going
straight up.

During the day, the absorption of the D layer ensures that
your range will be very short. After the sun goes down
the absorption will lessen and you will be able to make longer
distance contacts. The term for local non-skywave contacts
on HF is groundwave. Groundwave contacts work best
with a vertically polarized antenna. Skywave propagation
will improve with the change of seasons. D-layer absorption
is at its highest during the summer months simply because
the sun is up longer!

The terms "scatter" and "line of sight" refer primarily to
VFH/UHF signals. We are talking HF here, got to keep
those terms straight...

Then there is the nature of the inhabitants of the 75/80 meter
bands. Some of the old curmudgeons there have not made
a non-net non-scheduled contact in YEARS! In fact, many
years ago I was told by one of those old crustaceans that
"We don't call CQ on 75 meters." Oh, yeah!?!

Just ignore that and carry on.

Come to think of it, most of those old crabs seem to inhabit
these usenet groups too... Ignore them also!

73 Gary WG7X

3707. Re: Air-Wound Balun Design Info??

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-23 17:39:33 UTC
From: kelly@dvol.com
Message-ID: <d22b54c3.0208230939.6103ecca@posting.google.com>
Source record: 136048

Roy Lewallen <w7el@eznec.com> wrote in message news:<3D63123B.3060207@eznec.com>...
> For my lightweight portable antennas, I use 8-10 turns of RG-174 on a
> one inch or so O.D. toroid core of type 43 or one of the 70 series
> ferrites. The latter will give more impedance over the HF range. I also
> use this on my home antennas, and have had no trouble at power levels up
> to 300 watts or so.
>
>
RG-174 is scary stuff I generally avoid in antenna work but if it
works for you at 300W it'll work for me at 100W. I've read your posts
in this thread and understand the rationale for using 70 series cores.
>
>
> You could wind the coax into an air-core choke following the procedure
> in the ARRL Handbook or Antenna Book (except that you should wind the
> coil like a coil of rope or an extension cord, not carefully spaced as
> mistakenly described in recent Antenna Books).
>
>
I have the v1.0 Antenna Book CD, they show it on pp. 26-26. Along with
the related text which has cleared up most the holes in my grip on
bauluns. I've been quietly surfing this thread for days while you EEs
have been duking it out. Education is where ya find it.
>
>
> One made from RG-174
> using the RG-58 dimensions would be adequate. But this would be bulkier
> than the toroid solution unless you rewound it each time you used the
> antenna. It can also have a lot of wind resistance and be subject to
> snagging in trees and brush.
>
>
Good points all. Except for one nagging concern on my part: The reason
I'm particularly interested in air core vs. ferrite core baluns is my
impression (misimpression?) that ferrite core baluns are much more
lossy particularly under high SWR conditions than are air-wound
baluns. Care to comment on this topic?
>
>
>
>
> For those fussing about what a balun is, I suggest reading "Baluns: What
> They Are and How They Do It", in the ARRL Antenna Compendium, Vol. 1.
>

> Roy Lewallen, W7EL
>

Brian w3rv

3708. Re: Superposition quiz

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-23 17:40:23 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <3D667387.30809@eznec.com>
Source record: 136049

CAM wrote:
>
> Tom, would you take some isolated negative RF power and show me how to generate
> a negative RF field strength with it. I've got this idea for a broadcast station.
> It seems to me the FCC doesn't require a license for a broadcast station that
> is putting out a negative field strength and radio receivers should be able
> to receive its signal just fine.

Gee, Cecil, are my postings not getting through, or do you just insist
on ignoring the explanations presented by popular circuits texts?

Roy Lewallen, W7EL

3709. Re: What am I emitting on 80M?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-23 17:51:46 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <3D667632.7040504@eznec.com>
Source record: 136050

You might be putting 100 watts into your feedline, but perhaps not into your antenna. Depending on how much the antenna is shortened and how acute the angle of the V is, it can provide a severe mismatch to the feedline. Ladder line can tolerate this without much loss, provided it's dry. But if you're using coax, especially a long run of coax, the loss might be quite substantial, and you'd be better off going to ladder line and/or lengthening the antenna.

Some tuners also will be pretty lossy when faced with an extreme impedance, and this might be part of the problem.

As other people have pointed out, it won't be a great antenna, but you should be able to make contacts at much greater distances than that at night.

Roy Lewallen, W7EL

Ken wrote:
> I am putting 100 watts at 80M into a shortened inverted-V dipole with
> center 40 ft up. The only contacts I have been able to make are after
> dark to a densely populated area 20-30 miles to the west, behind a
> nearby hill that blocks line-of-sight to the contacts.
>
> Is my signal going straight up and these folks are seeing scatter off
> my pillar of RF? Will scatter travel that far?
>
> Ken KC2JDY
>
> Ken
> (to reply via email
> remove "zz" from address)

3710. Re: Connector Question ?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-23 18:04:35 UTC
From: 'Doc <w5lz@icok.net>
Message-ID: <3D66792D.3430AC02@icok.net>
Source record: 136051

Bob,
As you said, it would be essentially meaningless.
Of course there may be ~some~ benefit, but it would
be so small that you'd never tell the difference.
'Doc
PS - PL-259 and SO-239 connectors are usable well
into the UHF regions.

3711. Re: Modeling coax attached to an antenna in EZNEC

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-23 18:07:06 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <3D6679CA.4060805@eznec.com>
Source record: 136052

Bibby wrote:
> Doug, you have hit on what is possibly the central weakness of most antenna
> modeling programs available today. None of them address the issue of
> feeding the antenna.

The reason is that, except in the case of phased array antennas, the feed system has nothing to do with the antenna's gain or pattern, and these are the primary things antenna programs are intended to calculate. The calculated antenna feedpoint impedance can be transformed to a value of your choice without any impact on the antenna performance at all, except for whatever loss the transforming network has.

> Take for example the NEC core. It places a voltage on, or inserts a
> current at, the sub-section adjacent to the feed-point. It doesn't care
> how you feed it. One could model a gamma/tee match but you just move the
> problem to feeding the match.

NEC doesn't directly allow current sources, only voltage. However, when a single source is used, it makes absolutely no difference to the results what kind of source is used. As you say, you can model something like a gamma match with NEC-2 or derivatives. If you're interested in impedance matching networks using lumped elements, which NEC-2 doesn't allow directly, there are programs which can do this, such as MicroSmith (no longer available) and WinSMITH. The impedance match only affects the impedance seen by the transmitter, however. It has no affect on the antenna. Again, the exception is phased array antennas, where modeling programs can give you essential information about feedpoint impedance needed to design a feed system, but can't include anything but an all-transmission line feed system in the model.

> Much of the early work, which is when accurate measurements were made, was
> done on monopoles over a semi-infinite ground-plane. The measurements and
> theory agree reasonably well. In fact, as modeling has become better the
> agreement has got better - which speaks well of/for the measurements.
> With this assurance, antenna modelers then appeal to 'image-theory' to say
> that a dipole is a the combination of a monopole and a perfect reflection of
> itself. Not bad, but we have a good model for feeding a monopole that
> doesn't transfer well to a dipole. The hole in the infinite plane through
> which the monopole emerges can be modeled well. It is often referred to as
> a "magnetic frill". No-one has ever demonstrated a dipole excited by a
> magnetic frill!

None of the commonly used antenna modeling programs use the approach you describe when modeling antennas over ground. MININEC does use an image approach when calculating the impedance and currents by assuming a perfect ground during those calculations. This is a good approximation

provided that the antenna doesn't contain any significantly radiating horizontal wires lower than about 0.2 wavelength. But it does take ground conductivity and permittivity into account when calculating the radiation pattern, which is not the simple image approach you describe. NEC-2's Sommerfeld ground (called High Accuracy in EZNEC) does a true field calculation using finite ground parameters even for the impedance and voltage calculations, and uses a similar approach to MININEC for determining the radiation pattern.

> So your question is on the cutting edge of the state-of-the-art in this
> area. I will be interested to read other comments.

Roy Lewallen, W7EL

3712. Re: What am I emitting on 80M?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-23 18:19:52 UTC
From: 'Doc <w5lz@icok.net>
Message-ID: <3D667CC2.F171B985@icok.net>
Source record: 136053

Ken,
Assuming that you have a reasonable match to the antenna, and that the antenna is somewhere close to resonance, you're probably 'emitting' 100 watts, or close to it. With the antenna apex at 40 feet, I would think that the majority of the signal is being radiated at a fairly high angle, in a mostly omnidirectional pattern. It depends on how your antenna is shortened, and how much it is shortened. But even so, you should be heard in other places (not going to be a 'window breaking' signal, but someone should hear you).
'Doc

3713. AM DXing antenna question

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-23 18:24:34 UTC
From: newsguy <harpoon32@yahoo.com>
Message-ID: <ak5uli02lk5@enews1.newsguy.com>
Source record: 136055

I have a smallish GPX radio/tape player with only the telescope antenna on the back, and no other antenna hookup. While I have picked up clear channel stations as far away as denver (I am in Indiana) I am curious, if I hook up a random wire, would it go to the antenna? or do I pop the box and solder it somewhere inside? All the sites I have seen say to hook random wire to the antenna screws, which as I said I dont have.
Thanks!

3714. Re: TUTORIAL final,final

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-23 18:26:15 UTC
From: 'Doc <w5lz@icok.net>
Message-ID: <3D667E3C.7937B139@icok.net>
Source record: 136054

Tom,
Okay, in that case you have my permission to
pity my lack of understanding and wit.
'Doc

3715. Re: Superposition quiz

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-23 18:57:14 UTC
From: richardharrison@webtv.net
Message-ID: <8799-3D66858A-42@storefull-2391.public.lawson.webtv.net>
Source record: 136058

Tdonaly wrote:
"If you`re talking about the E field, it`s a vector. If you`re talking about the H field, it`s also a vector."

As Gabriel Heatter used to say on the radio: "There`s good news tonight!"

The ham doesn`t have to do vector analysis, know a cross product from a dot product, or divergence and curl from hair problems.

The minus applied to power on a transmission line indicates its direction of travel. This negative power is not absorbing energy. It is used to determine net power flowing through the line.

On radio frequency lines, the characteristic impedance is an almost pure resistance. This means the voltage and current are in-phase for the waves traveling toward the load and away from the load. SWR is just a manifestation of the two waves passing each other in opposite directions.

SWR has a 90-degree displacement between voltage and current because the reflected wave has a phase between its voltage and current of 180-degrees. This out-of phase condition of the reflected wave is due to reflection mechanics.

The incident current and voltage waves are forced to travel down a transmission line in-phase by Zo, a resistance for practical purposes.

A mismatch in the line reflects some or all of the incident waves. Interference between the incident and reflected waves produces the SWR.

Note that the distance between an SWR voltage maximum and an SWR current maximum is always 90-degrees. This tells us that the difference in phase between voltage and current in the reflected wave is 180-degrees. The relative velocity of waves traveling in opposite directions produces the 90-degree phase in the SWR.

If vectors are all in the same or opposite directions, we combine them algebraically. They add and subtract just like buckets of water! We don`t even need trigonometry to work such a problem.

Best regards, Richard Harrison, KB5WZI

3716. Re: What am I emitting on 80M?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-23 19:04:42 UTC
From: n7ws@nowhere.com
Message-ID: <3d66800c.4980248@news.triconet.org>
Source record: 136056

On Fri, 23 Aug 2002 10:18:36 -0500, "newsguy" <harpoon32@yahoo.com> wrote:

|I am still studying for my license, but it seems to me your antenna is to(o)
|low for the band you are operating on.

Keep studying.

Too low is a relative thing. For DXing, higher would be better, but for shorter distances, lower might be better.

Nevertheless, while I am a real casual DXer and mostly work 20 meters (300+ worked), I have 75 countries on 75-80 (including, JT, XZ, XT, BA, TI9) using an "inverted-vee" with the apex at about 40 feet.

During the winter months I've had ragchewing roundtables with lots of Europeans and have a lot of them calling me. This is from the depths of Southern Arizona, not exactly a great DX location.

I anticipate getting the other 25 needed for 80m DXCC (and thus 5BDXCC) this winter using this same antenna.

Now all of this is anecdotal and doesn't mean a thing about the merits of antennas, except that with perseverance and a modicum of skill you can overcome significant antenna limitations.

3717. Re: Fractal Antenna for sale

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-23 19:10:56 UTC
From: k3bu@aol.com
Message-ID: <20020823151056.04929.00003332@mb-cu.aol.com>
Source record: 136057

>I'm going to
>buy more popcorn. You see it is kind of like watching all three
>stooges rolled into one buffoon.
>
>*See previous posts for definition of buffoon.
>
>Maybe someone will post a schedule so we will not miss an episode.
>Dan
>N9JBF
>
>I've rambled enough, back to the rocking chair.

Sopranos are coming back, so this frectal stuff will become redundant.

Bada BUm

3718. Re: What am I emitting on 80M?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-23 19:20:55 UTC
From: richardharrison@webtv.net
Message-ID: <8802-3D668B17-3@storefull-2391.public.lawson.webtv.net>
Source record: 136060

Ken, KC2JDY wrote:
"---why no one beyond 30 miles seems to hear me."

Low antennas have high angles of radiation in the vertical plane, especially those with substantial horizontal polarization.

A good ground system and conversion of your inverted-V into a vertical antenna might do a lot for your low angle radiation. The inverted-V will do well over a good ground, or maybe a not so good ground, if you get it up in the air. It`s too low now to expect DX.

Best regards, Richard Harrison, KB5WZI

3719. Re: Air-Wound Balun Design Info??

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-23 19:37:06 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <5q3dmugi9hk7vu90drag35puq43946i17f@4ax.com>
Source record: 136059

On 23 Aug 2002 10:39:33 -0700, kelly@dvol.com (Brian Kelly) wrote:

>>
>Good points all. Except for one nagging concern on my part: The reason
>I'm particularly interested in air core vs. ferrite core baluns is my
>impression (misimpression?) that ferrite core baluns are much more
>lossy particularly under high SWR conditions than are air-wound
>baluns. Care to comment on this topic?
>>

Hi Brian,

Lossy is in the eye of the beholder. Let's simply offer a worst case scenario (or is it really?) where a single bead looks like 5 Ohms with 50V RF across it (the current of which it is thus trying to snub). Well, by all methods of adding power, it looks like this bead will flame out after trying to shed 500W heat. Quite lossy.

Clearly, 5 Ohms reactance would be quite frosty.

Well, let's put a little more engineering into this. 5 Ohms is clearly not the best choice when 20 Ohms is easily found. And where one failed, how would 10 beads fare? With the same 50V RF across it we now find the assembled beads trying to shed 12.5W heat. The beads will run very hot to the touch. Quite lossy.

Can your air choke present better than 200 Ohms reactance? Presumably that and more - Still frosty.

Now, which scenario is "more" lossy? Could "more" lossy mean more efficient at snubbing current?

Further consider that I run with at least 40 beads each exhibiting at least 25 Ohms resistance (almost no reactance). This accumulated 1,000 Ohms resistive is off by at least one order of magnitude for a resonant choke at its peak (and for a fair BW overall). However, in the presence of that same 50V RF my beads simmer at a total 2.5W with any bead shedding all of 60mW - frosty.

The design paradigm that Roy offers is quite compelling and is certainly a shoo-in for fixed applications. For experimental work, the bead balun presents more flexibility in trade for modest performance and easier/quicker installation. If you invest in enough beads, of the right formulation, placed along the line to resolve unusual boundary conditions; then you have a very robust solution.

73's
Richard Clark, KB7QHC

3720. Re: TUTORIAL #3 FINAL

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-23 19:56:24 UTC
From: 'Doc <w5lz@icok.net>
Message-ID: <3D669362.A2F597D5@icok.net>
Source record: 136061

Thanks Art! The picture of Elmer Fudd singing
"Light My Fire" is great...
'Doc

3721. Basic Long Wire Antenna Question

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-23 20:04:46 UTC
From: River Gravel <tanked@free.net>
Message-ID: <uo4dmu0vq10a3ct46uhgf3114v2qhu5cvr@4ax.com>
Source record: 136062

I own a portable DX-398. I purchased 100ft. of 22-gauge hook-up wire from RS. My plan is to connect the wire to a nearby tree about 80ft away from my upstairs window. I'll then attach the wire to an 1/8 F Jack or clip to the whip. My questions are these: I could run the wire along a second floor railing instead but this would only be about 25 feet and have 3 90degree bends in it. It would look better and be more secure than the run to the tree. But would the latter setup be as good as an antenna? Also, I could run the wire from second story window up through a hole in the ceiling and run the wire across my large attic - probably a 50ft run but inside. Most secure and looks the best but would it be a good antenna? One other thing is if I do string the wire to the tree, I'd probably want to wrap the wire around my second story railing for mechanical security. Does wrapping the wire around something ruin the whole idea of a "long" wire? Anyway, thanks in advance. RG

3722. Re: Air-Wound Balun Design Info??

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-23 20:41:21 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <3D669DF1.1020604@eznec.com>
Source record: 136063

Regarding ferrite core baluns -- there are many ferrite materials, each with different characteristics. But they can be divided into three general groups. Using the Fair-Rite Corp. type designations (also used by Amidon), these are the 70 series, type 43, and the 60 series. You can find impedance vs frequency curves for these types at the Fair-Rite web site. Over most of the HF range, the impedance of 70 series ferrites is essentially resistive and relatively high. The impedance stays fairly constant over an extremely wide frequency range -- a winding on one of these looks like a resistor. This makes them favored for such applications as wideband transformers. They also make excellent baluns unless there's enough power to cause overheating (more about that in a minute). 60 series ferrites are primarily inductive at HF, and maintain a reasonable Q. A winding on one of these will resemble an inductor, and the loss will be very low compared to the other types. The problem is that you won't have nearly as much impedance as you will with the other ferrite types. Type 43 material is in between. It has a low Q in the lower HF range, and is primarily resistive at the upper end. But its impedance is somewhat lower than 70 series material. Overall it's less lossy than 70 series and more lossy than 60 series. Type 43 is widely used for EMC reduction, and a wide variety of core sizes and shapes are available in this material. Other vendors have comparable materials. For balun purposes, materials with similar initial permeability will have similar characteristics.

Powdered irons have much lower loss than ferrites, but also have much lower impedance per turn squared. The popularity of F-gazillion-2 baluns notwithstanding, powdered iron is seldom the best material to use.

Loss is I^2*R. If a balun is doing its job well, I, the current you're trying to choke, is small so the loss is low even if R is high. It's an impedance matching situation -- if the balun R is very low or very high, loss will be small. (High R results in low I.) Of course if balun Z (R, X, or a combination) is low, it won't be very effective.

If you're running 100 watts, one dB of loss is about 25 watts. You can probably imagine what would happen to a small ferrite core if it were dissipating 25 watts -- it would likely explode. The fact is that a decent ferrite balun, even on 70 type material, will typically result in only a small fraction of a dB of loss. So you don't need to be concerned about that aspect. The problem is that a small fraction of a dB is still a lot of watts if you're running a kW. So a ferrite core balun can get way too hot even when its loss is entirely negligible from a signal standpoint. In those cases, type 43 is better than 70 series, and you might even have to settle for a less effective balun wound on 60 series ferrite. But if your balun doesn't smoke or explode at a 100 watt level,

you'll never notice the loss on your signal. I find a one inch or so 70 series or type 43 core to be fine up to at least 300 watts, feeding a reasonably matched antenna.

As for RG-174, I often use a similar cable for portable operation, especially on 40 meters. The stuff I have is the same size as '174, but it has a solid center conductor. Standard '174 has a stranded Copperweld center conductor. And although the copper makes up a sizeable fraction of the wire diameter, the strands are so tiny that the current begins penetrating into the steel somewhere around 7 MHz. So at that frequency and below, the loss can be greater than you'd expect. I recommend measuring the loss of RG-174 if a very long piece of it will be used at the lower end of the HF range, since its loss might be more than a simple extrapolation of the higher frequency loss would indicate. The copper on the solid center conductor of the cable I have is thick enough that it's not a problem. As for power handling, I've had no trouble at 300 watts with a reasonably matched load. I personally think a lot of people have been conned into using bigger and more expensive coax than they need. Like the sign over my desk says, "Anyone can design a bridge that will stand up. It takes an engineer to design a bridge that will barely stand up."

Roy Lewallen, W7EL

Brian Kelly wrote:
> Roy Lewallen <w7el@eznec.com> wrote in message news:<3D63123B.3060207@eznec.com>...
>
>>For my lightweight portable antennas, I use 8-10 turns of RG-174 on a
>>one inch or so O.D. toroid core of type 43 or one of the 70 series
>>ferrites. The latter will give more impedance over the HF range. I also
>>use this on my home antennas, and have had no trouble at power levels up
>>to 300 watts or so.
>>
>>
>
> RG-174 is scary stuff I generally avoid in antenna work but if it
> works for you at 300W it'll work for me at 100W. I've read your posts
> in this thread and understand the rationale for using 70 series cores.
>
>>
>>You could wind the coax into an air-core choke following the procedure
>>in the ARRL Handbook or Antenna Book (except that you should wind the
>>coil like a coil of rope or an extension cord, not carefully spaced as
>>mistakenly described in recent Antenna Books).
>>
>>
>
> I have the v1.0 Antenna Book CD, they show it on pp. 26-26. Along with
> the related text which has cleared up most the holes in my grip on
> bauluns. I've been quietly surfing this thread for days while you EEs
> have been duking it out. Education is where ya find it.

>
>>
>>One made from RG-174
>>using the RG-58 dimensions would be adequate. But this would be bulkier
>>than the toroid solution unless you rewound it each time you used the
>>antenna. It can also have a lot of wind resistance and be subject to
>>snagging in trees and brush.
>>
>>
>
> Good points all. Except for one nagging concern on my part: The reason
> I'm particularly interested in air core vs. ferrite core baluns is my
> impression (misimpression?) that ferrite core baluns are much more
> lossy particularly under high SWR conditions than are air-wound
> baluns. Care to comment on this topic?
>
>>
>>
>>
>>For those fussing about what a balun is, I suggest reading "Baluns: What
>>They Are and How They Do It", in the ARRL Antenna Compendium, Vol. 1.
>>
>>Roy Lewallen, W7EL
>>
>
>
> Brian w3rv

3723. Re: Basic Long Wire Antenna Question

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-23 20:49:11 UTC
From: n7ws@nowhere.com
Message-ID: <3d669a78.11744720@news.triconet.org>
Source record: 136064

On Fri, 23 Aug 2002 20:04:46 GMT, River Gravel <tanked@free.net> wrote:

Last things first. A "long wire" antenna is usually defined as being long with respect to the wavelength, thus having some directional characterizes. What you are proposing, in any of its manifestations, is a "random-length" wire.

That said, the "best" version from an all round performance standpoint would probably be the wire run to the tree. Obviously, from an appearance and mechanical viewpoint, it is probably the "worst" antenna. If you go this route you need to account for movement of the tree, as your AWG 22 wire is very fragile. Wrapping it around the railing is probably not the best either, particularly if it is a metal rail. A possible, although not very elegant solution to both issues would to use something like a light tension bungee cord that would save the wire and serve as an adequate insulator.

The other two alternatives are difficult to analyze without knowing the construction of the railing and/or walls and roof of your home. A lot of hams have some success using indoor antennas for both transmitting and receiving so depending on your circumstances this might be the "best" compromise antenna.

Whatever you do, be careful. I'm sure you are much old than I was when I started SWLing at about age ten. Having no mentor at all, I risked life and limb climbing ever higher in a flimsy tree thinking that a couple of more feet in wire height would surely improve signal strengths immeasurably. Fifty years later I think I know better.

|I own a portable DX-398. I purchased 100ft. of 22-gauge hook-up wire
|from RS. My plan is to connect the wire to a nearby tree about 80ft
|away from my upstairs window. I'll then attach the wire to an 1/8 F
|Jack or clip to the whip. My questions are these: I could run the
|wire along a second floor railing instead but this would only be about
|25 feet and have 3 90degree bends in it. It would look better and be
|more secure than the run to the tree. But would the latter setup be
|as good as an antenna? Also, I could run the wire from second story
|window up through a hole in the ceiling and run the wire across my
|large attic - probably a 50ft run but inside. Most secure and looks
|the best but would it be a good antenna? One other thing is if I do
|string the wire to the tree, I'd probably want to wrap the wire around
|my second story railing for mechanical security. Does wrapping the
|wire around something ruin the whole idea of a "long" wire? Anyway,
|thanks in advance. RG

3724. Re: Superposition quiz

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-23 21:11:09 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <3D66A4ED.7010808@eznec.com>
Source record: 136065

Thanks again. Think I have it this time. I just hope the message didn't
get lost along the way.

Roy Lewallen, W7EL

Bill Nelson wrote:
> Wes <n7ws_at_yahoo.com> wrote:
>
>
>>I think you left out a bracket... shouldn't it be:
>
>
>>rPa = {Vrms^2 / (4 * R0)} * {[(Ri - R0)^2 + Xi^2)] / [(Ri + R0)^2 + Xi^2]}
>
>
> Neither one is correct. There is a problem with the ")" right after
> the first Xi^2 term. There is at least one other bracketing problem as well
> in the first equation.
>

3725. Re: Superposition quiz

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-23 21:23:37 UTC
From: CAM <Cecil.A.Moore@ieee.org>
Message-ID: <3D66A7D9.CF32B08D@ieee.org>
Source record: 136067

Tdonaly wrote:
> If you're talking about the E field, it's a vector. If you're talking about
> the H field,
> it's also a vector. If you combine them according to Poynting to find the
> direction
> of energy flow, that's also a vector. If a vector is pointed one way it's
> positive, if
> turned 180 degrees, negative.

Naaahhhhhh Tom, I'm talking about getting a negative reading on my field strength meter. I should be able to do that if I have negative power available.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

3726. Re: Air-Wound Balun Design Info??

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-23 21:25:49 UTC
From: n7ws@nowhere.com
Message-ID: <3d66a39a.14083090@news.triconet.org>
Source record: 136068

On Fri, 23 Aug 2002 13:41:21 -0700, Roy Lewallen <w7el@eznec.com> wrote:

|Regarding ferrite core baluns

[whole lot of really good stuff snipped]

|I personally think a lot of
|people have been conned into using bigger and more expensive coax than
|they need. Like the sign over my desk says, "Anyone can design a bridge
|that will stand up.

Apparently not:

http://www.nwrain.net/~newtsuit/recoveries/narrows/gg.htm

3727. 80M & 160M DX on the cheap?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-23 21:27:21 UTC
From: cprstn54zz@att.net
Message-ID: <3d66a458.291731390@news-server.optonline.net>
Source record: 136066

My multiband inverted V dipole (40 ft up) is not doing great on 80 and 160, for the usual reason and I can't turn my property into an antenna farm. So I am still looking for a solution.

What is the story on the mobile HF antennas, like the screwdrivers? They are close to the ground and are said to be tunable to low SWR. If I buried my truck in my back yard (or a heavy 20 ft X 20 ft. stainless screen) and stuck one of these right on top, would I be able to DX on 80 and 160?

See, e.g., the Larry KJ7U, which appears to have the best materials:
http://www.kj7u.com/default.asp
http://www.eham.net/reviews/detail/2339

Or is this a case of "if it looks to good to be true, it is too good to be true."

Where is the 500 watts going? Do these things propagate any significant RF or just heat themselves up?

Ken KC2JDY

Ken
(to reply via email
remove "zz" from address)

3728. Re: Superposition quiz

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-23 21:36:14 UTC
From: CAM <Cecil.A.Moore@ieee.org>
Message-ID: <3D66AACE.7404D403@ieee.org>
Source record: 135969

Roy Lewallen wrote:
>
> CAM wrote:
> >
> > Tom, would you take some isolated negative RF power and show me how to generate
> > a negative RF field strength with it. I've got this idea for a broadcast station.
> > It seems to me the FCC doesn't require a license for a broadcast station that
> > is putting out a negative field strength and radio receivers should be able
> > to receive its signal just fine.
>
> Gee, Cecil, are my postings not getting through, or do you just insist
> on ignoring the explanations presented by popular circuits texts?

I've said the only reason power is negative is direction, Roy. Seems to
me, negative power is positive energy flowing in a negative direction.
Thus, there seems to be no such thing as negative energy, i.e. there seems
to be only negative directions. So I am asking for a real-world demonstration
of actual negative energy. It's the difference between -(+joules/sec) and
+(-joules/sec) where the first sign indicates the direction and the second
sign indicates the quantum nature of the energy. Where can I find some of
this negative energy? Does anti-matter contain negative energy?
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

3729. Re: AM DXing antenna question

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-23 21:41:38 UTC
From: Fulano de Tal <therealexray@netscape.net>
Message-ID: <3D66AC12.E13026D8@netscape.net>
Source record: 135970

newsguy wrote:
>
> I have a smallish GPX radio/tape player with only the telescope antenna on
> the back, and no other antenna hookup. While I have picked up clear channel
> stations as far away as denver (I am in Indiana) I am curious, if I hook
> up a random wire, would it go to the antenna? or do I pop the box and solder
> it somewhere inside? All the sites I have seen say to hook random wire to
> the antenna screws, which as I said I dont have.
> Thanks!

Chances are that your AM-BCB 'antenna' is a ferrite rod inside the
radio. You can couple to it with a couple turns of wire around it.
-BM

3730. Re: Superposition quiz

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-23 21:50:06 UTC
From: Bill Nelson <billn@spock.peak.org>
Message-ID: <ak6ame$38i$7@quark.scn.rain.com>
Source record: 135971

Roy Lewallen <w7el@eznec.com> wrote:
> Bill Nelson wrote:
>> . . .
>> If there were such a thing as negative power, then I would expect that
>> it could be generated and stored. Such a power source, if hooked up to
>> a resistor, would cool it.

> Stored negative energy? Contemplate the ice cubes in your freezer.

That is no more negative stored energy than a lump of iron sitting
in your garage. By your definition, everything physical would have
to be a source of stored negative energy - until you got to the hottest
plasma that can possibly exist.

--
Bill Nelson (billn@peak.org)

3731. Re: Superposition quiz

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-23 21:51:53 UTC
From: CAM <Cecil.A.Moore@ieee.org>
Message-ID: <3D66AE79.E42D0C89@ieee.org>
Source record: 135972

Bill Nelson wrote:
>
> Roy Lewallen <w7el@eznec.com> wrote:
> > Bill Nelson wrote:
> >> . . .
> >> If there were such a thing as negative power, then I would expect that
> >> it could be generated and stored. Such a power source, if hooked up to
> >> a resistor, would cool it.
>
> > Stored negative energy? Contemplate the ice cubes in your freezer.
>
> That is no more negative stored energy than a lump of iron sitting
> in your garage. By your definition, everything physical would have
> to be a source of stored negative energy - until you got to the hottest
> plasma that can possibly exist.

Ice cubes in my freezer still have a positive energy because they
are above absolute zero. At absolute zero, they have zero energy.
Now someone please tell me how to obtain negative energy. How does
anything get below absolute zero?
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
------== Over 80,000 Newsgroups - 16 Different Servers! =-----

3732. Re: Superposition quiz

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-23 21:57:46 UTC
From: Bill Nelson <billn@spock.peak.org>
Message-ID: <ak6b4p$38i$8@quark.scn.rain.com>
Source record: 135973

Wes Stewart <n7ws@nowhere.com> wrote:
> |> | rPa = {Vrms^2 / (4 * R0)} * {[(Ri - R0)^2 + Xi^2)] / (Ri + R0)^2 + Xi^2]}
> |
> |> I think you left out a bracket... shouldn't it be:
> |
> |> rPa = {Vrms^2 / (4 * R0)} * {[(Ri - R0)^2 + Xi^2)] / [(Ri + R0)^2 + Xi^2]}
> |
> |Neither one is correct. There is a problem with the ")" right after
> |the first Xi^2 term. There is at least one other bracketing problem as well
> |in the first equation.

> Okay, how about:

> (Vrms^2/(4*Ro))*(((Ri-Ro)^2 + Xi^2)/((Ri+Ro)^2 + Xi^2))

> I think that's why they invented Mathcad <g>

That parses fine. Now, you can change some back to using the brackets
and braces, if you wish - as long as you keep the pairs matched.

I thought that the above was what you meant, but was not sure as there
were a number of ways to correct the parsing on the original equation.
And I was too lazy to look it up.

--
Bill Nelson (billn@peak.org)

3733. Re: Superposition quiz

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-23 21:59:20 UTC
From: n7ws@nowhere.com
Message-ID: <3d66aeb5.16926494@news.triconet.org>
Source record: 135974

On Thu, 22 Aug 2002 21:01:44 -0700, Roy Lewallen <w7el@eznec.com> wrote:

|Richard Harrison wrote:
|> . . .
|> Bird suggests limiting reflected power to 10% of forward power for
|> accuracy.
| > . . .
|
|Hm, that limits it to 2:1 SWR or less.

If I'm reading the same section of the Bird manual, I think what they are attempting to communicate is that achieving Pr < 10% (SWR = 2:1) is "good enough" in the commonly accepted case.

Also, 1% (SWR = 1.2) is approaching the accuracy limits for a single element but lower values can be measured by using two different elements.

3734. Re: Air-Wound Balun Design Info??

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-23 22:05:05 UTC
From: k1bqt@aol.com
Message-ID: <20020823180505.28593.00002077@mb-mn.aol.com>
Source record: 135975

>RG-174 is scary stuff...<

Has nearly twice the breakdown voltage rating of LMR-400 and nearly 4 times the breakdown point of RG-8X. Not all THAT scary.

--Rick

3735. Re: Superposition quiz

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-23 22:35:54 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <3D66B8CA.1040301@eznec.com>
Source record: 135976

Ok, so you're just ignoring them. I'm glad to hear they're getting through.

Roy Lewallen, W7EL

CAM wrote:
> Roy Lewallen wrote:
>
>>CAM wrote:
>>
>>>Tom, would you take some isolated negative RF power and show me how to generate
>>>a negative RF field strength with it. I've got this idea for a broadcast station.
>>>It seems to me the FCC doesn't require a license for a broadcast station that
>>>is putting out a negative field strength and radio receivers should be able
>>>to receive its signal just fine.
>>
>>Gee, Cecil, are my postings not getting through, or do you just insist
>>on ignoring the explanations presented by popular circuits texts?
>
>
> I've said the only reason power is negative is direction, Roy. Seems to
> me, negative power is positive energy flowing in a negative direction.
> Thus, there seems to be no such thing as negative energy, i.e. there seems
> to be only negative directions. So I am asking for a real-world demonstration
> of actual negative energy. It's the difference between -(+joules/sec) and
> +(-joules/sec) where the first sign indicates the direction and the second
> sign indicates the quantum nature of the energy. Where can I find some of
> this negative energy? Does anti-matter contain negative energy?

3736. Re: Superposition quiz

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-23 22:38:36 UTC
From: Bill Nelson <billn@spock.peak.org>
Message-ID: <ak6dhc$38i$9@quark.scn.rain.com>
Source record: 135977

CAM <Cecil.A.Moore@ieee.org> wrote:
> Bill Nelson wrote:
>> >> If there were such a thing as negative power, then I would expect that
>> >> it could be generated and stored. Such a power source, if hooked up to
>> >> a resistor, would cool it.
>>
>> > Stored negative energy? Contemplate the ice cubes in your freezer.
>>
>> That is no more negative stored energy than a lump of iron sitting
>> in your garage. By your definition, everything physical would have
>> to be a source of stored negative energy - until you got to the hottest
>> plasma that can possibly exist.

> Ice cubes in my freezer still have a positive energy because they
> are above absolute zero. At absolute zero, they have zero energy.
> Now someone please tell me how to obtain negative energy. How does
> anything get below absolute zero?

Which was my point. Thanks for the expansion.

--
Bill Nelson (billn@peak.org)

3737. Re: Superposition quiz

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-23 22:42:01 UTC
From: tdonaly@aol.com
Message-ID: <20020823184201.24361.00002353@mb-cc.aol.com>
Source record: 135978

>Tdonaly wrote:
>> If you're talking about the E field, it's a vector. If you're talking
>about
>> the H field,
>> it's also a vector. If you combine them according to Poynting to find the
>> direction
>> of energy flow, that's also a vector. If a vector is pointed one way it's
>> positive, if
>> turned 180 degrees, negative.
>
>Naaahhhhhh Tom, I'm talking about getting a negative reading on my field
>strength meter. I should be able to do that if I have negative power
>available.
>--
>cheers, CAM http://www.qsl.net/w5dxp

Well, Cecil, if you can't get a negative reading on your field strength meter you should learn to exercise more imagination. :)
73,
Tom Donaly KA6RUH

3738. Re: Superposition quiz

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-23 23:02:37 UTC
From: dplatt@radagast.org
Message-ID: <umdfod4gsegc4d@corp.supernews.com>
Source record: 135979

In article <ak6dhc$38i$9@quark.scn.rain.com>,
Bill Nelson <billn@spock.peak.org> wrote:

>> Ice cubes in my freezer still have a positive energy because they
>> are above absolute zero. At absolute zero, they have zero energy.
>> Now someone please tell me how to obtain negative energy. How does
>> anything get below absolute zero?
>
>Which was my point. Thanks for the expansion.

Just to complicate matters a bit (shame on me - I can't help it ;-)
I'll point out that physicists do consider the concept of "negative
temperature" to be a valid one. It's possible for a closed system to
be described by a negative temperature... but, oddly, it's _hotter_
than the same system at any positive temperature.

http://math.ucr.edu/home/baez/physics/ParticleAndNuclear/neg_temperature.html
is one place to read about this rather strange condition.

'Tain't relevant at all to "negative" or "reflected" power on a
transmission line, as far as I can see.

--
Dave Platt <dplatt@radagast.org> AE6EO
Hosting the Jade Warrior home page: http://www.radagast.org/jade-warrior
I do _not_ wish to receive unsolicited commercial email, and I will
boycott any company which has the gall to send me such ads!

3739. Re: Antenna Sought 10m/6m/2m/70cm

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-23 23:13:04 UTC
From: "Chip G." <n1mie@NOSPAM.snet.net>
Message-ID: <230820021912569243%n1mie@NOSPAM.snet.net>
Source record: 135980

In article <3D640298.3030401@charter.net>, NI4L <ni4l@charter.net>
wrote:

] Try this he will make you what ever you want. He really did me a good
] job on a 6-20 meter antenna.
] http://www.qsl.net/w4kma/

Ummm ... I was planning to use it mobile ... how do you mount that 12'
boom on a car?

;)

--
N1MIE - FN31xm

3740. Re: Superposition quiz

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-23 23:23:13 UTC
From: tdonaly@aol.com
Message-ID: <20020823192313.24361.00002357@mb-cc.aol.com>
Source record: 135981

Cecil wrote,
>
>Ice cubes in my freezer still have a positive energy because they
>are above absolute zero. At absolute zero, they have zero energy.
>Now someone please tell me how to obtain negative energy. How does
>anything get below absolute zero?
>--
>cheers, CAM http://www.qsl.net/w5dxp
>

Now you're getting metaphysical. If you ask the same question
on the physics newsgroup I bet you'll get a very interesting answer.
73,
Tom Donaly, KA6RUH

3741. Re: Superposition quiz

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-23 23:45:00 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <0eidmuohoqteq1gedp92mti7hanecs5tp9@4ax.com>
Source record: 135982

On Fri, 23 Aug 2002 16:51:53 -0500, CAM <Cecil.A.Moore@ieee.org>
wrote:

>Ice cubes in my freezer still have a positive energy because they
>are above absolute zero. At absolute zero, they have zero energy.

Hi Cecil,

Again, the inference does not match the implication; but it does
reveal the quiz is wholly devoid of life.

Your ice cube has lots of energy at ANY temperature. Open that
freezer door and I am quite sure if it fell to the floor it would
still exhibit the same power that stirred Newton to observe and put to
theory more than 300 years ago. In this day and age it is the energy
we call potential (as opposed to the kinetic, when the ice cube
falls), and for those who cannot relate outside of an electrical
paradigm, energy for centuries simply meant gravity (still does - even
if you cannot argue it correctly).

This shows how poor a metaphor ALWAYS is when applied to an argument.
The metaphor typically fails at the wrong time and pulls the argument
it is weakly buttressing, down with it. The perception is much like
the observation of a broken food tray in front of you on an airplane:
If they can't maintain the tray, how dutiful are they with the wings?

73's
Richard Clark, KB7QHC

3742. Re: Superposition quiz

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-24 00:06:54 UTC
From: n7ws@nowhere.com
Message-ID: <3d66cd50.24763181@news.triconet.org>
Source record: 135983

On Fri, 23 Aug 2002 16:23:37 -0500, CAM <Cecil.A.Moore@ieee.org> wrote:

|Tdonaly wrote:
|> If you're talking about the E field, it's a vector. If you're talking about
|> the H field,
|> it's also a vector. If you combine them according to Poynting to find the
|> direction
|> of energy flow, that's also a vector. If a vector is pointed one way it's
|> positive, if
|> turned 180 degrees, negative.
|
|Naaahhhhhh Tom, I'm talking about getting a negative reading on my field
|strength meter. I should be able to do that if I have negative power
|available.

Turn the damned meter upside down. Now the greater the negative power, the more the meter pointer moves to the left.

Or as Einstein might have said, "It's all relative."

3743. Re: Longwire antennas

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-24 00:42:49 UTC
From: "Thomas C. Sefranek" <WA1RHP@ARRL.net>
Message-ID: <dEA99.3578$ld4.308631@newsread2.prod.itd.earthlink.net>
Source record: 135984

My tried and true advice:
Make it as high as you can,
make it a LONG as you can,
Use a tuner,
Use a ground at least as long.

eatc7402 <eatc7402@attbi.com> wrote in message
news:cGU59.113109$D36.98625@rwcrnsc53...
> I need some advice on the design of a long wire antenna.
> I have about 150' length of space to work with. The antenna
> must be end fed. I would like to use it primarily for 80-40 meters,
> but if it works on other freqs thats okay too. I realize that I will
> more than likely need an antenna tuner to match the impedance
> of the antenna to 50 ohms coax connector of the transmitter.
> Its been a lot of years since I've put up an antenna. Any design
> tips, sites with good designs on them etc would be most
> helpful.
> Thanks
>
> David Freedman
> K0KWK
>
>
>
>

3744. Re: Longwire antennas

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-24 00:49:25 UTC
From: "Thomas C. Sefranek" <WA1RHP@ARRL.net>
Message-ID: <pKA99.3589$ld4.309015@newsread2.prod.itd.earthlink.net>
Source record: 135985

eatc7402 <eatc7402@attbi.com> wrote in message
news:cGU59.113109$D36.98625@rwcrnsc53...
> I need some advice on the design of a long wire antenna.
> I have about 150' length of space to work with. The antenna
> must be end fed. I would like to use it primarily for 80-40 meters,
> but if it works on other freqs thats okay too. I realize that I will
> more than likely need an antenna tuner to match the impedance
> of the antenna to 50 ohms coax connector of the transmitter.
> Its been a lot of years since I've put up an antenna. Any design
> tips, sites with good designs on them etc would be most
> helpful.
> Thanks
>
> David Freedman
> K0KWK
>
Rule #1 Make it as HIGH as you can.
Rule #2 Make it as LONG as you can,
Rule #3 Use a tuner.
Rule #4 Use the BEST ground you can.

*
| __O Thomas C. Sefranek WA1RHP@ARRL.net
|_-\<,_ Amateur Radio Operator: WA1RHP
(*)/ (*) Bicycle mobile on 145.41, 448.625 MHz

http://hamradio.cmcorp.com/inventory/Inventory.html
http://www.harvardrepeater.org

3745. Re: Superposition quiz

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-24 01:10:34 UTC
From: tdonaly@aol.com
Message-ID: <20020823211034.09186.00002672@mb-cs.aol.com>
Source record: 135986

```
>
>On Fri, 23 Aug 2002 16:23:37 -0500, CAM <Cecil.A.Moore@ieee.org> wrote:
>
>|Tdonaly wrote:
>|> If you're talking about the E field, it's a vector. If you're talking
>about
>|> the H field,
>|> it's also a vector. If you combine them according to Poynting to find the
>|> direction
>|> of energy flow, that's also a vector. If a vector is pointed one way it's
>|> positive, if
>|> turned 180 degrees, negative.
>|
>|Naaahhhhhh Tom, I'm talking about getting a negative reading on my field
>|strength meter. I should be able to do that if I have negative power
>|available.
>
>Turn the damned meter upside down. Now the greater the negative power, the
>more
>the meter pointer moves to the left.
>
>Or as Einstein might have said, "It's all relative."
>

That's right. In his book, _Quantum Theory_ David Bohm writes, "In classical
mechanics,
the energy of a body is defined in terms of its ability to do work on other
bodies. (Work is
defined as the product of the force exerted by the one body on the other and
the distance
through which this force moves.) Since the preceding definition determines
only changes of
energy, the zero of energy can be chosen arbitrarily at a convenient point."
Later, he expands
this definition to include electromagnetic energy in space which can also do
work on bodies.
73,
Tom Donaly, KA6RUH
```

3746. Re: Basic Long Wire Antenna Question

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-24 01:24:14 UTC
From: jwalkermi@aol.com
Message-ID: <20020823212414.07545.00002855@mb-ct.aol.com>
Source record: 135987

>A possible, although not very elegant
solution to both issues would to use something like a light tension bungee cord
that would save the wire and serve as an adequate insulator.

A light rubber bungee strap works for me and the 20 gauge wire has withstood a
number of strong wind storms.

Jack
N8NSW

3747. Re: Basic Long Wire Antenna Question

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-24 01:45:56 UTC
From: Bob Miller <bamiller@texas.net>
Message-ID: <9uNmPahhMQxlkHzt97wZzxUzHeM8@4ax.com>
Source record: 135988

jwalkermi@aol.com (JWalkerMI) wrote:

>>A possible, although not very elegant
>solution to both issues would to use something like a light tension bungee cord
>that would save the wire and serve as an adequate insulator.
>
>A light rubber bungee strap works for me and the 20 gauge wire has withstood a
>number of strong wind storms.
>
>Jack
>N8NSW

Another possibility is a small pully from the hardware store. Attach it to the tree, and let your wire hang through it, with a light weight on its end. Attach the other end firmly to the house. Then the wire will "give" when the tree moves. Radio Shack also has antenna insulators you can use to isolate the wire from the tree and house. Run the wire straight to the random-wire attachment on your radio, and the setup should work nicely.

Bob
k5qwg

3748. Walking Stick Antenna to replace HT Dummy Load

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-24 01:46:51 UTC
From: Wayne Rogers <cwrogers@hiwaay.net>
Message-ID: <3D66E58B.4020808@hiwaay.net>
Source record: 135989

I want to build a Walking Stick antenna to replace the dummy load on my H-T. I intend to use this in search and rescue work where it is critical to have good communications. I believe that the antenna I have in mind would fill 2 needs. First it would increase the effective range of my H-T, and second it would be a usefull tool as a walking staff.

Does anyone know where I can get advice and or plans for building one of these?

Any guidance would be appreciated.

Bud
K9NOZ

3749. Re: Antenna Sought 10m/6m/2m/70cm

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-24 01:54:59 UTC
From: Bob Miller <bamiller@texas.net>
Message-ID: <SeZmPWXGFgi4Mf9ZXLxUn0EDjOlW@4ax.com>
Source record: 135990

"Chip G." <n1mie@NOSPAM.snet.net> wrote:

>In article <3D640298.3030401@charter.net>, NI4L <ni4l@charter.net>
>wrote:
>
>] Try this he will make you what ever you want. He really did me a good
>] job on a 6-20 meter antenna.
>] http://www.qsl.net/w4kma/
>
>Ummm ... I was planning to use it mobile ... how do you mount that 12'
>boom on a car?

You should have mentioned your use for the rig in the first post.

If it's mobile, the Diamond HV-7A whip covers 10-6-2-440. I couldn't tell you
how good it is, but it is rated for those bands.

Bob
k5qwg
>
>;)

3750. Re: What am I emitting on 80M?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-24 02:07:24 UTC
From: n2ey@aol.com
Message-ID: <20020823220724.21128.00000263@mb-da.aol.com>
Source record: 135991

In article <3d663141.262268750@news-server.optonline.net>, cprstn54zz@att.net (Ken) writes:

>I am putting 100 watts at 80M into a shortened inverted-V dipole with
>center 40 ft up.

Some questions:

- How "shortened" is this dipole? (100 feet? 80 feet? 66 feet?)

- How is the shortening done? (Loading coils? Traps? Simply cutting the wire short?)

- What is the feedline and matching system?

- How high are the ends?

>The only contacts I have been able to make are after
>dark to a densely populated area 20-30 miles to the west, behind a
>nearby hill that blocks line-of-sight to the contacts.

80 meters is fairly quiet during the daylight hours. After dark is when things come alive.

>Is my signal going straight up and these folks are seeing scatter off
>my pillar of RF? Will scatter travel that far?

Most of the signal from an 80 meter dipole or inverted V will be radiated at high angles, but the idea that it's all going "straight up" is a misconception. Here's proof:

Using EZNEC (Demo version), I modeled a full-size 80 meter inverted V over medium ground using the 'high accuracy' ground mode. I set the center (feedpoint) at 40 feet above ground and the ends at 20 feet. wire length was adjusted for resonance at about 3.6 MHz.

At right angles to the wire (most favored direction), the radiation is:

90 degrees (straight up): 4.93 dBi
60 degrees: 4.13 dBi (0.80 dB weaker than straight up)
45 degrees: 2.86 dBi (2.07 dB weaker than straight up)
30 degrees: 0.40 dBi (4.53 dB weaker than straight up)
25 degrees: -0.87 dBi (5.80 dB weaker than straight up - just under 1 S unit)
20 degrees: -2.53 dBi (7.46 dB weaker than straight up - about 1.25 S unit)

The signal radiated at 25 degrees is only about an S unit weaker than the signal going straight up. But a signal leaving the antenna at 25 degrees will come down
roughly 900 miles away on the first hop.

I think perhaps the problem may be that your 100 watts isn't all getting to the antenna. Please give some more details on this installation.

73 de Jim, N2EY

3751. Re: Walking Stick Antenna to replace HT Dummy Load

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-24 02:26:05 UTC
From: Dennis Kaylor <k4oxg@tampabay.rr.com>
Message-ID: <3D66EECB.2D3A2FD9@tampabay.rr.com>
Source record: 135992

wayne
i really dont think it would help cause on VHF and UHF you need height as much as you need gain so an antenna at ground level wouldnt be of much help since most S/R type folks wear hardhats why not rig a dual band 1/4 antenna on the top of it that way your body height will be higher than the walking stick and you can leave the HT on your belt and use a speaker mic
you would look a touch goony sorta like a red unicorn but you would be heard and keep in mind that an HT doesnt hold a charge more than a couple of hours in the 5 watt mode which is what you would need to be heard with any antenna you choose
good luck

Wayne Rogers wrote:

> I want to build a Walking Stick antenna to replace the dummy load on my
> H-T. I intend to use this in search and rescue work where it is critical
> to have good communications. I believe that the antenna I have in mind
> would fill 2 needs. First it would increase the effective range of my
> H-T, and second it would be a usefull tool as a walking staff.
>
> Does anyone know where I can get advice and or plans for building one of
> these?
>
> Any guidance would be appreciated.
>
> Bud
> K9NOZ

3752. 2 Meter HT Dummy Load Replacement

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-24 02:48:32 UTC
From: Wayne Rogers <cwrogers@hiwaay.net>
Message-ID: <3D66F400.6070307@hiwaay.net>
Source record: 135993

This may be a bit off-topic in that I really don't want an hf antenna.
Here goes anyway:

I want to build a Walking Stick antenna to replace the dummy load on my
2 meter H-T. I intend to use this in search and rescue work where it is
critical to have good communications. I believe that the antenna I have
in mind would fill 2 needs. First it would increase the effective range
of my H-T, and second, it would be a usefull tool as a walking staff.

Does anyone know where I can get advice and or plans for building one of
these?

Any guidance would be appreciated.

Bud
K9NOZ

3753. Re: 80M & 160M DX on the cheap?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-24 03:14:40 UTC
From: 'Doc <w5lz@icok.net>
Message-ID: <3D66FA19.B066B48F@icok.net>
Source record: 135994

Ken,
If the screwdriver antenna has 'enough' coil
it should work on 160 meters. Probably not the
'best' in the world, but it should work. Your
truck may not be enough 'ground' or counterpoise
for 160m though. A couple'a'few radials as long
as you can make them certainly wouldn't hurt.
The same holds for any mobile antenna, not just
for the screwdrivers.
'Doc

3754. Re: What am I emitting on 80M?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-24 03:20:44 UTC
From: klocko@toad.net
Message-ID: <224d9cd4.0208231920.9d1e53a@posting.google.com>
Source record: 135995

cprstn54zz@att.net (Ken) wrote in message
news:<3d663141.262268750@news-server.optonline.net>...
> I am putting 100 watts at 80M into a shortened inverted-V dipole with
> center 40 ft up. The only contacts I have been able to make are after
> dark to a densely populated area 20-30 miles to the west, behind a
> nearby hill that blocks line-of-sight to the contacts.
>
> Is my signal going straight up and these folks are seeing scatter off
> my pillar of RF? Will scatter travel that far?
>
> Ken KC2JDY
>
> Ken
> (to reply via email
> remove "zz" from address)

Hi Ken,
Don't listen to the folks who say you have a cloud warmer. I have a slightly different configuration - a long dipole with the arms at right angles along the sides of my lot, the center up maybe 35' and the ends up maybe 15'. But it works the whole state of Maryland and some of Pennsylvania during the daytime. I know because I run an early evening net using 50 watts. Plenty of sunshine during the summer. During night-time hours, I can work the whole east coast.

I would bet that there is some lossy component somewhere in your system (a low SWR could be a symptom of a lossy system). Thoroughly check your system out. One simple test is doing DC resistance checks on your feedline, antenna wire, and connectors.
73,
Bill N3WK

3755. Re: Basic Long Wire Antenna Question

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-24 03:21:35 UTC
From: dan <danlx@execpc.com>
Message-ID: <3d66fbae$0$1431$272ea4a1@news.execpc.com>
Source record: 135996

Hi all,
I have found screen door springs, you know, the long ones about 1/2
3/4 inch diameter, work great. Just use a piece of nylon rope or
heavy fish line on an insulator to attach the wire.

On 24 Aug 2002 01:24:14 GMT, jwalkermi@aol.com (JWalkerMI) wrote:

>>A possible, although not very elegant
>solution to both issues would to use something like a light tension bungee cord
>that would save the wire and serve as an adequate insulator.
>
>A light rubber bungee strap works for me and the 20 gauge wire has withstood a
>number of strong wind storms.
>
>Jack
>N8NSW

Dan
N9JBF

I've rambled enough, back to the rocking chair. ZZZZZZZZZ
Remove left x for e-mail reply.

3756. Re: Fan Dipole 160/80/40/20

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-24 03:30:03 UTC
From: Terry Crissman <tcrissman@simplynet.net>
Message-ID: <umdvdal24ee356@corp.supernews.com>
Source record: 135997

HI guys and thanks for the input...I added 3 ft to each leg of the 40 meter wire and it tunes.....all is well with the quadpole :)

Terry

3757. Re: AM DXing antenna question

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-24 03:55:32 UTC
From: FACE <AFaceInTheCrowd@today.net>
Message-ID: <ge0emugedoj0emctg0e7n11f97h9dnl7a4@4ax.com>
Source record: 135998

On Fri, 23 Aug 2002 17:41:38 -0400, Fulano de Tal
<therealexray@netscape.net> in rec.radio.amateur.antenna wrote:

>newsguy wrote:
>>
>> I have a smallish GPX radio/tape player with only the telescope antenna on
>> the back, and no other antenna hookup. While I have picked up clear channel
>> stations as far away as denver (I am in Indiana) I am curious, if I hook
>> up a random wire, would it go to the antenna? or do I pop the box and solder
>> it somewhere inside? All the sites I have seen say to hook random wire to
>> the antenna screws, which as I said I dont have.
>> Thanks!
>
>Chances are that your AM-BCB 'antenna' is a ferrite rod inside the
>radio. You can couple to it with a couple turns of wire around it.
>-BM

Agreed. A good way to tell is if you collapse the telescoping antenna
and the signal input strength does not change, you are operating off
of an internal ferrite bar. Physically put your palm on the radio in
various places and when the signal strength suddenly doubles you will
know approximately where the ferrite bar is .

FACE

3758. Re: Losses in insulating materials

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-24 04:46:15 UTC
From: Ron McConnell <rcmcc@earthlink.net>
Message-ID: <3D670F83.FF39EE8D@earthlink.net>
Source record: 135999

Jean Cesario, F8BXG, wrote:

> I'm wondering about losses in antennas made of standard "domestic"
> stranded or solid copper wire, insulated with polyvinyl chloride.

As Richard indicates, you will not notice any difference in loss
when using the different wires as _antenna_ wire.

What quantitative data I have is safely packed away
in boxes that I brought home from work when I retired last year.
However, some qualitative notes follow...

You _will_ notice a difference when using pairs of wires
with different insulations as a transmission line.
For instance, polyethelene is a very good insulator
with low loss and stable characteristics for a very
wide frequency range (audio to television twinlead)
and with time. It is a relatively soft material.
PVC is a tough material and is often chosen
for low frequency use (AC and outdoor telephone)
where it may be subjected to physical abuse,
weather, ... However, it is not a good insulator
in that its characteristics vary with frequency.
I once had the chance to salvage several reels
of telephone drop* wire with 19 1/2 AWG
copperclad steel wire and PVC insulation.
Some quick calculations indicated
the impedance was in the 100 ohm range
and that it _might_ be useful as transmission line.
Then I learned about its very poor performance
at radio frequencies and passed on getting the cable.

My layman's understanding is that the PVC molecule
is polar, meaning it has - and + ends. When
it is excited with rf , loss results when the molecules
vibrate. This is not noticable for practical purposes
when used as a conductor for receiving antennas.
When the wires are paired for a t-line,
the characteristics of PVC will affect the performance
for transmission purposes where loss counts more.

(Subject to correction and a more clear
explanation by real experts... It is getting late here
and brain cells are experiencing loss.)

Cheers, 73,

Ron McConnell
w2iol

* "Drop" meaning the drop from utility pole to house
where it must survive squirrels running along it,
chewing on it, rubbing against tree limbs...
Thus PVC and copperclad steel.

3759. Re: Hustler 6BVT vertical

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-24 05:20:24 UTC
From: vswrref@hotmail.com
Message-ID: <3d671620.16735650@national-news.stargate.net>
Source record: 136000

Thanks for the info. I've never had a vertical but know how they can
be tricky on using or not using radials. IN the situation I have
facing me, the only option will be to lay radials down. I've read in
users reprots and the manual to have the radials insulated from the
ground. So it would require to lay insulated wire on the ground and
seal the end of the wire so it won't come in contact with the earth.
I have to investigate that further to make sure it's true.

Yes indeed. A vertical dipole is better than a 1/4 vertical. It
would be nice to make a more effecient vertical.

Jeff Y.

On Fri, 23 Aug 2002 11:20:54 -0500, "Dan/W4NTI"
<w4nti@mindspringnospam.com> wrote:

>Unless you have a VERY GOOD GROUND under the vertical most of the radiation
>will just heat the near vicinity soil.
>
>Good ground meaning bunches of radials. Many studies have been made on this
>subject over the years,
>
>A good compromise is a counterpoise above ground system, which is what I
>described to you earlier.
>
>The 4/6BTV is basically a 1/4 wave electrical radiator. Don't confuse this
>with, say, the GAP which is a center fed vertical dipole for all practical
>purposes. Which btw, is a much better design than ANY 1/4 waver.
>
>Dan/W4NTI
>
>"Jeff Y." <vswrref@hotmail.com> wrote in message
>news:3d659f03.3652491@national-news.stargate.net...
>> Hi Dan,
>>
>> Thanks for the info. So the ground mount gave you problems. Hmmmm,
>> kinda strange since others I've talked with said it worked best ground
>> mounted but a real burden when elevated. Maybe ground conditions are
>> a big factor as well.
>>
>> I'm debating between this and the DX-77 because of the tilt over. I
>> know the 6BTV ins't a tilt over but I can always rig that up if I need
>> to. More info to ponder. Thanks again, Dan!
>>
>>

>> Jeff Y.
>>
>>
>>
>> On Thu, 22 Aug 2002 17:53:23 -0500, "Dan/W4NTI"
>> <w4nti@mindspringnospam.com> wrote:
>>
>> >I had the 4BTV for many years. I assume it is basically the same as the
>> >6BTV other than a few more bands.
>> >
>> >Actually I had the 5BTV. It had the KW 80m resonator.
>> >
>> >I agree...it is not good on 80m anywhere. Its too short you know.
>> >
>> >On 40 I found it worked out quite well. In Germany, when I was DA2LJ, I
>> >used the 4BTV sticking out of the top floor attic window in the roof.
>Ran
>> >one radial per band. Worked gangbusters. Of course it was 110 feet in
>the
>> >air at that time...hi.
>> >
>> >Back stateside I used it in my backyard by putting it on a 10 foot pole.
>> >Then running a screen of interconnected chicken wire as a above ground
>> >counterpoise. Seemed to do quite well that way too.
>> >
>> >The worst situation I used it in was ground mounting with no radials.
>> >
>> >Hope that helps.
>> >
>> >Dan/W4NTI
>> >
>> >"IE" <m9191@abc.se> wrote in message
>> >news:us8amu8gkj1rh457kemae36tfiu4aat3f4@4ax.com...
>> >> Hi,
>> >>
>> >> I have used the 6BVT for four years. First I had it mounted on ground
>> >> and last two years 3 meters above with radials going out from the low
>> >> point of the antenna. (Just above the roof of a building and wall
>> >> mounted). Radials are going in all directions.
>> >>
>> >> Compared to my beam it is a big difference (the beam is much, much
>> >> better). And for 80 meter I never use it (very narrow and not good
>> >> compared to my wire antennas), But I like it since it is easy to play
>> >> with. On 30 and 40 I use it a lot and have worked many DX.
>> >>
>> >> This fall I will add more radials to it since I have not been fair to
>> >> the antenna. I have about 8 radials today in different lengths and
>> >> with very weak copper wire. I think I can get much more out of this
>> >> antenna with better radials and thicker wire.
>> >>

>> >> The SWR is good on all bands. I have tuned the 80 meter part to 3.500
>> >> and SWR is low there as well. But SWR is one thing. I still prefer a
>> >> wire dipole on 80. It is a question of S-units in difference.
>> >>
>> >> I am very impressed of the possibillity for the antenna to take care
>> >> of hard wind. First years I was nervous but today I trust the antenna
>> >> in all WX.
>> >>
>> >> This antenna is connected to the 2nd antenna connector on a TS870 so I
>> >> have never used it for higher power then 70-80 W. That power it takes
>> >> care of.
>> >>
>> >> Earlier I have had other verticals. I can't say for sure this one
>> >> works better but I feel so.
>> >>
>> >> I have a computer LAN in the same building and this antenna picks up
>> >> more radiation from the LAN and TV-sets than a dipole or a beam.
>> >>
>> >> In conclusion I like the antenna and think it is a nice multiband
>> >> vertical. I should have done the work with radials earlier. My feeling
>> >> are that it worked better ground mounted, due to grounding, then 3
>> >> meters up. This antenna will stay with me for years.
>> >>
>> >>
>> >>
>> >>
>> >> On Thu, 22 Aug 2002 15:55:47 GMT, rong@computer.net (Ron
>> >> Goldstein--KA2IIA) wrote:
>> >>
>> >> >vswrref@hotmail.com (Jeff Y.) wrote:
>> >> >
>> >> >>Hi all!
>> >> >>
>> >> >>Wondering if anybody is currently using, or has used the Hustler 6BVT
>> >> >>HF vertical and what your thoughts, likes and dislikes of it, are.
>> >> >>How does it work on the bands, with or without the radials. Looking
>> >> >>forrward to seeing the posts.
>> >> >>
>> >> >>
>> >> >>Jeff Y.
>> >> >>===
>> >> >Hi Jeff,
>> >> >
>> >> > I've had a 5BTV (80, 40, 20, 15, & 10) since I've been licensed
>(1980),
>> >> >and it has given me no problems in the 22 years it has been up. It's
>> >mounted on
>> >> >a 3 foot piece of inch & a half pipe which is driven 2 feet into the
>> >ground in
>> >> >my backyard. I have no ground radials. Within the first 2 years of

>using
>> >it, I
>> >> >accomplished WAS, WAC, and DXCC (100 countries). I think it's a great
>> >antenna
>> >> >for a vertical.
>> >> >**
>> >> > Ron Goldstein.....KA2IIA
>> >> > STAY YOUNG---DRIVE A VINTAGE 427 CORVETTE.
>> >> > KEEP YOUR MIND ACTIVE---BECOME AN AMATEUR RADIO OPERATOR.
>> >> >
>> >> >REMEMBER, THERE ARE NO STRANGERS IN AMATEUR RADIO, ONLY FRIENDS
>> >> > THAT WE HAVE NOT YET MET.
>> >> > rong@computer.net******ka2iia@arrl.net
>> >>
>> >
>> >
>>
>
>

3760. Re: 80M & 160M DX on the cheap?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-24 05:49:06 UTC
From: Paul N3EOP <n3eop@arrl.or.callsign.net>
Message-ID: <Xns9273E81F165C9n3eophotmailcom@64.164.98.6>
Source record: 136001

cprstn54zz@att.net (Ken) wrote:

> My multiband inverted V dipole (40 ft up) is not doing great on 80 and
> 160, for the usual reason and I can't turn my property into an
> antenna farm. So I am still looking for a solution.
>
> What is the story on the mobile HF antennas, like the screwdrivers?
> They are close to the ground and are said to be tunable to low SWR.
> If I buried my truck in my back yard (or a heavy 20 ft X 20 ft.
> stainless screen) and stuck one of these right on top, would I be able
> to DX on 80 and 160?

I ran into much the same problem, except that I'm not even able to try a dipole for 80. (Multi-unit apartment complex.) I decided to give the Isotrons (40 and 80 for me) a try; they've received decent reviews in the magazines and on eHam. (Mine arrived today; I hope to get them on the air this weekend.)

While they're not cheap, they are a darn bit cheaper than a good screwdriver type antenna, *and* they don't need a ground plane.

http://www.rayfield.net/isotron/

Remember, mobile installations have much stricter limitations, such as height and wind loading, that home installations don't have.

Maybe you can consider making a base loaded vertical for 80/160? 30' of aluminum tubing should put out a respectable signal.

3761. seriously concerned about doc

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-24 06:48:42 UTC
From: derekbales@aol.com
Message-ID: <b5dee4b5.0208232248.46888c14@posting.google.com>
Source record: 136002

doc,
am getting very concerned about your personality swings. may i
suggest next time your partner goes for the grocerys, you ask him to
purchase some HRT for you,it works wonders on most women, i have been
told.
db

3762. Re: AM DXing antenna question

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-24 07:08:50 UTC
From: nm5k@wt.net
Message-ID: <25eb70d7.0208232308.67f89edc@posting.google.com>
Source record: 136003

"newsguy" <harpoon32@yahoo.com> wrote in message news:<ak5uli02lk5@enews1.newsguy.com>...
> I have a smallish GPX radio/tape player with only the telescope antenna on
> the back, and no other antenna hookup. While I have picked up clear channel
> stations as far away as denver (I am in Indiana) I am curious, if I hook
> up a random wire, would it go to the antenna? or do I pop the box and solder
> it somewhere inside? All the sites I have seen say to hook random wire to
> the antenna screws, which as I said I dont have.
> Thanks!

It most likely uses a small ferrite bar antenna inside the radio. You
may notice that it is somewhat directional according to how you turn
the radio.
Adding a wire antenna to that whip won't do a thing as the whip should
be for FM only, unless it also includes shortwave bands. Your present
antenna really should be good enough if you are hearing a good bit of
noise when a station is not tuned in. About the only way to really
improve it is to make a larger loop antenna of a few turns, and then
place the radio up behind the loop to couple with it. You will also
need an old variable cap to tune the loop to resonance. Any old 365 pf
BC cap will do from an old radio. You don't have to make any direct
connection from the loop to the radio. The radios ferrite antenna
becomes the coupling loop. You will notice a certain spot where the
signals are the strongest. Thats the distance you want to keep it from
the loop. This radio/loop combo is quite directional with good nulls.
The nulls are broadside to the loop, and max signals inline with the
loop wires. Opposite from the operation of a large 1 wave loop. I have
one loop I've been using quite a bit with my 706 for MW use. It's a 16
inch dia circle , on a round plastic frame with 12 turns of wire. I
have a two turn coupling loop about an 1.5 inches behind the main 12
turn loop. You can actually feed the 12 turn loop directly, but I
think I get a slightly cleaner pattern with the coupling loop. I have
it mounted on a turnable base so I can turn it to null or peak
signals. MK

3763. Re: 80M & 160M DX on the cheap?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-24 07:23:12 UTC
From: nm5k@wt.net
Message-ID: <25eb70d7.0208232323.16fe24de@posting.google.com>
Source record: 136004

cprstn54zz@att.net (Ken) wrote in message
news:<3d66a458.291731390@news-server.optonline.net>...
> My multiband inverted V dipole (40 ft up) is not doing great on 80 and
> 160, for the usual reason and I can't turn my property into an
> antenna farm. So I am still looking for a solution.
>
> What is the story on the mobile HF antennas, like the screwdrivers?
> They are close to the ground and are said to be tunable to low SWR.
> If I buried my truck in my back yard (or a heavy 20 ft X 20 ft.
> stainless screen) and stuck one of these right on top, would I be able
> to DX on 80 and 160?

You would be much better off with some kind of simple vertical like an
inv L, T vertical, or whatever. The average mobile antenna on 160m
might be good to do 1.5-3 % efficiency when mounted on a large car or
truck. An antenna such as that will require a very good ground system
to work in a backyard on the ground. The shorter the vertical in
wavelength, the more critical the ground. If you can string an inv L
up through a tree ,even with a few number of radials, you would be
much better off. But yes, you can work dx with a vertical.
Many times a good vertical like a bugcatcher on a large truck could
outdo your 40 ft high inv vee to far off distances. I've seen that
happen even on 40m at night. I've worked quite a few mobiles on 160m,
but none dx. But thats more due to my limitations than theirs...:(I
don't really have too good of receiving antennas on 160m. I've
listened to Tom W8JI many times working dx, and I almost never hear
the stuff he works. I'm talking a total blank. Trying to hear that
stuff on the average transmit antenna is tough. MK

3764. Using coax shield for long wire antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-24 12:47:51 UTC
From: emergencyradioserv@yahoo.com
Message-ID: <46060eb3.0208240447.51029cd3@posting.google.com>
Source record: 136005

Anyone have any experience good/bad with using the braided shield of coax as a long wire antenna? I have a large roll of RG-59/U with copper braid and a LARGE lot to run it over. I want to be able to monitor (no transmitting) on 160 meters and below. I thought of using the shield as the antenna and a local ground at the radio. (Lightning protection will of course be provided as well.

Is there any advantage to doing this due to the potentially larger diameter of the antenna rather than using simple wire? I know there will be more ice loading on it but another thought is laying on the ground and using it as a LW antenna.

Any thoughts or input welcomed.

Thanks Bob

3765. Cobbweb antenna question

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-24 13:25:04 UTC
From: Jason Ingram <jason.ingram@ntlworld.com>
Message-ID: <B98D47C0.188EE%jason.ingram@ntlworld.com>
Source record: 136006

I am thinking of buying a Cobbweb antenna but would appreciate any comments
for those who may have used one first.

TIA

Jason
G7BSK

3766. WTB 70-110ft Free Standing motorized/crankup Tower

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-24 13:39:37 UTC
From: "John F. Feist" <aa6qn@pacbell.net>
Message-ID: <3D678C98.F2CA2240@pacbell.net>
Source record: 136007

Hi, I am looking for a 70~110 ft Free Standing Crankup or Motorizied tower (perfer the motorized version). I live in the San Diego area. I also want the tilt over base so I can lower the tower as well. If you have such a item please drop me a line at: aa6qn@nospam.excite.com (remove the nospam.). I can also be reached via packet at aa6qn@aa6qn.#sca.ca.usa.noam

Thank you in Advance, 73, John AA6QN

3767. Re: Hustler 6BVT vertical

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-24 14:37:53 UTC
From: accrider3@aol.comnojunque
Message-ID: <20020824103753.20589.00002412@mb-fa.aol.com>
Source record: 136008

I have used the 4BTV with a 80m KW resonator basically its now a 5BTV. Bought in in 1975 when licensed as a novice took it down a few years later and been in storage until 2000 when I got back into the hobby. Now have a Cushcraft A3S which hears better and works better. Mine is ground mounted with no radials using 500W was a must for DX. The soil conductivity in South Florida seems pretty good and where the antenna is mounted does't lend its self for radials. Don't get me wrong the antenna did work a lot of DX and if you are space constricted its not bad, better I am sure with a counterpoise. This antenna is easy to take down just by loosening the bottom clamp and removing the antenna from the base unless you want to tilting over for stealth reasons. A few times during hurricane warnings I have taken it loose from the base and split it and tossed it in the garage. My tower is a tilt/crank up for those reasons.
80 meter performance isn't so great
73 de Dale
KG4KZG
Hope this helps

3768. Re: seriously concerned about doc

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-24 14:57:14 UTC
From: 'Doc <w5lz@icok.net>
Message-ID: <3D679EBE.F72D49A0@icok.net>
Source record: 136009

Derek,
No need to worry, it's just that some days it's
really hard to put up with nonsense. I don't send
my partner for groceries any more. He's a miniature
schnauzer, and his tastes are sort of odd compared
to mine. I'm not sure what HRT is, but if you can't
get it with food stamps I don't need it. Can you
recommend anything for old broken bones, and stuff like
that? I'd sure appreciate that! Maybe something for
baldness? I don't need any more hair, but going to
a barber sure is a pain since my last one quit. She
was really a pleasure to have cut my hair (wink, wink).
Thanks again for your concern Derek, it's nice to
know you care. I think I'll print it out so I can
show people when they drive by. You know, sit'n and
rocking in my rocking chair, on the front porch. I'll
bet they'll think it's nice too...
'Doc

3769. Re: Antenna Sought 10m/6m/2m/70cm

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-24 16:07:17 UTC
From: Uncle Peter <radioconnectionNO@cox.netSPAM>
Message-ID: <VaO99.9542$082.453229@news1.east.cox.net>
Source record: 136010

"Chip G." <n1mie@NOSPAM.snet.net> wrote in message
news:230820021912569243%n1mie@NOSPAM.snet.net...
> In article <3D640298.3030401@charter.net>, NI4L <ni4l@charter.net>
> wrote:
>
>] Try this he will make you what ever you want. He really did me a good
>] job on a 6-20 meter antenna.
>] http://www.qsl.net/w4kma/
>
> Ummm ... I was planning to use it mobile ... how do you mount that 12'
> boom on a car?
>
> ;)
>
> --
> N1MIE - FN31xm

I was going to suggest a KMA log as well. We aren't mind readers.

Peter

3770. FS. MORE

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-24 17:07:41 UTC
From: George Kinzer <horseflygk@worldnet.att.net>
Message-ID: <x3P99.2330$p%3.160999@bgtnsc05-news.ops.worldnet.att.net>
Source record: 136011

Plans on how to make your own base and mobile antennas, from quarter waves
to beams, quads, and MORE.
Understanding coax, swr's, line loss, co-phasing, grounding and MORE.
CD also includes tuning and modifications on just about every cb as well as
most 10 meter radios and MORE
Mic wiring to all popular cbs, D104, Sedelata, Turner, standard and of
course MORE.
PLL convertions, adding talk-back, swing kits, roger beeps and MORE
Packed with pictures, how toos, parts and MORE.
email for more info, over 100 megs of info in easy to understand format,
carefully organized for EASY reference.

--
If first you don't succeed, do the same thing again...see what happens

3771. Lightning Effects Questions

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-24 17:41:11 UTC
From: Robert Rose <rgsrose@tiac.net>
Message-ID: <ak8gmg$23i$1@slb5.atl.mindspring.net>
Source record: 136012

Hello:

I guess the subject of lighning protection, induced voltages, and the like
is a favorite topic herein.
I've read up, a bit, on it, but still have a few basic, and a few applied,
type questions.

A very confusing subject, all in all.

Hope the following isn't too confusing, so let me ask, please:

I have just installed a new discone in my attic (receive only).

Having read the great posts on the subject, I now appreciate the fact that
the discone will work just as well,
with or without a separate ground up at the antenna end.

But-

a. The single rod vertical element protruding from the top of the Discone
ends only about 1 inch from the interior surface of
my attic's roof (essentially the roofs high point).

I am therefore wondering if this "might" make the antenna more prone to
attract a direct lightning hit?
Or, does the roof actually provide "some" protection (due to its being
something of a dielectric?) ?

If so, why? Differences for a wet vs. dry roof?

b. Would it still be a good idea to ground the antenna mast (which would
also ground the elements) to a water pipe in the attic?

-Does the possibility of a strike, or induced voltages from a nearby
strike, go to zero if the coax is unplugged from the receiver?
(which is what I plan on doing, but one sometimes forgets)

c. A theoretical question: in the general sense, does a grounded mast help
prevent a counter charge from being developed beneath a charged up cloud, or
merely provide a well defined path for a lightning bolt to travel to ground?

d. From looking at some catalogs, I see the in-line coax lightning
protectors seem to come in two flavors:

there's (a) the type from Alpha Delta which provides a separate lug
for grounding, and (b) most of the others which
apparently funnel the charge, when the spark gap breaks down, to the
coax shield.

what I'm wondering about, is for for (b). The charge would then
go directly to the chassis of the radio, and would
then reach ground via the chassis' ground.

As it may not be an actual strike, but perhaps a lower induced
voltage of just enough to break the spark gap,
what would this do to the radio (e.g., the chassis being raised
momentarily to 100 V, or so) ?

Are both types just as safe and useful?
Any caveats?

Thanks,
Bob

3772. Re: Fractal Antenna for sale

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-24 17:43:02 UTC
From: "W.G Ewald" <wgewald@att.net>
Message-ID: <g4hfmu8dmmn2p2cub6oji0upp10eemn27i@4ax.com>
Source record: 136013

On Thu, 22 Aug 2002 21:09:23 -0400, "MD" <ve3tmt@rac.ca> wrote:

>
>"Fractal Antennas" <fractena@yahoo.com> wrote in message
>news:653d2ee5.0208221144.4aa42d89@posting.google.com...
>> I have for sale one fractal antenna, operating on the HF frequencies.
>> Used for about 1 year, in good shape. Email for information.
>
>Are we going to get into this useless BS all over again. What a waste of
>bandwidth.
>

I think the responses have been hilarious.

But I wonder if this was the antenna that was vandalized?

3773. Re: [ABSE] Electric torture elec-tor.wav - elec_tor.wav (0/2)

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-24 17:43:03 UTC
From: "W.G Ewald" <wgewald@att.net>
Message-ID: <8dhfmug3bt7fh5g6d4mnacbd7pn2kj5o8s@4ax.com>
Source record: 136014
Cross-posted to: rec.radio.amateur.antenna,alt.usenet.kooks

On Fri, 23 Aug 2002 16:27:06 GMT, secret_studio@charter.net (Paul at Secret Studio) wrote:

>Borrowed from the film "The Fractal Experiment." Topless woman gets
>zapped and screams piteously. Not my own recording, but a "must-have"
>for electro-S&M fans.

Sorry, no interest here.

3774. Re: seriously concerned about doc

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-24 18:22:49 UTC
From: KC5CQW <kc5cqw@excite.com>
Message-ID: <umfjnq9bntt78e@corp.supernews.com>
Source record: 136015

WTF?

"derek Bales" <derekbales@aol.com> wrote in message
news:b5dee4b5.0208232248.46888c14@posting.google.com...
> doc,
> am getting very concerned about your personality swings. may i
> suggest next time your partner goes for the grocerys, you ask him to
> purchase some HRT for you,it works wonders on most women, i have been
> told.
> db

3775. Re: 80M & 160M DX on the cheap?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-24 18:39:11 UTC
From: rb <rbigg@seii.net>
Message-ID: <ak8j4b$hs2$1@news.chatlink.com>
Source record: 136016

Go to Radio Works and take a look at the 16m Beam Special Carolina Windom.

I've used one of those for several years, and find it simply the best way of getting on 160 from limited space. The Beam Special requires about 100' or so of horizontal, and the ends can be bent down.

On 160, it becomes a "shorty" veritcal with top loading. It's a tough match apparently, because Jim derates the ant to 500 watts on 160 to keep from overheating the pot.

Mine gets out very well, and my vertical feed hangs straight down. That's another almost requirement. The 32' active element of feedline hanging straight down, and being in the clear is important for radiation purposes.

The nice thing is that the 160m Beam Special is great on all freqs above 160m. It will match/load on most without a tuner. Give it some thought.

3776. Re: Lightning Effects Questions

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-24 18:40:46 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <r0lfmuokd0cgijpjuba7bbu6ptl8v4ce69@4ax.com>
Source record: 136017

On Sat, 24 Aug 2002 13:41:11 -0400, "Robert Rose" <rgsrose@tiac.net>
wrote:

>a. The single rod vertical element protruding from the top of the Discone
>ends only about 1 inch from the interior surface of
> my attic's roof (essentially the roofs high point).

If you are not going below to 6M, clip it off.

>
> I am therefore wondering if this "might" make the antenna more prone to
>attract a direct lightning hit?

Sure, but how much is another matter.

> Or, does the roof actually provide "some" protection (due to its being
>something of a dielectric?) ?

Sure, but how much is another matter.

>
> If so, why? Differences for a wet vs. dry roof?
>

For all the usual reasons, of course.

>b. Would it still be a good idea to ground the antenna mast (which would
>also ground the elements) to a water pipe in the attic?

As you most likely have a plumbing vent that will be higher than your
antenna, and that it is already a conductor (maybe plastic which
invalidates everything here) to ground, lightning is far more likely
to seek that path (no warrantee against capricious strikes is made nor
implied)
>
> -Does the possibility of a strike, or induced voltages from a nearby
>strike, go to zero if the coax is unplugged from the receiver?
> (which is what I plan on doing, but one sometimes forgets)

That lead up into the sky is a short circuit to the charges stored up
there. You may not offer a ground, but it still remains a preferred
path over insulative air.

>
>c. A theoretical question: in the general sense, does a grounded mast help
>prevent a counter charge from being developed beneath a charged up cloud, or
>merely provide a well defined path for a lightning bolt to travel to ground?

Be thankful if it does "merely" that and skip the philosophies of charge.

>
>d. From looking at some catalogs, I see the in-line coax lightning
>protectors seem to come in two flavors:
>
> there's (a) the type from Alpha Delta which provides a separate lug
>for grounding, and (b) most of the others which
> apparently funnel the charge, when the spark gap breaks down, to the
>coax shield.
>
> what I'm wondering about, is for for (b). The charge would then
>go directly to the chassis of the radio, and would
> then reach ground via the chassis' ground.
>
> As it may not be an actual strike, but perhaps a lower induced
>voltage of just enough to break the spark gap,
> what would this do to the radio (e.g., the chassis being raised
>momentarily to 100 V, or so) ?
>
> Are both types just as safe and useful?
> Any caveats?
>
>Thanks,
>Bob
>

Hi Bob,

Skip the arrestors too, concentrate on a safety ground first (ask a librarian for the local electrical code).

Take pause for common sense. I would bet that you already have wire in the attic (going to the doorbell if nothing else) that has yet to be struck by lightning. Same must be true of nearly every neighbor within view. As an attractant to lightning, your antenna is barely going to poke 3 feet above these other strike magnets (and as magnets they are pitiful).

This is all pretty facile to shrug off the risk indoors, but if you were tempted to hike this up outside, it might be a different story. Being different doesn't mean that the risk is catastrophic, it means that your ground issues have moved outdoors - if you ignore them there, grief will find its way indoors.

73's
Richard Clark, KB7QHC

3777. Re: Fractal Antenna for sale

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-24 18:57:43 UTC
From: Jim Pennino <jimp@specsol.com>
Message-ID: <ak8kv7$m2k$1@mail.specsol.com>
Source record: 136018

W.G Ewald <wgewald@att.net> wrote:
> On Thu, 22 Aug 2002 21:09:23 -0400, "MD" <ve3tmt@rac.ca> wrote:

>>
>>"Fractal Antennas" <fractena@yahoo.com> wrote in message
>>news:653d2ee5.0208221144.4aa42d89@posting.google.com...
>>> I have for sale one fractal antenna, operating on the HF frequencies.
>>> Used for about 1 year, in good shape. Email for information.
>>
>>Are we going to get into this useless BS all over again. What a waste of
>>bandwidth.
>>

> I think the responses have been hilarious.

> But I wonder if this was the antenna that was vandalized?

Probably not since if one looks at the headers, it appears the poster
is not who everyone is assuming it is.

A google search shows fractena@yahoo.com has posted exactly 1 time.

Ever hear of a troll?

--
Jim Pennino

3778. Re: Using coax shield for long wire antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-24 19:00:47 UTC
From: 'Doc <w5lz@icok.net>
Message-ID: <3D67D7D4.AB686C6B@icok.net>
Source record: 135919

Bob,
There really isn't any advantage to using braid as an
antenna, and there are a few disadvantages. The primay
disadvantage is that weather tends to 'eat' copper braid
fairly quickly.
The diameter of the conductor makes very little differnece
at HF, especially on 160 meters. Any conductor that is
large enough to hold up it's own weight will work as well as
any other conductor in almost all cases.
Using RG-59/u for the conductor will work. It may not be
the 'best' use you could put it to, but it should certainly
work.
'Doc

3779. Re: Fractal Antenna for sale

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-24 19:43:46 UTC
From: aunwin@fgi.net
Message-ID: <c4becf19.0208241143.23acc52e@posting.google.com>
Source record: 135920

fractena@yahoo.com (Fractal Antennas) wrote in message
news:<653d2ee5.0208221144.4aa42d89@posting.google.com>...
> I have for sale one fractal antenna, operating on the HF frequencies.
> Used for about 1 year, in good shape. Email for information.

Doctor Cohen, (Chip)
What is the secret that you,Hately and others have to get so much
attention to your antennas ? I imagine I have seen so many pages where
your antennas have been scrutenised, disected, delved into, deep
searches for inconsistencies and errors that it could easily rival
'common mode' discussions.
If I remember correctly, the torrent of discussion put you in line for
a hefty grant from the government which wasn't too bad and I think
Hately got government assistance in the same way. In both cases the
government took an interest in your work where from others all you got
was derision. So tell me Chip, do I have to be rude, call everybody
names and get everybody upset so that they get in line to try and chop
me off at the knees? Staying calm and polite is not what people are
looking for, is it just a fight that get their juices running?
All I have is a little ferret named doc who keeps snapping at my heels
but nobody of any consequence.
So what is the secret that you and Hately have ?

Art Unwin KB9MZ.....XG

3780. Re: Fractal Antenna for sale

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-24 19:55:45 UTC
From: dan <danlx@execpc.com>
Message-ID: <3d67e4b0$0$1421$272ea4a1@news.execpc.com>
Source record: 135921

On Sat, 24 Aug 2002 17:43:02 GMT, W.G Ewald <wgewald@att.net> wrote:

>On Thu, 22 Aug 2002 21:09:23 -0400, "MD" <ve3tmt@rac.ca> wrote:
>
>>
>>"Fractal Antennas" <fractena@yahoo.com> wrote in message
>>news:653d2ee5.0208221144.4aa42d89@posting.google.com...
>>> I have for sale one fractal antenna, operating on the HF frequencies.
>>> Used for about 1 year, in good shape. Email for information.
>>
>>Are we going to get into this useless BS all over again. What a waste of
>>bandwidth.
>>
>
>I think the responses have been hilarious.
>
>But I wonder if this was the antenna that was vandalized?
>
>
Damaged goods? You mean I bought more popcorn, set up the, well, had
the wife set up the lawn chairs and it is for damaged goods?

Or is it you can't tell the difference between wind/vandal damage and
original without a buffoonery degree? Oh, I do hope this was not all
for nothing! All the time, energy, constipation, oops, that was from
the string cheese, got to go now. Talk to ya 'll later.
Dan
N9JBF

I've rambled enough, back to the rocking chair. ZZZZZZZZZ
Remove left x for e-mail reply.

3781. Re: Is Lithium Grease good for assembling antenna mating sections?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-24 20:11:15 UTC
From: Uncle Peter <radioconnectionNO@cox.netSPAM>
Message-ID: <DLR99.9675$082.500093@news1.east.cox.net>
Source record: 135922

"Gary V. Deutschmann, Sr." <raiar@bbs.galilei.com.nospam> wrote in message
news:3d5d618d.139562218@news.galilei.com...
> StarGazer <pti@capnet.com> verbositized:
>
> >how do you know it had harmonics all over the place.
>
> Because I was running a packet station on that antenna and wiped out
> the whole net one night until I received a phone call telling me I was
> running packet on the wrong frequency. I was on the right frequency,
> but at the same time, I found out after some testing, I was on many
> frequencies.
> At first I thought something was wrong with my transmitter and it went
> broadband on me, so I pulled it and used a different radio, again the
> same problem occurred.
> Back then I didn't have a means to check much of anything. But
> switching back over to the brass antenna caused no problems.
> Reconnecting back to the nickel plated antenna I could pick up my
> signal on many frequencies across the band and also on some bands I
> wasn't even on. It was so long ago that I don't remember the exact
> details anymore, but I did have quite a few people mad at me for
> months over that issue.
>
> The particular pipe I had used was 3/8 inch hard copper, nickel
> plated. It was nickel plated for later chrome plating apparently, by
> the company I got it from, but they were supposed to have used soft
> copper rather than hard for the intended purpose. So to them, it was
> waste scrap taking up space and I got it for like 1/4th the price of
> new copper pipe.
>
> I can't say with all honesty that the nickel coating is what truly
> caused the problem, because I don't really know for sure. But since
> it was identical in all aspects to another yagi I had built that
> worked perfectly, the antenna itself became suspect and was discarded.
> I later used a piece of that same pipe as a stub on a J-Pole and we
> never could get the antenna antenna SWR down.
> In both cases, received signal strength (at a listening station) was
> way down on the antennas with nickel plated components.
> I do remember losing a lot of packets on that antenna before I got the
> phone call, but that is about all I remember about it. Other than it
> took solder real well, hi hi.....
>
> TTUL
> Gary

Sounds like LF parasitic oscillations in a solid-state transmitter.
Harmonics
would not fall in the same band at nearby frequencies. Perhaps the
antenna reactance was just right to cause instabilities?

Pete

3782. Re: Lightning Effects Questions

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-24 20:15:16 UTC
From: 'Doc <w5lz@icok.net>
Message-ID: <3D67E94A.5EFC863F@icok.net>
Source record: 135923

Bob,
Having an antenna in your attic isn't going to make
your house appear more attractive to lightning. You
have the exact same chance of being struck by lightning
with or without the antenna, it will affect that 'chance'
in no appreciable way at all.
Like any antenna, the one in your attic may have fairly
large currents induced in it from near by lightning strikes.
It isn't a bad idea to disconnect the antenna from equipment
when there is a storm near by. Shorting the connector to
ground isn't a bad idea either, but not one I'm convinced is
necessary.
'Doc

3783. Magnetic Loop Board now in english!

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-24 20:19:55 UTC
From: Andre Vaupel <avaupel@web.de>
Message-ID: <LTR99.3396$Hb1.105947@news.easynews.com>
Source record: 135924
Cross-posted to: rec.ham-radio,rec.radio.amateur.antenna,rec.radio.amateur.equipment

Hi there!

Our new Magnetic Loop Website are now in english available.

http://www.magnetic-loop.de

There were a lot of request to us, to setup the software to english language.
This is now done. There is also the e mail notification now working, if someone replies
to your message inside the board. For this you have to register with username and
password...a very useful function , if you re not every day there.

We would be happy to get your questions, hints and information in our Board :-)

just visit our NON commercial and no ads website http://www.magentic-loop.de

Thank you very much :-)

Andre

3784. Re: Fractal Antenna for sale

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-24 20:30:02 UTC
From: fractenna@aol.com
Message-ID: <20020824163002.18266.00002826@mb-mk.aol.com>
Source record: 135925

>So what is the secret that you and Hately have ?
>
>Art Unwin KB9MZ.....XG
>

Mr Unwin:

I have nothing to do with this person who signs under 'fractena@yahoo.com'. It is not me. It is no one I know of.

I do not know who Mr. Hately is, nor am I in anyway interested. Nor do I seek to know why you have sought such an alleged association.

I do not discuss any personal matters here. Also, your facts are incorrect, and I will not attempt to understand why they are even posed in this antenna forum.

If you have a friendly, and factually based question along a topic I have already discussed, I will be most happy to respond to you. If not, kindly understand that I do not believe that expanding upon what you interpret as a impersonation should be discussed.

I wish you a most pleasant weekend, and extend that salutation to others here.

73,
Chip N1IR

3785. Re: What am I emitting on 80M?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-24 20:31:21 UTC
From: Mike Coslo <mcoslo@adelphia.net>
Message-ID: <3D68174D.6000902@adelphia.net>
Source record: 135926

Bill Klocko wrote:

> cprstn54zz@att.net (Ken) wrote in message
news:<3d663141.262268750@news-server.optonline.net>...
>
>>I am putting 100 watts at 80M into a shortened inverted-V dipole with
>>center 40 ft up. The only contacts I have been able to make are after
>>dark to a densely populated area 20-30 miles to the west, behind a
>>nearby hill that blocks line-of-sight to the contacts.
>>
>>Is my signal going straight up and these folks are seeing scatter off
>>my pillar of RF? Will scatter travel that far?

<snippage>

> Hi Ken,
> Don't listen to the folks who say you have a cloud warmer. I have a
> slightly different configuration - a long dipole with the arms at
> right angles along the sides of my lot, the center up maybe 35' and
> the ends up maybe 15'.

<some more snippage>

> I would bet that there is some lossy component somewhere in your
> system (a low SWR could be a symptom of a lossy system). Thoroughly
> check your system out. One simple test is doing DC resistance checks
> on your feedline, antenna wire, and connectors.

Seconds on both the cloud warming and the likely trouble spot. I have a 96 foot dipole at 40 feet fed with balanced line and a tuner. During contests I have made several Pennsylvania-California contacts on 75 meter SSB. If I listened to the purists I wouldn't have even tried 75 meters.

What exactly is your setup, Ken? We should be able to help you troubleshoot it.

- Mike KB3EIA -

3786. Re: What am I emitting on 80M?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-24 20:39:18 UTC
From: fractenna@aol.com
Message-ID: <20020824163918.18273.00002874@mb-mk.aol.com>
Source record: 135927

>>>I am putting 100 watts at 80M into a shortened inverted-V dipole with
>>>center 40 ft up. The only contacts I have been able to make are after
>>>dark to a densely populated area 20-30 miles to the west, behind a
>>>nearby hill that blocks line-of-sight to the contacts.
>>>
>>>Is my signal going straight up and these folks are seeing scatter off
>>>my pillar of RF? Will scatter travel that far?
>
>

Hello,

Your signal is not going straight up, but its bulk is going at very high launch angle. In addition, the pattern down at 10 degrees-- a typical angle sought for DX-- is approximately 20 dB down from the high zenith gain, assuming your ground is between 'good' and 'poor'. I suspect you are also dealing with losses from shortening.

Do you hear DX in the DX window? If not, and you hear others working it in your area, then this is surely the case.

Sorry I don't have better news.

73,
Chip N1IR

3787. Parallel Antennas

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-24 20:40:44 UTC
From: ps8sj@hotmail.com
Message-ID: <3375983.0208241240.766e7d92@posting.google.com>
Source record: 135928

Hi guys,

I am a newbie in the antenna trick, I am developping a new antenna system.

Can I parallel two antennas, (KLM 6 el Yagi & TH7) feeding them direct with
two 52 ohms cable into a TL922 amp ?

In the normal pratic split power as toroidal or Wilkinson circuit can match the 52 ohm antennas with the 52 ohm source

Teorically two 52 ohm antennas feeded each one with 52 ohm coax cable, connected directly in parallel are seen from the TL922 as a 26 ohm load.

The SWR seen from a 52 ohm source is 2:1, but if the source is an amplifier
with a tank circuit that can load the full power into a variable output load why I need to use a split power ?

I think that if an amplifier can load full power into a 2:1 SWR antenna, usually
antenna on 80m from SSB to CW portion or on an 10m Yagi always from SSB to CW freq. where the impedence can be 26 or 104 ohm, why it cannot load into a parallel antennas ??

Is there some problems, other then the antennas are not equal, and so may be
some load difference due the fact that they are not only resistive, that could
avoid this kind of coupling ??

Un abrazo

rodiho

3788. Re: Question About J-Pole

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-24 21:26:33 UTC
From: Leland Cox <lcox107@comcast.net>
Message-ID: <3D67FBC3.2000303@comcast.net>
Source record: 135929

Turn your J-Pole and see what you get. Then tell us all!
Les,
AA4F

fiddelhead@hotmail.com wrote:

> I have heard that a J-pole for 2 metres use is not entirely omni-
> directional. Is it true there is a "side" of the J-Pole that has a weeker
> spot to it, or a side that produces better performance? If so, can someone
> tell me which side is the "weaker" side?
>
> Thank you.
>
> 73's
>

3789. Re: Fractal Antenna for sale

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-24 21:38:18 UTC
From: CAM <Cecil.A.Moore@ieee.org>
Message-ID: <3D67FCCA.634C77BA@ieee.org>
Source record: 135930

"W.G Ewald" wrote:
> But I wonder if this was the antenna that was vandalized?

How can you tell if a fractal antenna has been vandalized?
(The devil made me do it.)
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

3790. Re: Hustler 6BVT vertical

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-24 21:47:42 UTC
From: Dan/W4NTI <w4nti@mindspringnospam.com>
Message-ID: <ak8us3$l6a$1@slb4.atl.mindspring.net>
Source record: 135931

There is no need to 'insulate the wires from the earth' if you are ground mounting the vertical antenna. The wires couple to the earth and are part of the 'ground screen'. In fact the wires should be buried just under the surface. Slit the grass and stick it in.

Perhaps you were thinking of say a 1/2 wave Gap, linear loaded jobber. This one does have three insulated wires laying on the ground. But I don't think this is what you mean.

Dan/W4NTI

"Jeff Y." <vswrref@hotmail.com> wrote in message news:3d671620.16735650@national-news.stargate.net...
> Thanks for the info. I've never had a vertical but know how they can
> be tricky on using or not using radials. IN the situation I have
> facing me, the only option will be to lay radials down. I've read in
> users reprots and the manual to have the radials insulated from the
> ground. So it would require to lay insulated wire on the ground and
> seal the end of the wire so it won't come in contact with the earth.
> I have to investigate that further to make sure it's true.
>
> Yes indeed. A vertical dipole is better than a 1/4 vertical. It
> would be nice to make a more effecient vertical.
>
>
> Jeff Y.
>
>
> On Fri, 23 Aug 2002 11:20:54 -0500, "Dan/W4NTI"
> <w4nti@mindspringnospam.com> wrote:
>
> >Unless you have a VERY GOOD GROUND under the vertical most of the radiation
> >will just heat the near vicinity soil.
> >
> >Good ground meaning bunches of radials. Many studies have been made on this
> >subject over the years,
> >
> >A good compromise is a counterpoise above ground system, which is what I
> >described to you earlier.
> >
> >The 4/6BTV is basically a 1/4 wave electrical radiator. Don't confuse this
> >with, say, the GAP which is a center fed vertical dipole for all

practical
> >purposes. Which btw, is a much better design than ANY 1/4 waver.
> >
> >Dan/W4NTI
> >
> >"Jeff Y." <vswrref@hotmail.com> wrote in message
> >news:3d659f03.3652491@national-news.stargate.net...
> >> Hi Dan,
> >>
> >> Thanks for the info. So the ground mount gave you problems. Hmmmm,
> >> kinda strange since others I've talked with said it worked best ground
> >> mounted but a real burden when elevated. Maybe ground conditions are
> >> a big factor as well.
> >>
> >> I'm debating between this and the DX-77 because of the tilt over. I
> >> know the 6BTV ins't a tilt over but I can always rig that up if I need
> >> to. More info to ponder. Thanks again, Dan!
> >>
> >>
> >> Jeff Y.
> >>
> >>
> >>
> >> On Thu, 22 Aug 2002 17:53:23 -0500, "Dan/W4NTI"
> >> <w4nti@mindspringnospam.com> wrote:
> >>
> >> >I had the 4BTV for many years. I assume it is basically the same as
the
> >> >6BTV other than a few more bands.
> >> >
> >> >Actually I had the 5BTV. It had the KW 80m resonator.
> >> >
> >> >I agree...it is not good on 80m anywhere. Its too short you know.
> >> >
> >> >On 40 I found it worked out quite well. In Germany, when I was DA2LJ,
I
> >> >used the 4BTV sticking out of the top floor attic window in the roof.
> >Ran
> >> >one radial per band. Worked gangbusters. Of course it was 110 feet
in
> >the
> >> >air at that time...hi.
> >> >
> >> >Back stateside I used it in my backyard by putting it on a 10 foot
pole.
> >> >Then running a screen of interconnected chicken wire as a above ground
> >> >counterpoise. Seemed to do quite well that way too.
> >> >
> >> >The worst situation I used it in was ground mounting with no radials.
> >> >

> >> >Hope that helps.
> >> >
> >> >Dan/W4NTI
> >> >
> >> >"IE" <m9191@abc.se> wrote in message
> >> >news:us8amu8gkj1rh457kemae36tfiu4aat3f4@4ax.com...
> >> >> Hi,
> >> >>
> >> >> I have used the 6BVT for four years. First I had it mounted on
ground
> >> >> and last two years 3 meters above with radials going out from the
low
> >> >> point of the antenna. (Just above the roof of a building and wall
> >> >> mounted). Radials are going in all directions.
> >> >>
> >> >> Compared to my beam it is a big difference (the beam is much, much
> >> >> better). And for 80 meter I never use it (very narrow and not good
> >> >> compared to my wire antennas), But I like it since it is easy to
play
> >> >> with. On 30 and 40 I use it a lot and have worked many DX.
> >> >>
> >> >> This fall I will add more radials to it since I have not been fair
to
> >> >> the antenna. I have about 8 radials today in different lengths and
> >> >> with very weak copper wire. I think I can get much more out of this
> >> >> antenna with better radials and thicker wire.
> >> >>
> >> >> The SWR is good on all bands. I have tuned the 80 meter part to
3.500
> >> >> and SWR is low there as well. But SWR is one thing. I still prefer a
> >> >> wire dipole on 80. It is a question of S-units in difference.
> >> >>
> >> >> I am very impressed of the possibillity for the antenna to take care
> >> >> of hard wind. First years I was nervous but today I trust the
antenna
> >> >> in all WX.
> >> >>
> >> >> This antenna is connected to the 2nd antenna connector on a TS870 so
I
> >> >> have never used it for higher power then 70-80 W. That power it
takes
> >> >> care of.
> >> >>
> >> >> Earlier I have had other verticals. I can't say for sure this one
> >> >> works better but I feel so.
> >> >>
> >> >> I have a computer LAN in the same building and this antenna picks up
> >> >> more radiation from the LAN and TV-sets than a dipole or a beam.
> >> >>
> >> >> In conclusion I like the antenna and think it is a nice multiband

> >> >> vertical. I should have done the work with radials earlier. My
feeling
> >> >> are that it worked better ground mounted, due to grounding, then 3
> >> >> meters up. This antenna will stay with me for years.
> >> >>
> >> >>
> >> >>
> >> >>
> >> >> On Thu, 22 Aug 2002 15:55:47 GMT, rong@computer.net (Ron
> >> >> Goldstein--KA2IIA) wrote:
> >> >>
> >> >> >vswrref@hotmail.com (Jeff Y.) wrote:
> >> >> >
> >> >> >>Hi all!
> >> >> >>
> >> >> >>Wondering if anybody is currently using, or has used the Hustler
6BVT
> >> >> >>HF vertical and what your thoughts, likes and dislikes of it, are.
> >> >> >>How does it work on the bands, with or without the radials.
Looking
> >> >> >>forrward to seeing the posts.
> >> >> >>
> >> >> >>
> >> >> >>Jeff Y.
> >> >> >>==========
> >> >> >Hi Jeff,
> >> >> >
> >> >> > I've had a 5BTV (80, 40, 20, 15, & 10) since I've been licensed
> >(1980),
> >> >> >and it has given me no problems in the 22 years it has been up.
It's
> >> >mounted on
> >> >> >a 3 foot piece of inch & a half pipe which is driven 2 feet into
the
> >> >ground in
> >> >> >my backyard. I have no ground radials. Within the first 2 years of
> >using
> >> >it, I
> >> >> >accomplished WAS, WAC, and DXCC (100 countries). I think it's a
great
> >> >antenna
> >> >> >for a vertical.
> >> >> >**********
> >> >> > Ron Goldstein.....KA2IIA
> >> >> > STAY YOUNG---DRIVE A VINTAGE 427 CORVETTE.
> >> >> > KEEP YOUR MIND ACTIVE---BECOME AN AMATEUR RADIO OPERATOR.
> >> >> >
> >> >> >REMEMBER, THERE ARE NO STRANGERS IN AMATEUR RADIO, ONLY FRIENDS
> >> >> > THAT WE HAVE NOT YET MET.
> >> >> > rong@computer.net******ka2iia@arrl.net

> >> >>
> >> >
> >> >
> >>
> >
> >
>

3791. Re: What am I emitting on 80M?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-24 22:02:00 UTC
From: cprstn54zz@att.net
Message-ID: <3d680065.380833140@news-server.optonline.net>
Source record: 135932

On Sat, 24 Aug 2002 20:31:21 GMT, Mike Coslo <mcoslo@adelphia.net>
wrote:
> What exactly is your setup, Ken? We should be able to help you
>troubleshoot it.

I have an Alpha-Delta DX-LB+ inverted V shortened multi-wire, loaded
dipole with center at 40 ft., a 100 ft. RG-8X feed line, an MFJ-986
tuner and an FT990 radio.

Testing shows I am TXing on a frequency near antenna resonance on 160M
-- where I have an untuned band minimum SWR of around 2.0 -- tunable
to 1.0. At the ends of the band -- where I am not TXing -- SWR is
around 5.0.

The radio shows full power to the antenna, and a continuity tester
shows an open circuit on the feedline between the sheathing and center
conductor.

Ken KC2JDY

Ken
(to reply via email
remove "zz" from address)

3792. Re: What am I emitting on 80M?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-24 22:49:35 UTC
From: fractenna@aol.com
Message-ID: <20020824184935.17982.00002452@mb-fx.aol.com>
Source record: 135933

>Testing shows I am TXing on a frequency near antenna resonance on 160M
>-- where I have an untuned band minimum SWR of around 2.0 -- tunable
>to 1.0. At the ends of the band -- where I am not TXing -- SWR is
>around 5.0.
>
>The radio shows full power to the antenna, and a continuity tester
>shows an open circuit on the feedline between the sheathing and center
>conductor.
>
>Ken KC2JDY
>
>Ken
>(to reply via email
>remove "zz" from address)
>

My two cents:

1) The short is due to the balun and is normal (that's a DC short);
2) Your antenna is too low for DX launch angles;
3) You asked about 80M and you gave info on 160M?:-> Typo?

73,
Chip N1IR

3793. Re: Air-Wound Balun Design Info??

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-24 23:10:03 UTC
From: kelly@dvol.com
Message-ID: <d22b54c3.0208241510.57f85bab@posting.google.com>
Source record: 135934

Roy Lewallen <w7el@eznec.com> wrote in message news:<3D669DF1.1020604@eznec.com>...
>
>
> Regarding ferrite core baluns -- there are many ferrite materials, each
> with different characteristics. But they can be divided into three
> general groups. Using the Fair-Rite Corp. type designations (also used
> by Amidon), these are the 70 series, type 43, and the 60 series. You can
> find impedance vs frequency curves for these types at the Fair-Rite web
> site.
>
>
I've requested their catalog/tech info booklet.
>
>
> Over most of the HF range, the impedance of 70 series ferrites is
> essentially resistive and relatively high. The impedance stays fairly
> constant over an extremely wide frequency range -- a winding on one of
> these looks like a resistor. This makes them favored for such
> applications as wideband transformers.
>
>
Looks like you went right to the bottom line as far as core materials
are concerned. 70 it is.
>
>
> They also make excellent baluns
> unless there's enough power to cause overheating (more about that in a
> minute). 60 series ferrites are primarily inductive at HF, and maintain
> a reasonable Q. A winding on one of these will resemble an inductor, and
> the loss will be very low compared to the other types. The problem is
> that you won't have nearly as much impedance as you will with the other
> ferrite types. Type 43 material is in between. It has a low Q in the
> lower HF range, and is primarily resistive at the upper end. But its
> impedance is somewhat lower than 70 series material. Overall it's less
> lossy than 70 series and more lossy than 60 series. Type 43 is widely
> used for EMC reduction, and a wide variety of core sizes and shapes are
> available in this material. Other vendors have comparable materials. For
> balun purposes, materials with similar initial permeability will have
> similar characteristics.
>
>
Whew: I gotta dig up the curves then read this four more times.
>
>

> Powdered irons have much lower loss than ferrites, but also have much
> lower impedance per turn squared. The popularity of F-gazillion-2 baluns
> notwithstanding, powdered iron is seldom the best material to use.
>
>
Lotta mythology which is bad physics is floating around ham circles.
Especially
in antennas.
>
>
> Loss is I^2*R. If a balun is doing its job well, I, the current you're
> trying to choke, is small so the loss is low even if R is high. It's an
> impedance matching situation -- if the balun R is very low or very high,
> loss will be small. (High R results in low I.) Of course if balun Z (R,
> X, or a combination) is low, it won't be very effective.
>
>
Easy enough.
>
>
> If you're running 100 watts, one dB of loss is about 25 watts. You can
> probably imagine what would happen to a small ferrite core if it were
> dissipating 25 watts -- it would likely explode. The fact is that a
> decent ferrite balun, even on 70 type material, will typically result in
> only a small fraction of a dB of loss. So you don't need to be concerned
> about that aspect.
>
>
I don't care about signal losses until the guy on the other end can
hear a discernable difference in signal strength and that takes more
than just a fraction of one dB.
>
>
> The problem is that a small fraction of a dB is still
> a lot of watts if you're running a kW. So a ferrite core balun can get
> way too hot even when its loss is entirely negligible from a signal
> standpoint. In those cases, type 43 is better than 70 series, and you
> might even have to settle for a less effective balun wound on 60 series
> ferrite. But if your balun doesn't smoke or explode at a 100 watt level,
> you'll never notice the loss on your signal.
>
>
More wraps on larger stacked 60 series cores should be the way to go
at the kW level. ?
>
>
> I find a one inch or so 70
> series or type 43 core to be fine up to at least 300 watts, feeding a
> reasonably matched antenna.
>

>
Bingo, there it is, there's my conceptual problem. What happens in the
case of a 1:1 balun, air or ferrite core when the antenna is not a
"reasonable" match with 50 ohm coax? What's the definition of a
"reasonably matched load"?? Take the case of a G5RV. They can present
swrs which are all over the map but are still within the tuning range
of the average ATU. Which is "good enough" in most ham's minds.
>
>
Assume that the swr at the feedpoint is 6:1 and that it's resistive on
one band or another. The feedpoint impedance could be either 8+jï¿½ or
300+jï¿½. The proper balun under these conditions should be a 6:1 unit
connected one way or the other.
>
>
The average ham goes out and pops the usual $40 for one of the usual
store-bought G5RVs of which F-gazillion-2 are in use. They come with
some kinda balun, 4:1 or some such at the coax connector. Lousy match
with the balun no matter how you cut it. What's going on in those
baluns? What are the losses under these conditions? Is there a useful
decrease in losses with an air-core balun a la Heath vs. a ferrite
core balun? My tummy tells me yes and this is where I was orignally
coming from when I posed my question about how to wind air core
baluns.
>
>
Seems to me it gets even worse when "they" use a 4:1 balun to feed an
end-fed wire.
>
>
When cometh the point when one simply sez to hell with this
transformer stuff, just kill the circulating currents with a coil or
beads and take the coax losses?
>
>
> As for RG-174, I often use a similar cable for portable operation,
> especially on 40 meters. The stuff I have is the same size as '174, but
> it has a solid center conductor. Standard '174 has a stranded Copperweld
> center conductor. And although the copper makes up a sizeable fraction
> of the wire diameter, the strands are so tiny that the current begins
> penetrating into the steel somewhere around 7 MHz. So at that frequency
> and below, the loss can be greater than you'd expect. I recommend
> measuring the loss of RG-174 if a very long piece of it will be used at
> the lower end of the HF range, since its loss might be more than a
> simple extrapolation of the higher frequency loss would indicate.
>
>
Copperweld oughta be outlawed.
>
>

> The
> copper on the solid center conductor of the cable I have is thick enough
> that it's not a problem.
>
>
I'm not shooting for "microlight" antennas, I like the idea of using
174 for winding compact baluns but I'd use 8X for the run from the
balun to the ATU. Any hints on the minimum allowable coiling diameter
for 174?
>
>
> As for power handling, I've had no trouble at
> 300 watts with a reasonably matched load. I personally think a lot of
> people have been conned into using bigger and more expensive coax than
> they need.
>
>
. . . 8X easier than 174 to find in the woods . . .
>
>
> Like the sign over my desk says, "Anyone can design a bridge
> that will stand up. It takes an engineer to design a bridge that will
> barely stand up."
>
>
I'm a mech eng. Been there. Done that. Except at this point it's ME
who is barely standing up.
>
>
Speaking of bridges: Where/how can a ham come up with a half-decent HF
impedance bridge for antenna work without having to send HP or GR
$5,000 -8,000?
>
>
> Roy Lewallen, W7EL
>
>

Thank you Roy. Brian w3rv

3794. Re: Air-Wound Balun Design Info??

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-24 23:12:40 UTC
From: kelly@dvol.com
Message-ID: <d22b54c3.0208241512.28759fe@posting.google.com>
Source record: 135935

k1bqt@aol.com (Rick Littlefield) wrote in message
news:<20020823180505.28593.00002077@mb-mn.aol.com>...
> >RG-174 is scary stuff...<
>
> Has nearly twice the breakdown voltage rating of LMR-400 and nearly 4 times the
> breakdown point of RG-8X. Not all THAT scary.
>
> --Rick
>
>
Urp. I stand spanked.

3795. Re: Fractal Antenna for sale

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-24 23:15:12 UTC
From: "W.G Ewald" <wgewald@att.net>
Message-ID: <v05gmukf4odgqkosmolkphjjs9feg9etqk@4ax.com>
Source record: 135936

On Sat, 24 Aug 2002 18:57:43 +0000 (UTC), Jim Pennino
<jimp@specsol.com> wrote:

>W.G Ewald <wgewald@att.net> wrote:
>> On Thu, 22 Aug 2002 21:09:23 -0400, "MD" <ve3tmt@rac.ca> wrote:
>
>>>
>>>"Fractal Antennas" <fractena@yahoo.com> wrote in message
>>>news:653d2ee5.0208221144.4aa42d89@posting.google.com...
>>>> I have for sale one fractal antenna, operating on the HF frequencies.
>>>> Used for about 1 year, in good shape. Email for information.
>>>
>>>Are we going to get into this useless BS all over again. What a waste of
>>>bandwidth.
>>>
>
>> I think the responses have been hilarious.
>
>> But I wonder if this was the antenna that was vandalized?
>
>Probably not since if one looks at the headers, it appears the poster
>is not who everyone is assuming it is.
>
>A google search shows fractena@yahoo.com has posted exactly 1 time.
>
>Ever hear of a troll?

Of course, but every Fractenna post has been a troll.

3796. Re: Fractal Antenna for sale

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-24 23:16:16 UTC
From: "W.G Ewald" <wgewald@att.net>
Message-ID: <545gmu4j6p2q195a4k4dm0avcefds5pjsh@4ax.com>
Source record: 135937

On 24 Aug 2002 12:43:46 -0700, aunwin@fgi.net (Art Unwin KB9MZ) wrote:

>fractena@yahoo.com (Fractal Antennas) wrote in message
news:<653d2ee5.0208221144.4aa42d89@posting.google.com>...
>> I have for sale one fractal antenna, operating on the HF frequencies.
>> Used for about 1 year, in good shape. Email for information.
>
>Doctor Cohen, (Chip)
> What is the secret that you,Hately and others have to get so much
>attention to your antennas ?

Do you really want the kind of attention Cohen gets?

3797. Re: Fractal Antenna for sale

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-24 23:17:16 UTC
From: "W.G Ewald" <wgewald@att.net>
Message-ID: <g65gmugov414eqf72svp61237u5nl8hfsu@4ax.com>
Source record: 135938

On 24 Aug 2002 20:30:02 GMT, fractenna@aol.com (Fractenna) wrote:

>>So what is the secret that you and Hately have ?
>>
>>Art Unwin KB9MZ.....XG
>>
>
>Mr Unwin:
>
>I have nothing to do with this person who signs under 'fractena@yahoo.com'. It
>is not me. It is no one I know of.

Have you asked Phil?

3798. Re: Using coax shield for long wire antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-24 23:29:22 UTC
From: Owen Duffy <owen@oda.com.au>
Message-ID: <3D6816D2.4401BAEB@oda.com.au>
Source record: 135939

Bob wrote:
>
> Anyone have any experience good/bad with using the braided shield of
> coax as a long wire antenna? I have a large roll of RG-59/U with
> copper braid and a LARGE lot to run it over. I want to be able to

From Belden's data on 9204 (RG/59) max tension on cable is 344N, and its diameter is ~6mm.

If you planned to install it with 5% sag, WLL 25% of UTS, and to resist winds to 40m/s, the maximum span would be less than 4m.

You might achive higher UTS by effectively tying the innder conductor to the braid... but essentially standard RG59 has high wind resistance and low tensile strength.

> Is there any advantage to doing this due to the potentially larger
> diameter of the antenna rather than using simple wire? I know there
> will be more ice loading on it but another thought is laying on the
> ground and using it as a LW antenna.

Ice loading will exacerbate the problem - additional gravitational force and additional wind loading.

Owen

3799. Kapton question

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-24 23:32:41 UTC
From: Mike Coslo <mcoslo@adelphia.net>
Message-ID: <3D6841CD.1090702@adelphia.net>
Source record: 135940

I have an application (trombone capacitor) for which I might want to use Kapton (tm) as the dielectric. All the properties I've found look pretty good for my use. I haven't seen any specs on Kapton's friction properties tho'.

Has anyone had experience with using Kapton with trombone caps, or somewhere else that the material had to slide over another?

- Mike KB3EIA -

3800. Re: Air-Wound Balun Design Info??

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-24 23:33:50 UTC
From: k1bqt@aol.com
Message-ID: <20020824193350.02277.00002533@mb-dd.aol.com>
Source record: 135941

>Urp. I stand spanked.<

Of course the current-handline stinks. :)

Rick K1BQT

3801. Re: FS: Kraus and Marhefka: Antennas for all Applications

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-25 00:13:55 UTC
From: fractenna@aol.com
Message-ID: <20020824201355.08886.00002296@mb-mw.aol.com>
Source record: 135942

Sold.

73,
Chip N1IR

3802. Another trombone cap question

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-25 01:09:57 UTC
From: Mike Coslo <mcoslo@adelphia.net>
Message-ID: <3D685868.6030808@adelphia.net>
Source record: 135944

In further investigation, I see that mylar has some good properties for trombone caps.

But I noticed that it has a "slight" sensitivity to moisture. Anyone with experience here to say if that will be a problem in this application?

- Mike KB3EIA -

3803. Re: What am I emitting on 80M?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-25 01:11:40 UTC
From: cprstn54zz@att.net
Message-ID: <3d682bbc.391927796@news-server.optonline.net>
Source record: 135943

On 24 Aug 2002 22:49:35 GMT, fractenna@aol.com (Fractenna) wrote:
>3) You asked about 80M and you gave info on 160M?:-> Typo?

Not a typo. Just forgot which band I started talking about in the thread. Unsatisfactory results are same for both in that both have reasonable untuned SWR (around 2.0) where I am TXing (1.0 after tuning), and both produce strong skywave contacts at night no further away than 30 miles.

I should have also mentioned the 160M because alternate antenna solutions sugested for 80M aren't enough. E.g. the Carolina Windom "Beam" (now the 80) won't do it. The 160 is something like 265 ft. long, which I can't fit. They have a shortened 160, but I have no reason to believe it would be an improvement over the DX-LB+.

Ken KC2JDY

Ken
(to reply via email
remove "zz" from address)

3804. Re: What am I emitting on 80M?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-25 01:15:56 UTC
From: fractenna@aol.com
Message-ID: <20020824211556.08151.00002606@mb-df.aol.com>
Source record: 135945

>On 24 Aug 2002 22:49:35 GMT, fractenna@aol.com (Fractenna) wrote:
>>3) You asked about 80M and you gave info on 160M?:-> Typo?
>
>Not a typo. Just forgot which band I started talking about in the
>thread. Unsatisfactory results are same for both in that both have
>reasonable untuned SWR (around 2.0) where I am TXing (1.0 after
>tuning), and both produce strong skywave contacts at night no further
>away than 30 miles.
>
>I should have also mentioned the 160M because alternate antenna
>solutions sugested for 80M aren't enough. E.g. the Carolina Windom
>"Beam" (now the 80) won't do it. The 160 is something like 265 ft.
>long, which I can't fit. They have a shortened 160, but I have no
>reason to believe it would be an improvement over the DX-LB+.
>
>Ken KC2JDY
>
>
>Ken
>(to reply via email
>remove "zz" from address)
>

Does this have a line isolator (choke) on it? If so, is it at the feedpoint or down the length of the coax?

73,
Chip N1IR

3805. Re: What am I emitting on 80M?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-25 01:22:21 UTC
From: cprstn54zz@att.net
Message-ID: <3d682fb7.392946687@news-server.optonline.net>
Source record: 135946

On Fri, 23 Aug 2002 10:51:46 -0700, Roy Lewallen <w7el@eznec.com>
wrote:
>But if you're using coax, especially a long run of coax, the loss
>might be quite substantial, and you'd be better off going to ladder line
>and/or lengthening the antenna.

I WILL be switching to ladderline momentarily, but not to improve the
situation where I am TXing now. At these frequencies, I am near
resonance in the band -- around SWR=2.0 without tuner. At the ends of
the low bands, however, untuned SWR goes to around 6.0 at the radio.
I have been told here that this means SWR at the feedpoint of over 60
(which I verified) and 90+% line losses in the coax. Unfortunately,
the path I have for the ladderline is a little problematic and I await
some counsel from the ARRL as to do's and don'ts before I run it.

Ken KC2JDY

Ken
(to reply via email
remove "zz" from address)

3806. Re: Hustler 6BVT vertical

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-25 01:22:41 UTC
From: vswrref@hotmail.com
Message-ID: <3d68300e.1270428@national-news.stargate.net>
Source record: 135947

Hi Dan,

Thanks for th info and your right, the base would be part of the "ground plane" and insulating the wire would be fruitless. I had seen that on the review of the 6BTV on eham.net and 1 or 2 people "insualted" the wires from the earth surface and had better results and tuned easier. Makes you wonder. No need to worry about slitting the grass to bury radials. This is Las Vegas and there is no vegetation in the back yard, just small decorative stones, a cross between lava rock and pebbles, which can easily be moved, lay the wire, then cover. I still have a month or more before I make up my mind what I want to do and all of this info is helping quite a bit! :)

Jeff Y.

On Sat, 24 Aug 2002 16:47:42 -0500, "Dan/W4NTI" <w4nti@mindspringnospam.com> wrote:

>There is no need to 'insulate the wires from the earth' if you are ground
>mounting the vertical antenna. The wires couple to the earth and are part
>of the 'ground screen'. In fact the wires should be buried just under the
>surface. Slit the grass and stick it in.
>
>Perhaps you were thinking of say a 1/2 wave Gap, linear loaded jobber. This
>one does have three insulated wires laying on the ground. But I don't think
>this is what you mean.
>
>Dan/W4NTI
>
>"Jeff Y." <vswrref@hotmail.com> wrote in message
>news:3d671620.16735650@national-news.stargate.net...
>> Thanks for the info. I've never had a vertical but know how they can
>> be tricky on using or not using radials. IN the situation I have
>> facing me, the only option will be to lay radials down. I've read in
>> users reprots and the manual to have the radials insulated from the
>> ground. So it would require to lay insulated wire on the ground and
>> seal the end of the wire so it won't come in contact with the earth.
>> I have to investigate that further to make sure it's true.
>>
>> Yes indeed. A vertical dipole is better than a 1/4 vertical. It
>> would be nice to make a more effecient vertical.
>>
>>
>> Jeff Y.
>>

>>
>> On Fri, 23 Aug 2002 11:20:54 -0500, "Dan/W4NTI"
>> <w4nti@mindspringnospam.com> wrote:
>>
>> >Unless you have a VERY GOOD GROUND under the vertical most of the
>radiation
>> >will just heat the near vicinity soil.
>> >
>> >Good ground meaning bunches of radials. Many studies have been made on
>this
>> >subject over the years,
>> >
>> >A good compromise is a counterpoise above ground system, which is what I
>> >described to you earlier.
>> >
>> >The 4/6BTV is basically a 1/4 wave electrical radiator. Don't confuse
>this
>> >with, say, the GAP which is a center fed vertical dipole for all
>practical
>> >purposes. Which btw, is a much better design than ANY 1/4 waver.
>> >
>> >Dan/W4NTI
>> >
>> >"Jeff Y." <vswrref@hotmail.com> wrote in message
>> >news:3d659f03.3652491@national-news.stargate.net...
>> >> Hi Dan,
>> >>
>> >> Thanks for the info. So the ground mount gave you problems. Hmmmm,
>> >> kinda strange since others I've talked with said it worked best ground
>> >> mounted but a real burden when elevated. Maybe ground conditions are
>> >> a big factor as well.
>> >>
>> >> I'm debating between this and the DX-77 because of the tilt over. I
>> >> know the 6BTV ins't a tilt over but I can always rig that up if I need
>> >> to. More info to ponder. Thanks again, Dan!
>> >>
>> >>
>> >> Jeff Y.
>> >>
>> >>
>> >>
>> >> On Thu, 22 Aug 2002 17:53:23 -0500, "Dan/W4NTI"
>> >> <w4nti@mindspringnospam.com> wrote:
>> >>
>> >> >I had the 4BTV for many years. I assume it is basically the same as
>the
>> >> >6BTV other than a few more bands.
>> >> >
>> >> >Actually I had the 5BTV. It had the KW 80m resonator.
>> >> >

>> >> >I agree...it is not good on 80m anywhere. Its too short you know.
>> >> >
>> >> >On 40 I found it worked out quite well. In Germany, when I was DA2LJ,
>I
>> >> >used the 4BTV sticking out of the top floor attic window in the roof.
>> >Ran
>> >> >one radial per band. Worked gangbusters. Of course it was 110 feet
>in
>> >the
>> >> >air at that time...hi.
>> >> >
>> >> >Back stateside I used it in my backyard by putting it on a 10 foot
>pole.
>> >> >Then running a screen of interconnected chicken wire as a above ground
>> >> >counterpoise. Seemed to do quite well that way too.
>> >> >
>> >> >The worst situation I used it in was ground mounting with no radials.
>> >> >
>> >> >Hope that helps.
>> >> >
>> >> >Dan/W4NTI
>> >> >
>> >> >"IE" <m9191@abc.se> wrote in message
>> >> >news:us8amu8gkj1rh457kemae36tfiu4aat3f4@4ax.com...
>> >> >> Hi,
>> >> >>
>> >> >> I have used the 6BVT for four years. First I had it mounted on
>ground
>> >> >> and last two years 3 meters above with radials going out from the
>low
>> >> >> point of the antenna. (Just above the roof of a building and wall
>> >> >> mounted). Radials are going in all directions.
>> >> >>
>> >> >> Compared to my beam it is a big difference (the beam is much, much
>> >> >> better). And for 80 meter I never use it (very narrow and not good
>> >> >> compared to my wire antennas), But I like it since it is easy to
>play
>> >> >> with. On 30 and 40 I use it a lot and have worked many DX.
>> >> >>
>> >> >> This fall I will add more radials to it since I have not been fair
>to
>> >> >> the antenna. I have about 8 radials today in different lengths and
>> >> >> with very weak copper wire. I think I can get much more out of this
>> >> >> antenna with better radials and thicker wire.
>> >> >>
>> >> >> The SWR is good on all bands. I have tuned the 80 meter part to
>3.500
>> >> >> and SWR is low there as well. But SWR is one thing. I still prefer a
>> >> >> wire dipole on 80. It is a question of S-units in difference.
>> >> >>

>> >> >> I am very impressed of the possibillity for the antenna to take care
>> >> >> of hard wind. First years I was nervous but today I trust the
>antenna
>> >> >> in all WX.
>> >> >>
>> >> >> This antenna is connected to the 2nd antenna connector on a TS870 so
>I
>> >> >> have never used it for higher power then 70-80 W. That power it
>takes
>> >> >> care of.
>> >> >>
>> >> >> Earlier I have had other verticals. I can't say for sure this one
>> >> >> works better but I feel so.
>> >> >>
>> >> >> I have a computer LAN in the same building and this antenna picks up
>> >> >> more radiation from the LAN and TV-sets than a dipole or a beam.
>> >> >>
>> >> >> In conclusion I like the antenna and think it is a nice multiband
>> >> >> vertical. I should have done the work with radials earlier. My
>feeling
>> >> >> are that it worked better ground mounted, due to grounding, then 3
>> >> >> meters up. This antenna will stay with me for years.
>> >> >>
>> >> >>
>> >> >>
>> >> >>
>> >> >> On Thu, 22 Aug 2002 15:55:47 GMT, rong@computer.net (Ron
>> >> >> Goldstein--KA2IIA) wrote:
>> >> >>
>> >> >> >vswrref@hotmail.com (Jeff Y.) wrote:
>> >> >> >
>> >> >> >>Hi all!
>> >> >> >>
>> >> >> >>Wondering if anybody is currently using, or has used the Hustler
>6BVT
>> >> >> >>HF vertical and what your thoughts, likes and dislikes of it, are.
>> >> >> >>How does it work on the bands, with or without the radials.
>Looking
>> >> >> >>forrward to seeing the posts.
>> >> >> >>
>> >> >> >>
>> >> >> >>Jeff Y.
>> >> >> >>==========
>> >> >> >Hi Jeff,
>> >> >> >
>> >> >> > I've had a 5BTV (80, 40, 20, 15, & 10) since I've been licensed
>> >(1980),
>> >> >> >and it has given me no problems in the 22 years it has been up.
>It's
>> >> >mounted on

>> >> >> >a 3 foot piece of inch & a half pipe which is driven 2 feet into
>the
>> >> >ground in
>> >> >> >my backyard. I have no ground radials. Within the first 2 years of
>> >using
>> >> >it, I
>> >> >> >accomplished WAS, WAC, and DXCC (100 countries). I think it's a
>great
>> >> >antenna
>> >> >> >for a vertical.
>> >> >> >**********
>> >> >> > Ron Goldstein.....KA2IIA
>> >> >> > STAY YOUNG---DRIVE A VINTAGE 427 CORVETTE.
>> >> >> > KEEP YOUR MIND ACTIVE---BECOME AN AMATEUR RADIO OPERATOR.
>> >> >> >
>> >> >> >REMEMBER, THERE ARE NO STRANGERS IN AMATEUR RADIO, ONLY FRIENDS
>> >> >> > THAT WE HAVE NOT YET MET.
>> >> >> > rong@computer.net******ka2iia@arrl.net
>> >> >>
>> >> >
>> >> >
>> >>
>> >
>> >
>>
>
>

3807. Re: What am I emitting on 80M?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-25 01:27:35 UTC
From: cprstn54zz@att.net
Message-ID: <3d683176.393393656@news-server.optonline.net>
Source record: 135948

On 24 Aug 2002 02:07:24 GMT, n2ey@aol.com (N2EY) wrote:
>- How "shortened" is this dipole? (100 feet? 80 feet? 66 feet?)
>- How is the shortening done? (Loading coils? Traps? Simply cutting the wire
>short?)
>- What is the feedline and matching system?
>- How high are the ends?

It is an Alpha-Delta DX-LB+
http://www.alphadeltacom.com/dxlb_ii.htm

Feedline is 100 ft. of RG-8X

Matching is done with an MFJ-986 at the radio.

Center is at 40 ft. Ends are at 20 ft. Ground slopes down 10% over
the length of the antenna. As a result, one leg is almost horizontal
and the other approximately 45 degrees below horizontal.

Ken KC2JDY

Ken KC2JDY

Ken
(to reply via email
remove "zz" from address)

3808. Re: Another trombone cap question

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-25 01:28:29 UTC
From: Crazy George <munschNO@attglobal.net.SPAM>
Message-ID: <3d6836db_2@news1.prserv.net>
Source record: 135949

Whassamatta? Your plastics store don't have any thin sheet Teflon? Forget all that other crap. Use pipe thread tape if you have to. Just requires a little creativity in application. Geeeez.....

--
Crazy George
Remove NO and SPAM from return address
Mike Coslo <mcoslo@adelphia.net> wrote in message news:3D685868.6030808@adelphia.net...
> In further investigation, I see that mylar has some good properties for
> trombone caps.
>
> But I noticed that it has a "slight" sensitivity to moisture. Anyone with
> experience here to say if that will be a problem in this application?
>
> - Mike KB3EIA -
>

3809. Re: Hustler 6BVT vertical

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-25 01:30:20 UTC
From: vswrref@hotmail.com
Message-ID: <3d6831a0.1673030@national-news.stargate.net>
Source record: 135950

Hi Dale!

The reason for tilting it over would be for stealth reasons. I'm in the desert and I wonder how the performance would be with the extremely dry soil. However, you dig down about 1-1/2 to 2 feet and the ground is wet, actually very wet.

That's what I was looking for was how it performed on 80 meters. I wouldn't spend all of my time on that band but it would be nice to work a few new ones.

Like I say. I'm trying to decide which antenna I would like to put up. THe DX-77 or the 6BTV. A buddy of mine on the other side of Vegas has the DX-77, which I helped put up, and he loves it and he's able to work DX fairly well, even barefoot.

Jeff Y.

On 24 Aug 2002 14:37:53 GMT, accrider3@aol.comnojunque (A ccrider3) wrote:

>I have used the 4BTV with a 80m KW resonator basically its now a 5BTV. Bought
>in in 1975 when licensed as a novice took it down a few years later and been in
>storage until 2000 when I got back into the hobby. Now have a Cushcraft A3S
>which hears better and works better. Mine is ground mounted with no radials
>using 500W was a must for DX. The soil conductivity in South Florida seems
>pretty good and where the antenna is mounted does't lend its self for radials.
>Don't get me wrong the antenna did work a lot of DX and if you are space
>constricted its not bad, better I am sure with a counterpoise. This antenna is
>easy to take down just by loosening the bottom clamp and removing the antenna
>from the base unless you want to tilting over for stealth reasons. A few times
>during hurricane warnings I have taken it loose from the base and split it and
>tossed it in the garage. My tower is a tilt/crank up for those reasons.
>80 meter performance isn't so great
>73 de Dale
>KG4KZG
>Hope this helps

3810. Re: Cobbweb antenna question

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-25 01:31:20 UTC
From: Crazy George <munschNO@attglobal.net.SPAM>
Message-ID: <3d683783_3@news1.prserv.net>
Source record: 135951

Jasdon:
Go to:
http://groups.google.com
and work your way to this NG archives, and enter Cobbweb. You'll get
plenty of advice.

--
Crazy George
Remove NO and SPAM from return address
Jason Ingram <jason.ingram@ntlworld.com> wrote in message
news:B98D47C0.188EE%jason.ingram@ntlworld.com...
> I am thinking of buying a Cobbweb antenna but would appreciate any
comments
> for those who may have used one first.
>
> TIA
>
> Jason
> G7BSK
>

3811. Re: What am I emitting on 80M?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-25 01:50:02 UTC
From: Fulano de Tal <exray@nospamcaribe.net>
Message-ID: <3D6837CA.6D20E7E3@nospamcaribe.net>
Source record: 135952

> >reasonable untuned SWR (around 2.0) where I am TXing (1.0 after
> >tuning), and both produce strong skywave contacts at night no further
> >away than 30 miles.

I've used some lousy 80m antennas but I can't imagine one that would
only reach 30 miles and no further.
From NC I tried loading up a window screen (in place) with my HX50 (no,
it didn't load well at all) and chatted with a guy in Mississippi for an
hour, solid copy.

-WX4A

3812. Re: Another trombone cap question

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-25 01:58:58 UTC
From: Mike Coslo <mcoslo@adelphia.net>
Message-ID: <3D686418.2070908@adelphia.net>
Source record: 135953

Crazy George wrote:

> Whassamatta? Your plastics store don't have any thin sheet Teflon? Forget
> all that other crap. Use pipe thread tape if you have to. Just requires a
> little creativity in application. Geeeez.....................

Hi George

Teflon would work, but not quite as well. It has a dielectric constant of 2, while Mylar's is 3.2. This makes a big difference in the size of the cap. My design has good performance (at least on paper) from 15 meters down to 40, and I may be able to get something passable at 80 meters also. But if I go to teflon, I'll have to make the trombones a *lot* longer than I want to.

- Mike KB3EIA -

3813. Re: Another trombone cap question

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-25 01:59:33 UTC
From: n7ws@nowhere.com
Message-ID: <3d68374b.117443430@news.triconet.org>
Source record: 135957

On Sun, 25 Aug 2002 01:09:57 GMT, Mike Coslo <mcoslo@adelphia.net> wrote:

|In further investigation, I see that mylar has some good properties for
|trombone caps.
|
| But I noticed that it has a "slight" sensitivity to moisture. Anyone with
|experience here to say if that will be a problem in this application?

Can't say for sure. What is the application? I know you are trying to build coaxial capacitors but where will they be used?

Before we redesigned them to use Johanson tuners, one of our missiles used a "home-made" tuning post to resonate a cavity. To insulate the low impedance section, a single wrap of mylar tape was used. However, the missile was backfilled with dry nitrogen so moisture wasn't an issue.

3814. Magloop design question

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-25 02:04:45 UTC
From: Mike Coslo <mcoslo@adelphia.net>
Message-ID: <3D686572.5060003@adelphia.net>
Source record: 135954

My design for a magloop has trombone capacitors (yeah, like everyone doesn't know that by now! ;^)

My question is: How much will the exterior piping of the trombones affect the antenna? Which is to say that I plan on having two sections approximately 15 inches on each side for the Stators of the trombone. This piping is planned to be on the inside of the loop.

- Mike KB3EIA -

3815. Re: What am I emitting on 80M?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-25 02:06:36 UTC
From: cprstn54zz@att.net
Message-ID: <3d683b2a.395878437@news-server.optonline.net>
Source record: 135955

On 25 Aug 2002 01:15:56 GMT, fractenna@aol.com (Fractenna) wrote:

>Does this have a line isolator (choke) on it? If so, is it at the feedpoint or
>down the length of the coax?

Oh, Yes. Right at the feedpoint I have a big ferrite toroid with ten
turns of teflon coax around it.

Ken KC2JDY

Ken
(to reply via email
remove "zz" from address)

3816. Re: Air-Wound Balun Design Info??

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-25 02:07:03 UTC
From: n2ey@aol.com
Message-ID: <20020824220703.28700.00000268@mb-fz.aol.com>
Source record: 135956

In article <3D65F3D2.3070609@eznec.com>, Roy Lewallen <w7el@eznec.com> writes:

>Unfortunately I don't have my data from the original measurements using
>RG-213. (My measurements were done in 1985.)

When I hit the lottery I'm gonna get me a proper setup and make about three dozen baluns and measure all the parameters. Just to satisfy my own curiosity.

> I do, however, have some
>graphs of RG-58 flat coils of two lengths and various numbers of turns.

You just added another level of complication. When you say "flat coil", do you mean a single pancake layer like rope laid on the deck of a ship, or wound up in a hank as shown in the picture in the Handbook et al? I think there'd be some significant difference in resonant frequency and overall Z between the two.

>Of these, the best had just over a 3:1 frequency range at the 500 ohm
>points. I see from K1TTT's data that he was able to achieve 4:1 with one
>configuration and nearly that with another. The other two, though, were
>less than 3:1. So I'm not entirely convinced that the flat coil is
>inherently more narrow than the solenoid if wound with the same type of
>coax and carefully optimized. It might be -- if so, I'd estimate a ratio
>of about 3:4, flat:solenoid for bandwidth.

Sounds reasonable. Two of the columns of the K1TTT data (the two I referenced) sure look like the same coax wound two ways.

>I do like the flat approach because it's fast, simple, and low weight
>and bulk.

Yup. No piece of PVC pipe adding weight, either. Just a couple of UV resistant ty-wraps.

>But there certainly is more than one way to make an effective
>air core balun. And if maximum bandwidth is the goal, other methods
>might well be better.

One thing all this points out is that there's no quick'n'easy 3-30 MHz magic balun design out there, whether it's coax, coils, beads or cores. All have their advantages and weaknesses.

It would be really neat to see how good or bad the old Heath B-1 really was. B&W sold those coils for years - all Heath did was package them in a nice box with instructions.
>
>Whatever method is chosen, though, I believe you'll find that the
>maximum bandwidth will be achieved if you make use of self resonance,

>and don't try to restrict yourself to the region where the device is
>inductive or to prevent resonance.

Agreed! All we really need is lots of X - whether it's capacitive or inductive doesn't matter.

Looks to me that what W3RV wants is a bulletproof balun for a half-size G5RV, to cover 40/20/15 and maybe 10. Me, I'd look at a trap or parallel dipole to do that job.

73 de Jim, N2EY

3817. Re: Ladderline & Mast

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-25 02:23:24 UTC
From: Rezster <dbm@[remove]>
Message-ID: <Xns9274CF77F80A7dbmremovefisinet@148.78.248.75>
Source record: 135958

Rezster <dbm@[remove]fisi.net> wrote in
news:Xns9272ADD28FB68dbmremovefisinet@148.78.248.75:

> After all the responses on my ladderline situation, I've decided to
> erect a steel mast..30' on my roof...far enough away to use up the
> excess line. Now, with what do I secure the ladderline to the mast
> and to the roof?
>

Got it mounted on the steel mast. Used a long bolt for standoff. Let the
ladderline drape down to the eave of the roof then ran the feed line to the
transmitter along the eave. I can get the SWRs down below 1:1. I'm quite
happy with the results. Thanks for all the input!

3818. Re: Another trombone cap question

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-25 02:29:24 UTC
From: Mike Coslo <mcoslo@adelphia.net>
Message-ID: <3D686B3A.2070407@adelphia.net>
Source record: 135960

Wes Stewart wrote:

> On Sun, 25 Aug 2002 01:09:57 GMT, Mike Coslo <mcoslo@adelphia.net> wrote:
>
> |In further investigation, I see that mylar has some good properties for
> |trombone caps.
> |
> | But I noticed that it has a "slight" sensitivity to moisture. Anyone with
> |experience here to say if that will be a problem in this application?
>
> Can't say for sure. What is the application? I know you are trying to build
> coaxial capacitors but where will they be used?

This would be an antenna application, so It would be in an enclosure, but unsealed. It wouldn't have to be constant in Dielectric constant (hows that for an contradiction), but would need to retain it's physical shape, ie no swelling. Voltage characteristics would need to stay put pretty much, or be overdesigned a bit. This darn thing will have almost 8KV across the cap when in use on 40 meters.

Thanks for the advice!

- Mike KB3EIA -

3819. Re: Question About J-Pole

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-25 02:35:45 UTC
From: Douglas Stinson <douglas-stinson@attbi.com>
Message-ID: <4oX99.159980$983.240782@rwcrnsc53>
Source record: 135959

Sorry... that should be slightly MORE radiation in the direction of the
stub.

"Douglas Stinson" <douglas-stinson@attbi.com> wrote in message
news:bia99.32633$aA.8159@sccrnsc02...
> When I modeled the j-pole in EZNEC I found a SLIGHT asymmetry, with the
> lightly less radiation in the direction of the stub, presumably because
the
> currents are almost but not exactly equal in both legs. From a practical
> standpoint, the difference seems negligible. I've heard people report
larger
> differences with real antennas, but I've often wondered if this had more
to
> due with the feedline than anything else.
>
> <fiddelhead@hotmail.com> wrote in message
> news:Xns92728C006C953fiddelheadhotmailcom@198.164.200.20...
> > I have heard that a J-pole for 2 metres use is not entirely omni-
> > directional. Is it true there is a "side" of the J-Pole that has a
weeker
> > spot to it, or a side that produces better performance? If so, can
> someone
> > tell me which side is the "weaker" side?
> >
> > Thank you.
> >
> > 73's
>
>

3820. Tandem Match

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-25 02:38:13 UTC
From: Gary & Angela Belcaster <gbelcas@charter.net>
Message-ID: <gbelcas-BBDBB3.21381324082002@corp.supernews.com>
Source record: 135961

Anybody built the Tandem Match swr/wattmeter and can answer a couple of questions? Thanks in advance.

Gary

3821. Re: What am I emitting on 80M?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-25 03:16:33 UTC
From: richardharrison@webtv.net
Message-ID: <12690-3D684C11-84@storefull-2393.public.lawson.webtv.net>
Source record: 135962

Ken wrote:
"---behind a nearby hill that blocks line-of-sight to the contacts."

The hill to the west must be low enough not to block rays which reflect from the ionosphere beyond 30 miles. What is the elevation angle to the crest of your hill from your QTH? Otherwise, too many hops may be required and multiple hops enervate the signal.

What`s to your east and are there path obstructions in that direction too?

Best regards, Richard Harrison, KB5WZI

3822. Re: Lightning Effects Questions

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-25 03:49:12 UTC
From: richardharrison@webtv.net
Message-ID: <8799-3D6853B8-253@storefull-2391.public.lawson.webtv.net>
Source record: 135964

Robert Rose wrote:
"The single rod vertical element protuding from the top of the Discone ends only about 1 inch from the interior of my attic roof."

Radio towers with a flashing beacon at their tops are often hit by lightning. This does not harm the beacon because a lightning rod extends well above the beacon. The rod takes the lightning hits sparing the beacon. The beacon is well within the rod`s "cone of protection".

A lightning rod on the ridge of a house roof above and near a Discone antenna may (no guarantee) protect part of the house and the Discone antenna within its cone of protection.

Best regards, Richard Harrison, KB5WZI

3823. Re: Fractal Antenna for sale

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-25 03:50:16 UTC
From: "J. Harvey" <JM002.Harvey_ANTI*SPAM_@Sympatico.ca>
Message-ID: <5tY99.73734$Px3.1947906@news20.bellglobal.com>
Source record: 135963

"Alexander S. Wood"
> The link given....does not work, please repost it.

http://patft.uspto.gov/netahtml/srchnum.htm
Then enter: 6,025,810

United States Patent 6,025,810
Strom February 15, 2000
Hyper-light-speed antenna

Abstract
A method to transmit and receive electromagnetic waves which comprises generating opposing magnetic fields having a plane of maximum force running perpendicular to a longitudinal axis of the magnetic field; generating a heat source along an axis parallel to the longitudinal axis of the magnetic field; generating an accelerator parallel to and in close proximity to the heat source, thereby creating an input and output port; and generating a communications signal into the input and output port, thereby sending the signal at a speed faster than light.

Inventors: Strom; David L. (1615 Geneva St., Aurora, CO 80010)
Appl. No.: 942824
Filed: October 2, 1997

3824. Re: What am I emitting on 80M?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-25 04:27:23 UTC
From: Fred Hambrecht <w4jle@charter.net>
Message-ID: <umgn5dppi1k524@corp.supernews.com>
Source record: 135965

I sure would check out the feedline with an ohm meter for shorts. No antenna is as bad as the results you are getting.

I once made several contacts on a fractal 10 meter antenna on 75 just for grins. All of them in excess of anything your getting. Back in the old AM days, I talked further than that loading a 100 watt lightbulb with about 18 inch leads with an old DX-100.

My guess is that you have a short or open in the coax or a bad solder job on a connector. Check out the cables,and the connection at the center connection of the antenna.

Also check the continuity from the center piece to each connection to the antenna wires. To be this bad it has to be something simple.

"Ken" <cprstn54zz@att.net> wrote in message
news:3d683176.393393656@news-server.optonline.net...
> On 24 Aug 2002 02:07:24 GMT, n2ey@aol.com (N2EY) wrote:
> >- How "shortened" is this dipole? (100 feet? 80 feet? 66 feet?)
> >- How is the shortening done? (Loading coils? Traps? Simply cutting the
wire
> >short?)
> >- What is the feedline and matching system?
> >- How high are the ends?
>
> It is an Alpha-Delta DX-LB+
> http://www.alphadeltacom.com/dxlb_ii.htm
>
> Feedline is 100 ft. of RG-8X
>
> Matching is done with an MFJ-986 at the radio.
>
> Center is at 40 ft. Ends are at 20 ft. Ground slopes down 10% over
> the length of the antenna. As a result, one leg is almost horizontal
> and the other approximately 45 degrees below horizontal.
>
> Ken KC2JDY
>
>
> Ken KC2JDY
>
> Ken
> (to reply via email
> remove "zz" from address)

3825. Re: What am I emitting on 80M?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-25 04:31:35 UTC
From: cprstn54zz@att.net
Message-ID: <3d685a6f.403882937@news-server.optonline.net>
Source record: 135966

On Sat, 24 Aug 2002 22:16:33 -0500 (CDT), richardharrison@webtv.net
(Richard Harrison) wrote:
> What is the elevation angle to the
>crest of your hill from your QTH? >
>What`s to your east and are there path obstructions in that direction
>too?

I am Huntington on the north shore of Long Island, where the land
drops to meet Long Island Sound. My house is on the east side of a
neck that extends to the north.

My shack is actually on the hill, which rises at 10% to the west and
crests approximately 30 ft. above the center of my dipole.

To the east the topography is roughly flat for 100 miles and then
Atlantic Ocean.

To the north is flat terrain for 10 miles then the hills of
Connecticut behind Norwalk.

Ken KC2JDY

Ken
(to reply via email
remove "zz" from address)

3826. Which antenna is Better?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-25 04:50:54 UTC
From: theplanters95@aol.comnospam
Message-ID: <20020825005054.16125.00003697@mb-bg.aol.com>
Source record: 135967

Which of the following is the better antenna system for 40-10m?

1. Buddipole
2. MP-1 By Super Antenna
3. MFJ Mini Bug catcher
4. Hamsticks
5. Hustler with resonaters?
6. Other portable antenna

The antenna will be for use at my apartment and maybe portable. Main use will be on my apartments ground floor balcony. The balcony is 8 ft by 8 ft with no railing.

Randy ka4nma

3827. Re: Which antenna is Better?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-25 05:09:29 UTC
From: Dennis Kaylor <k4oxg@tampabay.rr.com>
Message-ID: <3D686674.5A96488C@tampabay.rr.com>
Source record: 135968

hey randy
i think the only way to go in your situation is to use hamsticks as a dipole on something like a musicians mic stand
the makers of hamsticks also make the dipole mount to screw two of the same band hamsticks in it and attach it to the stand and you will be off and running on what ever band the hamsticks are tuned for
the other antennas you listed all need some kind of a ground system and unless you care to bound in a ground rod and hook it to the mount i think the hamsticks will do just as well and they are cheap only 25 eash or so
good luck

Theplanters95 wrote:

> Which of the following is the better antenna system for 40-10m?
>
> 1. Buddipole
> 2. MP-1 By Super Antenna
> 3. MFJ Mini Bug catcher
> 4. Hamsticks
> 5. Hustler with resonaters?
> 6. Other portable antenna
>
> The antenna will be for use at my apartment and maybe portable. Main
> use will be on my apartments ground floor balcony. The balcony is 8 ft by 8 ft
> with no railing.
>
> Randy ka4nma

3828. Re: Which antenna is Better?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-25 06:21:22 UTC
From: George Kinzer <horseflygk@worldnet.att.net>
Message-ID: <CH_99.33825$Ke2.2362392@bgtnsc04-news.ops.worldnet.att.net>
Source record: 135869

http://users.cis.net/kingpop/T-225.htm

--
If first you don't succeed, do the same thing again...see what happens

3829. Re: Better Antenna Question

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-25 06:22:27 UTC
From: George Kinzer <horseflygk@worldnet.att.net>
Message-ID: <DI_99.33828$Ke2.2363148@bgtnsc04-news.ops.worldnet.att.net>
Source record: 135870

http://users.cis.net/kingpop/T-225.htm
--
If first you don't succeed, do the same thing again...see what happens

3830. Re: What am I emitting on 80M?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-25 06:55:37 UTC
From: n7ws@nowhere.com
Message-ID: <3d683ffc.119668886@news.triconet.org>
Source record: 135871

On Sun, 25 Aug 2002 01:22:21 GMT, cprstn54zz@att.net (Ken) wrote:

|On Fri, 23 Aug 2002 10:51:46 -0700, Roy Lewallen <w7el@eznec.com>
|wrote:
|>But if you're using coax, especially a long run of coax, the loss
|>might be quite substantial, and you'd be better off going to ladder line
|>and/or lengthening the antenna.
|
|I WILL be switching to ladderline momentarily, but not to improve the
|situation where I am TXing now. At these frequencies, I am near
|resonance in the band -- around SWR=2.0 without tuner. At the ends of
|the low bands, however, untuned SWR goes to around 6.0 at the radio.
|I have been told here that this means SWR at the feedpoint of over 60
|(which I verified) and 90+% line losses in the coax.

I don't know how you "verified" 60:1 but I doubt that it's anywhere near there.

Without the dimensions of the wire on the far side of the "ISO-RES" it's hard to try any modeling of your situation. However, the ISO-RES seem to be nothing but rf-chokes, offering a bit of inductive loading on 40 and a lot on 80. They also have to be extremely lossy, which strange as it seems, works in your favor as far as bandwidth goes.

So... assuming that the real part of the impedance at 3.5 MHz is around 20 ohm with a bunch of capacitive reactance I poked these numbers into Dan's (AC6LA) "Transmission Line Details" program, a copy of which everyone should have. See:

http://www.qsl.net/ac6la/tldetails.html

Step 1. I selected the built-in parameters for Belden 9258 (RG-8X).

Step 2. I set the frequency to 3.5.

Step 3. I set the line length to 100 feet.

I set the load R to 20 and incremented the X value (in the negative direction) until the SWR at the input was approximately 6:1, which you say you measure. I can now read the SWR at the load (20 -j86) as about 9.3:1. With the power set to the default 100W, the loss data on the right side of the screen shows the power at the load should be about 59 W, or a total loss of ~2.3 dB, which is a long way from 90%.

The load Z that I picked was an educated guess. Since the antenna is low to the ground and much shorter that a half-wavelength long, the real part will always be much lower than a resonant length. Since the antenna is resonant higher in the band, the reactance has to be negative. You claim a 2:1 SWR at resonance which suggests 25 ohm for the real part higher in the band (I know not where).

This will drop somewhat as the frequency is lowered.

If you don't like these particular numbers, try something else (with the aforementioned limitations) but you'll find it doesn't make any difference.

Now that you're in the program, leave the load Z as is and go to Step 1 and select Wireman 554 ladder line.

Looking at the new loss figures you see that you now have 85 W at the load or a total loss of only about 0.7 dB. Looks like the way to go, right?

Well, not so quick. Check out the 50 ohm SWR, it's 80:1. The real part is near enough to 50 ohm that if the reactive part was tuned out the SWR would be acceptable. The problem is that if your tuner is the now common hi-pass tee with two series caps and a shunt inductor, you can't match this load.

|Unfortunately,
|the path I have for the ladderline is a little problematic and I await
|some counsel from the ARRL as to do's and don'ts before I run it.

Don't

Wes

3831. Re: Another trombone cap question

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-25 07:01:24 UTC
From: n7ws@nowhere.com
Message-ID: <3d688037.135719125@news.triconet.org>
Source record: 135872

On Sun, 25 Aug 2002 02:29:24 GMT, Mike Coslo <mcoslo@adelphia.net> wrote:

|Wes Stewart wrote:
|
|> On Sun, 25 Aug 2002 01:09:57 GMT, Mike Coslo <mcoslo@adelphia.net> wrote:
|>
|> |In further investigation, I see that mylar has some good properties for
|> |trombone caps.
|> |
|> | But I noticed that it has a "slight" sensitivity to moisture. Anyone with
|> |experience here to say if that will be a problem in this application?
|>
|> Can't say for sure. What is the application? I know you are trying to build
|> coaxial capacitors but where will they be used?
|
|
| This would be an antenna application, so It would be in an enclosure, but
|unsealed. It wouldn't have to be constant in Dielectric constant (hows
|that for an contradiction), but would need to retain it's physical
|shape, ie no swelling. Voltage characteristics would need to stay put
|pretty much, or be overdesigned a bit. This darn thing will have almost
|8KV across the cap when in use on 40 meters.

Consider this. If you have any air gap between the plates and the mylar, that
is where your voltage breakdown will occur.

3832. Re: Air-Wound Balun Design Info??

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-25 08:02:19 UTC
From: kelly@dvol.com
Message-ID: <d22b54c3.0208250002.43aee2b5@posting.google.com>
Source record: 135873

Richard Clark <kb7qhc@attbi.com> wrote in message
news:<5q3dmugi9hk7vu90drag35puq43946i17f@4ax.com>...
> On 23 Aug 2002 10:39:33 -0700, kelly@dvol.com (Brian Kelly) wrote:
>
> >>
> >Good points all. Except for one nagging concern on my part:
>
> Hi Brian,
>
> Lossy is in the eye of the beholder.
>
>
Or in the other guy's ears - which is the problem which needs to be
avoided.
>
>
> Let's simply offer a worst case
> scenario (or is it really?) where a single bead looks like 5 Ohms with
> 50V RF across it (the current of which it is thus trying to snub).
> Well, by all methods of adding power, it looks like this bead will
> flame out after trying to shed 500W heat. Quite lossy.
>
>
Ten amps?!?
>
>
> Clearly, 5 Ohms reactance would be quite frosty.
>
> Well, let's put a little more engineering into this. 5 Ohms is
> clearly not the best choice when 20 Ohms is easily found. And where
> one failed, how would 10 beads fare? With the same 50V RF across it
> we now find the assembled beads trying to shed 12.5W heat. The beads
> will run very hot to the touch. Quite lossy.
>
> Can your air choke present better than 200 Ohms reactance? Presumably
> that and more - Still frosty.
>
> Now, which scenario is "more" lossy? Could "more" lossy mean more
> efficient at snubbing current?
>
>
Depends on where the losses lie. If the intent of the balun is to
maintain a radiation pattern then the balun internal losses can be
miniscule vs. the "losses" associated with a radiating feedline to a

highly directioanl antenna. But that's not the point at the moment.
>
>
> Further consider that I run with at least 40 beads each exhibiting at
> least 25 Ohms resistance (almost no reactance). This accumulated
> 1,000 Ohms resistive is off by at least one order of magnitude for a
> resonant choke at its peak (and for a fair BW overall). However, in
> the presence of that same 50V RF my beads simmer at a total 2.5W with
> any bead shedding all of 60mW - frosty.
>
>
True, but then ya have a heavy beast of a balun which would not be
suitable for the pack 'n go antenna I'm trying to pull together. My
thrust is to come up with a workable combination low weight, minimum
bulk and "enough" choking at the 100w level to do a decent job given a
40-15m mutiband dipole. Or in a stetch a 40-10m antenna. Or a vertical
multiband 40m half-wave loop. Or some balanced antenna along these
lines. Looks like 500 ohms worth of choke at 7mHz is the input
parameter for "enough". Or maybe to hell with any balun in these kinds
of inherently non-critical applications.
>
>
> The design paradigm that Roy offers is quite compelling and is
> certainly a shoo-in for fixed applications. For experimental work,
> the bead balun presents more flexibility in trade for modest
> performance and easier/quicker installation. If you invest in enough
> beads, of the right formulation, placed along the line to resolve
> unusual boundary conditions; then you have a very robust solution.
>
>
Understood. If I'm ever in a position where I can put up big HF yagis
again I'll string beads all along the feedlines.
>
>
> 73's
> Richard Clark, KB7QHC

Thanks Richard. Brian w3rv

3833. Re: Air-Wound Balun Design Info??

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-25 08:35:48 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <mu5hmu8if4tcaatolr3hs0v13t5die17ii@4ax.com>
Source record: 135874

On 25 Aug 2002 01:02:19 -0700, kelly@dvol.com (Brian Kelly) wrote:

>True, but then ya have a heavy beast of a balun which would not be
>suitable for the pack 'n go antenna I'm trying to pull together.

Hi Brian,

Mine is less than 2 OZ of ceramic on one foot of RG58. How does that compare to the weight of 10' of coax in an air wound balun? I use it every field day without trouble and I also bring the same amount of beads distributed over 40' of coax.

73's
Richard Clark, KB7QHC

3834. Re: Losses in insulating materials

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-25 09:14:53 UTC
From: Jean Cesario <jean.cesario1@libertysurf.fr>
Message-ID: <3D68A00D.D54B8EE5@libertysurf.fr>
Source record: 135875

Thanks Dick and Ron for pertinent opinions. You comfort my own thinking, but so many books and reviews insist for using bare copper wire, or varnish insulated one.
PVC insulation gives much better mechanical protection at places where wires must be attached or bent.
I just finished a 3 el. cubical quad made of solid copper PVC insulated, supported by 8 fiberglass fishing poles and polyester guying. Up to now, 10 and 15 meters bands installed and fine DX results ; the poles lenght is OK for next 20 meters wiring. Very light and flexible structure, 12 m up on an air-lifted mast. The PVC insulation is usefull for no-sliding, no-harmfull bindings with 3mm polyester guys. It would be much more critical with bare copper or even copperweld.

And as you both say, HF absorption by the dielectric is probably negligible.

73's de Jean f8bxg

Ron McConnell a ï¿½crit :

> Jean Cesario, F8BXG, wrote:
>
> > I'm wondering about losses in antennas made of standard "domestic"
> > stranded or solid copper wire, insulated with polyvinyl chloride.
>
> As Richard indicates, you will not notice any difference in loss
> when using the different wires as _antenna_ wire.
>
> What quantitative data I have is safely packed away
> in boxes that I brought home from work when I retired last year.
> However, some qualitative notes follow...
>
> You _will_ notice a difference when using pairs of wires
> with different insulations as a transmission line.
> For instance, polyethelene is a very good insulator
> with low loss and stable characteristics for a very
> wide frequency range (audio to television twinlead)
> and with time. It is a relatively soft material.
> PVC is a tough material and is often chosen
> for low frequency use (AC and outdoor telephone)
> where it may be subjected to physical abuse,
> weather, ... However, it is not a good insulator
> in that its characteristics vary with frequency.
> I once had the chance to salvage several reels
> of telephone drop* wire with 19 1/2 AWG

> copperclad steel wire and PVC insulation.
> Some quick calculations indicated
> the impedance was in the 100 ohm range
> and that it _might_ be useful as transmission line.
> Then I learned about its very poor performance
> at radio frequencies and passed on getting the cable.
>
> My layman's understanding is that the PVC molecule
> is polar, meaning it has - and + ends. When
> it is excited with rf , loss results when the molecules
> vibrate. This is not noticable for practical purposes
> when used as a conductor for receiving antennas.
> When the wires are paired for a t-line,
> the characteristics of PVC will affect the performance
> for transmission purposes where loss counts more.
>
> (Subject to correction and a more clear
> explanation by real experts... It is getting late here
> and brain cells are experiencing loss.)
>
> Cheers, 73,
>
> Ron McConnell
> w2iol
>
> * "Drop" meaning the drop from utility pole to house
> where it must survive squirrels running along it,
> chewing on it, rubbing against tree limbs...
> Thus PVC and copperclad steel.

3835. Re: Which antenna is Better?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-25 09:47:32 UTC
From: KC1DI <elbc@pivot.net>
Message-ID: <3d68a3d4_2@corp.newsgroups.com>
Source record: 135876

"Theplanters95" <theplanters95@aol.comnospam> wrote in message
news:20020825005054.16125.00003697@mb-bg.aol.com...
> Which of the following is the better antenna system for 40-10m?
>
> 1. Buddipole
> 2. MP-1 By Super Antenna
> 3. MFJ Mini Bug catcher
> 4. Hamsticks
> 5. Hustler with resonaters?
> 6. Other portable antenna
>
> The antenna will be for use at my apartment and maybe portable. Main
> use will be on my apartments ground floor balcony. The balcony is 8 ft by
8 ft
> with no railing.
>
>
> Randy ka4nma

Hi Randy ,

In your case since your on the ground floor I would say # 6.. other--- Mag Loop antenna.. the MFJ one is very easy to tune and provides fairly good results close to the ground. They are remotely tunable from about 10MHZ to 30 Mhz. For 40 , 80, and 160 I'd go dual hamsticks made up as a dipole for each band of interest.. But the loop will do well on the upper bands.

hope this helps ,
73 Dave KC1DI

Outgoing mail is certified Virus Free.
Checked by AVG anti-virus system (http://www.grisoft.com).
Version: 6.0.384 / Virus Database: 216 - Release Date: 8/21/02

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

3836. Re: What am I emitting on 80M?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-25 11:03:33 UTC
From: fractenna@aol.com
Message-ID: <20020825070333.08069.00002687@mb-df.aol.com>
Source record: 135877

>r a total loss of ~2.3 dB, which is a
>long way from 90%.

Wes is quite right; although old coax can be lossy, in general it is very difficult to find a (long) piece with high insertion loss at 160M(or 80M).

Few working those lower bands are running ladder line.

Your problem is NOT coax; if it was, then even the sky noise would be attenuated. You have a LAUNCH ANGLE problem;-)

Still curious about my query on your DX window results...agin: do you hear folks near you working DX and you can't hear them?

73,
Chip N1IR

3837. Re: What am I emitting on 80M?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-25 11:12:55 UTC
From: fractenna@aol.com
Message-ID: <20020825071255.08069.00002688@mb-df.aol.com>
Source record: 135878

Your antenna is mostly a horizontally polarized radiator, and the launch angle is at or near the zenith.

I would let the coax radiate:if the line isolator is removable, remove it at the feedpoint. Now connect it to a length of good coax corresponding to the vertical height. Connect the line isolator at the base of this coax section, just above --but not connected to--ground.Connect the top of this coax section directly to the apex. DO NOT CHOKE THE COAX IN ANY WAY above the line isolator position.

This is now a vertically radiating dipole(VRD), sometimes called a 'controlled feeder radiator' (CFR). It will be elliptically polarized, with a dominant vertical component.

You will be working loads of DX with this arrangement.

73,
Chip N1IR

3838. Re: What am I emitting on 80M?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-25 11:51:22 UTC
From: cprstn54zz@att.net
Message-ID: <3d68c2cc.430599515@news-server.optonline.net>
Source record: 135879

On Sun, 25 Aug 2002 06:55:37 GMT, n7ws@nowhere.com (Wes Stewart)
wrote:>
>I don't know how you "verified" 60:1 but I doubt that it's anywhere near there.

First, it appears that I misspoke myself. I looked at my written test results and SWR (without tuner) at the radio at the ends of the bands (nonresonant) averaged around 10.0 -- using a Radio Shack digital SWR meter. At one frequency, where SWR was 12.0 at the radio, I used the same meter on the other end of the feedline, around 8 ft from the feedpoint, and it read 60.0 -- which was predicted here BTW.

Folks here suggested a switch to ladderline because of the high SWR away from resonance. A QST article confirms that this is a good solution. Can you please amplify why my MFJ-986 won't be able to tune my antenna if fed with ladderline? It has no problem bringing the SWR=12.0 down to 1.0.

Ken KC2JDY

Ken
(to reply via email
remove "zz" from address)

3839. Re: What am I emitting on 80M?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-25 11:56:18 UTC
From: cprstn54zz@att.net
Message-ID: <3d68c4e7.431138734@news-server.optonline.net>
Source record: 135880

On 25 Aug 2002 11:03:33 GMT, fractenna@aol.com (Fractenna) wrote:
>Still curious about my query on your DX window results...agin: do you hear
>folks near you working DX and you can't hear them?

I am not sure what you mean. Do you mean, Can I hear folks working DX
but they can't hear me? Or something else?

If the former, I have heard folks working DX on 80 and 160, but have
not had an opportunity to call CQ to the participants (because they
were long ragchews). I will try that again.

Ken KC2JDY

Ken
(to reply via email
remove "zz" from address)

3840. Re: What am I emitting on 80M?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-25 12:02:20 UTC
From: cprstn54zz@att.net
Message-ID: <3d68c621.431452781@news-server.optonline.net>
Source record: 135881

On Sun, 25 Aug 2002 00:27:23 -0400, "Fred Hambrecht"
<w4jle@charter.net> wrote:
>I sure would check out the feedline with an ohm meter for shorts. No antenna
>is as bad as the results you are getting.

Ohmmeter shows an open circuit between the center conductor and the
sheathing -- at the radio. So I do not have a short.

If I had a defective solder job at a connector, I would also be having
problems on the 10-20-40 bands, but I am not. I have good DX on those
bands.

Ken KC2JDY

Ken
(to reply via email
remove "zz" from address)

3841. Re: What am I emitting on 80M?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-25 12:06:56 UTC
From: n2ey@aol.com
Message-ID: <20020825080656.15779.00000364@mb-fm.aol.com>
Source record: 135882

In article <3d683176.393393656@news-server.optonline.net>, cprstn54zz@att.net (Ken) writes:

>On 24 Aug 2002 02:07:24 GMT, n2ey@aol.com (N2EY) wrote:
>>- How "shortened" is this dipole? (100 feet? 80 feet? 66 feet?)
>>- How is the shortening done? (Loading coils? Traps? Simply cutting the wire
>>short?)
>>- What is the feedline and matching system?
>>- How high are the ends?
>
>It is an Alpha-Delta DX-LB+
>http://www.alphadeltacom.com/dxlb_ii.htm

It's a parallel dipole that also has traps on one wire. They call them "ISO RES" thingies, and make a big deal about them not having capacitors, but they are really just traps with lots of L and very little C. The C is just the distributed capacitance of the coils.

They have so much L that on 160 they load the 100 feet of wire to 160 meter resonance.
>
>Feedline is 100 ft. of RG-8X
>
That's decent stuff, and unless you have an open or short the losses on 80 meters will be low up to an SWR of 5 or 6 to 1

>Matching is done with an MFJ-986 at the radio.

I don;t know that tuner. Some tuners are better than others at matching various loads.

>Center is at 40 ft. Ends are at 20 ft. Ground slopes down 10% over
>the length of the antenna. As a result, one leg is almost horizontal
>and the other approximately 45 degrees below horizontal.

I've used lower antennas (homemade trap inverted Vees) that have done a lot better.

In another post you mention Teflon coax around a toroid. at the feedpoint, too.

Here's what I'd do. You have to lower the antenna to do most of this. :

1) Get rid of of the Teflon coax/balun thing. You don't need it. It may be the source of your troubles.

2) Check the feedline for shorts or opens.

3) Check that the entire antenna is assembled according to instructions.

4) Try a different tuner, or even try the antenna without the tuner on a frequency where the SWR is 2:1 or less.

Changing to ladderline is a last resort, and negates the need for the Alpha-Delta.

73 es GL de Jim, N2EY

3842. Re: What am I emitting on 80M?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-25 12:19:21 UTC
From: cprstn54zz@att.net
Message-ID: <3d68c87d.432056468@news-server.optonline.net>
Source record: 135883

On 25 Aug 2002 11:12:55 GMT, fractenna@aol.com (Fractenna) wrote:
>I would let the coax radiate:if the line isolator is removable, remove it at
>the feedpoint. Now connect it to a length of good coax corresponding to the
>vertical height. Connect the line isolator at the base of this coax section,
>just above --but not connected to--ground.Connect the top of this coax section
>directly to the apex. DO NOT CHOKE THE COAX IN ANY WAY above the line isolator
>position.

This is problematic because my shack is high up, only a few feet below
the feedpoint. My current choke is now at the feedpoint. What if I
inserted a length of coax between the feedpoint and the choke? One
leg would go down (up to 40 ft) and the other leg would go back up. I
could leave them close together or some distance apart (like a narrow
"U"). Would this serve the same purpose, or would they cancel out? If
they would cancel out, could I use coax down and something else up
that wouldn't cancel?

This would be an interesting experiment. Would it hurt me on
10-20-40?

I should mention that there is a vertical grounded flue around 30 ft
long around 3 ft from the feedpoint. Modeling showed it had minimal
effect on the dipole's performance. However, it might have a much
greater effect on a vertical antenna 3 ft away.

Ken KC2JDY
Ken
(to reply via email
remove "zz" from address)

3843. Re: Which antenna is Better?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-25 12:40:14 UTC
From: Bob Miller <bamiller@texas.net>
Message-ID: <xM1oPWq5Ad=Fb4wwf7mjKust1oaT@4ax.com>
Source record: 135884

theplanters95@aol.comnospam (Theplanters95) wrote:

>Which of the following is the better antenna system for 40-10m?
>
>1. Buddipole
>2. MP-1 By Super Antenna
>3. MFJ Mini Bug catcher
>4. Hamsticks
>5. Hustler with resonaters?
>6. Other portable antenna

Well, if you can't break your lease and seek higher ground... :-)

If you can find a telescoping fiberglas pole of some sort, that would enable you to hoist, from your balcony, a 1/4-wave vertical wire for the band of your choice. Connect the wire to the center conductor of your coax. Attach a 1/4-wave counterpoise wire to the braid of your coax, and throw the wire across your apartment floor. This will give you a homebrew 1/4-wave ground plane antenna of sorts. Could work. Experment.

Bob
k5qwg
>
> The antenna will be for use at my apartment and maybe portable. Main
>use will be on my apartments ground floor balcony. The balcony is 8 ft by 8 ft
>with no railing.
>
>
>Randy ka4nma

3844. Re: Air-Wound Balun Design Info??

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-25 12:52:00 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <3D68D2F0.60501@eznec.com>
Source record: 135885

Brian Kelly wrote:

>. . .
> More wraps on larger stacked 60 series cores should be the way to go
> at the kW level. ?
>. . .

It'd be worth a try, but I think that a lot of people running that kind of power are using ferrite beads strung along the outside of the coax (a W2DU balun). Type 43 cores are probably most often used for this. The advantages of this approach are simplicity, broad bandwidth (like a ferrite toroid), the ability to work easily with large coax, and relatively high power handling ability. The disadvantages are cost and weight. If you have N beads each with impedance Z, you get N*Z total impedance. With a toroid core you get T^2*Z where T is the number of turns. So it takes quite a few beads.

>>
>>I find a one inch or so 70
>>series or type 43 core to be fine up to at least 300 watts, feeding a
>>reasonably matched antenna.
>>
>>
>
> Bingo, there it is, there's my conceptual problem. What happens in the
> case of a 1:1 balun, air or ferrite core when the antenna is not a
> "reasonable" match with 50 ohm coax? What's the definition of a
> "reasonably matched load"?? Take the case of a G5RV. They can present
> swrs which are all over the map but are still within the tuning range
> of the average ATU. Which is "good enough" in most ham's minds.

There's been a lot of discussion about this on the newsgroup, but a lot of it has been with some lack of understanding. What counts is the impedance seen along the shield toward ground, and the relationship between this and the feedpoint impedance isn't entirely clear. So I'm not sure anyone can really give a good general answer to this. Some experiments and measurements are in order -- maybe you'll be the one to make them.

> Assume that the swr at the feedpoint is 6:1 and that it's resistive on
> one band or another. The feedpoint impedance could be either 8+jï¿½ or
> 300+jï¿½. The proper balun under these conditions should be a 6:1 unit
> connected one way or the other.

I'd personally prefer to make separate transformer and balun, just because it would be easier for me to optimize both. The balun's job is

different from the impedance matching problem, so I'd rather handle each individually.

> The average ham goes out and pops the usual $40 for one of the usual
> store-bought G5RVs of which F-gazillion-2 are in use.

Yes, ham radio is in a sad condition today.

> They come with
> some kinda balun, 4:1 or some such at the coax connector. Lousy match
> *with the balun* no matter how you cut it. What's going on in those
> baluns? What are the losses under these conditions? Is there a useful
> decrease in losses with an air-core balun a la Heath vs. a ferrite
> core balun? My tummy tells me yes and this is where I was orignally
> coming from when I posed my question about how to wind air core
> baluns.

Depends. Depends on the antenna, the band, and the balun. There's no single answer.

> Seems to me it gets even worse when "they" use a 4:1 balun to feed an
> end-fed wire.

Good lord, yes. Yuck.

> When cometh the point when one simply sez to hell with this
> transformer stuff, just kill the circulating currents with a coil or
> beads and take the coax losses?

It's up to you. You pays your money and you makes your choice.

> Copperweld oughta be outlawed.

I disagree. It's great stuff for a multitude of purposes. The only time it'll cause electrical problems at HF and above is if the wire is teeny tiny. And in RG-174 it is.

> I'm not shooting for "microlight" antennas, I like the idea of using
> 174 for winding compact baluns but I'd use 8X for the run from the
> balun to the ATU. Any hints on the minimum allowable coiling diameter
> for 174?

No. Check with some cable manufacturers' web sites. By the way, RG-8X is considerably heavier than RG-58 and measurements I made of some RG-8X at Dayton showed that the difference in loss for 50-100 feet between it and RG-58 up to 15 meters was pretty small. I don't have the numbers in front of me, but it was a poor trade when I had to carry the cable. I use RG-58 and RG-174 (type) cable for backpacking portable operation.

> Speaking of bridges: Where/how can a ham come up with a half-decent HF
> impedance bridge for antenna work without having to send HP or GR
> $5,000 -8,000?

Get an MFJ Antenna Analyzer. It won't give you the sign of the reactance, and it's not a precision instrument, but it's a whole lot

better than nothing. There are two other solutions. One is to get a GR bridge surplus or on ebay. The other is to roll your own. There are some methods in _Solid State Design for the Radio Amateur_ that work quite well. I used a homebrew resistor bridge with calibrated series X circuit (just a calibrated series LC with variable C) for each band, for many years before I acquired a GR.

Roy Lewallen, W7EL

3845. Re: Air-Wound Balun Design Info??

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-25 12:56:31 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <3D68D3FF.707@eznec.com>
Source record: 135886

N2EY wrote:
> In article <3D65F3D2.3070609@eznec.com>, Roy Lewallen <w7el@eznec.com> writes:
>
>>I do, however, have some
>>graphs of RG-58 flat coils of two lengths and various numbers of turns.
>
>
> You just added another level of complication. When you say "flat coil", do you
> mean a single pancake layer like rope laid on the deck of a ship, or wound up
> in a hank as shown in the picture in the Handbook et al? I think there'd be
> some significant difference in resonant frequency and overall Z between the
> two.

Like the picture in the Handbook. I've had a hell of a time describing this for some reason. I must be the only person in the world that winds up rope or extension cords like that, since "like a coil of rope" or "like an extension cord" always brings a bunch of questions like this.

> One thing all this points out is that there's no quick'n'easy 3-30 MHz magic
> balun design out there, whether it's coax, coils, beads or cores. All have
> their advantages and weaknesses.

Bingo. It's true with antennas, cars, and women. Why should baluns be different?

>. . .

Roy Lewallen, W7EL

3846. Re: Another trombone cap question

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-25 12:59:22 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <3D68D4AA.2020806@eznec.com>
Source record: 135887

Wes Stewart wrote:
> Consider this. If you have any air gap between the plates and the mylar, that
> is where your voltage breakdown will occur.

And it won't take much of an air gap to make the dielectric constant of
the plastic irrelevant.

Roy Lewallen, W7EL

3847. Re: Using coax shield for long wire antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-25 13:21:57 UTC
From: emergencyradioserv@yahoo.com
Message-ID: <46060eb3.0208250521.7052a396@posting.google.com>
Source record: 135888

Yes, I tend to agree with the fact that it would not make a good elevated antenna. Since I have a large roll of it and its not really good for use as coax feedline for me, does anyone have any good links for "on-the-ground" antennas for longwave reception? It would be fairly stealthy and I could just unroll it across an unused piece of the property.

Thanks for the help!

Bob

3848. Re: What am I emitting on 80M?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-25 13:29:47 UTC
From: cprstn54zz@att.net
Message-ID: <3d68d9c0.436476515@news-server.optonline.net>
Source record: 135889

On 25 Aug 2002 12:06:56 GMT, n2ey@aol.com (N2EY) wrote:

>I don;t know that tuner. Some tuners are better than others at matching various
>loads.

The MFJ-986 has a good rep for being able to tune anything.
http://www.eham.net/reviews/detail/631

>Changing to ladderline is a last resort, and negates the need for the
>Alpha-Delta.

Could you elaborate on this please? Do you mean that I could just use
a 100 ft long dipole (or whatever I could fit) and just tune that on
160-10 (because high SWR wouldn't matter)? Would it radiate as well
as my multi-wire dipole on 10 and 20 where it has separate wires? Or
do you mean that the 40-80-160 wire with the coils would be
unnecessary and a simple 50' wire would do the job just as well?

Ken KC2JDY

Ken
(to reply via email
remove "zz" from address)

3849. Re: Fractal Antenna for sale

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-25 14:40:12 UTC
From: aunwin@fgi.net
Message-ID: <c4becf19.0208250640.4899b0@posting.google.com>
Source record: 135890

W.G Ewald <wgewald@att.net> wrote in message
news:<545gmu4j6p2q195a4k4dm0avcefds5pjsh@4ax.com>...
> On 24 Aug 2002 12:43:46 -0700, aunwin@fgi.net (Art Unwin KB9MZ) wrote:
>
> >fractena@yahoo.com (Fractal Antennas) wrote in message
news:<653d2ee5.0208221144.4aa42d89@posting.google.com>...
> >> I have for sale one fractal antenna, operating on the HF frequencies.
> >> Used for about 1 year, in good shape. Email for information.
> >
> >Doctor Cohen, (Chip)
> > What is the secret that you,Hately and others have to get so much
> >attention to your antennas ?
>
> Do you really want the kind of attention Cohen gets?

Going by the old adage all types of publicity is good publicity.
Fractal antenna designs made the Arrl book so it can be seen as
a worthy antenna. No sarcastic notes to the Arrl about the legitimacy
of it's placement, it is fully recognised by the Arrl.
Same with Hately, he was recognised all over the World with contracts.
Yet both of these antennas were not recognised by this group tho they
were accepted in the real world by solid actions, building e.t.c.
Now I am not saying that the amateur fraternity is not up to par with
respect to the professional world but it would seem that their
judgments are not reflected by the professional world. Why were the
views so different?
What was it that this group failed to recognise or overlooked that the
pro's
thought worthy of investigation ? Both got bad publicity that
stretched over years and both designers reaped the benefits. As far as
I am concerned
Chip deserved all the aclaim that he received by being in 'the book',
and he is still held in high repute in the academin world and still
has tenure.
So with the Unwin antenna are we following the old adage that the
'second or third liar doesn't stand a chance, presuming that I am
being judged as a liar
or I am insane?
Why did not anyone say that the antenna was a complete washout
because...
as they did with the above antennas to allow outsiders to make their
own judgement? Why were the models created behing the scenes by what
was said
were competant modelers and not shared in the same manner that the

Unwin design
were shared with all? If the sharing of those means 'bad publicity',
then bring on the crowd. Surely the CIA isn't involved with this, the
english are allies,
or is this also not accepted by this group? I don,t want to be like an
artist
whose efforts are only recognised after death, what is holding this
group back?
Publicity even if bad but structered has it's good side.
Art

/

3850. Re: Modeling coax attached to an antenna in EZNEC

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-25 14:59:13 UTC
From: Bibby <bibby@attbi.com>
Message-ID: <5h6a9.239971$UU1.39133@sccrnsc03>
Source record: 135891

Roy, I read your response to my response with interest. I am surprised, and disappointed, that others haven't offered an opinion.

Regarding your own comments. I agree with your comments about modeling monopoles. The only reason for introducing it, and mentioning the infinite ground-plane was to show how the frill model came to be applied to dipoles.

Re-reading Doug's original inquiry, I realize that I jumped to a specific case - a dipole - when his question was more generally stated.

Nevertheless, you made a comment that I think needs to be responded to. You say that 'the feed system has nothing to do with the antenna's gain or pattern, and these are the primary things antenna programs are intended to calculate. The calculated antenna feedpoint impedance can be transformed to a value of your choice without any impact on the antenna performance at all, except for whatever loss the transforming network has." What antenna programs are you talking about?

Antenna impedance of dipoles and dipole arrays is also of great interest and importance. In fact, I would say that gain/pattern are subjects that most amateurs only contemplate/dream about as few have the tools to measure them properly. By contrast, impedance matching is something that most amateurs can, and do, do - using their VSWR meters, etc. As you say, the antenna feedpoint impedance can be transformed into whatever you want it to be - but where/how you do it can have a significant effect on the radiation pattern. If the antenna is fed with balance line, led away at right-angles to the antenna and the matching unit is out of the near-field of the antenna then you are correct. However, if the matching is done right up at the antenna feed-point, then the matching system is in, and contributes to, the near-field of the antenna and cannot be ignored. Because the matching unit is in the near-field, it will effect the performance in the far-field (gain/pattern). This is the thought that I was most concerned with in my previous response. It is a very difficult problem from a modeling point of view and so, more often than not, it is ignored. The difficulty in modeling this problem, accurately, is that it would take considerable computer resources to accomplish. But today, we have those resources. So far however, few, if any, programs exist that attempt to do this, never mind do it well.

Malcolm, W1/GW3NJY

"Roy Lewallen" <w7el@eznec.com> wrote in message
news:3D6679CA.4060805@eznec.com...
> Bibby wrote:
> > Doug, you have hit on what is possibly the central weakness of most
antenna

> > modeling programs available today. None of them address the issue of
> > feeding the antenna.
>
> The reason is that, except in the case of phased array antennas, the
> feed system has nothing to do with the antenna's gain or pattern, and
> these are the primary things antenna programs are intended to calculate.
> The calculated antenna feedpoint impedance can be transformed to a value
> of your choice without any impact on the antenna performance at all,
> except for whatever loss the transforming network has.
>
> > Take for example the NEC core. It places a voltage on, or inserts a
> > current at, the sub-section adjacent to the feed-point. It doesn't
care
> > how you feed it. One could model a gamma/tee match but you just move
the
> > problem to feeding the match.
>
> NEC doesn't directly allow current sources, only voltage. However, when
> a single source is used, it makes absolutely no difference to the
> results what kind of source is used. As you say, you can model something
> like a gamma match with NEC-2 or derivatives. If you're interested in
> impedance matching networks using lumped elements, which NEC-2 doesn't
> allow directly, there are programs which can do this, such as MicroSmith
> (no longer available) and WinSMITH. The impedance match only affects the
> impedance seen by the transmitter, however. It has no affect on the
> antenna. Again, the exception is phased array antennas, where modeling
> programs can give you essential information about feedpoint impedance
> needed to design a feed system, but can't include anything but an
> all-transmission line feed system in the model.
>
> > Much of the early work, which is when accurate measurements were made,
was
> > done on monopoles over a semi-infinite ground-plane. The measurements
and
> > theory agree reasonably well. In fact, as modeling has become better
the
> > agreement has got better - which speaks well of/for the measurements.
> > With this assurance, antenna modelers then appeal to 'image-theory' to
say
> > that a dipole is a the combination of a monopole and a perfect
reflection of
> > itself. Not bad, but we have a good model for feeding a monopole that
> > doesn't transfer well to a dipole. The hole in the infinite plane
through
> > which the monopole emerges can be modeled well. It is often referred
to as
> > a "magnetic frill". No-one has ever demonstrated a dipole excited by
a
> > magnetic frill!
>

> None of the commonly used antenna modeling programs use the approach you
> describe when modeling antennas over ground. MININEC does use an image
> approach when calculating the impedance and currents by assuming a
> perfect ground during those calculations. This is a good approximation
> provided that the antenna doesn't contain any significantly radiating
> horizontal wires lower than about 0.2 wavelength. But it does take
> ground conductivity and permittivity into account when calculating the
> radiation pattern, which is not the simple image approach you describe.
> NEC-2's Sommerfeld ground (called High Accuracy in EZNEC) does a true
> field calculation using finite ground parameters even for the impedance
> and voltage calculations, and uses a similar approach to MININEC for
> determining the radiation pattern.
>
> > So your question is on the cutting edge of the state-of-the-art in this
> > area. I will be interested to read other comments.
>
> Roy Lewallen, W7EL
>

3851. Re: Fractal Antenna for sale

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-25 15:21:26 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <3D68F5F6.1050108@eznec.com>
Source record: 135892

Art,

If it's simply attention you want, then Cohen, Hately, and your average two year old are good models to emulate. But is that what you want?

You've already succeeded in getting quite a good deal of attention directed toward your antenna, very likely as much as Cohen has gotten directed toward fractal antennas on this newsgroup. (Although you still have a long way to go to catch up with Hately.) But what you really want, I believe, is for your antenna to be accepted and embraced as an important development. While you can get attention by acting in a bizarre and threatening manner or by making outrageous claims, I'm afraid it won't help you convince people that your antenna is great any more than Cohen's behavior has helped him convince people that fractal antennas are. In fact, most people would agree that it's counterproductive.

To convince people that you have a great antenna, the first thing you need is to have a great antenna. And the question seemingly still out to the jury is: Do you?

Roy Lewallen, W7EL

3852. Re: Air-Wound Balun Design Info??

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-25 15:27:30 UTC
From: n7ws@nowhere.com
Message-ID: <3d68f3ef.3886610@news.triconet.org>
Source record: 135893

On Sun, 25 Aug 2002 05:52:00 -0700, Roy Lewallen <w7el@eznec.com> wrote:

|Brian Kelly wrote:
|
|
|>. . .
|> More wraps on larger stacked 60 series cores should be the way to go
|> at the kW level. ?
| >. . .
|
|It'd be worth a try, but I think that a lot of people running that kind
|of power are using ferrite beads strung along the outside of the coax (a
|W2DU balun). Type 43 cores are probably most often used for this. The
|advantages of this approach are simplicity, broad bandwidth (like a
|ferrite toroid), the ability to work easily with large coax, and
|relatively high power handling ability.

While I'm not concerned with portability, my balun is exactly that. I found some surplus type 43 (determined by measurement) "sleeve" cores, 1 inch long with a hole diameter just big enough to pass RG-142 through. I have about a dozen of these on the coax, inside an enclosure made from PVC water pipe that it is used for the center insulator of my dipole.

I run full power on 80 meters and haven't cooked anything, although I confess I have not tried to measure any heating. Afterall, it's sealed up and 40 feet in the air, (which should be 104 degrees today) so it's hard to reach <g>.

3853. Re: Modeling coax attached to an antenna in EZNEC

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-25 15:37:46 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <3D68F9CA.1090802@eznec.com>
Source record: 135894

Bibby wrote:
> . . .
> Nevertheless, you made a comment that I think needs to be responded to. You
> say that 'the feed system has nothing to do with the antenna's gain or
> pattern, and these are the primary things antenna programs are intended to
> calculate. The calculated antenna feedpoint impedance can be transformed
> to a value of your choice without any impact on the antenna performance at
> all, except for whatever loss the transforming network has." What antenna
> programs are you talking about?

I may not have communicated well. I see that you might have read this to say that you could tranform impedances with the antenna programs. That's not what I meant to say, and I don't know of any antenna program you can directly do the transformation with, unless you want to deal with NEC networks or do transformations strictly with transmission lines. But the transformations and network design are easily done with programs like WinSMITH.

> Antenna impedance of dipoles and dipole arrays is also of great interest and
> importance. In fact, I would say that gain/pattern are subjects that most
> amateurs only contemplate/dream about as few have the tools to measure them
> properly.

All common antenna programs will tell you the feedpoint impedance of the modeled antenna.

By contrast, impedance matching is something that most amateurs
> can, and do, do - using their VSWR meters, etc. As you say, the antenna
> feedpoint impedance can be transformed into whatever you want it to be - but
> where/how you do it can have a significant effect on the radiation pattern.
> If the antenna is fed with balance line, led away at right-angles to the
> antenna and the matching unit is out of the near-field of the antenna then
> you are correct. However, if the matching is done right up at the antenna
> feed-point, then the matching system is in, and contributes to, the
> near-field of the antenna and cannot be ignored. Because the matching unit
> is in the near-field, it will effect the performance in the far-field
> (gain/pattern). This is the thought that I was most concerned with in my
> previous response. It is a very difficult problem from a modeling point of
> view and so, more often than not, it is ignored. The difficulty in
> modeling this problem, accurately, is that it would take considerable
> computer resources to accomplish. But today, we have those resources. So
> far however, few, if any, programs exist that attempt to do this, never mind
> do it well.

That's a really interesting statement. For a matching network to actually radiate enough to compete with the antenna is something that's

never occurred to me. It would require extraordinary currents in the matching network as well as components that are extraordinarily large. The only case where I've seen this is in mobile whip loading coils. I seriously doubt that it's a measurable phenomenon in nearly any common application. There is software capable of doing the sort of complex field analysis you mention. It's in the $20k - $50k and up category. Hardly worth while for someone to write or use a program like this to model an effect that's not likely to be noticeable in the overall radiation pattern. If it really is important to you, though, such programs are available. If you can come up with one you can sell for a hundred pounds, I'm sure you'll have lots of customers.

I'll stand by my statement that matching network has no effect on the antenna pattern or gain (except, of course, the ability to reduce the efficiency due to loss).

Roy Lewallen, W7EL

3854. Re: Air-Wound Balun Design Info??

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-25 15:49:24 UTC
From: n7ws@nowhere.com
Message-ID: <3d68f86e.5037910@news.triconet.org>
Source record: 135895

On 24 Aug 2002 16:10:03 -0700, kelly@dvol.com (Brian Kelly) wrote:

|Speaking of bridges: Where/how can a ham come up with a half-decent HF
|impedance bridge for antenna work without having to send HP or GR
|$5,000 -8,000?

In addition to the low cost handheld thingies by MFJ and AEA, look for a surplus Boonton RX meter. I have two of these. They're big and still have vacuum tubes in them, but they can be very accurate, although slow to use.

Another possibility is to find an HP vector voltmeter. These cannot be used directly to measure impedance as they do not have a built in signal source but with the addition of directional couplers or homemade bridges you can make complex impedance measurements.

The downside to these is the total lack of repair parts and the necessity to know how to twist knobs and interpret results.

3855. Re: What am I emitting on 80M?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-25 15:51:31 UTC
From: n7ws@nowhere.com
Message-ID: <3d68fca1.6113443@news.triconet.org>
Source record: 135896

On Sun, 25 Aug 2002 11:51:22 GMT, cprstn54zz@att.net (Ken) wrote:

|On Sun, 25 Aug 2002 06:55:37 GMT, n7ws@nowhere.com (Wes Stewart)
|wrote:>
|>I don't know how you "verified" 60:1 but I doubt that it's anywhere near there.
|
|First, it appears that I misspoke myself. I looked at my written test
|results and SWR (without tuner) at the radio at the ends of the bands
|(nonresonant) averaged around 10.0 -- using a Radio Shack digital SWR
|meter. At one frequency, where SWR was 12.0 at the radio, I used the
|same meter on the other end of the feedline, around 8 ft from the
|feedpoint, and it read 60.0 -- which was predicted here BTW.

Please tell us how you predicted this.
|
|Folks here suggested a switch to ladderline because of the high SWR
|away from resonance. A QST article confirms that this is a good
|solution. Can you please amplify why my MFJ-986 won't be able to tune
|my antenna if fed with ladderline? It has no problem bringing the
|SWR=12.0 down to 1.0.

If the QST article was "The Lure of the Ladder Line" (or even if it wasn't) then
I suggest a look at my homepage at

http://users.triconet.org/wesandlinda/

and follow the ladder line link.

Also, if you will do yourself a favor and take advantage of the excellent (and
free!) tools available to you at Dan's site, you can learn why your tuner won't
handle the load that I predict you will see if you convert to ladder line.

3856. Re: Another trombone cap question

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-25 15:54:15 UTC
From: n7ws@nowhere.com
Message-ID: <3d68fd3e.6270450@news.triconet.org>
Source record: 135897

On Sun, 25 Aug 2002 05:59:22 -0700, Roy Lewallen <w7el@eznec.com> wrote:

|Wes Stewart wrote:
|> Consider this. If you have any air gap between the plates and the mylar, that
|> is where your voltage breakdown will occur.
|
|And it won't take much of an air gap to make the dielectric constant of
|the plastic irrelevant.

That too.

3857. Re: Fractal Antenna for sale

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-25 16:12:02 UTC
From: k1bqt@aol.com
Message-ID: <20020825121202.19454.00002874@mb-mf.aol.com>
Source record: 135898

>...he is still held in high repute in the academin world...<

You must have missed Chip's recent post announcing "retirement" from academia.

>...and still has tenure.<

To my knowledge, Chip never had tenure. Not that that's a strike against him (there's not much incentive for Universities to hand out tenure these days). In a system where poorly-paid foreign grad assistants mumbling unintelligible english do much of the undergrad teaching, it sorta makes you wonder where that 30K-per-year tuition check really goes!

Art, I think the best way to gain credibility is to present your work openly and challenge people to take their best shot at it. You'll either walk away with a lot to think about--or with confidence that you actually got it right. Leave the beyots to the mead hall.

Rick K1BQT

3858. Re: Fractal Antenna for sale

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-25 16:19:25 UTC
From: fractenna@aol.com
Message-ID: <20020825121925.18283.00002700@mb-mk.aol.com>
Source record: 135900

>Chip deserved all the aclaim that he received by being in 'the book',
>and he is still held in high repute in the academin world and still
>has tenure.

I do not know which 'ARRL book' you refer to, and I have retired as an academician; I have so noted it here a few weeks back.

I will confirm that fractal element antennas enjoy commercial success, however they are not being marketed to the radio amateur community and I see no reason to expand upon this here.

Although I appreciate your well wishes, you have made many statements which are not factually accurate in recent weeks, and I request, again, that you cease from doing so.

I am not selling any fractal antennas on this NG, nor have I done so. The thread is a bogus one--if you assume I have any connection with 'fractena@yahoo.com', which I do not.

Your question seems to tie in with notions of how disruptive technologies get accepted; although a topic I have experience in, I fear it is beyond the interests of this NG. I am sorry I cannot discuss it, other than to say that history provides many valuable guides, and human nature never changes:-)

Don't be so down on yourself: Enjoy your accomplishments Art.

Best,
Chip N1IR

3859. Cushcraft AR-10

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-25 16:19:57 UTC
From: ke1bz <ke1bz@cox.net>
Message-ID: <3D6903A4.11B75906@cox.net>
Source record: 135899

Hello all,
I just bought an AR-10 at a local flea market and it didn't come with a
Coaxial Tuning Stub. I have the directions for the antenna and it says
that it 16 5/8 inches.
Two questions:
1) Is this 50 ohm coax?
2) Is the stub shorted?
Thank you in advance for your help.

73,
Bill

3860. WTB: 1955 World Radio Handbook

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-25 16:20:37 UTC
From: Dan Henderson <dandan2@comcast.net>
Message-ID: <akb04l$8rc$1@xuxa.iecc.com>
Source record: 135902
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.boatanchors,rec.radio.broadcasting,rec.radio.shortwave

I am in the market for a 1955 World Radio Handbook. Price is no object.
Email me at: dandan2@comcast.net.

3861. WTB: How to Listen to the World

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-25 16:20:43 UTC
From: Dan Henderson <dandan2@comcast.net>
Message-ID: <akb04r$8sv$1@xuxa.iecc.com>
Source record: 135903
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.boatanchors,rec.radio.broadcasting,rec.radio.shortwave

I am in the Market for the following editions of How to Listen to the
World:

3rd, 4th, and 5th--Published prior to 1956
11th--Published in March 1965.

Price is almost no object. Email me at : dandan2@comcast.net.

3862. Re: Fractal Antenna for sale

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-25 16:22:05 UTC
From: fractenna@aol.com
Message-ID: <20020825122205.18273.00003078@mb-mk.aol.com>
Source record: 135901

>You must have missed Chip's recent post announcing "retirement" from
>academia.
>

That is correct.

:-> !

Best,
Chip N1IR

3863. Re: Modeling coax attached to an antenna in EZNEC

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-25 17:02:18 UTC
From: n7ws@nowhere.com
Message-ID: <3d68ffec.6955859@news.triconet.org>
Source record: 135904

On Sun, 25 Aug 2002 14:59:13 GMT, "Bibby" <bibby@attbi.com> wrote:

|Roy, I read your response to my response with interest. I am surprised,
|and disappointed, that others haven't offered an opinion.

That's because when Roy answers you, that's the best opinion you're going to get
and the rest of us (present company excepted, of course <g>) keep quiet.
|
|Regarding your own comments. I agree with your comments about modeling
|monopoles. The only reason for introducing it, and mentioning the infinite
|ground-plane was to show how the frill model came to be applied to dipoles.
|
|Re-reading Doug's original inquiry, I realize that I jumped to a specific
|case - a dipole - when his question was more generally stated.
|
|Nevertheless, you made a comment that I think needs to be responded to. You
|say that 'the feed system has nothing to do with the antenna's gain or
|pattern, and these are the primary things antenna programs are intended to
|calculate. The calculated antenna feedpoint impedance can be transformed
|to a value of your choice without any impact on the antenna performance at
|all, except for whatever loss the transforming network has." What antenna
|programs are you talking about?

Roy is too modest to recommend EZNEC one that he sells. However, I'm not, I
highly recommend it. There are others both freeware (MultiNEC, MMANA) and
commercial from Nittany Scientific, et.al.
|
|Antenna impedance of dipoles and dipole arrays is also of great interest and
|importance. In fact, I would say that gain/pattern are subjects that most
|amateurs only contemplate/dream about as few have the tools to measure them
|properly. By contrast, impedance matching is something that most amateurs
|can, and do, do - using their VSWR meters, etc. As you say, the antenna
|feedpoint impedance can be transformed into whatever you want it to be - but
|where/how you do it can have a significant effect on the radiation pattern.
|If the antenna is fed with balance line, led away at right-angles to the
|antenna and the matching unit is out of the near-field of the antenna then
|you are correct. However, if the matching is done right up at the antenna
|feed-point, then the matching system is in, and contributes to, the
|near-field of the antenna and cannot be ignored. Because the matching unit
|is in the near-field, it will effect the performance in the far-field
|(gain/pattern).

Why do you think this is necessarily so? Look at:

http://users.triconet.org/wesandlinda/YagiFeed-1a.jpg

and

http://users.triconet.org/wesandlinda/YagiFeed-2a.jpg

(This is a "top" view of the antenna with the tower folded over.)

Here impedance matching and a balanced-to-unbalanced transform are performed in one structure located right at the feedpoint. Are you suggesting that there is significant radiation occurring in this matching structure? It is after all a balanced line normal to the dipole.

I should add that this antenna, a 3-element Yagi, was designed using EZNEC for the electrical part (gain, F/B, Z) and spreadsheets from "Physical Design of Yagi Antennas" to calculate the mechanical properties and electrical equivalents of the element clamps, etc. I separately calculated the impedance of the stub, a balanced line over a ground plane (the boom) and putting it all together, it came out almost *exactly* as predicted. It took two very minor adjustments of the stub shorting bar and driven element length to achieve the desired match and the measured SWR bandwidth is *remarkably* close to predictions. This stuff works.

|This is the thought that I was most concerned with in my
|previous response. It is a very difficult problem from a modeling point of
|view and so, more often than not, it is ignored. The difficulty in
|modeling this problem, accurately, is that it would take considerable
|computer resources to accomplish. But today, we have those resources. So
|far however, few, if any, programs exist that attempt to do this, never mind
|do it well.

Send a fist full of thousand dollar bills to:

http://www.ansoft.com/products/hf/hfss/

3864. Re: What am I emitting on 80M?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-25 17:19:12 UTC
From: richardharrison@webtv.net
Message-ID: <10909-3D691190-340@storefull-2397.public.lawson.webtv.net>
Source record: 135907

Ken, KC2JDY wrote:
"I should mention that there is a vertical grounded flue around 30 ft long around 3 ft from the feedpoint."

The effective height of Ken`s inverted V dipole is very low. Now Ken reveals his shack height is around that of his dipole and contains a variety of grounded items including a flue pipe.

Several respondents say it`s too low. Others say they work DX with dummy load leads. It is affected by location.

Ken`s antenna is too low.

Edition 19 of the ARRL Antenna Book shows on page 3-11 patterns of a full-size, non-drooping, dipole with real, not imagined, ground clearances. Propagation gets good at 1/2-wavelength height.

Compare the groundplane vertical antenna patterns on page 3-13. A groundplane up only 1/8-wavelength has good low-angle radiation. The effects of good ground conductivity are apparent in Fig 16-A.

On page 3-14, the Antenna Book says:
"Real ground, with finite conductivity and less-than-perfect dielectric constant, can severely curtail the low-angle radiation at which verticals are supposed to excel."

"---Practical installations for 160 and 80 meters rarely allow amateurs to put up a horizontal antenna high enough to radiate effectively at low elevation angles. After all, a halfwave on 1.8 MHz is 273 feet high---."

Best regards, Richard Harrison, KB5WZI

3865. Re: Fractal Antenna for sale

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-25 17:20:27 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <qk4imu0pu4r7dilskn6bqdbbogqd8ruf3u@4ax.com>
Source record: 135905

On 25 Aug 2002 07:40:12 -0700, aunwin@fgi.net (Art Unwin KB9MZ) wrote:

>So with the Unwin antenna are we following the old adage that the
>'second or third liar doesn't stand a chance, presuming that I am
>being judged as a liar
>or I am insane?

Hi Art,

Liar? Insane? No - pathetic (given your repeated preference to embrace these negative qualities that no one but you brought to the table). I don't buy how you died (Hately, forgive them....) and rose to save us from our sins of overlooking vastly superior designs. We are tired of asking for specifics of your design and being offered views of your stigmata.

If you truly aspire to the heights of Fraudtenna coverage you need only start a few illegal lotteries, name an innocent Ham brother as a vicious serial murderer, have your best design trounced 6 times over in open competition, and begin threatening everyone here with suits over fantasized claims of imagined patent pending protection. One clear market advantage you might also emulate is to offer cyanide capsules to each customer to insure your design is not duplicated surreptitiously (also prevents those embarrassing questions of: how much more gain?). Is this really your idea of the magnanimity of a noble mission?

You wrap yourself in this mantle of the fractal, and get diss'ed for doing so in a manner that mocks your trust:
>>your facts are incorrect, and
>>I will not attempt to understand why they are even posed in this antenna forum.
Pathetic is how you can absorb that abuse with bonhomie and then rail against those who worked hard in your behalf.

73's
Richard Clark, KB7QHC

3866. Re: What am I emitting on 80M?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-25 17:38:52 UTC
From: cprstn54zz@att.net
Message-ID: <3d6915d1.451853031@news-server.optonline.net>
Source record: 135906

On Sun, 25 Aug 2002 15:51:31 GMT, n7ws@nowhere.com (Wes Stewart)
wrote:
>Please tell us how you predicted this.

I didn't predict it; Owen Duffy did. In a thread entitled "Computing
power from SWR", Owen Duffy wrote:

For those who asked, the full calculator results used to source the
above analysis (excuse the format, pasting a html page doesn't work
elegantly in Netscape 4.x):

VSWR calculator results
10W tx on 3.6MHz, 100ft RG-8/X
Input values:
Parameter Value
Transmitter power output into matched load (W) 10
Forward power (W) 24
VSWR 12
Line loss to transmitter (dB) 0
Line loss to antenna (dB) 0.55
Antenna gain (dB) 0

Calculated values:
Parameter Value
Transmission efficiency (%) 24.09
Line loss due to VSWR (dB) 5.63
Effectiveness (%) 16.42
EIRP (W) 1.64

Parameter Transmitter Antenna
Fwd Power (W) 24.000 21.145
Ref Power (W) 17.183 19.503
Net Power (W) 6.817 1.642
VSWR 12.00 49.50
Return Loss (dB) 1.5 0.4
Voltage reflection coefficient (pu) 0.846 0.960
Power reflection coefficient (pu) 0.716 0.922
Ken
(to reply via email
remove "zz" from address)

3867. Re: What am I emitting on 80M?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-25 17:52:44 UTC
From: fractenna@aol.com
Message-ID: <20020825135244.18211.00002751@mb-mk.aol.com>
Source record: 135908

>
>Ken, KC2JDY wrote:
>"I should mention that there is a vertical grounded flue around 30 ft
>long around 3 ft from the feedpoint."
>
>The effective height of Ken`s inverted V dipole is very low. Now Ken
>reveals his shack height is around that of his dipole and contains a
>variety of grounded items including a flue pipe.
>
>Several respondents say it`s too low. Others say they work DX with dummy
>load leads. It is affected by location.
>
>Ken`s antenna is too low.
>
>Edition 19 of the ARRL Antenna Book shows on page 3-11 patterns of a
>full-size, non-drooping, dipole with real, not imagined, ground
>clearances. Propagation gets good at 1/2-wavelength height.
>
>Compare the groundplane vertical antenna patterns on page 3-13. A
>groundplane up only 1/8-wavelength has good low-angle radiation. The
>effects of good ground conductivity are apparent in Fig 16-A.
>
>On page 3-14, the Antenna Book says:
>"Real ground, with finite conductivity and less-than-perfect dielectric
>constant, can severely curtail the low-angle radiation at which
>verticals are supposed to excel."
>
>"---Practical installations for 160 and 80 meters rarely allow amateurs
>to put up a horizontal antenna high enough to radiate effectively at low
>elevation angles. After all, a halfwave on 1.8 MHz is 273 feet high---."
>
>Best regards, Richard Harrison, KB5WZI
>
>
Richard,

This has already been said. Kindly see my previous posts on this.

My suggestion was to lower the line isolator to just above the ground and let
the coax radiate as a vertical radiator.

73,
Chip N1IR

3868. Re: Air-Wound Balun Design Info??

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-25 17:55:49 UTC
From: kelly@dvol.com
Message-ID: <d22b54c3.0208250955.4a9e2ccb@posting.google.com>
Source record: 135909

n2ey@aol.com (N2EY) wrote in message news:<20020824220703.28700.00000268@mb-fz.aol.com>...
>
> Looks to me that what W3RV wants is a bulletproof balun for a half-size G5RV,
> to cover 40/20/15 and maybe 10. Me, I'd look at a trap or parallel dipole to do
> that job.
>
>
That (80m)G5RV was an expedient given the circumstances. If I had the
time to fuss with it before I had to get it up I'd have cut the balun
off the feedline and directly fed the twinlead with the 8X. I'll
cheerfully take all the feedline radiation I can get with a G5RV on
Field Day. Next year there won't be a G5RV or a trap in sight.
>
>
> 73 de Jim, N2EY

w3rv

3869. Re: Update: Wanted--Kraus Edition 1 (Used)

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-25 17:59:22 UTC
From: fractenna@aol.com
Message-ID: <20020825135922.18233.00002756@mb-mk.aol.com>
Source record: 135910

Looking for 3 now. E-mail reply please.

73,
Chip N1IR

3870. Re: What am I emitting on 80M?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-25 18:08:28 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <gg7imu8eeu66uvqpk2gavll4asdf0mbo71@4ax.com>
Source record: 135911

On Sun, 25 Aug 2002 13:29:47 GMT, cprstn54zz@att.net (Ken) wrote:

>>Changing to ladderline is a last resort, and negates the need for the
>>Alpha-Delta.
>
>Could you elaborate on this please? Do you mean that I could just use
>a 100 ft long dipole (or whatever I could fit) and just tune that on
>160-10 (because high SWR wouldn't matter)? Would it radiate as well
>as my multi-wire dipole on 10 and 20 where it has separate wires? Or
>do you mean that the 40-80-160 wire with the coils would be
>unnecessary and a simple 50' wire would do the job just as well?
>
>Ken KC2JDY

BINGO

Hi Ken,

Follow the newsgroup for a couple of weeks and you will eventually
read a fair amount of correspondence to this matter.

However, back to the problem at hand. You've been advised to test the
cable, but so far not to a method that would definitely reveal a
problem.

Put a dummy load and power meter at the far end of cable, key down,
read power, key up, move meter to rig end of cable, key down, read
power, key up.

Compute the ratio of the two powers. Take the ratio's log and
multiply by 10. Multiply that product by 100, then divide by the
length in feet of your cable.

The last operation will yield your cable loss in dB/100feet, a
standard specification for cables such that I can offer some
representative values at 10MHz:
RG 58 1.5dB
RG11 0.7dB
7/8ths 0.1dB
Loss is linear to cable length, so measurement is not as critical as
compared to issues of resonance. If there is anything wrong with your
system up to the antenna, this will reveal it in a heartbeat.

If you decide to go twin line, the same mission serves as a sanity
check of your connections and transformations.

73's
Richard Clark, KB7QHC

3871. Linearity of Bird Wattmeter Slugs?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-25 18:13:43 UTC
From: fractenna@aol.com
Message-ID: <20020825141343.14960.00002002@mb-cq.aol.com>
Source record: 135912

Hi!

I have a (new) used Bird wattmeter with a couple of medium power slugs.One is for 400-2500 Megs and the other is 50- (I think)400 Megs.

I noticed that I could reasonably use the latter at 28 MHz to a fairly constant factor : in other words, the value would read wrong, but if I scale by a constant I can get the right power.

My question: how linear are these slugs at the edge of their passbands?(Is the value at 52 MHz within, say 2% precision?)

If I use a 50-400 slug at 28 MHz, will the relative scaling still hold as I decrease power?

Think of it this way--its always preferable to have the right slug. But can you use what you got if stuck?

73,
Chip N1IR

3872. Re: Using coax shield for long wire antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-25 18:26:32 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <ae8imu8fqvgio3h46k8am8djr4okvfs800@4ax.com>
Source record: 135913

On 25 Aug 2002 06:21:57 -0700, emergencyradioserv@yahoo.com (Bob)
wrote:

>Yes, I tend to agree with the fact that it would not make a good
>elevated antenna. Since I have a large roll of it and its not really
>good for use as coax feedline for me, does anyone have any good links
>for "on-the-ground" antennas for longwave reception? It would be
>fairly stealthy and I could just unroll it across an unused piece of
>the property.
>
>Thanks for the help!
>
>Bob

Hi Bob,

From the way you ask the question it seems you already anticipate the
snake-in-the-grass antenna. I was about to respond to your other
query with a suggestion of a Beverage design.

Elevate 2,3, or more wavelengths of your cable a dozen feet and listen
on the shield. If you cannot elevate it, then lay it out and listen
on the center conductor. The specifics as to if the far end is
terminated, opened, or shorted escapes me... that should resolve with
simple testing. You should have a good local ground screen (8 radials
out a couple dozen feet - use cable shield here too, along the ground;
no need to strip it, insulated will work fine - probably better).

73's
Richard Clark, KB7QHC

3873. Re: Cobbweb antenna question

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-25 18:36:35 UTC
From: Jason's iBook <jason.ingram@ntlworld.com>
Message-ID: <B98EE243.D3BE%jason.ingram@ntlworld.com>
Source record: 135914

Cheers George

Jason

On 25/8/02 2:31 am, in article 3d683783_3@news1.prserv.net, "Crazy George"
<munschNO@attglobal.net.SPAM> wrote:

> Jasdon:
> Go to:
> http://groups.google.com
> and work your way to this NG archives, and enter Cobbweb. You'll get
> plenty of advice.
>
> --
> Crazy George
> Remove NO and SPAM from return address
> Jason Ingram <jason.ingram@ntlworld.com> wrote in message
> news:B98D47C0.188EE%jason.ingram@ntlworld.com...
>> I am thinking of buying a Cobbweb antenna but would appreciate any
> comments
>> for those who may have used one first.
>>
>> TIA
>>
>> Jason
>> G7BSK
>>
>
>

3874. Re: Using coax shield for long wire antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-25 18:41:17 UTC
From: 'Doc <w5lz@icok.net>
Message-ID: <3D6924C0.E3A33AE7@icok.net>
Source record: 135915

Richard,
Terminate it in a resistor of the same value as the
coax's characteristic impedance (75 ohms). Will it be
a great antenna? Nope, but it will work. Needs to be
at least 1 wave length long, and is a 'single band' thing.
'Doc

3875. Re: What am I emitting on 80M?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-25 18:42:59 UTC
From: richardharrison@webtv.net
Message-ID: <10909-3D692533-343@storefull-2397.public.lawson.webtv.net>
Source record: 135916

Chip, N1IR wrote:
"This has already been said. Kindly see my previous posts on this."

It makes no difference who said it first. It should make a more persuasive case that Chip and the ARRL agree on the cause and effect of Ken`s antenna problem.

Best regards, Richard Harrison KB5WZI

3876. Re: Hustler 6BVT vertical

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-25 19:32:52 UTC
From: Dan/W4NTI <w4nti@mindspringnospam.com>
Message-ID: <akbbbb$ed5$1@nntp9.atl.mindspring.net>
Source record: 135917

Go pick up a copy of the recent CQ Magazine that I just got in the mail. It has an article about what we are discussing. I have not read it through yet, but looks like it is going against everything we 'thought' we knew.

Might be a good read for you.

Dan/W4NTI

"Jeff Y." <vswrref@hotmail.com> wrote in message news:3d68300e.1270428@national-news.stargate.net...
> Hi Dan,
>
> Thanks for th info and your right, the base would be part of the
> "ground plane" and insulating the wire would be fruitless. I had seen
> that on the review of the 6BTV on eham.net and 1 or 2 people
> "insualted" the wires from the earth surface and had better results
> and tuned easier. Makes you wonder. No need to worry about slitting
> the grass to bury radials. This is Las Vegas and there is no
> vegetation in the back yard, just small decorative stones, a cross
> between lava rock and pebbles, which can easily be moved, lay the
> wire, then cover. I still have a month or more before I make up my
> mind what I want to do and all of this info is helping quite a bit! :)
>
>
> Jeff Y.
>
>
> On Sat, 24 Aug 2002 16:47:42 -0500, "Dan/W4NTI"
> <w4nti@mindspringnospam.com> wrote:
>
> >There is no need to 'insulate the wires from the earth' if you are ground
> >mounting the vertical antenna. The wires couple to the earth and are part
> >of the 'ground screen'. In fact the wires should be buried just under the
> >surface. Slit the grass and stick it in.
> >
> >Perhaps you were thinking of say a 1/2 wave Gap, linear loaded jobber. This
> >one does have three insulated wires laying on the ground. But I don't think
> >this is what you mean.
> >
> >Dan/W4NTI
> >

> >"Jeff Y." <vswrref@hotmail.com> wrote in message
> >news:3d671620.16735650@national-news.stargate.net...
> >> Thanks for the info. I've never had a vertical but know how they can
> >> be tricky on using or not using radials. IN the situation I have
> >> facing me, the only option will be to lay radials down. I've read in
> >> users reprots and the manual to have the radials insulated from the
> >> ground. So it would require to lay insulated wire on the ground and
> >> seal the end of the wire so it won't come in contact with the earth.
> >> I have to investigate that further to make sure it's true.
> >>
> >> Yes indeed. A vertical dipole is better than a 1/4 vertical. It
> >> would be nice to make a more effecient vertical.
> >>
> >>
> >> Jeff Y.
> >>
> >>
> >> On Fri, 23 Aug 2002 11:20:54 -0500, "Dan/W4NTI"
> >> <w4nti@mindspringnospam.com> wrote:
> >>
> >> >Unless you have a VERY GOOD GROUND under the vertical most of the
> >radiation
> >> >will just heat the near vicinity soil.
> >> >
> >> >Good ground meaning bunches of radials. Many studies have been made
on
> >this
> >> >subject over the years,
> >> >
> >> >A good compromise is a counterpoise above ground system, which is
what I
> >> >described to you earlier.
> >> >
> >> >The 4/6BTV is basically a 1/4 wave electrical radiator. Don't confuse
> >this
> >> >with, say, the GAP which is a center fed vertical dipole for all
> >practical
> >> >purposes. Which btw, is a much better design than ANY 1/4 waver.
> >> >
> >> >Dan/W4NTI
> >> >
> >> >"Jeff Y." <vswrref@hotmail.com> wrote in message
> >> >news:3d659f03.3652491@national-news.stargate.net...
> >> >> Hi Dan,
> >> >>
> >> >> Thanks for the info. So the ground mount gave you problems. Hmmmm,
> >> >> kinda strange since others I've talked with said it worked best
ground
> >> >> mounted but a real burden when elevated. Maybe ground conditions
are

> >> >> a big factor as well.
> >> >>
> >> >> I'm debating between this and the DX-77 because of the tilt over. I
> >> >> know the 6BTV ins't a tilt over but I can always rig that up if I
need
> >> >> to. More info to ponder. Thanks again, Dan!
> >> >>
> >> >>
> >> >> Jeff Y.
> >> >>
> >> >>
> >> >>
> >> >> On Thu, 22 Aug 2002 17:53:23 -0500, "Dan/W4NTI"
> >> >> <w4nti@mindspringnospam.com> wrote:
> >> >>
> >> >> >I had the 4BTV for many years. I assume it is basically the same
as
> >the
> >> >> >6BTV other than a few more bands.
> >> >> >
> >> >> >Actually I had the 5BTV. It had the KW 80m resonator.
> >> >> >
> >> >> >I agree...it is not good on 80m anywhere. Its too short you know.
> >> >> >
> >> >> >On 40 I found it worked out quite well. In Germany, when I was
DA2LJ,
> >I
> >> >> >used the 4BTV sticking out of the top floor attic window in the
roof.
> >> >Ran
> >> >> >one radial per band. Worked gangbusters. Of course it was 110
feet
> >in
> >> >the
> >> >> >air at that time...hi.
> >> >> >
> >> >> >Back stateside I used it in my backyard by putting it on a 10 foot
> >pole.
> >> >> >Then running a screen of interconnected chicken wire as a above
ground
> >> >> >counterpoise. Seemed to do quite well that way too.
> >> >> >
> >> >> >The worst situation I used it in was ground mounting with no
radials.
> >> >> >
> >> >> >Hope that helps.
> >> >> >
> >> >> >Dan/W4NTI
> >> >> >
> >> >> >"IE" <m9191@abc.se> wrote in message

> >> >> >news:us8amu8gkj1rh457kemae36tfiu4aat3f4@4ax.com...
> >> >> >> Hi,
> >> >> >>
> >> >> >> I have used the 6BVT for four years. First I had it mounted on
> >ground
> >> >> >> and last two years 3 meters above with radials going out from the
> >low
> >> >> >> point of the antenna. (Just above the roof of a building and wall
> >> >> >> mounted). Radials are going in all directions.
> >> >> >>
> >> >> >> Compared to my beam it is a big difference (the beam is much,
much
> >> >> >> better). And for 80 meter I never use it (very narrow and not
good
> >> >> >> compared to my wire antennas), But I like it since it is easy to
> >play
> >> >> >> with. On 30 and 40 I use it a lot and have worked many DX.
> >> >> >>
> >> >> >> This fall I will add more radials to it since I have not been
fair
> >to
> >> >> >> the antenna. I have about 8 radials today in different lengths
and
> >> >> >> with very weak copper wire. I think I can get much more out of
this
> >> >> >> antenna with better radials and thicker wire.
> >> >> >>
> >> >> >> The SWR is good on all bands. I have tuned the 80 meter part to
> >3.500
> >> >> >> and SWR is low there as well. But SWR is one thing. I still
prefer a
> >> >> >> wire dipole on 80. It is a question of S-units in difference.
> >> >> >>
> >> >> >> I am very impressed of the possibillity for the antenna to take
care
> >> >> >> of hard wind. First years I was nervous but today I trust the
> >antenna
> >> >> >> in all WX.
> >> >> >>
> >> >> >> This antenna is connected to the 2nd antenna connector on a TS870
so
> >I
> >> >> >> have never used it for higher power then 70-80 W. That power it
> >takes
> >> >> >> care of.
> >> >> >>
> >> >> >> Earlier I have had other verticals. I can't say for sure this one
> >> >> >> works better but I feel so.
> >> >> >>
> >> >> >> I have a computer LAN in the same building and this antenna picks

up
> >> >> >> more radiation from the LAN and TV-sets than a dipole or a beam.
> >> >> >>
> >> >> >> In conclusion I like the antenna and think it is a nice multiband
> >> >> >> vertical. I should have done the work with radials earlier. My
> >feeling
> >> >> >> are that it worked better ground mounted, due to grounding, then
3
> >> >> >> meters up. This antenna will stay with me for years.
> >> >> >>
> >> >> >>
> >> >> >>
> >> >> >>
> >> >> >> On Thu, 22 Aug 2002 15:55:47 GMT, rong@computer.net (Ron
> >> >> >> Goldstein--KA2IIA) wrote:
> >> >> >>
> >> >> >> >vswrref@hotmail.com (Jeff Y.) wrote:
> >> >> >> >
> >> >> >> >>Hi all!
> >> >> >> >>
> >> >> >> >>Wondering if anybody is currently using, or has used the
Hustler
> >6BVT
> >> >> >> >>HF vertical and what your thoughts, likes and dislikes of it,
are.
> >> >> >> >>How does it work on the bands, with or without the radials.
> >Looking
> >> >> >> >>forrward to seeing the posts.
> >> >> >> >>
> >> >> >> >>
> >> >> >> >>Jeff Y.
> >> >> >> >>==========
> >> >> >> >Hi Jeff,
> >> >> >> >
> >> >> >> > I've had a 5BTV (80, 40, 20, 15, & 10) since I've been
licensed
> >> >(1980),
> >> >> >> >and it has given me no problems in the 22 years it has been up.
> >It's
> >> >> >mounted on
> >> >> >> >a 3 foot piece of inch & a half pipe which is driven 2 feet into
> >the
> >> >> >ground in
> >> >> >> >my backyard. I have no ground radials. Within the first 2 years
of
> >> >using
> >> >> >> >it, I
> >> >> >> >accomplished WAS, WAC, and DXCC (100 countries). I think it's a
> >great
> >> >> >antenna

> >> >> >> >for a vertical.
> >> >> >> >**
> >> >> >> > Ron Goldstein.....KA2IIA
> >> >> >> > STAY YOUNG---DRIVE A VINTAGE 427 CORVETTE.
> >> >> >> > KEEP YOUR MIND ACTIVE---BECOME AN AMATEUR RADIO OPERATOR.
> >> >> >> >
> >> >> >> >REMEMBER, THERE ARE NO STRANGERS IN AMATEUR RADIO, ONLY FRIENDS
> >> >> >> > THAT WE HAVE NOT YET MET.
> >> >> >> > rong@computer.net******ka2iia@arrl.net
> >> >> >>
> >> >> >
> >> >> >
> >> >>
> >> >
> >> >
> >>
> >
> >
>

3877. Re: What am I emitting on 80M?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-25 19:36:17 UTC
From: cprstn54zz@att.net
Message-ID: <3d692df2.458029937@news-server.optonline.net>
Source record: 135918

On Sun, 25 Aug 2002 18:08:28 GMT, Richard Clark <kb7qhc@attbi.com>
wrote:
>Put a dummy load and power meter at the far end of cable, key down,
>read power, key up, move meter to rig end of cable, key down, read
>power, key up.
>Compute the ratio of the two powers. Take the ratio's log and
>multiply by 10. Multiply that product by 100, then divide by the
>length in feet of your cable.

Thank you for something I understand. To do this right, I have to get
to my feedpoint, which requires some effort. Some time this week I
will do it.

So -- anticipating things a bit -- if I find loss per 100 ft. of say
under 1 dB for my whole RG-8X feedline plus current balun across the
whole HF spectrum, then my feedline is probably OK.

I would still have to decide whether replacing the coax with ladder
line will help or will just overload my tuner.

To test a ladder line feedline with a dummy load having an SO-239
connector, do I need a fancy balun? Or just connect the ladder line
leads the sheathing and center conductor the cable out of a PL-259?

Ken KC2JDY

Ken
(to reply via email
remove "zz" from address)

3878. Re: What am I emitting on 80M?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-25 19:40:26 UTC
From: fractenna@aol.com
Message-ID: <20020825154026.02277.00002699@mb-dd.aol.com>
Source record: 135819

>
>Chip, N1IR wrote:
>"This has already been said. Kindly see my previous posts on this."
>
>It makes no difference who said it first. It should make a more
>persuasive case that Chip and the ARRL agree on the cause and effect of
>Ken`s antenna problem.
>
>Best regards, Richard Harrison KB5WZI
>

Well its always helpful to have corroboration on the point Richard; perhaps I was under the wrong impression that you had ignored the advice so proferred?

73,
Chip N1IR

3879. Re: What am I emitting on 80M?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-25 19:42:23 UTC
From: fractenna@aol.com
Message-ID: <20020825154223.02277.00002700@mb-dd.aol.com>
Source record: 135821

>>Put a dummy load and power meter at the far end of cable, key down,
>>read power, key up, move meter to rig end of cable, key down, read
>>power, key up.
>>Compute the ratio of the two powers. Take the ratio's log and
>>multiply by 10. Multiply that product by 100, then divide by the
>>length in feet of your cable.
>
>Thank you for something I understand. To do this right, I have to get
>to my feedpoint, which requires some effort. Some time this week I
>will do it.
>
>So -- anticipating things a bit -- if I find loss per 100 ft. of say
>under 1 dB for my whole RG-8X feedline plus current balun across the
>whole HF spectrum, then my feedline is probably OK.
>
>I would still have to decide whether replacing the coax with ladder
>line will help or will just overload my tuner.
>
>To test a ladder line feedline with a dummy load having an SO-239
>connector, do I need a fancy balun? Or just connect the ladder line
>leads the sheathing and center conductor the cable out of a PL-259?
>
>Ken KC2JDY
>
>Ken
>(to reply via email
>remove "zz" from address)
>

The problem is pattern not ladder.

Either:

1) Change the height;
2) Make the antenna a vertical radiator by changing the line isolator position
and let the coax radiate.

73,
Chip N1IR

3880. Re: What am I emitting on 80M?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-25 19:45:37 UTC
From: cprstn54zz@att.net
Message-ID: <3d6932f2.459309687@news-server.optonline.net>
Source record: 135822

On Sun, 25 Aug 2002 13:42:59 -0500 (CDT), richardharrison@webtv.net
(Richard Harrison) wrote:
>Chip, N1IR wrote:
>"This has already been said. Kindly see my previous posts on this."
>
>It makes no difference who said it first. It should make a more
>persuasive case that Chip and the ARRL agree on the cause and effect of
>Ken`s antenna problem.

If I might iterject here, is my 40 ft high feedpoint to low because it
should be 273 ft? Or because it should be 50 ft.?

The former I can't do anything to remedy. The latter I might be able
to address, with some effort.

Ken KC2JDY

Ken
(to reply via email
remove "zz" from address)

3881. Horizontal Loop Question

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-25 19:49:04 UTC
From: karl <wb0vzz@email.msn.com>
Message-ID: <3d69334a$1@news.sihope.com>
Source record: 135820

Dear members of the group,

My current antenna is as follows:

A horizontal loop with a circumference of about 141 feet (1005/7.15 = 104.6 feet). It's 8 feet above the roof of a four story apartment building. It's fed via an autotuner with 450 ohm ladderline. It tunes well on 40/20/17/20 which are my bands of interest. The SWR is typically about 1.2 to 1.6.

I am considering increasing the size of the loop. The available area on the roof would allow for a loop of about 45 feet by 75 feet. That would increase the circumference to 240 feet. This would figure to a frequency of 4.2 MHz. The shape would not be a square, obviously, but maybe it's too rectangular.

Would this increase to a "random" size offer any benefits, or would I experience a degradation in performance?

Yes, there is the popular school of thought of "try it and see." Please forgive my laziness for asking for input from the group as to opinions and/or someone's quick modeling output. If there is a clear advantage/disadvantage to trying it -- well, to the roof I go!

This experimentation process involves construction, usage for a few weeks to allow for variations in band conditions, decision, and possibly repeating the process. The current antenna is constructed in a semi-stealth fashion using enameled wire, fishline, cable ties for insulators, etc. Once a final design is determined, I'm going to build it with more stout materials; 14 AWG flexweave, conventional insulators, sturdier supports, and such. I live in Minnesota, and the winters are long and hard. The final version must withstand the winter (fingers crossed).

Thanks in advance to the replies.

73, Karl K0TBT

3882. Re: What am I emitting on 80M?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-25 20:02:21 UTC
From: fractenna@aol.com
Message-ID: <20020825160221.10502.00002913@mb-cr.aol.com>
Source record: 135823

>
>The former I can't do anything to remedy. The latter I might be able
>to address, with some effort.
>
>Ken KC2JDY
>

Even a short piece of radiating coax (that is the 40 ft) will give you substantial improvements on 80 and 160 for DX.

Is it really not possible to insert a 40 ft section of coax at the feedpoint down to the line isolator?

I will be the first to apologize for giving the wrong answer if this 5 minute experiment failed...

73,
Chip N1IR

3883. Re: What am I emitting on 80M?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-25 20:08:23 UTC
From: n7ws@nowhere.com
Message-ID: <3d692c89.18379378@news.triconet.org>
Source record: 135824

On Sun, 25 Aug 2002 17:38:52 GMT, cprstn54zz@att.net (Ken) wrote:

Okay, I give up. I can't hit a moving target.

First it was: "At the ends of the low bands, however, untuned SWR goes to around 6.0 at the radio."

Then it was: "At one frequency, where SWR was 12.0 at the radio,..."

The "end of the band" in the example below is 3.6 MHz and the topic spans two (or is it more) threads.

I don't know what "calculator" was used below but you cannot predict an exact line loss based only upon the input SWR.

|On Sun, 25 Aug 2002 15:51:31 GMT, n7ws@nowhere.com (Wes Stewart)
|wrote:
|>Please tell us how you predicted this.
|
|I didn't predict it; Owen Duffy did. In a thread entitled "Computing
|power from SWR", Owen Duffy wrote:
|
|For those who asked, the full calculator results used to source the
|above analysis (excuse the format, pasting a html page doesn't work
|elegantly in Netscape 4.x):
|
|
|VSWR calculator results
|10W tx on 3.6MHz, 100ft RG-8/X
|Input values:
|Parameter Value
|Transmitter power output into matched load (W) 10
|Forward power (W) 24
|VSWR 12
|Line loss to transmitter (dB) 0
|Line loss to antenna (dB) 0.55
|Antenna gain (dB) 0
|
|Calculated values:
|Parameter Value
|Transmission efficiency (%) 24.09
|Line loss due to VSWR (dB) 5.63
|Effectiveness (%) 16.42
|EIRP (W) 1.64
|
|

|Parameter Transmitter Antenna
|Fwd Power (W) 24.000 21.145
|Ref Power (W) 17.183 19.503
|Net Power (W) 6.817 1.642
|VSWR 12.00 49.50
|Return Loss (dB) 1.5 0.4
|Voltage reflection coefficient (pu) 0.846 0.960
|Power reflection coefficient (pu) 0.716 0.922
|Ken
|(to reply via email
|remove "zz" from address)

3884. Re: Fractal Antenna for sale

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-25 20:36:51 UTC
From: fractena@yahoo.com
Message-ID: <653d2ee5.0208251236.3d896bc7@posting.google.com>
Source record: 135825

fractenna@aol.com (Fractenna) wrote in message
news:<20020824163002.18266.00002826@mb-mk.aol.com>...
> I have nothing to do with this person who signs under 'fractena@yahoo.com'. It
> is not me. It is no one I know of.

It's funny what one post will do, even when you don't reply to the replies. :)

3885. Re: Modeling coax attached to an antenna in EZNEC

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-25 20:50:44 UTC
From: Bibby <bibby@attbi.com>
Message-ID: <Eqba9.243465$UU1.40361@sccrnsc03>
Source record: 135826

If I restrict my remarks to "freely available", "available at low cost", "public domain", etc., then I think that we are all in violent agreement.

Wes, your design looks very interesting. Were you able to measure the gain/pattern? If so, how and what were the results?

Roy, my thinking on antennas is often biased towards thinking in the vhf/uhf application range. There, as you know, much of the conventional antenna theory is "first order" at best due to the failure of various assumptions, particularly that radii are less than 0.01 wavelengths. Consequently, I spend considerable time and energy chasing "second order" effects. Modeling an 'in situ' matching network may be one of those things.

Thanks to Roy and Wes for their comments.

Malcolm, W1/GW3NJY

P.S. Roy did you really mean pounds or euros?!

"Wes Stewart" <n7ws@nowhere.com> wrote in message news:3d68ffec.6955859@news.triconet.org...
> On Sun, 25 Aug 2002 14:59:13 GMT, "Bibby" <bibby@attbi.com> wrote:
>
> |Roy, I read your response to my response with interest. I am surprised,
> |and disappointed, that others haven't offered an opinion.
>
> That's because when Roy answers you, that's the best opinion you're going to get
> and the rest of us (present company excepted, of course <g>) keep quiet.
> |
> |Regarding your own comments. I agree with your comments about modeling
> |monopoles. The only reason for introducing it, and mentioning the infinite
> |ground-plane was to show how the frill model came to be applied to dipoles.
> |
> |Re-reading Doug's original inquiry, I realize that I jumped to a specific
> |case - a dipole - when his question was more generally stated.
> |
> |Nevertheless, you made a comment that I think needs to be responded to. You
> |say that 'the feed system has nothing to do with the antenna's gain or
> |pattern, and these are the primary things antenna programs are intended to
> |calculate. The calculated antenna feedpoint impedance can be transformed

> |to a value of your choice without any impact on the antenna performance
at
> |all, except for whatever loss the transforming network has." What
antenna
> |programs are you talking about?
>
> Roy is too modest to recommend EZNEC one that he sells. However, I'm not,
I
> highly recommend it. There are others both freeware (MultiNEC, MMANA) and
> commercial from Nittany Scientific, et.al.
> |
> |Antenna impedance of dipoles and dipole arrays is also of great interest
and
> |importance. In fact, I would say that gain/pattern are subjects that
most
> |amateurs only contemplate/dream about as few have the tools to measure
them
> |properly. By contrast, impedance matching is something that most
amateurs
> |can, and do, do - using their VSWR meters, etc. As you say, the antenna
> |feedpoint impedance can be transformed into whatever you want it to be -
but
> |where/how you do it can have a significant effect on the radiation
pattern.
> |If the antenna is fed with balance line, led away at right-angles to the
> |antenna and the matching unit is out of the near-field of the antenna
then
> |you are correct. However, if the matching is done right up at the
antenna
> |feed-point, then the matching system is in, and contributes to, the
> |near-field of the antenna and cannot be ignored. Because the matching
unit
> |is in the near-field, it will effect the performance in the far-field
> |(gain/pattern).
>
> Why do you think this is necessarily so? Look at:
>
> http://users.triconet.org/wesandlinda/YagiFeed-1a.jpg
>
> and
>
> http://users.triconet.org/wesandlinda/YagiFeed-2a.jpg
>
> (This is a "top" view of the antenna with the tower folded over.)
>
> Here impedance matching and a balanced-to-unbalanced transform are
performed in
> one structure located right at the feedpoint. Are you suggesting that
there is
> significant radiation occurring in this matching structure? It is after

all a
> balanced line normal to the dipole.
>
> I should add that this antenna, a 3-element Yagi, was designed using EZNEC
for
> the electrical part (gain, F/B, Z) and spreadsheets from "Physical Design
of
> Yagi Antennas" to calculate the mechanical properties and electrical
equivalents
> of the element clamps, etc. I separately calculated the impedance of the
stub,
> a balanced line over a ground plane (the boom) and putting it all
together, it
> came out almost *exactly* as predicted. It took two very minor
adjustments of
> the stub shorting bar and driven element length to achieve the desired
match and
> the measured SWR bandwidth is *remarkably* close to predictions. This
stuff
> works.
>
> |This is the thought that I was most concerned with in my
> |previous response. It is a very difficult problem from a modeling point
of
> |view and so, more often than not, it is ignored. The difficulty in
> |modeling this problem, accurately, is that it would take considerable
> |computer resources to accomplish. But today, we have those resources.
So
> |far however, few, if any, programs exist that attempt to do this, never
mind
> |do it well.
>
> Send a fist full of thousand dollar bills to:
>
> http://www.ansoft.com/products/hf/hfss/
>
>

3886. Re: Fractal Antenna for sale

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-25 20:57:59 UTC
From: k1bqt@aol.com
Message-ID: <20020825165759.10550.00002653@mb-cr.aol.com>
Source record: 135827

>No - pathetic (given your repeated preference to embrace these negative qualities that no one but you brought to the table).<

That's a little harsh, Richard.

However, Art, it might be as counterproductive to discuss antenna design issues with your doctor as it is to discuss your seretonin uptake here.

Rick K1BQT

3887. Re: What am I emitting on 80M?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-25 21:15:02 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <3D6948D6.8090509@eznec.com>
Source record: 135828

By "line isolator" I assume you mean a common mode choke, or "current balun". This device doesn't abruptly stop current at one point while allowing radiation from all points above it. Depending on its position in wavelengths relative to the antenna and the length and orientation of the line above and below the antenna, its effect can be to reduce current dramatically on the entire feedline or to simply redistribute current. So, although it might (or might not) be advantageous to have a radiating feedline, putting a balun or "line isolator" at the bottom of the feedline doesn't assure line radiation above that point.

Roy Lewallen, W7EL

Fractenna wrote:
> Richard,
>
> This has already been said. Kindly see my previous posts on this.
>
> My suggestion was to lower the line isolator to just above the ground and let
> the coax radiate as a vertical radiator.
>
> 73,
> Chip N1IR

3888. Re: What am I emitting on 80M?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-25 21:20:50 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <6piimukif25v0fea7rjpths2rvdfj7k2s3@4ax.com>
Source record: 135829

On Sun, 25 Aug 2002 19:36:17 GMT, cprstn54zz@att.net (Ken) wrote:

>
>To test a ladder line feedline with a dummy load having an SO-239
>connector, do I need a fancy balun? Or just connect the ladder line
>leads the sheathing and center conductor the cable out of a PL-259?
>
>Ken KC2JDY

Hi Ken,

You will need either a Dummy Load equal to the characteristic Z of the
feed line (50/75/90/200/300/600)

OR

You will need a lossless (or low loss) impedance transformer to shift
between that same Z & 50 Ohm Dummy Load.

It is not difficult to obtain useful transformers, and this test will
separate out the best of them.

73's
Richard Clark, KB7QHC

3889. Re: Antenna Theory/Experiment Book Recommendation

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-25 21:21:11 UTC
From: François Paré <francoispare2002@yahoo.ca>
Message-ID: <3D6948C0.7060705@yahoo.ca>
Source record: 135866

Jake wrote:
> Looking for book recommendations regarding antenna theory/experiments to
> learn more about antennas.
>
> After passing my technician exam, I only have basic knowledge of antennas.
> I do not fully understand transmission lines (ladder vs coax), ohm matching
> (seems like there's different types of resistance terminology), etc. I
> would really like to understand more about the different types of antennas,
> what they are trying to achieve, and hearing (seeing, if there's models or
> diagrams) the difference between modifications. For me, the best way to
> learn is to read about it, study the theory, experiment, and learn by doing.
> I'd like to emphasize on a book based on experiments with explanations.
>
> Any book recommendations to start out with?
>
> Thanks in advanced,
>
> Jake
>
>

Hi Jake.

I have 3 other suggestions. I've been writing basic technical notes
for military radio operators and hams like myself. Yes the arrl antenna
handbook is the bible but there is also:

Cubical Quad antennas, William Orr and Stuart Cowan (RAC)
Practical Wire Antennas, John D Heys G3BDQ (RSGB)(great for novice hams)

and of course the superb ...

Antennas and Techniques for LOW-BAND DXing, John Delvoldere,ON4UN (ARRL)

Well there's my contribution ...
Francois.

3890. Re: Fractal Antenna for sale

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-25 21:46:39 UTC
From: fractenna@aol.com
Message-ID: <20020825174639.10561.00002363@mb-cr.aol.com>
Source record: 135830

>
>fractenna@aol.com (Fractenna) wrote in message
>news:<20020824163002.18266.00002826@mb-mk.aol.com>...
>> I have nothing to do with this person who signs under 'fractena@yahoo.com'.
>It
>> is not me. It is no one I know of.
>
>It's funny what one post will do, even when you don't reply to the replies.
>:)
>

When you impersonate someone, and use the internet to hide your identity, and don't reply to queries via e-mail, its not surprising that folks feel duped and taken advantage of.

I suspect that you will find out my sense of injury on the matter--which continues by others off this NG.

If you have any sense of common decency you will offer me and others here the respect of not impersonating others.

NC

3891. Re: Appropriate Choke for 500-800 Mhz?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-25 21:53:58 UTC
From: fractenna@aol.com
Message-ID: <20020825175358.10528.00002668@mb-cr.aol.com>
Source record: 135831

>We have a repeater in the presence of 250 Kw UHF TV transmitter. We are not
>experiencing any pronounced problems with our 2m repeater @ 300', but wanted
>to take all precautions. My questions:
>
>1. What would be the proper toroid material and who to order it from?
>
>2. What should be choked?
>
>a. Main feedline to the antenna (at the duplexer, I would gather)?
>b. Rx and Tx cables from the duplexer (at the input to the Rx and ouput of
>Tx) ?
>c. Power cables to the repeater (as they enter the repeater case)?
>
>TIA
>--
>hasan schiers, N0AN
>schiers@netins.net
>

Use #24 or #28 ferrite collars on all cabling.

73,
Chip N1IR

3892. Re: Horizontal Loop Question

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-25 22:15:58 UTC
From: John Tait <bravo@iol.ie>
Message-ID: <yGca9.1403$cP3.3238@news.iol.ie>
Source record: 135832

Hi Karl..
Your 240ft loop,fed with about 40ft of 450Ohm ladderline will
give you a low SWR on 80m.(no tuner required, but a choke balun would be
helpful at the shack end of the ladderline). If you add a 1/4 w/l of coax
for 40m to the ladderline, it will also resonate on 40m. However, if your
ATU is of decent quality, I'd expect the loop to be excellent on all bands
80 through 10m, and it would work reasonably OK on 160m too. With the
dimensions that you propose, it is a W9LX on 80m. If you opened the loop at
the opposite side to the feed, you'd have a bent 160m dipole..
'been there...done that... have the T shirt.. Loops are great...but
I'm biased..!!
73
John EI7BA http://www.iol.ie/~bravo/

"karl" <wb0vzz@email.msn.com> wrote in message
news:3d69334a$1@news.sihope.com...
> Dear members of the group,
>
> My current antenna is as follows:
>
> A horizontal loop with a circumference of about 141 feet (1005/7.15 =
104.6
> feet). It's 8 feet above the roof of a four story apartment building.
It's
> fed via an autotuner with 450 ohm ladderline. It tunes well on
40/20/17/20
> which are my bands of interest. The SWR is typically about 1.2 to 1.6.
>
> I am considering increasing the size of the loop. The available area on
the
> roof would allow for a loop of about 45 feet by 75 feet. That would
> increase the circumference to 240 feet. This would figure to a frequency
of
> 4.2 MHz. The shape would not be a square, obviously, but maybe it's too
> rectangular.
>
> Would this increase to a "random" size offer any benefits, or would I
> experience a degradation in performance?
>
> Yes, there is the popular school of thought of "try it and see." Please
> forgive my laziness for asking for input from the group as to opinions
> and/or someone's quick modeling output. If there is a clear
> advantage/disadvantage to trying it -- well, to the roof I go!
>

> This experimentation process involves construction, usage for a few weeks
to
> allow for variations in band conditions, decision, and possibly repeating
> the process. The current antenna is constructed in a semi-stealth fashion
> using enameled wire, fishline, cable ties for insulators, etc. Once a
final
> design is determined, I'm going to build it with more stout materials; 14
> AWG flexweave, conventional insulators, sturdier supports, and such. I
live
> in Minnesota, and the winters are long and hard. The final version must
> withstand the winter (fingers crossed).
>
> Thanks in advance to the replies.
>
> 73, Karl K0TBT
>
>

Outgoing mail is certified Virus Free.
Checked by AVG anti-virus system (http://www.grisoft.com).
Version: 6.0.384 / Virus Database: 216 - Release Date: 21/08/2002

3893. Re: Appropriate Choke for 500-800 Mhz?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-25 23:26:57 UTC
From: k1bqt@aol.com
Message-ID: <20020825192657.18023.00003076@mb-fx.aol.com>
Source record: 135833

>Use #24 or #28 ferrite collars on all cabling.<

Not familiar with those mixes. If you're using a Fair-Rite product, use 43 or 61 mix--depending on which end of the UHF spectrum you're dealing with (43 toward the low end and 61 near the higher end). You can mix them, too.

Rick K1BQT

3894. Re: Ham flavored Linux :)

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-26 00:10:24 UTC
From: moebush <moebush@singapore.hm>
Message-ID: <Qlea9.15139$ja.2854033@twister.socal.rr.com>
Source record: 135834

I use Mandrake 8.2 and love it.

Stan
AH6JR

newsguy wrote:

> Just wanting to know if one Linux distro is favored over others in regard to
> Amatuer radio and electronics usefulness ? So far I am liking Debian, just
> looking for others ideas please.
> Thanks!
>
>

3895. Re: Appropriate Choke for 500-800 Mhz?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-26 00:11:48 UTC
From: fractenna@aol.com
Message-ID: <20020825201148.25412.00002504@mb-cv.aol.com>
Source record: 135835

>>Use #24 or #28 ferrite collars on all cabling.<
>
>Not familiar with those mixes. If you're using a Fair-Rite product, use 43 or
>61 mix--depending on which end of the UHF spectrum you're dealing with (43
>toward the low end and 61 near the higher end). You can mix them, too.
>
>Rick K1BQT
>

These do pretty well up to a Gig. I use them daily.

73,
Chip N1IR

3896. Help!!

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-26 00:12:43 UTC
From: RalphE <k4ffa@comcast.net>
Message-ID: <%nea9.86158$Aw4.3614678@bin2.nnrp.aus1.giganews.com>
Source record: 135836

I just received a complete Hygain TH-7DX, but I don't a instructional manual
of putting this huge antenna together.
Does anyone have a manual they scan or copy for me. I would gladly
reimburse for the copy fees and postage.

Thanks,

Phillip Johnson KB4I

3897. Re: Appropriate Choke for 500-800 Mhz?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-26 01:14:36 UTC
From: k1bqt@aol.com
Message-ID: <20020825211436.25311.00002312@mb-cv.aol.com>
Source record: 135837

>These do pretty well up to a Gig. I use them daily.<

Interesting--I'd like to test them. Can you share a manufacturer, part number, website, permiability?

Rick K1BQT

3898. Re: Linearity of Bird Wattmeter Slugs?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-26 01:53:54 UTC
From: gaschafer@attbi.com
Message-ID: <3d698985.6561399@netnews.attbi.com>
Source record: 135838

On 25 Aug 2002 18:13:43 GMT, fractenna@aol.com (Fractenna) wrote:

>Hi!
>
>I have a (new) used Bird wattmeter with a couple of medium power slugs.One is
>for 400-2500 Megs and the other is 50- (I think)400 Megs.
>
>I noticed that I could reasonably use the latter at 28 MHz to a fairly constant
>factor : in other words, the value would read wrong, but if I scale by a
>constant I can get the right power.
>
>My question: how linear are these slugs at the edge of their passbands?(Is the
>value at 52 MHz within, say 2% precision?)
>
> If I use a 50-400 slug at 28 MHz, will the relative scaling still hold as I
>decrease power?
>
>Think of it this way--its always preferable to have the right slug. But can you
>use what you got if stuck?
>
>73,
>Chip N1IR

Don't know what kind of slugs you have but the ones I have seen in
that range go from 400 -
1000 mhz.
The 50 mhz one goes from 50 - 125 mhz.

But yes they will work outside those ranges quite well. The higher
power the slug the broader
the bandwidth it is. For example a (500C), 500 watt 100-250 mhz slug
looks nearly flat from
20 mhz to 1000 mhz. It's response is down about 1 db at each end.

Compared to a (100C), 100 watt 100-250mhz slug which is down about 3
db at 20 mhz and
down about 5 db at 1000 mhz.

A (10C), 10 watt 100-250 mhz slug is down about 9 db at 20 mhz and
down about 8 db at
1000 mhz.

From the chart that I have it looks like the 100C starts to fall off
at around 50 mhz. At 30 mhz it
looks like it is down about 1.5 db and down 3 db at 20 mhz. On the
high end it starts to fall off

at about 400 mhz.

I don't have a chart for the 50 mhz slug but it's response will
probably be similar as a percent of
frequency difference.

The linearity should be the same if in band or out of band with the
slug.

At best the Bird accuracy is + - 5% of FULL scale with the proper
frequency range slug.
Remember with a 100 watt slug that means the accuracy is + - 5 watts
on any part of the scale.
So if you are measuring 25 watts with a 100 watt slug the error can be
as much as + - 20%!

73
Gary K4FMX

3899. Re: Cobbweb antenna question

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-26 02:10:34 UTC
From: Crazy George <munschNO@attglobal.net.SPAM>
Message-ID: <3d69925c_1@news1.prserv.net>
Source record: 135839

Jason:
I got it right that time. Sorry about the extra letter in your name.

--
Crazy George
Remove NO and SPAM from return address
Jason's iBook <jason.ingram@ntlworld.com> wrote in message
news:B98EE243.D3BE%jason.ingram@ntlworld.com...
> Cheers George
>
> Jason
>
> On 25/8/02 2:31 am, in article 3d683783_3@news1.prserv.net, "Crazy George"
> <munschNO@attglobal.net.SPAM> wrote:
>
> > Jasdon:
> > Go to:
> > http://groups.google.com
> > and work your way to this NG archives, and enter Cobbweb. You'll get
> > plenty of advice.
> >
> > --
> > Crazy George
> > Remove NO and SPAM from return address
> > Jason Ingram <jason.ingram@ntlworld.com> wrote in message
> > news:B98D47C0.188EE%jason.ingram@ntlworld.com...
> >> I am thinking of buying a Cobbweb antenna but would appreciate any
> > comments
> >> for those who may have used one first.
> >>
> >> TIA
> >>
> >> Jason
> >> G7BSK
> >>
> >
> >
>

3900. Re: What am I emitting on 80M?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-26 02:16:25 UTC
From: cprstn54zz@att.net
Message-ID: <3d698c9f.1112000@news-server.optonline.net>
Source record: 135840

On 25 Aug 2002 20:02:21 GMT, fractenna@aol.com (Fractenna) wrote:
>Is it really not possible to insert a 40 ft section of coax at the feedpoint
>down to the line isolator?

No, it is not impossible. But then I would need a 40 ft section of
coax to get back up because near the feedpoint is where the coax comes
into my house for a 70 ft run. I would have to make a different path
through my house to get to the shack if I don't come back up. The
down and up won't work, I fear.

For an experiment, I would need around 200 ft of coax to take the
down-around-up route.

In answer to your previous question about the DX window, I hear lots
of phone DX in the 80M DX window, but am not authorized to TX there.
I hear nothing in the 160M DX window.

Ken KC2JDY

Ken
(to reply via email
remove "zz" from address)

3901. Re: What am I emitting on 80M?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-26 02:20:11 UTC
From: cprstn54zz@att.net
Message-ID: <3d698fb3.1900890@news-server.optonline.net>
Source record: 135841

On 25 Aug 2002 19:42:23 GMT, fractenna@aol.com (Fractenna) wrote:

>The problem is pattern not ladder.
>Either:
>1) Change the height;
>2) Make the antenna a vertical radiator by changing the line isolator position
>and let the coax radiate.

Are you giving consideration to the fact that one leg of my inverted V
dipole is at a pretty steep 45 degrees to the horizontal and is
already pumping out some vertically polarized waves?

Ken CK2JDY

Ken
(to reply via email
remove "zz" from address)

3902. Re: What am I emitting on 80M?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-26 02:35:04 UTC
From: richardharrison@webtv.net
Message-ID: <8799-3D6993D8-343@storefull-2391.public.lawson.webtv.net>
Source record: 135842

Ken, KC2JDY wrote:
"---I would also be having problems on 10-20-40 bands, but I am not."

That`s evidence the coax is good. The problem
as Chip and others have said is a low horizontally polarized antenna.
The inverted V antenna would normally have some vertically polarized
energy.

Ken`s V antenna has two problems. First, the effective height is much
less than 30 or 40 feet due to the clutter of grounded pipes and wires
in the house next to it. Second, is a grounded vertical flue pipe next
to the feedpoint. Reradiated energy from the flue pipe is about
180-degrees out of phase with any energy which might be radiated by the
coax. That`s just fine for bands where the dipole is effective. For 80
and 160 meters where the dipole is far too low to be effective, the flue
pipe is probably a killer for vertically polarized radiation.

To disarm the flue pipe, a parallel wire connected at the top of the
flue pipe but otherwise insulated from it, and not grounded at the
bottom as the flue pipe is, may help. Or, shunt-feed the flue pipe and
try it as a radiator on 80 and 160 meters.

Ken`s antenna arrangement has proved to be bad on the lowest bands. His
coax has proved to be good by its performance on higher bands.

The ground mounted vertically polarized antenna must have a good ground
to perform well, especially because it will be too short. But the
vertical can have useful radiation. The antenna Ken has now does not.

Best regards, Richard Harrison, KB5WZI

3903. Re: What am I emitting on 80M?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-26 02:59:40 UTC
From: richardharrison@webtv.net
Message-ID: <5020-3D69999C-356@storefull-2396.public.lawson.webtv.net>
Source record: 135848

Ken, KC2JDY wrote:
"---one leg of my inverted V dipole is a pretty steep 45 degrees to the horizontal and is already pumping out some vertically polarized waves."

Very little evidence to support that claim! Try the V legs as radials and erect a resonant loaded vertical whip over the feedpoint. See the improvement that will make. Lengthen and add radials for more improvement.

Best regards, Richard Harrison, KB5WZI

3904. Re: Linearity of Bird Wattmeter Slugs?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-26 03:01:22 UTC
From: fractenna@aol.com
Message-ID: <20020825230122.17976.00002687@mb-fx.aol.com>
Source record: 135843

>
>On 25 Aug 2002 18:13:43 GMT, fractenna@aol.com (Fractenna) wrote:
>
>>Hi!
>>
>>I have a (new) used Bird wattmeter with a couple of medium power slugs.One
>is
>>for 400-2500 Megs and the other is 50- (I think)400 Megs.
>>
>>I noticed that I could reasonably use the latter at 28 MHz to a fairly
>constant
>>factor : in other words, the value would read wrong, but if I scale by a
>>constant I can get the right power.
>>
>>My question: how linear are these slugs at the edge of their passbands?(Is
>the
>>value at 52 MHz within, say 2% precision?)
>>
>> If I use a 50-400 slug at 28 MHz, will the relative scaling still hold as I
>>decrease power?
>>
>>Think of it this way--its always preferable to have the right slug. But can
>you
>>use what you got if stuck?
>>
>>73,
>>Chip N1IR
>
>
>Don't know what kind of slugs you have but the ones I have seen in
>that range go from 400 -
>1000 mhz.
>The 50 mhz one goes from 50 - 125 mhz.
>
>But yes they will work outside those ranges quite well. The higher
>power the slug the broader
>the bandwidth it is. For example a (500C), 500 watt 100-250 mhz slug
>looks nearly flat from
>20 mhz to 1000 mhz. It's response is down about 1 db at each end.
>
>Compared to a (100C), 100 watt 100-250mhz slug which is down about 3
>db at 20 mhz and
>down about 5 db at 1000 mhz.
>

>A (10C), 10 watt 100-250 mhz slug is down about 9 db at 20 mhz and
>down about 8 db at
>1000 mhz.
>
>From the chart that I have it looks like the 100C starts to fall off
>at around 50 mhz. At 30 mhz it
>looks like it is down about 1.5 db and down 3 db at 20 mhz. On the
>high end it starts to fall off
>at about 400 mhz.
>
>I don't have a chart for the 50 mhz slug but it's response will
>probably be similar as a percent of
>frequency difference.
>
>The linearity should be the same if in band or out of band with the
>slug.
>
>At best the Bird accuracy is + - 5% of FULL scale with the proper
>frequency range slug.
>Remember with a 100 watt slug that means the accuracy is + - 5 watts
>on any part of the scale.
>So if you are measuring 25 watts with a 100 watt slug the error can be
>as much as + - 20%!
>
>73
>Gary K4FMX
>

Thanks Gary; very helpful.

73
Chip N1IR

3905. Re: Another trombone cap question

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-26 03:02:22 UTC
From: aunwin@fgi.net
Message-ID: <c4becf19.0208251902.429acb6e@posting.google.com>
Source record: 135844

iIRoy Lewallen <w7el@eznec.com> wrote in message news:<3D68D4AA.2020806@eznec.com>...
> Wes Stewart wrote:
> > Consider this. If you have any air gap between the plates and the mylar, that
> > is where your voltage breakdown will occur.
>
> And it won't take much of an air gap to make the dielectric constant of
> the plastic irrelevant.
>
> Roy Lewallen, W7EL

I had good results using wax paper (from the food store) then filled with oil
to drive the air out. Topped out and sealed it after a couple of days.
Art.

3906. Re: What am I emitting on 80M?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-26 03:03:55 UTC
From: fractenna@aol.com
Message-ID: <20020825230355.17976.00002689@mb-fx.aol.com>
Source record: 135845

>Are you giving consideration to the fact that one leg of my inverted V
>dipole is at a pretty steep 45 degrees to the horizontal and is
>already pumping out some vertically polarized waves?
>
>Ken CK2JDY

Yes.

Your antenna is not vertically polarized or, if it is, there is some phase cancellation which is killing low angle stuff. Richard has a nice discussion on this I note.

Choke that sucker--just not at the feed.

73,
Chip N1IR

3907. Re: Modeling coax attached to an antenna in EZNEC

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-26 03:05:02 UTC
From: n7ws@nowhere.com
Message-ID: <3d6998ff.46149530@news.triconet.org>
Source record: 135847

On Sun, 25 Aug 2002 20:50:44 GMT, "Bibby" <bibby@attbi.com> wrote:

|If I restrict my remarks to "freely available", "available at low cost",
|"public domain", etc., then I think that we are all in violent agreement.
|
|Wes, your design looks very interesting. Were you able to measure the
|gain/pattern?

In a word, no.

I've done a fair amount of work in anechoic chambers doing gain, pattern and axial ratio measurements at frequencies up to 35 GHz. I have also done some open field stuff at 1.5 GHz, so I know better than to try and do any significant measurements at 14 MHz with amateur type equipment.

I honestly believe that the models are accurate and predict the performance better than I would be able to measure it, therefore, I am happy.

Wes

3908. Re: Appropriate Choke for 500-800 Mhz?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-26 03:06:07 UTC
From: fractenna@aol.com
Message-ID: <20020825230607.17976.00002691@mb-fx.aol.com>
Source record: 135846

>>These do pretty well up to a Gig. I use them daily.<
>
>Interesting--I'd like to test them. Can you share a manufacturer, part
>number,
>website, permiability?
>
>Rick K1BQT
>

Sure:

www.ferrishield.com.

They have some stuff that works at 802.11b also; haven't tried yet.

73,
Chip N1IR

3909. Re: Fractal Antenna for sale

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-26 03:25:50 UTC
From: k3bu@aol.com
Message-ID: <20020825232550.16571.00004673@mb-ch.aol.com>
Source record: 135849

>
>How can you tell if a fractal antenna has been vandalized?
>(The devil made me do it.)
>--
>cheers, CAM

It was further fractalized (to second irritation? :-)

Cheeze, BUm

3910. Re: Horizontal Loop Question

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-26 03:52:31 UTC
From: Tad Danley <tdanley@nospamatearthlink.net>
Message-ID: <3D69A5F9.678EFAB@earthlink.net>
Source record: 135850

karl wrote:

> I am considering increasing the size of the loop. The available area on the
> roof would allow for a loop of about 45 feet by 75 feet. That would
> increase the circumference to 240 feet. This would figure to a frequency of
> 4.2 MHz. The shape would not be a square, obviously, but maybe it's too
> rectangular.
>
> Would this increase to a "random" size offer any benefits, or would I
> experience a degradation in performance?

It will be easier to get it to load on 75/80 and 160. Also, you may see it become a bit directional on the higher frequencies. Experiment away and have fun! I used a loop around my house when I lived in Eden Prairie - no problems with the Minnesota winters!

Good luck and 73,

--
Tad Danley, K3TD
mailto:tdanley@earthlink.net

Caution!
Anti-SPAM e-mail return address in use.

3911. Re: Linearity of Bird Wattmeter Slugs?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-26 04:01:38 UTC
From: richardharrison@webtv.net
Message-ID: <18205-3D69A822-438@storefull-2392.public.lawson.webtv.net>
Source record: 135852

Chip, N1IR wrote:
"How linear are these slugs at the edge of their passbands?"

Standard Bird elements come in the following frequency bands (MHz):
2-30, 25-60, 50-125, 100-250, 200-500, and 400-1000. There are many more slugs for low power, high power, higher frequencies, etc.

Accuracy specified is 5% of full scale

Low power and low frequency require tighter coupling. Accuracy is probably better on loosly coupled slugs, or over a smaller range on more tightly coupled slugs. When the distances within a slug become significant in terms of wavelength, accuracy may decline. Again, Bird can just narrow the specified band pass to stay within their specified 5% accuracy.

For greater accuracy two slugs, a high power slug for forward power and a low power slug for reflected power, can improve results.

Bird will probably gladly supply a replacement manual and more, reprints of their "Technical
Series", on request. Secrecy is long gone as some makers of similar products now have slugs which directly interchange with the Bird elements. Most deny the interchangeability, but they usually produce identical results for me. Bird elements usually look better and cost little if any more than the off-breeds. Availability may be better from Bird, too.

Sorry I haven`t checked the deterioration of accuracy at the band edges. More accurately, I don`t know how much better than 5% of full scale the Bird element is at mid-band.

Best regards, Richard Harrison, KB5WZI

3912. Re: Horizontal Loop Question

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-26 04:08:38 UTC
From: 'Doc <w5lz@icok.net>
Message-ID: <3D69A9B7.FF7DCFDA@icok.net>
Source record: 135851

Karl,
Increasing the size of the loop to somewhere around
240 feet will give you 80 meter capability. It will
also change the characteristics of the antenna on other
bands. 40 meters, since it would be the 2nd harmonic,
isn't going to be as 'good' as what you see now, neither
will 10 meters. The radiation pattern will change on
all bands and it may not be 'pointed' where you want it,
but then again, it might be.
There are a lot of things that affect how well an
antenna works, as I'm sure you know. The only thing that
anyone can tell you for sure is that things will change,
not if it will be for the 'better' than what you have now.
I've been in your situation and was very happy with an
80 meter loop. Compared to a dipole, it worked out 'better'
considering the low height I had available, and I was
interested in 80 meters anyway. It's that same old 'deal',
you won't know how well it will work for you till you try it.
'Doc

3913. Re: Kapton question

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-26 04:21:12 UTC
From: UnMustached Jim <technomoose@starband.net>
Message-ID: <jvajmu41109bohiaa70ctbgp9foikhia52@4ax.com>
Source record: 135853

I don't know how relevant this is, but I sometimes use kapton tape for insulation in the course of my work. It looks and feels very much like a smooth mylar. I would assume that two surfaces covered with it would easily slide over each other. I caution you, though, that kapton tape is expensive, so I would assume any "bulk" supply of kapton would probably also be.

Jim WD4BRU

On Sat, 24 Aug 2002 23:32:41 GMT, Mike Coslo <mcoslo@adelphia.net> wrote:

>I have an application (trombone capacitor) for which I might want to use
>Kapton (tm) as the dielectric. All the properties I've found look pretty
>good for my use. I haven't seen any specs on Kapton's friction
>properties tho'.
>
> Has anyone had experience with using Kapton with trombone caps, or
>somewhere else that the material had to slide over another?
>
> - Mike KB3EIA -

3914. Re: Help!!

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-26 04:55:03 UTC
From: Zoran Brlecic <WA7AA@attbi.com>
Message-ID: <3D69B4AA.31B9D601@attbi.com>
Source record: 135854

RalphE wrote:

> I just received a complete Hygain TH-7DX, but I don't a instructional manual
> of putting this huge antenna together.
> Does anyone have a manual they scan or copy for me. I would gladly
> reimburse for the copy fees and postage.
>
> Thanks,
>
> Phillip Johnson KB4I

Phillip,

I can e-mail you a zip file with the scanned pages from the manual if you want.

73 .... Zoran WA7AA

3915. Re: Air-Wound Balun Design Info??

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-26 05:03:47 UTC
From: "George, W5YR" <w5yr@att.net>
Message-ID: <3D69B6B1.3BCC271B@att.net>
Source record: 135855

The solution that I have used for several years now is the AEA/Tempo CIA-HF analyzer. It costs about twice what a 259 does, but it plots R,Z, X, SWR, etc.vs frequency as well as presenting tabular data. I have observed that 98% of the time, the sign of the reactance is correct.

It is an expensive instrument and the microprocessor is quite slow, but it seems to produce consistent results which tend to be accurate.

I have found that the added information obtained from the plotted data far outweights the added cost. Manual searching for data points just allows too many to fall in the crack - at least for me.

I also have a very good GR 916A if anyone is interested in a *real* impedance bridge!

73/72/oo, George W5YR - the Yellow Rose of Texas
Fairview, TX 30 mi NE of Dallas in Collin county EM13qe
Amateur Radio W5YR, in the 56th year and it just keeps getting better!
QRP-L 1373 NETXQRP 6 SOC 262 COG 8 FPQRP 404 TEN-X 11771 I-LINK 11735
Icom IC-756PRO #02121 Kachina 505 DSP #91900556 Icom IC-765 #02437

Roy Lewallen wrote:

> > Speaking of bridges: Where/how can a ham come up with a half-decent HF
> > impedance bridge for antenna work without having to send HP or GR
> > $5,000 -8,000?
>
> Get an MFJ Antenna Analyzer. It won't give you the sign of the
> reactance, and it's not a precision instrument, but it's a whole lot
> better than nothing. There are two other solutions. One is to get a GR
> bridge surplus or on ebay. The other is to roll your own. There are some
> methods in _Solid State Design for the Radio Amateur_ that work quite
> well. I used a homebrew resistor bridge with calibrated series X circuit
> (just a calibrated series LC with variable C) for each band, for many
> years before I acquired a GR.
>
> Roy Lewallen, W7EL

3916. Re: Another trombone cap question

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-26 05:05:05 UTC
From: Rick Karlquist <richard@karlquist.remove.this.com>
Message-ID: <5Gia9.27268$_91.148@rwcrnsc51.ops.asp.att.net>
Source record: 135856

The trouble with mylar is that it has about 2%
dissipation constant, even when dry. Only
teflon or polyethylene should be used for
RF.

Rick N6RK

"Mike Coslo" <mcoslo@adelphia.net> wrote in message
news:3D685868.6030808@adelphia.net...
> In further investigation, I see that mylar has some good properties for
> trombone caps.
>
> But I noticed that it has a "slight" sensitivity to moisture. Anyone with
> experience here to say if that will be a problem in this application?
>
> - Mike KB3EIA -
>

3917. Re: Another trombone cap question

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-26 08:05:43 UTC
From: "Ian White, G3SEK" <G3SEK@ifwtech.co.uk>
Message-ID: <UIavWxFXFea9EAsc@ifwtech.co.uk>
Source record: 135771

Rick Karlquist wrote:

>The trouble with mylar is that it has about 2% dissipation constant,
>even when dry. Only teflon or polyethylene should be used for RF.
>
That last sentence may be too sweeping, because the "usability" of any RF insulating material also depends on the dielectric stress it's subjected to - and that's often the hardest part to predict.

For example, you can make excellent chimneys for tubes like the 4CX250 series, 3CX800, 8877 etc. by rolling up a sheet of teflon and securing it with a wrap of mylar parcel tape. Now you might think that a poor dielectric like mylar would be very unlikely to work in this situation: the strip of tape runs straight up-and-down between the anode of the tube and the grounded lid of the case - only about two inches in some VHF stripline amps - and it also has to operate in a stream of hot air. But mylar tape actually works very well in this situation (credit goes to W2GN).

Delrin is another example of a not-very-good RF insulator. In the wrong situation, I've melted Delrin within seconds in a 50W amp for 144MHz. On the other hand, Delrin pillars work just fine as supports for the tank coils of some commercial 1.5kW amps. Same material, different RF situation, different performance.

The tuning capacitor for a small loop is one of the few cases where you can predict the RF voltage and current quite accurately... but more generally, intuition about RF field strengths can be a poor guide.

--
73 from Ian G3SEK 'In Practice' columnist for RadCom (RSGB)
Editor, 'The VHF/UHF DX Book'
http://www.ifwtech.co.uk/g3sek

3918. Welcome to Dallas

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-26 09:30:46 UTC
From: crossfire <noone@home.com>
Message-ID: <1030354510.775365@nnrp1.phx1.gblx.net>
Source record: 135857

Hello to All
The South Dallas Amateur radio Operators (SDARO) would like to extend an invitation to all Amateur's in the Dallas area and beyond to meet and discuss new and innovative ideas to better serve the Dallas area community. SDARO has been an active club in the Dallas area for over 20 Years and is considered a brick road of talent to be shared with Everyone, Ham Radio Operators and the General Public alike.
In the past 10 Years Amateur radio has expanded to many new technological aspects and We would like the opportunity to help broaden the horizon's of aspiring Hams in these new modes of operating while giving Them the opportunity to exhibit Their skills and incorporate them as a respected force within SDARO
Some of the projects on the table now are :
Coordination of a Dallas area SDARO club repeater .
Inducting new Members to participate in community events. And to also to establish a Emergency Communication Team to be available in times of disaster.
We would like to see new and old Hams in the Dallas area step up to the challenge of carrying a torch that has burned a brilliant flame for 20 years and be part of the success that is foreseen for the future by Your participation and support.
We welcome You to share Your ideas with Us . And offer to share Our experience with You .
Our meetings are held every 2nd Saturday of each month at a Dallas area library and is open to the public to attend.
For more information regarding location and time for the meeting and Membership , Please contact the President of SDARO, Mr.Fred Ratciff (KK5TN) at (972) 572-0560 or Club Secretary Mr.Jimmie Thompson (KX5S) at (214) 376-3878.
The SDARO is looking forward to meeting YOU and the expectations of Dallas area Amateur Community.
73"
Fred Ratcliff
KK5TN
President SDARO

3919. Re: Fractal Antenna for sale

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-26 10:20:09 UTC
From: fractena@yahoo.com
Message-ID: <653d2ee5.0208260220.15ba9aba@posting.google.com>
Source record: 135858

fractenna@aol.com (Fractenna) wrote in message
news:<20020825174639.10561.00002363@mb-cr.aol.com>...
> When you impersonate someone, and use the internet to hide your identity, and
> don't reply to queries via e-mail, its not surprising that folks feel duped and
> taken advantage of.
>
> I suspect that you will find out my sense of injury on the matter--which
> continues by others off this NG.
>
> If you have any sense of common decency you will offer me and others here the
> respect of not impersonating others.

Can you please quote the post in which I stated I was anyone
specifically. You won't be able to because I never said I was you or
anyone else for that matter. Oh, BTW - I haven't even logged into that
email account on Yahoo since I created this account, so don't waste
your time emailing me.

3920. Re: Linearity of Bird Wattmeter Slugs?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-26 10:59:30 UTC
From: fractenna@aol.com
Message-ID: <20020826065930.28654.00002060@mb-mn.aol.com>
Source record: 135859

>Chip, N1IR wrote:
>"How linear are these slugs at the edge of their passbands?"
>
>Standard Bird elements come in the following frequency bands (MHz):
>2-30, 25-60, 50-125, 100-250, 200-500, and 400-1000. There are many more
>slugs for low power, high power, higher frequencies, etc.
>
>Accuracy specified is 5% of full scale
>
>Low power and low frequency require tighter coupling. Accuracy is
>probably better on loosly coupled slugs, or over a smaller range on more
>tightly coupled slugs. When the distances within a slug become
>significant in terms of wavelength, accuracy may decline. Again, Bird
>can just narrow the specified band pass to stay within their specified
>5% accuracy.
>
>For greater accuracy two slugs, a high power slug for forward power and
>a low power slug for reflected power, can improve results.
>
>Bird will probably gladly supply a replacement manual and more, reprints
>of their "Technical
>Series", on request. Secrecy is long gone as some makers of similar
>products now have slugs which directly interchange with the Bird
>elements. Most deny the interchangeability, but they usually produce
>identical results for me. Bird elements usually look better and cost
>little if any more than the off-breeds. Availability may be better from
>Bird, too.
>
>Sorry I haven`t checked the deterioration of accuracy at the band edges.
>More accurately, I don`t know how much better than 5% of full scale the
>Bird element is at mid-band.
>
>Best regards, Richard Harrison, KB5WZI
>
>

That's very helpful. Thanks!

73
Chip N1IR

3921. Re: Appropriate Choke for 500-800 Mhz?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-26 11:01:29 UTC
From: k1bqt@aol.com
Message-ID: <20020826070129.14938.00002404@mb-cq.aol.com>
Source record: 135860

Hi Chip--

Thanks! 61 mix appears to deliver 8-10 dB of suppression for a 1" cross-section at 2.4 GHz. Fair-Rite also lists a 67 mix that's supposed to work even higher, but now say they've discontinued it because of supply problems with one of the materials.

Rick K1BQT

3922. Re: Appropriate Choke for 500-800 Mhz?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-26 11:18:24 UTC
From: fractenna@aol.com
Message-ID: <20020826071824.28619.00002495@mb-mn.aol.com>
Source record: 135861

>
>Hi Chip--
>
>Thanks! 61 mix appears to deliver 8-10 dB of suppression for a 1"
>cross-section at 2.4 GHz. Fair-Rite also lists a 67 mix that's supposed to
>work
>even higher, but now say they've discontinued it because of supply problems
>with one of the materials.
>
>Rick K1BQT
>

The problem I get up there is the lengths of coax I use are usually smaller than the beads;-); bazooka baluns end up being smaller too!

But thanks for the info.

Something else which is really cool (not totally related)--but decreases measurement headaches: DAMS at

www.diamondeng.net

Don't have one yet but the engs there are very informative and sound like they did it right. We're a Lab Vu house and have something similar; at some point though its easier to buy than to make!

Just a thought.

73
Chip N1IR

3923. Re: What am I emitting on 80M?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-26 11:24:52 UTC
From: cprstn54zz@att.net
Message-ID: <3d6a0dd2.2120781@news-server.optonline.net>
Source record: 135862

On Sun, 25 Aug 2002 21:35:04 -0500 (CDT), richardharrison@webtv.net
(Richard Harrison) wrote:
>Ken`s V antenna has two problems. First, the effective height is much
>less than 30 or 40 feet due to the clutter of grounded pipes and wires
>in the house next to it. Second, is a grounded vertical flue pipe next
>to the feedpoint. Reradiated energy from the flue pipe is about
>180-degrees out of phase with any energy which might be radiated by the
>coax. That`s just fine for bands where the dipole is effective. For 80
>and 160 meters where the dipole is far too low to be effective, the flue
>pipe is probably a killer for vertically polarized radiation.

One more bit of information. I did run EZNEC for my antenna and it
showed that the flue had an insignificant effect on propagation across
all frequencies. My results were confirmed by a seasoned user of that
program.

At this point, I have reliable information that:

The flue has no effect
The flue is hurting

I should switch to ladder line
I shouldn't switch to ladder line

The feedpoint is too low
The feedpoint is OK

I guess I will try some suggestions in the order of difficulty.
-Shut feed the flue or add the outside droopy ungrounded wire.
-Switch to ladder line
-Raise the feedpoint ten feet with a Mast Co. unstayed aluminum mast.

Ken KC2JDY

Ken
(to reply via email
remove "zz" from address)

3924. Re: What am I emitting on 80M?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-26 11:32:13 UTC
From: fractenna@aol.com
Message-ID: <20020826073213.28609.00002369@mb-mn.aol.com>
Source record: 135863

>On Sun, 25 Aug 2002 21:35:04 -0500 (CDT), richardharrison@webtv.net
>(Richard Harrison) wrote:
>>Ken`s V antenna has two problems. First, the effective height is much
>>less than 30 or 40 feet due to the clutter of grounded pipes and wires
>>in the house next to it. Second, is a grounded vertical flue pipe next
>>to the feedpoint. Reradiated energy from the flue pipe is about
>>180-degrees out of phase with any energy which might be radiated by the
>>coax. That`s just fine for bands where the dipole is effective. For 80
>>and 160 meters where the dipole is far too low to be effective, the flue
>>pipe is probably a killer for vertically polarized radiation.
>
>One more bit of information. I did run EZNEC for my antenna and it
>showed that the flue had an insignificant effect on propagation across
>all frequencies. My results were confirmed by a seasoned user of that
>program.
>
>At this point, I have reliable information that:
>
>The flue has no effect
>The flue is hurting
>
>I should switch to ladder line
>I shouldn't switch to ladder line
>
>The feedpoint is too low
>The feedpoint is OK
>
>I guess I will try some suggestions in the order of difficulty.
>-Shut feed the flue or add the outside droopy ungrounded wire.
>-Switch to ladder line
>-Raise the feedpoint ten feet with a Mast Co. unstayed aluminum mast.
>
>Ken KC2JDY
>
>
>Ken
>(to reply via email
>remove "zz" from address)
>

Such programs do a poor job of simulating real environments--unless you like to
view the world's structures with a wire mesh, which I doubt your 'seasoned
user' took the time to do on this problem.

You have plenty of stuff in the near field so there are probably opportunities for currents at places you don't expect.

JUST--LET--THE COAX--RADIATE:-)! Control the coaxial radiation by placing a choke down the bottom. Make lemonades from lemons.

That's it for my advice on this thread. Maybe Richard has a bit more patience than me.

73,
Chip N1IR

3925. Re: Cushcraft AR-10

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-26 12:24:15 UTC
From: Dale Parfitt <parinc@verizon.net>
Message-ID: <3D6A1E5F.A2A38E60@verizon.net>
Source record: 135864

ke1bz wrote:

> Hello all,
> I just bought an AR-10 at a local flea market and it didn't come with a
> Coaxial Tuning Stub. I have the directions for the antenna and it says
> that it 16 5/8 inches.
> Two questions:
> 1) Is this 50 ohm coax?
> 2) Is the stub shorted?
> Thank you in advance for your help.
>
> 73,
> Bill

The coaxial length forms a coaxial capacitor- part of the L-C Z transformer-
so the coax is left open. MY redcollection is that it is 50 Ohm solid
dielectric- this is important as the pF/ft is a function of dielctric and
the coaxial impedance-

Dale W4OP

3926. 6BTV correction

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-26 12:56:14 UTC
From: Dan/W4NTI <w4nti@mindspringnospam.com>
Message-ID: <akd8fd$6se$1@slb3.atl.mindspring.net>
Source record: 135865

I referenced this months CQ. It was actually the January 2002 issue of CQ
that I was refering to concerning ground theory.

Dan/W4NTI

3927. Re: What am I emitting on 80M?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-26 13:20:52 UTC
From: richardharrison@webtv.net
Message-ID: <18206-3D6A2B34-127@storefull-2392.public.lawson.webtv.net>
Source record: 135867

Ken, KC2JDY wrote:
"At this point I have reliable information that:
The flue has no effect
The flue is hurting

I should switch to ladder line
I shouldn`t switch to ladder line

The feedpoint is too low
The feedpoint is OK

Ken has received opinions based on his description of the antenna installation.

Coupling between conductors is based on proximity and parallelism. Ken`s flue is vertical, close, and parallel to the vertical component of radiation from his inverted-V. The vertical component of his radiation is the only useful part at 80-160 meters.

For the line feeding an inverted-V, see page 6-3 of the ARRL Antenna Book. Coax is used without any balun or choke to feed the inverted-V. Impedance at resonance is lower than the 75-ohm flat-top dipole. At 80-160 meters, Ken`s inverted-V has a high capacitive reactance because it`s too short. But, the real problem is the antenna is too low to usefully radiate as a horizontal antenna in the lower bands. A short vertical can work which is why Chip suggests using the coax as a radiator. Look up the "Multee" antenna which uses the dipole as a capacity hat on the coax used as the actual radiator on the lowest band.

The feedpoint is not at an OK height for a horizontal antenna at 80-150 meters. You don`t need to model it. You`ve tried it and it doesn`t work. All the textbooks tell you it won`t work. You`ve confirmed what the books say for yourself. Contrary to popular myth, wishing won`t make it so.

Best regards, Richard Harrison, KB5WZI

3928. SteppIR Vertical

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-26 15:38:47 UTC
From: bhuson@gte.net
Message-ID: <20020826083927347114@evrtwa1-ar4-4-47-068-007.evrtwa1.dsl-verizon.net>
Source record: 135868

Has anyone looked into StepIR's new vertical? What kind of ground plane requirements. Pole mounting, etc.

3929. Re: 6BTV correction

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-26 16:44:15 UTC
From: Gene Fuller <W4SZzzzzz@att.net>
Message-ID: <3D6A5AEC.2645E089@att.net>
Source record: 135769

Dan,

That explains it.

The January 2002 CQ had an unfortunate editorial error in that at least
two articles were actually intended to be published on April 1.

The ground theory article and the dipole-buried-in-a-lake article are
complete, total, utter, unadulterated nonsense.

These articles were discussed in this newsgroup about six months ago.

73,
Gene, W4SZ

Dan/W4NTI wrote:
>
> I referenced this months CQ. It was actually the January 2002 issue of CQ
> that I was refering to concerning ground theory.
>
> Dan/W4NTI

3930. Re: Cushcraft AR-10

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-26 18:27:11 UTC
From: nm5k@wt.net
Message-ID: <25eb70d7.0208261027.434d22f7@posting.google.com>
Source record: 135770

ke1bz <ke1bz@cox.net> wrote in message news:<3D6903A4.11B75906@cox.net>...
> Hello all,
> I just bought an AR-10 at a local flea market and it didn't come with a
> Coaxial Tuning Stub. I have the directions for the antenna and it says
> that it 16 5/8 inches.
> Two questions:
> 1) Is this 50 ohm coax?

Yes. RG-8- .66 VF
> 2) Is the stub shorted?

No, it's open on the end. No connection from center to shield. It's used as a cap.
MK

3931. Re: What am I emitting on 80M?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-26 19:25:29 UTC
From: CAM <Cecil.A.Moore@ieee.org>
Message-ID: <3D6A80A9.3FECB05F@ieee.org>
Source record: 135772

Ken wrote:
> My results were confirmed by a seasoned user of that program.

Be careful, some people season with wine.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
------== Over 80,000 Newsgroups - 16 Different Servers! =-----

3932. Installing ladder line -- some help from ARRL

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-26 19:36:44 UTC
From: cprstn54zz@att.net
Message-ID: <3d6a81fa.31857015@news-server.optonline.net>
Source record: 135773

I asked the ARRL Tech Info Service some questions on the nitty gritty
of installing ladder line. The helpful answers are excerpted below:

<<< (1) Can it be stapled to wood studs with steel staples in the
middle insulator?

yes, it can.. no problem.

<<< (2) Mine will run parallel to and 12" away from a galvanized A/C
duct for 40 ft. Should I twist the ladderline? How often?

12" is good and half twist about every 18"

<<< (3) When crossing household wiring at a right angle, how close can
I come to it?

6 - 8 "

<<< (4) Can it pass through (perpendicular) a small opening in a 2
square foot chicken-wire screen?

yes

<<< (5) Can I hook one side of it over a small steel hook used for
strain relief near the feedpoint?

yes

Albert Alvareztorres, Jr. AA1DO
Technical Information Service

Ken KC2JDY
Ken
(to reply via email
remove "zz" from address)

3933. Re: Ham flavored Linux :)

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-26 21:10:24 UTC
From: moonelf <REMOVEcalisREMOVE@pagans.org>
Message-ID: <k56lmu8e4ombjq9o3f2pi6m8qrebuidntl@4ax.com>
Source record: 135774

On Mon, 26 Aug 2002 00:10:24 GMT, moebush <moebush@singapore.hm>
wrote:

Can I ask you what software you are running on it? I can't get any of
the newer versions of Xastir to build on my Mandrake 8.2 box. I am
getting ready to upgrade my Linux box to a Celeron 800, it is going to
be used mainly for ham stuff: APRS, logging, radio control (if I can
find a controller app for my IC-718) etc.

Mark
N9POA

>I use Mandrake 8.2 and love it.
>
>Stan
>AH6JR
>
>newsguy wrote:
>
>> Just wanting to know if one Linux distro is favored over others in regard to
>> Amatuer radio and electronics usefulness ? So far I am liking Debian, just
>> looking for others ideas please.
>> Thanks!
>>
>>

3934. Re: 6BTV correction

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-26 21:22:43 UTC
From: Dan/W4NTI <w4nti@mindspringnospam.com>
Message-ID: <ake64u$e4$1@slb7.atl.mindspring.net>
Source record: 135775

Ah so....perhaps a good thing I didn't finish it then......Since I am totally confused about antennas anyway. Its all magic...ain't it??? HI HI.

Dan/W4NTI

"Gene Fuller" <W4SZzzzzz@att.net> wrote in message news:3D6A5AEC.2645E089@att.net...
> Dan,
>
> That explains it.
>
> The January 2002 CQ had an unfortunate editorial error in that at least
> two articles were actually intended to be published on April 1.
>
> The ground theory article and the dipole-buried-in-a-lake article are
> complete, total, utter, unadulterated nonsense.
>
> These articles were discussed in this newsgroup about six months ago.
>
> 73,
> Gene, W4SZ
>
> Dan/W4NTI wrote:
> >
> > I referenced this months CQ. It was actually the January 2002 issue of CQ
> > that I was refering to concerning ground theory.
> >
> > Dan/W4NTI

3935. Re: Modeling coax attached to an antenna in EZNEC

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-26 22:26:18 UTC
From: Douglas Stinson <douglas-stinson@attbi.com>
Message-ID: <eWxa9.284605$sA3.545570@rwcrnsc52.ops.asp.att.net>
Source record: 135776

I've heard 'cautions' about measuring antenna patterns and gain. Is it really as bad as all that? Gain -- which would require an absolute measurement somewhere along the line -- I can understand as being quite difficult.

I tried to measure the pattern of an antenna I built. Most of the things I tried didn't work very well. But I seemed to get pretty reasonable and consistent results when:

(a) I measured the recieved signal strength using the test antenna while my wife transmitted from the other side of a lake. (Received power was determined by the amound of attenuation which needed to be inserted to obtain a constant S-meter reading.) and

(b) I measured received signal strength from a "fox" with the test antenna located on the top of a steeply sloped hill during a transmitter hunt.

Anything I should be "beware" of?

"Bibby" <bibby@attbi.com> wrote in message
news:5h6a9.239971$UU1.39133@sccrnsc03...
> Roy, I read your response to my response with interest. I am surprised,
> and disappointed, that others haven't offered an opinion.
>
> Regarding your own comments. I agree with your comments about modeling
> monopoles. The only reason for introducing it, and mentioning the
infinite
> ground-plane was to show how the frill model came to be applied to
dipoles.
>
> Re-reading Doug's original inquiry, I realize that I jumped to a specific
> case - a dipole - when his question was more generally stated.
>
> Nevertheless, you made a comment that I think needs to be responded to.
You
> say that 'the feed system has nothing to do with the antenna's gain or
> pattern, and these are the primary things antenna programs are intended to
> calculate. The calculated antenna feedpoint impedance can be transformed
> to a value of your choice without any impact on the antenna performance at
> all, except for whatever loss the transforming network has." What
antenna
> programs are you talking about?
>
> Antenna impedance of dipoles and dipole arrays is also of great interest
and
> importance. In fact, I would say that gain/pattern are subjects that

most
> amateurs only contemplate/dream about as few have the tools to measure
them
> properly. By contrast, impedance matching is something that most
amateurs
> can, and do, do - using their VSWR meters, etc. As you say, the antenna
> feedpoint impedance can be transformed into whatever you want it to be -
but
> where/how you do it can have a significant effect on the radiation
pattern.
> If the antenna is fed with balance line, led away at right-angles to the
> antenna and the matching unit is out of the near-field of the antenna then
> you are correct. However, if the matching is done right up at the
antenna
> feed-point, then the matching system is in, and contributes to, the
> near-field of the antenna and cannot be ignored. Because the matching
unit
> is in the near-field, it will effect the performance in the far-field
> (gain/pattern). This is the thought that I was most concerned with in my
> previous response. It is a very difficult problem from a modeling point
of
> view and so, more often than not, it is ignored. The difficulty in
> modeling this problem, accurately, is that it would take considerable
> computer resources to accomplish. But today, we have those resources.
So
> far however, few, if any, programs exist that attempt to do this, never
mind
> do it well.
>
> Malcolm, W1/GW3NJY
>
>
>
> "Roy Lewallen" <w7el@eznec.com> wrote in message
> news:3D6679CA.4060805@eznec.com...
> > Bibby wrote:
> > > Doug, you have hit on what is possibly the central weakness of most
> antenna
> > > modeling programs available today. None of them address the issue
of
> > > feeding the antenna.
> >
> > The reason is that, except in the case of phased array antennas, the
> > feed system has nothing to do with the antenna's gain or pattern, and
> > these are the primary things antenna programs are intended to calculate.
> > The calculated antenna feedpoint impedance can be transformed to a value
> > of your choice without any impact on the antenna performance at all,
> > except for whatever loss the transforming network has.
> >
> > > Take for example the NEC core. It places a voltage on, or inserts a

> > > current at, the sub-section adjacent to the feed-point. It doesn't
> care
> > > how you feed it. One could model a gamma/tee match but you just move
> the
> > > problem to feeding the match.
> >
> > NEC doesn't directly allow current sources, only voltage. However, when
> > a single source is used, it makes absolutely no difference to the
> > results what kind of source is used. As you say, you can model something
> > like a gamma match with NEC-2 or derivatives. If you're interested in
> > impedance matching networks using lumped elements, which NEC-2 doesn't
> > allow directly, there are programs which can do this, such as MicroSmith
> > (no longer available) and WinSMITH. The impedance match only affects the
> > impedance seen by the transmitter, however. It has no affect on the
> > antenna. Again, the exception is phased array antennas, where modeling
> > programs can give you essential information about feedpoint impedance
> > needed to design a feed system, but can't include anything but an
> > all-transmission line feed system in the model.
> >
> > > Much of the early work, which is when accurate measurements were made,
> was
> > > done on monopoles over a semi-infinite ground-plane. The
measurements
> and
> > > theory agree reasonably well. In fact, as modeling has become better
> the
> > > agreement has got better - which speaks well of/for the measurements.
> > > With this assurance, antenna modelers then appeal to 'image-theory' to
> say
> > > that a dipole is a the combination of a monopole and a perfect
> reflection of
> > > itself. Not bad, but we have a good model for feeding a monopole
that
> > > doesn't transfer well to a dipole. The hole in the infinite plane
> through
> > > which the monopole emerges can be modeled well. It is often referred
> to as
> > > a "magnetic frill". No-one has ever demonstrated a dipole excited
by
> a
> > > magnetic frill!
> >
> > None of the commonly used antenna modeling programs use the approach you
> > describe when modeling antennas over ground. MININEC does use an image
> > approach when calculating the impedance and currents by assuming a
> > perfect ground during those calculations. This is a good approximation
> > provided that the antenna doesn't contain any significantly radiating
> > horizontal wires lower than about 0.2 wavelength. But it does take
> > ground conductivity and permittivity into account when calculating the
> > radiation pattern, which is not the simple image approach you describe.

> > NEC-2's Sommerfeld ground (called High Accuracy in EZNEC) does a true
> > field calculation using finite ground parameters even for the impedance
> > and voltage calculations, and uses a similar approach to MININEC for
> > determining the radiation pattern.
> >
> > > So your question is on the cutting edge of the state-of-the-art in
this
> > > area. I will be interested to read other comments.
> >
> > Roy Lewallen, W7EL
> >
>
>

3936. Re: Looking for a good 10 meter vertical

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-26 22:54:21 UTC
From: Bill Turner <w4wnt@carolina.rr.com>
Message-ID: <xkya9.51455$Xa.2454103@twister.southeast.rr.com>
Source record: 135777

I don't know the configuration of the AR99, but you could elevate it 8-10 ft. and add four quarter wave radials under it. If it's a quarter wave, this would help. If it's a half wave job, probably makes no improvement.

Good Luck,

Bill, W4WNT

"Jon Eckert" <jpeckert@execpc.com> wrote in message news:3d64140d$0$1427$272ea4a1@news.execpc.com...
> Hi, I'm looking for a good 10 meter vertical to go on the roof. I have a
> Solarcon AR99 up now and that works fairly well, just wondering if there
> is something out there that works better and how much better is it as
> compared to the AR99. Thanks, Jon W9JPE
>

3937. ARRL Maryland-DC Section Convention & Hamfest

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-27 00:03:10 UTC
From: "E. Allen Brown, FALLFEST 2002 Programs Manager" <KZ3AB@ARRL.net>
Message-ID: <3D6AC1BE.DB706AE4@ARRL.net>
Source record: 135778
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.boatachors,rec.radio.amateur.homebrew

The Foundation for Amateur Radio (F.A.R.) and The Columbia Amateur Radio Association (CARA) have joined forces to create what will become one of the premier Amateur Radio events in the Mid-Atlantic region.

The dates are Saturday, September 7 and Sunday, September 8, 2002 at the Howard County (MD) Fairgrounds west of Baltimore near the intersection of I-70 and MD-32.

See: http://www.fall-fest.com/ for details and directions.

VE Exams (amateur radio tests) will run from 8:00 am - 12:00 n on Sunday, September 8.

Skywarn classes run from 12:00 N - 5:00 pm on Saturday, September 7. See: http://www.fall-fest.com/skywarn.shtml for info on how to register.

Many vendors have reserved space including "Satellite Sam," the "RF Connection," the "Badge Man," "Startek," "Ramsey Electronics," and more.

Seminars will include:

Amateur Microwave Communications with Bill Seabreeze, W3IY
RF Interference Investigation with Mike Martin, K3RFI
AMSAT Satellite Communications with Rick Hambly, W2GPS
Coordinated ARRL Presentation with Tom Abernethy, W3TOM, ARRL MDC SM
Demonstration of the Marconi Detector by Chip Weems, W4PBG
APRS Demonstration by Bob Bruninga, WB4APR
Amateur TV demonstration by Tim Keener, N3VGS

And more!

A special event station will be on the air demonstrating vintage and homebrew equipment (radios that glow in the dark) with that wonderful rich
sound of AM radio from the "old days."

For more info, contact: <info@fall-fest.com>

--
E. Allen Brown, KZ3AB
FALLFEST 2002 Programs Manager
<KZ3AB@ARRL.net>

3938. Re: What am I emitting on 80M?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-27 01:24:54 UTC
From: klocko@toad.net
Message-ID: <224d9cd4.0208261724.784e9344@posting.google.com>
Source record: 135779

richardharrison@webtv.net (Richard Harrison) wrote in message
news:<18206-3D6A2B34-127@storefull-2392.public.lawson.webtv.net>...
> Ken, KC2JDY wrote:
> "At this point I have reliable information that:
> The flue has no effect
> The flue is hurting
>
> I should switch to ladder line
> I shouldn`t switch to ladder line
>
> The feedpoint is too low
> The feedpoint is OK
>
> Ken has received opinions based on his description of the antenna
> installation.
>
> Coupling between conductors is based on proximity and parallelism. Ken`s
> flue is vertical, close, and parallel to the vertical component of
> radiation from his inverted-V.

Alright, so currents are induced on the flue. So what? Given a
high-enough flue, it will be an efficient radiator, a passive element,
and it will radiate somewhere. Does it change his pattern? Sure. Does
it act as an absorber. Nope. There could be a problem if coupling back
into the antenna changes the impedance match, but Ken's SWR numbers
don't appear to be way out of range.

> The vertical component of his radiation
> is the only useful part at 80-160 meters.

Where did you read this? This is absolute nonsense. You're probably
confusing vertical component with a vertically polarized antenna, like
a monopole, which has better gain at low take-off angles than an
inverted Vee.

From what I've read of Ken's messages, he is not trying to get into
Europe or Japan, he's just trying to get further than 30 miles. His
antenna, if working correctly, would do just that. Maybe not thousands
of miles, but at least several hundred. The antenna height is not the
problem.

Looking at the manufacturer's web site for his antenna, the design
uses a coil in each 80-meter arm. Those coils could be the problem.

> For the line feeding an inverted-V, see page 6-3 of the ARRL Antenna
> Book. Coax is used without any balun or choke to feed the inverted-V.

> Impedance at resonance is lower than the 75-ohm flat-top dipole. At
> 80-160 meters, Ken`s inverted-V has a high capacitive reactance because
> it`s too short. But, the real problem is the antenna is too low to
> usefully radiate as a horizontal antenna in the lower bands. A short
> vertical can work which is why Chip suggests using the coax as a
> radiator. Look up the "Multee" antenna which uses the dipole as a
> capacity hat on the coax used as the actual radiator on the lowest band.
>
> The feedpoint is not at an OK height for a horizontal antenna at 80-150
> meters. You don`t need to model it. You`ve tried it and it doesn`t work.
> All the textbooks tell you it won`t work. You`ve confirmed what the
> books say for yourself. Contrary to popular myth, wishing won`t make it
> so.

Let me ask you something - and I would like an honest answer. Have you ever actually tried an inverted Vee or a horizontal dipole on the 80-meter band? I have many years of actual experience with horizontal dipoles, day-time and night-time. Have you ever acted as Net Control on an 80-meter net at 6 PM in June? I have. Have you ever made late-morning contacts on 80 meters during Field Day? I have. What's your experience?

Bill N3WK

3939. Re: What am I emitting on 80M?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-27 02:32:05 UTC
From: Fred Hambrecht <w4jle@charter.net>
Message-ID: <umlp5bckmtig67@corp.supernews.com>
Source record: 135780

Amen Bill, I said the same thing. If he can't get over 30 miles the problems are more severe than all the theoretical crap about takeoff angles.

By the way, I HAVE done all the things you listed and have over 200 countries on 75 using the much maligned G5RV.

I know for example Chip is a very competent operator on 10 and have listened to him working DX, I have never heard him on 75.

My example of exceeding the distance loading up a 100 watt lightbulb with a DX-100, in the AM days, was to show him that regardless of takeoff angle, any antenna will let you get several hundred miles.

I would have checked the coax, then the traps. He said the coax was OK and you beat me to the punch on the traps. I would expect a signal to get out even if the traps were open if his tuner kept the transmitter from folding back from high SWR.

"Bill Klocko" <klocko@toad.net> wrote in message
news:224d9cd4.0208261724.784e9344@posting.google.com...
> richardharrison@webtv.net (Richard Harrison) wrote in message
news:<18206-3D6A2B34-127@storefull-2392.public.lawson.webtv.net>...
> > Ken, KC2JDY wrote:
> > "At this point I have reliable information that:
> > The flue has no effect
> > The flue is hurting
> >
> > I should switch to ladder line
> > I shouldn`t switch to ladder line
> >
> > The feedpoint is too low
> > The feedpoint is OK
> >
> > Ken has received opinions based on his description of the antenna
> > installation.
> >
> > Coupling between conductors is based on proximity and parallelism. Ken`s
> > flue is vertical, close, and parallel to the vertical component of
> > radiation from his inverted-V.
>
> Alright, so currents are induced on the flue. So what? Given a
> high-enough flue, it will be an efficient radiator, a passive element,
> and it will radiate somewhere. Does it change his pattern? Sure. Does
> it act as an absorber. Nope. There could be a problem if coupling back
> into the antenna changes the impedance match, but Ken's SWR numbers
> don't appear to be way out of range.

>
> > The vertical component of his radiation
> > is the only useful part at 80-160 meters.
>
> Where did you read this? This is absolute nonsense. You're probably
> confusing vertical component with a vertically polarized antenna, like
> a monopole, which has better gain at low take-off angles than an
> inverted Vee.
>
> From what I've read of Ken's messages, he is not trying to get into
> Europe or Japan, he's just trying to get further than 30 miles. His
> antenna, if working correctly, would do just that. Maybe not thousands
> of miles, but at least several hundred. The antenna height is not the
> problem.
>
> Looking at the manufacturer's web site for his antenna, the design
> uses a coil in each 80-meter arm. Those coils could be the problem.
>
> > For the line feeding an inverted-V, see page 6-3 of the ARRL Antenna
> > Book. Coax is used without any balun or choke to feed the inverted-V.
> > Impedance at resonance is lower than the 75-ohm flat-top dipole. At
> > 80-160 meters, Ken`s inverted-V has a high capacitive reactance because
> > it`s too short. But, the real problem is the antenna is too low to
> > usefully radiate as a horizontal antenna in the lower bands. A short
> > vertical can work which is why Chip suggests using the coax as a
> > radiator. Look up the "Multee" antenna which uses the dipole as a
> > capacity hat on the coax used as the actual radiator on the lowest band.
> >
> > The feedpoint is not at an OK height for a horizontal antenna at 80-150
> > meters. You don`t need to model it. You`ve tried it and it doesn`t work.
> > All the textbooks tell you it won`t work. You`ve confirmed what the
> > books say for yourself. Contrary to popular myth, wishing won`t make it
> > so.
>
> Let me ask you something - and I would like an honest answer. Have you
> ever actually tried an inverted Vee or a horizontal dipole on the
> 80-meter band? I have many years of actual experience with horizontal
> dipoles, day-time and night-time. Have you ever acted as Net Control
> on an 80-meter net at 6 PM in June? I have. Have you ever made
> late-morning contacts on 80 meters during Field Day? I have. What's
> your experience?
>
> Bill N3WK

3940. Re: Ham flavored Linux :)

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-27 02:46:32 UTC
From: Bob Miller <bamiller@texas.net>
Message-ID: <Y+dqParSBibMjdOC9ms5pUsXR454@4ax.com>
Source record: 135781

moonelf <REMOVEcalisREMOVE@pagans.org> wrote:

>On Mon, 26 Aug 2002 00:10:24 GMT, moebush <moebush@singapore.hm>
>wrote:
>
>Can I ask you what software you are running on it? I can't get any of
>the newer versions of Xastir to build on my Mandrake 8.2 box. I am
>getting ready to upgrade my Linux box to a Celeron 800, it is going to
>be used mainly for ham stuff: APRS, logging, radio control (if I can
>find a controller app for my IC-718) etc.
>
>Mark
>N9POA

Can any of you guys run Dos or Windows ham-oriented applications under Linux?

Tnx,

Bob
k5qwg

>
>>I use Mandrake 8.2 and love it.
>>
>>Stan
>>AH6JR
>>
>>newsguy wrote:
>>
>>> Just wanting to know if one Linux distro is favored over others in regard to
>>> Amatuer radio and electronics usefulness ? So far I am liking Debian, just
>>> looking for others ideas please.
>>> Thanks!
>>>
>>>

3941. Re: What am I emitting on 80M?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-27 02:56:39 UTC
From: richardharrison@webtv.net
Message-ID: <10204-3D6AEA67-471@storefull-2395.public.lawson.webtv.net>
Source record: 135783

Bill Klocko, N3WK quoted me:
"The vertical component of this radiation is the only useful part at 80-160 meters."

Bill wrote:
"Where did you read this? This is absolute nonsense."

Just read my previous posts in this thread. I gave page and figure numbers from the 19th edition of the ARRL Antenna book. I`ve read many antenna books and the ARRL book is an echo of what the other books say about low dipoles and short verticals.

Bill also wrote:
"Have you ever tried an inverted Vee or a horizontal dipole in the 80-meter band?"

Never tried an inverted-V in any band because I never had to make such a compromise. The inverted-V is a good compromise for amateur work. ON4UN`s survey of well known DXers shows them to be a favorite transmitting antenna. Almost certainly those used by contest champions bear little resemblance to the antenna discussed in this thread.

I have also never erected a dipole for use in the 80-meter amateur band. That seems not too different to me than the countless horizontal and vertical dipoles I have erected for commercial pursuits at frequencies above and below the 80-meter ham band. I`ve put them up in Europe, North America, and South America. I`ve also erected Curtain Antennas for almost every shortwave broadcasting band, more rhombics than I can count, and numerous dishes, periscopes, and scop antennas in many different microwave systems where I
was the principal designer. I started in mediumwave broadcasting in 1949. I have a BSEE degree thanks to the GI Bill. I`ve installed power frequency equipment too.

This thread is about an antenna that doesn`t work in a couple of bands. I`ve thought hard, and I don`t remember one of my antennas that didn`t work.

Best regards, Richard Harrison, KB5WZI

3942. Waveguide Antenna.

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-27 03:02:03 UTC
From: mhoskins <mhoskins3@comcast.net>
Message-ID: <LYBa9.228406$SS.9270698@bin3.nnrp.aus1.giganews.com>
Source record: 135782

I am looking for sources and or detailed plans / diagrams (dimensions),
design software for a waveguide antenna for 890mhz through 914mhz.

I am also looking for sources and or detailed plans / diagrams (dimensions),
design software for a feedhorn for 935mhz through 959mhz.

Any and all assistance and advice will be welcome.

3943. 2-Meter Co-Linear

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-27 03:12:44 UTC
From: chuck & shirley hawks <s_hawks@bellsouth.com>
Message-ID: <i1Ca9.6785$Hd4.3437189@e3500-atl1.usenetserver.com>
Source record: 135784

I am planning on replacing my old (10 years) antenna. I am planning on making my own Co-linear. The question is;

If I use 3 or 4 sections, will it be worth the extra sections gain wise, then a 2 section.

Thanks in advance

Chuck
KE4ETH

--
x-no-archive: yes

3944. Re: What am I emitting on 80M?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-27 03:19:20 UTC
From: richardharrison@webtv.net
Message-ID: <10204-3D6AEFB8-474@storefull-2395.public.lawson.webtv.net>
Source record: 135785

Bill Klocko wrote:
"Alright, so currents are induced on a flue. So what?"

A coax with longitudinal (common-mode) current on the exterior of its sheath might be the source of lower-angle radiation, good for a hop in excess of 30 miles were it not for the flue.

RE-radiation from the flue is 180-degrees out of phase. The effect of the pair made from the coax and the flue is much like a pair in a parallel-wire transmission line which leaves the radiation to the horizontal dipole.

In Ken`s case, the horizontal dipole is useless at 80-160 meters. Vertically polarized radiation from the coax would possibly produce some useful lower-angles for longer hops.

Best regards, Richard Harrison, KB5WZI

3945. Re: Waveguide Antenna.

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-27 03:46:58 UTC
From: Jim Pennino <jimp@specsol.com>
Message-ID: <akesni$81i$1@mail.specsol.com>
Source record: 135786

mhoskins <mhoskins3@comcast.net> wrote:
> I am looking for sources and or detailed plans / diagrams (dimensions),
> design software for a waveguide antenna for 890mhz through 914mhz.

> I am also looking for sources and or detailed plans / diagrams (dimensions),
> design software for a feedhorn for 935mhz through 959mhz.

> Any and all assistance and advice will be welcome.

Waveguide and horns are going to be pretty big at this low a frequency.

You can find detailed instructions for slot antennas at
http://www.ij.net/packrats/Slot_Antenna/slot.html going down to 1.1GHz.

I guess you could scale it easily enough if you can find wave guide
that big.

Horn designs can be found in just about any of the UHF/microwave books by
the ARRL or RSGB.

--
Jim Pennino

3946. Re: What am I emitting on 80M?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-27 04:02:51 UTC
From: richardharrison@webtv.net
Message-ID: <13083-3D6AF9EB-530@storefull-2394.public.lawson.webtv.net>
Source record: 135787

Fred Hambrecht wrote:
"If he can`t get over 30 miles the problems are more severe than all the theoretical crap about takeoff angles."

The antenna works on 40 meters and higher frequencies.

It produces NVIS at 30 miles on 80 meters.

Low horizontal antennas are cloud warmers.

If Ken had no flue pipe, chances are the high impedance of the too short dipole on 80-160 meters would divert current to the coax exterior where the radiation produced could skip out beyond 30 miles. As it is, radiation is produced but mostly at useless angles.

Best regards, Richard Harrison, KB5WZI

3947. Re: 2-Meter Co-Linear

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-27 04:26:06 UTC
From: richardharrison@webtv.net
Message-ID: <18205-3D6AFF5E-599@storefull-2392.public.lawson.webtv.net>
Source record: 135789

Chuck, KE4ETH wrote:
"If I use 3 or 4 sections, will it be worth the extra sections gain wise, than a 2 section?"

Only Chuck can answer that. It`s a personal decision what something is worth.

There is a 2-section co-linear 2-meter antenna, "The Super-J Maritime Antenna" in the 19th edition of the ARRL Antenna Book on page 16-24 for starters.

Best regards, Richard Harrison, KB5WZI

3948. Re: 2-Meter Co-Linear

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-27 04:43:36 UTC
From: George Kinzer <horseflygk@worldnet.att.net>
Message-ID: <YrDa9.6285$p%3.481509@bgtnsc05-news.ops.worldnet.att.net>
Source record: 135788

go for 5 !!!

--
If first you don't succeed, do the same thing again...see what happens

3949. Re: Linearity of Bird Wattmeter Slugs?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-27 05:17:22 UTC
From: "Bob M." <xxxxx@yyyy.zzz>
Message-ID: <CXDa9.110436$Aw4.4759180@bin2.nnrp.aus1.giganews.com>
Source record: 135790

I'm using Coaxial Dynamics elements (www.coaxial.com) with my Bird 43. They work fine and are less expensive than Bird elements. I believe that you can only buy new Bird products directly from Bird these days, however there's always stuff on eBay. NOARD in Ohio sells CDI elements for a couple of dollars less than buying direct from CDI. I also learned that, as a ham, if I buy new CDI elements from NOARD, I can send them back to CDI who will calibrate them, on a frequency of my choice, for maximum accuracy. And the price is right. I don't know how well they publicize this service, but I can not complain about their policies so far.

One thing I learned is that when a 5w element (200-500 MHz) reads 5 watts, and I put in a 50w element (200-500 MHz), it reads about 7 watts. Granted the reading is at the low end of the scale, but still unexpected. Well within the meter and element accuracy specs however. My solution was to buy 10w and 25w elements to fill in the gap.

Bob M.
======
"Fractenna" <fractenna@aol.com> wrote in message
news:20020826065930.28654.00002060@mb-mn.aol.com...
> >Chip, N1IR wrote:
> >"How linear are these slugs at the edge of their passbands?"
> >
> >Standard Bird elements come in the following frequency bands (MHz):
> >2-30, 25-60, 50-125, 100-250, 200-500, and 400-1000. There are many more
> >slugs for low power, high power, higher frequencies, etc.
> >
> >Accuracy specified is 5% of full scale
> >
> >Low power and low frequency require tighter coupling. Accuracy is
> >probably better on loosly coupled slugs, or over a smaller range on more
> >tightly coupled slugs. When the distances within a slug become
> >significant in terms of wavelength, accuracy may decline. Again, Bird
> >can just narrow the specified band pass to stay within their specified
> >5% accuracy.
> >
> >For greater accuracy two slugs, a high power slug for forward power and
> >a low power slug for reflected power, can improve results.
> >
> >Bird will probably gladly supply a replacement manual and more, reprints
> >of their "Technical
> >Series", on request. Secrecy is long gone as some makers of similar
> >products now have slugs which directly interchange with the Bird
> >elements. Most deny the interchangeability, but they usually produce
> >identical results for me. Bird elements usually look better and cost

> >little if any more than the off-breeds. Availability may be better from
> >Bird, too.
> >
> >Sorry I haven`t checked the deterioration of accuracy at the band edges.
> >More accurately, I don`t know how much better than 5% of full scale the
> >Bird element is at mid-band.
> >
> >Best regards, Richard Harrison, KB5WZI
> >
> >
>
> That's very helpful. Thanks!
>
> 73
> Chip N1IR

3950. Re: What am I emitting on 80M?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-27 05:22:23 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <3D6B0C8F.8000806@eznec.com>
Source record: 135791

Why would the radiation from the flue be 180 degrees out of phase? The magnitude and angle of radiation from Yagi parasitic elements can be controlled over quite a wide range by adjusting their length and spacing.

Roy Lewallen, W7EL

Richard Harrison wrote:
> Bill Klocko wrote:
> "Alright, so currents are induced on a flue. So what?"
>
> A coax with longitudinal (common-mode) current on the exterior of its
> sheath might be the source of lower-angle radiation, good for a hop in
> excess of 30 miles were it not for the flue.
>
> RE-radiation from the flue is 180-degrees out of phase. The effect of
> the pair made from the coax and the flue is much like a pair in a
> parallel-wire transmission line which leaves the radiation to the
> horizontal dipole.
>
> In Ken`s case, the horizontal dipole is useless at 80-160 meters.
> Vertically polarized radiation from the coax would possibly produce some
> useful lower-angles for longer hops.
>
> Best regards, Richard Harrison, KB5WZI
>

3951. Re: What am I emitting on 80M?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-27 05:36:57 UTC
From: Fred Hambrecht <w4jle@charter.net>
Message-ID: <umm3vuga4uhbff@corp.supernews.com>
Source record: 135792

Richard, while I agree with your general premise if we are talking about DX, practical experience has shown that 100 miles or more after dark is no problem for an antenna even 15 foot off the ground.

The reality, no ham gets those pretty patterns in the book on 75 unless he is blessed with large amounts of both money and land.

I will be willing to bet a bottle of your favorite soft drink that his problems have nothing to do with such esoteric reasons as angle of incidence or absorption of a flue.

These things are second order effects in the real world. Had he stated he couldn't reach beyond 200 miles, I would have set back and not said a word. When he stated 30 miles, I stick with my original assessment.

Something as simple as removing the insulation from the wire before connecting it to the trap, or an open connector that appears to work on 10 and 15 but not 75.

I would like to have 10 minutes with that antenna and my antenna analyzer, then with the initial problems solved you could then guide him into the world of patterns Vs height and all the neat esoteric stuff to let him work his first VK on 75 using the darn thing.

"Richard Harrison" <richardharrison@webtv.net> wrote in message news:13083-3D6AF9EB-530@storefull-2394.public.lawson.webtv.net...
> Fred Hambrecht wrote:
> "If he can`t get over 30 miles the problems are more severe than all the
> theoretical crap about takeoff angles."
>
> The antenna works on 40 meters and higher frequencies.
>
> It produces NVIS at 30 miles on 80 meters.
>
> Low horizontal antennas are cloud warmers.
>
> If Ken had no flue pipe, chances are the high impedance of the too short
> dipole on 80-160 meters would divert current to the coax exterior where
> the radiation produced could skip out beyond 30 miles. As it is,
> radiation is produced but mostly at useless angles.
>
> Best regards, Richard Harrison, KB5WZI
>

3952. Re: What am I emitting on 80M?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-27 07:11:05 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <3D6B2609.1@eznec.com>
Source record: 135793

I agree.

But even if people do get those pretty patterns, it's possible to work hundreds of miles, and even DX. Most people just don't seem to realize that the patterns are graphs of field strength vs. elevation angle. Even a cursory look at the graphs shows that just because an antenna is radiating most strongly at high angles doesn't mean that it's not also radiating at lower angles. (Or, for that matter, that the antenna doesn't radiate better at low angles than some antennas that do their best at low angles.) And often, that amount at lower angles is all you need to communicate.

But people have a great capacity for oversimplification, and apply it to antennas as well as so many other things.

Roy Lewallen, W7EL

Fred Hambrecht wrote:
> Richard, while I agree with your general premise if we are talking about DX,
> practical experience has shown that 100 miles or more after dark is no
> problem for an antenna even 15 foot off the ground.
>
> The reality, no ham gets those pretty patterns in the book on 75 unless he
> is blessed with large amounts of both money and land.
>
> I will be willing to bet a bottle of your favorite soft drink that his
> problems have nothing to do with such esoteric reasons as angle of incidence
> or absorption of a flue.
>
> These things are second order effects in the real world. Had he stated he
> couldn't reach beyond 200 miles, I would have set back and not said a word.
> When he stated 30 miles, I stick with my original assessment.
>
> Something as simple as removing the insulation from the wire before
> connecting it to the trap, or an open connector that appears to work on 10
> and 15 but not 75.
>
> I would like to have 10 minutes with that antenna and my antenna analyzer,
> then with the initial problems solved you could then guide him into the
> world of patterns Vs height and all the neat esoteric stuff to let him work
> his first VK on 75 using the darn thing.

3953. Re: What am I emitting on 80M?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-27 08:47:35 UTC
From: 'Doc <w5lz@icok.net>
Message-ID: <3D6B3C93.CD0450FF@icok.net>
Source record: 135794

Richard,
I suggest that until you have had a chance to
use a dipole on 160m or 80m that you not make such
disparaging comments about them. You might find
that what you think isn't exactly what 'is'. I don't
have an electrical engineering degree, but I do have
experience, and that experience says your mistaken.
'Doc

3954. RG-14AU?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-27 10:23:15 UTC
From: Mark Hall <mark.hall34@verizon.net>
Message-ID: <nqIa9.3170$Hl4.2638@nwrddc03.gnilink.net>
Source record: 135795

What are the group's thoughts on using RG-14AU? Specs look real good, it's a bit heavy though, and too big for normal connectors. Do they still make this stuff, or is it obsolete?

'73

3955. Re: Linearity of Bird Wattmeter Slugs?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-27 10:48:25 UTC
From: fractenna@aol.com
Message-ID: <20020827064825.14922.00002626@mb-cq.aol.com>
Source record: 135796

>I'm using Coaxial Dynamics elements (www.coaxial.com) with my Bird 43. They
>work fine and are less expensive than Bird elements. I believe that you can
>only buy new Bird products directly from Bird these days, however there's
>always stuff on eBay. NOARD in Ohio sells CDI elements for a couple of
>dollars less than buying direct from CDI. I also learned that, as a ham, if
>I buy new CDI elements from NOARD, I can send them back to CDI who will
>calibrate them, on a frequency of my choice, for maximum accuracy. And the
>price is right. I don't know how well they publicize this service, but I can
>not complain about their policies so far.
>
>One thing I learned is that when a 5w element (200-500 MHz) reads 5 watts,
>and I put in a 50w element (200-500 MHz), it reads about 7 watts. Granted
>the reading is at the low end of the scale, but still unexpected. Well
>within the meter and element accuracy specs however. My solution was to buy
>10w and 25w elements to fill in the gap.
>
>Bob M.
>======

Again, I'm glad I asked; thanks also for the great help:-)!

73,
Chip N1IR

3956. Diamond CP-6 setup manual

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-27 11:58:26 UTC
From: S57MHA - Alex <mr.alex@email.si>
Message-ID: <ITJa9.1017$EM5.22557@news.siol.net>
Source record: 135797

Hello there.

I just got allmost new Diamond CP-6 antenna, but I didn't get any manuals.
Does anyone have any info about radial lenght and other things about setting
it up. PSE contact me to my e-mail.

Thanks,

Alex, S57MHA

3957. Mag mount and capacitance

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-27 12:42:14 UTC
From: Larry Spinner <lspinner@isterrausa.com>
Message-ID: <9rKa9.21677$jg3.219278591@news.pvt>
Source record: 135798

Hi.

I'd like to work 10 and 15 meters mobile. I'll have a tri-mag mount on the car. Will that be enough capacitance (ground) for 15 meters?

73 and thanks...

3958. Good grounding ?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-27 14:20:30 UTC
From: Andy M <andrew.markham@virgin.net>
Message-ID: <3d6bb455@news.greennet.net>
Source record: 135799

Hi All

I'm putting up a Inverted L antenna for 160 metres Tx / Rx, and going to try and give it a good ground.

Question is do the radials I'm going to lay in the ground have to be bare wire or can I use insulated wire (I have loads of that) do'es it make a difference ??.

Andy
M3RZA

3959. Re: What am I emitting on 80M?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-27 14:37:55 UTC
From: n7ws@nowhere.com
Message-ID: <3d6b8a38.29218747@news.triconet.org>
Source record: 135801

On Tue, 27 Aug 2002 00:11:05 -0700, Roy Lewallen <w7el@eznec.com> wrote:

|I agree.
|
|But even if people do get those pretty patterns, it's possible to work
|hundreds of miles, and even DX. Most people just don't seem to realize
|that the patterns are graphs of field strength vs. elevation angle. Even
|a cursory look at the graphs shows that just because an antenna is
|radiating most strongly at high angles doesn't mean that it's not also
|radiating at lower angles. (Or, for that matter, that the antenna
|doesn't radiate better at low angles than some antennas that do their
|best at low angles.) And often, that amount at lower angles is all you
|need to communicate.

Exactly. Using your favorite modeling program, analyze a low dipole and save the elevation plot and then model a vertical over real ground (and by that I mean the lousy ground most of really have) and overlay the plots. There likely will be very little difference at the "useful" DX angles. The vertical will have the advantage of *not* having the high angle response that brings in local QRM and QRN, but the gains will be about the same.

Useful DX angles doesn't necessarily mean very low angles; there is some thought that a few more hops rather than fewer actually delivers better DX signal strengths at MF. See "Equinoctial and Diurnal Path Switching" Part 2. CQ Magazine, March 2002, pp 24-29.

If low dipoles didn't have some lower angle radiation then the anecdotal evidence of world-wide contacts that I offered earlier in this thread would not be possible.

3960. Re: RG-14AU?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-27 14:38:15 UTC
From: Dennis Kaylor <k4oxg@tampabay.rr.com>
Message-ID: <3D6B8EE4.30B9CDFD@tampabay.rr.com>
Source record: 135800

hey mark
i have been a ham since 1990 and have never heard of that feedline so it must be older than the hills
i would suggest looking at belden 9913f or times microware LMR400
both of these are very low loss long life 50 ohn coaxes
good luck

Mark Hall wrote:

> What are the group's thoughts on using RG-14AU? Specs look real good, it's
> a bit heavy though, and too big for normal connectors. Do they still make
> this stuff, or is it obsolete?
>
> '73

3961. Re: Diamond CP-6 setup manual

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-27 14:40:03 UTC
From: Andy M <andrew.markham@virgin.net>
Message-ID: <3d6bb8ed$1@news.greennet.net>
Source record: 135802

Hi Alex

Try here for info on the CP-6

http://www.rfparts.com/diamond/CP6A.pdf

Andy

"S57MHA - Alex" <mr.alex@email.si> wrote in message
news:ITJa9.1017$EM5.22557@news.siol.net...
> Hello there.
>
> I just got allmost new Diamond CP-6 antenna, but I didn't get any manuals.
> Does anyone have any info about radial lenght and other things about
setting
> it up. PSE contact me to my e-mail.
>
> Thanks,
>
> Alex, S57MHA
>
>

3962. Re: RG-14AU?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-27 14:42:40 UTC
From: Ralph Mowery <rmowery@cetlink.net>
Message-ID: <akg3f5$ao7$1@newsreader.cetlink.net>
Source record: 135803

Check out what they have to say about it here .

http://www.timesmicrowave.com/products/military/TL14/TL14.htm

I did not read up on it but did look at the table that has the specs for it.

"Mark Hall" <mark.hall34@verizon.net> wrote in message
news:nqIa9.3170$Hl4.2638@nwrddc03.gnilink.net...
> What are the group's thoughts on using RG-14AU? Specs look real good,
it's
> a bit heavy though, and too big for normal connectors. Do they still make
> this stuff, or is it obsolete?
>
> '73
>
>

3963. Re: What am I emitting on 80M?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-27 14:55:48 UTC
From: cprstn54zz@att.net
Message-ID: <3d6b91be.101429031@news-server.optonline.net>
Source record: 135804

On Sun, 25 Aug 2002 20:08:23 GMT, n7ws@nowhere.com (Wes Stewart)
wrote:

>On Sun, 25 Aug 2002 17:38:52 GMT, cprstn54zz@att.net (Ken) wrote:
>Okay, I give up. I can't hit a moving target.
>First it was: "At the ends of the low bands, however, untuned SWR goes to around
>6.0 at the radio."
>Then it was: "At one frequency, where SWR was 12.0 at the radio,..."

I immediately posted a correction saying the SWR *averaged* 10 at the
band limits. At one end it was 12.0. This is not inconsistent or
unexpected. I saw no point in posting the four actual SWR readings I
got at the band limits that averaged out to 10.

Ken KC2JDY
Ken
(to reply via email
remove "zz" from address)

3964. Re: ARRL Maryland-DC Section Convention & Hamfest

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-27 15:09:15 UTC
From: Vito <vito@crosslink.net>
Message-ID: <3D6B961B.DCE5180F@crosslink.net>
Source record: 135805
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.boatachors,rec.radio.amateur.homebrew

"E. Allen Brown, FALLFEST 2002 Programs Manager" wrote:
>
> The Foundation for Amateur Radio (F.A.R.) and The Columbia Amateur
> Radio Association (CARA) have joined forces to create what will
> become one of the premier Amateur Radio events in the Mid-Atlantic
> region.
>
> The dates are Saturday, September 7 and Sunday, September 8, 2002
> at the Howard County (MD) Fairgrounds west of Baltimore near the
> intersection of I-70 and MD-32.
>
> See: http://www.fall-fest.com/ for details and directions.....

Das in Merlin near Bomber where the Oreos play, rat?

73, K3DWW

3965. Re: What am I emitting on 80M?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-27 15:22:44 UTC
From: n7ws@nowhere.com
Message-ID: <3d6b9627.32273856@news.triconet.org>
Source record: 135806

On Tue, 27 Aug 2002 14:55:48 GMT, cprstn54zz@att.net (Ken) wrote:

|On Sun, 25 Aug 2002 20:08:23 GMT, n7ws@nowhere.com (Wes Stewart)
|wrote:
|
|>On Sun, 25 Aug 2002 17:38:52 GMT, cprstn54zz@att.net (Ken) wrote:
|>Okay, I give up. I can't hit a moving target.
|>First it was: "At the ends of the low bands, however, untuned SWR goes to around
|>6.0 at the radio."
|>Then it was: "At one frequency, where SWR was 12.0 at the radio,..."
|
|I immediately posted a correction saying the SWR *averaged* 10 at the
|band limits. At one end it was 12.0. This is not inconsistent or
|unexpected. I saw no point in posting the four actual SWR readings I
|got at the band limits that averaged out to 10.

"Immediately" being a day later and after I had responded to the first message.

It would have been helpful to those who are trying to be helpful to state:

I measured X:1 at 3.6 MHz, Y:1 at 7.1 MHz.... or whatever.

Clearly, "averaged", "ends of the low bands" and "at one frequency" have some of
us guessing.

SK

Wes

3966. Re: Good grounding ?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-27 15:49:59 UTC
From: 'Doc <w5lz@icok.net>
Message-ID: <3D6B9F92.9B9296AE@icok.net>
Source record: 135807

Andy,
No, it really doesn't make any difference.
'Doc

3967. is there a difference in quality in rooftop tv antennas?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-27 15:53:20 UTC
From: aaronep@pacbell.net
Message-ID: <8cf398a0.0208270753.ba8856a@posting.google.com>
Source record: 135808

I desire to purchase a new rooftop antenna, approx 50 elements, 120
in. boom length. Would it make a difference in terms of antenna
life, reception
quality, in choosing between the various brands out there, ie: Radio
Shack,
Channel Master, RCA, Winegard, etc.?

I do not wish to have to climb on the roof every other year to replace
an antenna.

All replies welcomed!

Aaron in N. Hollywood

3968. Re: RG-14AU?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-27 15:59:40 UTC
From: 'Doc <w5lz@icok.net>
Message-ID: <3D6BA1D7.DD7C50F8@icok.net>
Source record: 135809

Mark,
After a quick peek at the specs, I'd think it would
work okay for short to medium length runs. If you have
a mess of it already, why not? If you have to go looking
for it, I don't think it would be worth the trouble.
'Doc

3969. Re: Air-Wound Balun Design Info??

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-27 16:02:40 UTC
From: kelly@dvol.com
Message-ID: <d22b54c3.0208270802.7f8f7e13@posting.google.com>
Source record: 135810

Roy Lewallen <w7el@eznec.com> wrote in message news:<3D68D2F0.60501@eznec.com>...
> Brian Kelly wrote:
>

> It'd be worth a try, but I think that a lot of people running that kind
> of power are using ferrite beads strung along the outside of the coax (a
> W2DU balun). Type 43 cores are probably most often used for this. The
> advantages of this approach are simplicity, broad bandwidth (like a
> ferrite toroid), the ability to work easily with large coax, and
> relatively high power handling ability. The disadvantages are cost and
> weight.
>
>
Judgement/tradeoff call. Given any yagi with it's cost and weight an
18" string of beads the additional weight and cost is peanuts on both
counts.
>
>
> If you have N beads each with impedance Z, you get N*Z total
> impedance. With a toroid core you get T^2*Z where T is the number of
> turns. So it takes quite a few beads.
>
>
The N*2 term makes cores attractive. 'Nother tradeoff exercise.
>
>
>
> >
> > Bingo, there it is, there's my conceptual problem. What happens in the
> > case of a 1:1 balun, air or ferrite core when the antenna is not a
> > "reasonable" match with 50 ohm coax? What's the definition of a
> > "reasonably matched load"?? Take the case of a G5RV. They can present
> > swrs which are all over the map but are still within the tuning range
> > of the average ATU. Which is "good enough" in most ham's minds.
>
> There's been a lot of discussion about this on the newsgroup, but a lot
> of it has been with some lack of understanding.
>
>
I've read those gazillion posts. Which is why I'm in here pestering
you gurus and trying to get this nonsense straight for once and for
all.
>
>

> What counts is the
> impedance seen along the shield toward ground, and the relationship
> between this and the feedpoint impedance isn't entirely clear. So I'm
> not sure anyone can really give a good general answer to this.
>
>
I'm getting very close to writing off "baluns" as they relate to
anything involving line-to-load matching.
>
>
> Some
> experiments and measurements are in order -- maybe you'll be the one to
> make them.
>
>
Uh oh . . ! "The solution is left to the student" . . .
>
>
> > Assume that the swr at the feedpoint is 6:1 and that it's resistive on
> > one band or another. The feedpoint impedance could be either 8+jï¿½ or
> > 300+jï¿½. The proper balun under these conditions should be a 6:1 unit
> > connected one way or the other.
>
> I'd personally prefer to make separate transformer and balun, just
> because it would be easier for me to optimize both. The balun's job is
> different from the impedance matching problem, so I'd rather handle each
> individually.
>
>
That comment is a big key to helping me unscramble my confusion.
Semantics and definition problem on my part. The primary and/or only
function of a balun is to reduce circulating currents. Impedance
matching is another topic. But sometimes the two functions *can* be
combined in one widget at the feedpoint. Now it all falls into place.
>
>
> > The average ham goes out and pops the usual $40 for one of the usual
> > store-bought G5RVs of which F-gazillion-2 are in use.
>
> Yes, ham radio is in a sad condition today.
>
>
I dunno . . I came into ham radio as a Novice just after the Novice
ticket became available. The old farts back then moaned and groused
about kids getting on the air with only a 5 wpm code test. Maybe we're
just the next-gen old farts. I certainly enjoy ham radio as much now
as I did back then. With two big differences: I can't scamper up and
down trees and towers like I did back then and the technical aspects
have gotten much more complex and diverse. I could get under the hood
of my S-40 rcvr with the soldering iron. I pop the the top off my

TS-940 and just stare at it in awe.
>
>
>
> > Seems to me it gets even worse when "they" use a 4:1 balun to feed an
> > end-fed wire.
>
> Good lord, yes. Yuck.
>
>
The worst of it is that the guys who design and sell the things know
better. Didn't have that kinda crap back then.
>
>
> > Copperweld oughta be outlawed.
>
> I disagree. It's great stuff for a multitude of purposes.
>
>
Not when you're out in the woods rassling with the kinks it ain't!
>
>
> > I'm not shooting for "microlight" antennas, I like the idea of using
> > 174 for winding compact baluns but I'd use 8X for the run from the
> > balun to the ATU. Any hints on the minimum allowable coiling diameter
> > for 174?
>
> No. Check with some cable manufacturers' web sites. By the way, RG-8X is
> considerably heavier than RG-58
>
>
Yes it is plus it's 0.260" in diameter which means you can't slip
0.250" bore beads over the stuff, ya have to use 0.313" ID beads. But
it's still lighter than the RG-8 class cables.
>
>
> and measurements I made of some RG-8X at
> Dayton showed that the difference in loss for 50-100 feet between it and
> RG-58 up to 15 meters was pretty small.
>
>
The tables show a useful advantage for 8X but I guess it's a matter of
source & quality. I buy all my "stuff" from Pres the Wireman who seems
to know what's up and has a good reputation. I'll take another look at
58.
>
>
> > Speaking of bridges: Where/how can a ham come up with a half-decent HF
> > impedance bridge for antenna work without having to send HP or GR
> > $5,000 -8,000?

>
> Get an MFJ Antenna Analyzer.
>
>
I have a 259B, don't know how I managed to get along without it for
all those years. But how does one use a 259B to measure the impedance
of a balun on the bench? The only other pieces of instrumentation I
have so far beyond the 259B are an swr bridge, a decent DMM and a 50
ohm dummy load.
>
>
> It won't give you the sign of the
> reactance,
>
Not directly but it can be deduced. I think. I don't have the manual
handy. Cecil posted on the subject, sweep the band with the 259B, the
reactance flips from + to - at resonance . . ? The problem with the
259B is that it has a pretty low range, isn't much help when swrs get
over 12:1.
>
>
> and it's not a precision instrument, but it's a whole lot
> better than nothing.
>
>
Close enough is good enough in ham radio.
>
>
> There are two other solutions. One is to get a GR
> bridge surplus or on ebay. The other is to roll your own.
>
>
'Druther build one and spend the money I'd save on a radio.
>
>
> There are some
> methods in _Solid State Design for the Radio Amateur_ that work quite
> well.
>
>
It's not in the ARRL bookstore - who sells it?
>
>
> I used a homebrew resistor bridge with calibrated series X circuit
> (just a calibrated series LC with variable C) for each band, for many
> years before I acquired a GR.
>
>
Not a bad idea. I have a buddy who works in a phone company lab which
is packed with top-end measuring & calibration equipment. I could tap

him for the calibration work.
>
>
> Roy Lewallen, W7EL
>
>
This thread has been very useful, got rid of a lot of ongoing fuzzies
in this whole subject area on my part. I appreciate all your inputs.

Brian w3rv

3970. Re: is there a difference in quality in rooftop tv antennas?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-27 16:12:41 UTC
From: Bob Miller <bamiller@texas.net>
Message-ID: <BqNrPcBfpjAPUzkqRdwDuvRrwAWQ@4ax.com>
Source record: 135811

aaronep@pacbell.net (Aaron Epstein) wrote:

>I desire to purchase a new rooftop antenna, approx 50 elements, 120
>in. boom length. Would it make a difference in terms of antenna
>life, reception
>quality, in choosing between the various brands out there, ie: Radio
>Shack,
>Channel Master, RCA, Winegard, etc.?
>
>I do not wish to have to climb on the roof every other year to replace
>an antenna.
>
>All replies welcomed!
>
>Aaron in N. Hollywood

In a mild, snow-free, hurricane-free climate like L.A., I would imagine any of the major brands will suffice. If you get a rotator, you'll need one that will hold the antenna in the Santa Anna (sp?) winds.

Bob
k5qwg

3971. Need Info on Flat-Top Tee Wire Antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-27 16:47:08 UTC
From: "James P. Rybak" <jrybak@mesastate.edu>
Message-ID: <1030466510.498251@tshaper.mesastate.edu>
Source record: 135812

Can anyone tell me whether or not the Flat-Top Tee wire antenna with counterpoise (shown but not discussed much in the July, 2002 issue of CQ) out performs a regular quarter wave vertical? What is the input impedance of this antenna.

For those who didn't see the CQ article, the antenna is a quarter wavelength vertical with the top third forming the top of the tee and acting as a capacity hat.

Is this antenna discussed in any of the ARRL Antenna Compendia or in the ARRL Antenna Book?

Thanks.

Jim Rybak W0KSD

3972. Re: Good grounding ?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-27 17:10:16 UTC
From: larry levesque <ka1vgm@localnet.com>
Message-ID: <umncmlbggq4cf8@corp.supernews.com>
Source record: 135813

Let us ponder this for a second.
If the purpose of the radials set in the ground are to help with the grounding of the system, it would make sense to me that if they were bare, they would conduct better to the actual earth ground and therefore work better...
of course this is just a wag on my part.....

Andy M <andrew.markham@virgin.net> wrote in message news:3d6bb455@news.greennet.net...
> Hi All
>
> I'm putting up a Inverted L antenna for 160 metres Tx / Rx, and going to try
> and give it a good ground.
>
> Question is do the radials I'm going to lay in the ground have to be bare
> wire or can I use insulated wire (I have loads of that) do'es it make a
> difference ??.
>
> Andy
> M3RZA
>
>
>

3973. Re: Linearity of Bird Wattmeter Slugs?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-27 17:11:53 UTC
From: CAM <Cecil.A.Moore@ieee.org>
Message-ID: <3D6BB2D9.31DEA79A@ieee.org>
Source record: 135814

"Bob M." wrote:
> One thing I learned is that when a 5w element (200-500 MHz) reads 5 watts,
> and I put in a 50w element (200-500 MHz), it reads about 7 watts. Granted
> the reading is at the low end of the scale, but still unexpected. Well
> within the meter and element accuracy specs however.

Trying to read 5 watts on a 50 watt scale yields plus or minus
50% accuracy at 5 watts. Why was your 7 watt reading unexpected?
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

3974. Re: Mag mount and capacitance

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-27 17:13:46 UTC
From: CAM <Cecil.A.Moore@ieee.org>
Message-ID: <3D6BB34A.3FDC6F9E@ieee.org>
Source record: 135815

Larry Spinner wrote:
> I'd like to work 10 and 15 meters mobile. I'll have a tri-mag mount on the
> car. Will that be enough capacitance (ground) for 15 meters?

Those mounts usually have enough capacitance for 14 Mhz and up.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

3975. Re: What am I emitting on 80M?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-27 17:16:24 UTC
From: CAM <Cecil.A.Moore@ieee.org>
Message-ID: <3D6BB3E8.6FE2E738@ieee.org>
Source record: 135816

Wes Stewart wrote:
> Useful DX angles doesn't necessarily mean very low angles; there is some thought
> that a few more hops rather than fewer actually delivers better DX signal
> strengths at MF.

I worked New Zealand on 40m SSB with a 40 ft high G5RV and 100 watts.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
------== Over 80,000 Newsgroups - 16 Different Servers! =-----

3976. Re: is there a difference in quality in rooftop tv antennas?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-27 17:42:40 UTC
From: Crazy George <munschNO@attglobal.net.SPAM>
Message-ID: <3d6bbff6_4@news1.prserv.net>
Source record: 135817

Aaron:
There are two grades of TV antennas, consumer, and commercial as used in cable TV head ends and the like. The latter are getting extremely difficult to find, the prices are about 10X the RadShack, and they are also heavy (i. e. you need a stronger mast). Bill M can fill you in on specifics if he pops in here. Having said that, the major failure of consumer antennas are rust and plastic deterioration, and some tubing breakage. It is possible to take a RadShack antenna, beef up certain parts of it, drill out all the steel rivets and replace them with stainless bolts and lock nuts, coat the plastic with UV proof weatherproofing, and have a 20 year antenna. On the other hand, off the air TV is going away in 5 years, so why bother?

--
Crazy George
Remove NO and SPAM from return address
Aaron Epstein <aaronep@pacbell.net> wrote in message
news:8cf398a0.0208270753.ba8856a@posting.google.com...
> I desire to purchase a new rooftop antenna, approx 50 elements, 120
> in. boom length. Would it make a difference in terms of antenna
> life, reception
> quality, in choosing between the various brands out there, ie: Radio
> Shack,
> Channel Master, RCA, Winegard, etc.?
>
> I do not wish to have to climb on the roof every other year to replace
> an antenna.
>
> All replies welcomed!
>
> Aaron in N. Hollywood

3977. Re: RG-14AU?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-27 17:50:12 UTC
From: Crazy George <munschNO@attglobal.net.SPAM>
Message-ID: <3d6bbff8_4@news1.prserv.net>
Source record: 135818

Foam versions of RG-8 size coax are about as good as RG-14. Newer foam designs are always less lossy than older "standard" RG style coax. RG-14 was never as popular as RG-8, and its variants, or RG-17 and its variants, because the cost was nearly as high as 17, so there was little incentive to choose it unless the weight or size was very critical. Historically, shipboard seemed to be the major application. Foam hardline is the coax of choice for that these days. It is still being made, I saw some recently for a government repair operation where exact replacement was specified. Unfortunately, I wasn't privy to the cost.

--
Crazy George
Remove NO and SPAM from return address
Mark Hall <mark.hall34@verizon.net> wrote in message
news:nqIa9.3170$Hl4.2638@nwrddc03.gnilink.net...
> What are the group's thoughts on using RG-14AU? Specs look real good,
it's
> a bit heavy though, and too big for normal connectors. Do they still make
> this stuff, or is it obsolete?
>
> '73
>
>

3978. Re: Waveguide Antenna.

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-27 18:00:25 UTC
From: Jon Harmon <jharmon@ipns.com>
Message-ID: <3d6bbba0$1_3@corp-news.newsgroups.com>
Source record: 135719

check out the ARRL microwave antennas project book II.

"mhoskins" <mhoskins3@comcast.net> wrote in message
news:LYBa9.228406$SS.9270698@bin3.nnrp.aus1.giganews.com...
> I am looking for sources and or detailed plans / diagrams (dimensions),
> design software for a waveguide antenna for 890mhz through 914mhz.
>
> I am also looking for sources and or detailed plans / diagrams
(dimensions),
> design software for a feedhorn for 935mhz through 959mhz.
>
> Any and all assistance and advice will be welcome.
>
>

3979. Re: Air-Wound Balun Design Info??

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-27 18:45:58 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <3D6BC8E6.4010701@eznec.com>
Source record: 135720

Brian Kelly wrote:
> . . .
> I have a 259B, don't know how I managed to get along without it for
> all those years. But how does one use a 259B to measure the impedance
> of a balun on the bench? The only other pieces of instrumentation I
> have so far beyond the 259B are an swr bridge, a decent DMM and a 50
> ohm dummy load

Connect the two input conductors of the balun together and call it point A. Connect the two output conductors of the balun together and call it point B. Connect point A to the center conductor of the analyzer input and point B to analyzer ground at the connector (or the other way around). You'll probably have to keep the analyzer and balun away from large conductive objects when you do the measurement, and it won't be precise. But it'll get you in the ballpark.

> . . .

> [Solid State Design for the Radio Amateur is] not in the ARRL bookstore - who sells it?

Is it finally out of print after all these years? It was published by the ARRL. Well, I see Powell's has a copy of it, new, for $15. http://www.powells.com. I'm sure that with a little resourcefulness and a Google search you can find other sources. It's a very worthwhile addition to the library of any amateur interested in experimenting.

> . . .

Roy Lewallen, W7EL

3980. Re: 2-Meter Co-Linear

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-27 19:17:29 UTC
From: chuck & shirley hawks <s_hawks@bellsouth.com>
Message-ID: <7ISa9.17799$Hd4.4686002@e3500-atl1.usenetserver.com>
Source record: 135733

OK, Let me rephrase the question.

How much more gain is there on a three section Co-linear then with a two section.

I tried to search, but came up dry. If anyone can point me to some info or other web sites that would be great.

Thanks

Chuck

--
x-no-archive: yes
"chuck & shirley hawks" <s_hawks@bellsouth.com> wrote in message news:i1Ca9.6785$Hd4.3437189@e3500-atl1.usenetserver.com...
> I am planning on replacing my old (10 years) antenna. I am planning on
> making my own Co-linear. The question is;
>
> If I use 3 or 4 sections, will it be worth the extra sections gain wise,
> then a 2 section.
>
> Thanks in advance
>
> Chuck
> KE4ETH
>
> --
> x-no-archive: yes
>
>
>

3981. Re: What am I emitting on 80M?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-27 19:43:40 UTC
From: richardharrison@webtv.net
Message-ID: <18205-3D6BD66C-668@storefull-2392.public.lawson.webtv.net>
Source record: 135721

Roy Lewallen wrote:
"Why would the radiation from the flue be 180 degrees out of phase?"

Because the flue is only about 3 feet from the coax and the frequency is in the 80 or 160 meter band. Also there is evidence of insufficient radiation at low angles where some can be expected with the antenna used. We are relying on the reports.

Ken`s antenna is reported to work at 30 miles and does not work at greater distances. Were it not for radiatiation pattern cancellation at low elevation angles, a low horizontal dipole might be a great DX antenna. Anecdotes of working the world with a dummy load don`t make it the best antenna. The next user may not have the same luck.

We have scoffing at the "waveangle stuff". The FCC publishes approximate wave departure angles at 1 MHz versus surface path length It`s a part of the rules. Appreciation may be improved by a look at the numbers:
11 degrees at 500 miles
20 degrees at 250 miles
30 degrees at 150 miles
40 degrees at 120 miles
50 degrees at 80 miles
60 degrees at 60 miles
70 degrees at 40 miles
80 degrees at 20 miles

Roy mentioned Yagi parasitic elements. The earth is a reflector for the low dipole. The low dipole over earth has its energy reflected up, not toward or even near the horizon.

The image of the vertical antenna is very different. It produces maximum radiation at low elevation angles.

Vertically polarized radiation from Ken`s inverted-V should fill-in the sky wave beyond 30 miles. It does not.

Bad coax would not be worse at 80-160 meters than at 40 meters.

A too-short antenna seems to be exciting the zenith well enough because Ken reports working stations 30-miles distant at night which he can not work during the day.

My speculation is that, removed from the vicinity of Ken`s house and in the clear, the low inverted-V would work stations well beyond the 30-mille limit he has now. I speculate the antenna does not work as it should because it is near the house.

I agree the flue is not resonant at 80 or 160 meters, so it is not cancelling all vertically polarized radiation, but it is close coupled. Point is, Ken does not get enough vertically polarized radiation to relieve his situation.

Antenna performance is as surely a function of its environment as it is of the wire configuraton. A very low dipole isn`t consistently going to reach far via the ionosphere. It will reach near. A short vertical antenna can span the globe. You probably have heard DX on a mobile radio.

Best regards, Richard Harrison, KB5WZI

3982. Re: Need Info on Flat-Top Tee Wire Antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-27 20:12:54 UTC
From: richardharrison@webtv.net
Message-ID: <18206-3D6BDD46-187@storefull-2392.public.lawson.webtv.net>
Source record: 135725

Jim, W0KSD wrote:
"Is this antenna discussed in any of the ARRL Antenna Compendia or in the ARRL Antenna Book?"

See ON4UN`s "Low-Band DXing" published by ARRL. Its index sends you to page 9-50 and that directs you to probably everything you ever wanted to know about this and similar antennas.

Best regards, Richard Harrison, KB5WZI

3983. Re: RG-14AU?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-27 20:27:46 UTC
From: Crazy George <munschNO@attglobal.net.SPAM>
Message-ID: <3d6be4f1_4@news1.prserv.net>
Source record: 135722

Mark:

Oh, and by the way, the designation is way, way obsolete. RG-14 was redesignated RG-217 when it was standardized at 50 ohms, and under the present nomenclature system it M17/78-RG217 (swept), or M17/165-00001 (unswept).

But, foam is still better.

--
Crazy George
Remove NO and SPAM from return address

3984. G5RV Question

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-27 20:35:30 UTC
From: rob34 <rob34@infinet.com>
Message-ID: <3d6be29d$0$3571$4c5ecdc7@news.erinet.com>
Source record: 135724

I am building a G5RV antenna for 10 -80 meters and I was wondering if it would work out ok to use a "Van Gorden" Hi -Q balun with a 1:1 ratio on the end of the ladder line where the coax hooks on or would it be better to make an air balun for this? Thanks on any info on this. Rob WB8VWI

3985. Re: Good grounding ?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-27 20:49:25 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <3D6BE5D5.5070907@eznec.com>
Source record: 135726

The "connection" to the ground is more by electromagnetic field
(capacitive and inductive) coupling than by conduction. So insulated
wire works as well as bare wire. Insulated wire is also less subject to
corrosion.

Roy Lewallen, W7EL

larry levesque wrote:
> Let us ponder this for a second.
> If the purpose of the radials set in the ground are to help with the
> grounding of the system, it would make sense to me that if they were bare,
> they would conduct better to the actual earth ground and therefore work
> better...
> of course this is just a wag on my part.......

3986. Re: Antenna Theory/Experiment Book Recommendation

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-27 20:59:46 UTC
From: JC <jacques.culot@skynet.be>
Message-ID: <3d6be845$0$182$ba620e4c@news.skynet.be>
Source record: 135727

I also recommend a very good book : "Reflections - transmission lines and antennas" written by W2DU - published by ARRL (this is a must). Also "Radio communication handbook" volume 2 - published by RSGB (I have the fifth edition).

73 de Jacques - ON5MJ

3987. Santa Barbara, Ca. - RF Design Engineer Position Available

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-27 21:13:53 UTC
From: itjobs@digcareers.com
Message-ID: <257f7925.0208271313.703def60@posting.google.com>
Source record: 135728

Position: RF Design Engineer
Location: Beautiful Santa Barbara
Salary: $ 95,000 - 115,000 (may go higher for right candidate)
Contact: Bernie Laporte
Digital Careers, Inc.
itjobs@digcareers.com
714-705-1555

Please reference job number: BL082202-01

Our Client is a well established company that designs, manufactures, and markets electronic communications equipment for diversified telecommunication industries, and the radio and television broadcast industry.

RF Design Engineer

Seeking a highly motivated individual to join our team. We are developing state-of-the-art wireless telecommunication and broadcast radio equipment operating in the 400MHz-8GHz frequency range, and all aspects of radio transmitter / receiver system design, incorporating Windows based components into multi-layer PC boards. Position requires close work with PCB designer and integrated schematic capture software packages (ACCEL).

Experience should include Crystal Oscillator, Low-Noise Synthesizer, Linear Power Amp, Low-Noise Preamp, Optimized VCO, RF Modem, Microprocessor Interface, and Analog/ Digital Audio.

Must be able to communicate, document, and certify the design-to-release cycle for the benefit of others. Must carry final product responsibility into pilot run, production, and tech support phases, and be able to multitask and manage time productively.

Candidates will posses a 4 year degree minimum, (or demonstrable equivalent work experience) and 5+ years experience.

3988. Re: Antenna question

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-27 21:14:28 UTC
From: jgboyles@aol.com
Message-ID: <20020827171428.27162.00003891@mb-bh.aol.com>
Source record: 135729

>I would like to hook up my roof antenna to my portable radio

Hi Joe, If you could tell us exactly what kind of roof antenna you have, as well as what kind of portable radio, might could give you a few ideas. Also are you mostly interested in FM/AM or both?
73 Gary N4AST

3989. Antenna question

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-27 21:24:06 UTC
From: joe <casavant@nucleus.com>
Message-ID: <3d6be197@news.nucleus.com>
Source record: 135723

I would like to hook up my roof antenna to my portable radio but the radio
does not have the normal am/fm antenna screws. How can I modify the radio
so I can hook up 75 ohm coaxil to it?
Thanks
Joe

3990. Re: What am I emitting on 80M?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-27 21:37:53 UTC
From: Owen Duffy <owen@oda.com.au>
Message-ID: <3D6BF131.4F930B63@oda.com.au>
Source record: 135730

Ken wrote:
>
> I am putting 100 watts at 80M into a shortened inverted-V dipole with
> center 40 ft up. The only contacts I have been able to make are after
> dark to a densely populated area 20-30 miles to the west, behind a
> nearby hill that blocks line-of-sight to the contacts.
>

Ken,

You are sending everyone spare with your expression of possibly unreliable, usually partial observations in a haphazard way. (One could be forgiven for thinking it could be one of the best wind-ups perpetrated here for w while!)

Somehow I think that theses observations are based on essentially the ***same*** configuration that you have described under about four threads.

For avoidance of doubt and some risk of clarity, lets talk about the 80m band (or 75 or whatever you call it over there) exclusively here.

It seems that the antenna you are using is a commercial wire antenna of about 100ft with some lumped reactive elements, possibly also parallel dipoles, intended for multi-band operation down to 160m. The manufacturer seems to suggest that it is designed to be fed with 50 ohm coax and deliver a bandwidth (on 80m) of ~50KHz with VSWR<2 with a caveat: subject to height of installation and ground configuration.

If the antenna actually works like this, then feeding it with 100ft of RG8X is reasonable (losses, even under VSWR=2 of 100ft of RG8X at 3.6MHz (or thereabouts) is reasonably acceptable. If you use some kind of balun device at the antenna that is intended for use on the end of a 50ohm coax, it will probably perform acceptably (ie reasonable loss, minimal derating of its power handling capability) at VSWR<2.

Remember that the VSWR you measure at the transmitter end of the coax is lower than exists at the antenna end of the coax by virtue of the cable losses. In the case of the situation described above (cable type, length and frequency), VSWR at the transmitter end of the cable will be 1.8 when it is 2 at the antenna end of the cable.

Now, if you want to use it like the manufacturer intended (that's why you purchased it wasn't it?), you need to try to find the (narrow) frequency band where it does exhibit these characteristics. You may want to try and shift that operating band to a more convenient frequency band.

The manufacture suggests that the antenna will cover the whole of the band with the help of a tuner. We might interpret that to mean that VSWR will increase significantly, and with the help of a tuner you will still be able to develop rated transmitter power into the tuner / feedline / balun / antenna subsystem.

Let's consider the effect of increasing antenna VSWR on the system:

Understand that your balun device might not have acceptable losses and its power handling may be derated when operating on loads significantly different to 50 ohm resistive.

Cable losses increase when operated at higher VSWR. For that reason, for the feedline configuration described above, I recommend you do not exceed VSWR=3. Cable power handling capability will also be reduced.

If you introduce an antenna tuner to transform the load impedance at the radio end of the feedline to suit the transmitter, the tuner will introduce losses, and the losses will tend to be higher at higher transformation ratios (generally associated with higher VSWR).

Ok, If you measure VSWR on your operating frequency at the transmitter (in this configuration) of less than about 2, that sounds like the feed arrangement is working acceptably.

If you measure VSWR on a frequency in the 80m band at 12 for the above configuration (as you previously reported) or numbers like it, and use a tuner to load the radio up, you will lose most of your power in the tuner / feedline (receive will be similarly affected).

Owen

PS: Nothing in this response should be interpreted to attach any special importance to any magical value of VSWR in a general sense. However, if a given is using 100ft of RG8X at 3.6MHz, cable losses become unacceptable (IMHO) with VSWR above about 3. To the extent that managing cable loss is a wothwhile objective, measuring the VSWR on the RG8X is a legitimate source of information in establishing reasonably efficient operation of the feedline.

3991. Re: What am I emitting on 80M?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-27 21:42:14 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <3D6BF236.6020801@eznec.com>
Source record: 135731

Richard Harrison wrote:

> Roy Lewallen wrote:
> "Why would the radiation from the flue be 180 degrees out of phase?"
>
> Because the flue is only about 3 feet from the coax and the frequency is
> in the 80 or 160 meter band. Also there is evidence of insufficient
> radiation at low angles where some can be expected with the antenna
> used. We are relying on the reports.

I don't believe it's valid to assume that induced current in the pipe is to blame for the failure to communicate and, from there, infer a current magnitude and ratio in the pipe. With generously low ground impedances assumed and a resonant pipe, the field strength is reduced by less than 4 dB. In the model, at least, the signal strength loss is due to ground system dissipation. If the pipe is longer or shorter, the effect is even less, and the angle of current induced in the pipe varies considerably with length.

> Ken`s antenna is reported to work at 30 miles and does not work at
> greater distances. Were it not for radiatiation pattern cancellation at
> low elevation angles, a low horizontal dipole might be a great DX
> antenna. Anecdotes of working the world with a dummy load don`t make it
> the best antenna. The next user may not have the same luck.
>
> We have scoffing at the "waveangle stuff". The FCC publishes approximate
> wave departure angles at 1 MHz versus surface path length It`s a part of
> the rules. Appreciation may be improved by a look at the numbers:
> 11 degrees at 500 miles
> 20 degrees at 250 miles
> 30 degrees at 150 miles
> 40 degrees at 120 miles
> 50 degrees at 80 miles
> 60 degrees at 60 miles
> 70 degrees at 40 miles
> 80 degrees at 20 miles
>
> Roy mentioned Yagi parasitic elements. The earth is a reflector for the
> low dipole. The low dipole over earth has its energy reflected up, not
> toward or even near the horizon.
>
> The image of the vertical antenna is very different. It produces maximum
> radiation at low elevation angles.
> . . .

So let's look at some numbers. I don't know the details of the inverted vee, but an inverted vee has nearly the same elevation pattern as a dipole. For a fair comparison, the dipole height should be lower than the inverted vee by an amount equal to 1/3 of the vertical distance from the apex to the ends. But I'll use a 30 foot high dipole to illustrate my point.

At 3.8 MHz over average ground, a quarter wavelength vertical with 8 ground radials produces a field of -1.2 dBi at the elevation angle of it strongest radiation, 25 degrees. At that angle, a dipole up only 30 feet produces a field strength of -0.1 dBi, actually stronger than the vertical. Over poor ground, the vertical is best at 27 degrees, where its field strength is -1.9 dBi and the dipole's is -0.1 dBi, an even bigger difference in favor of the low dipole. Who cares where the radiation is maximum? What you should care about is how much radiation occurs at the angles you need for communication.

The angles used at 3.8 MHz aren't the same as for 1 MHz, but let's take a look at a couple of the angles listed, anyway.

Average ground

Angle Vert Dipole
11 deg -3.0 dBi -6.5 dBi
20 deg -1.4 dBi -1.8 dBi

Poor ground

Angle Vert Dipole
11 deg -4.1 dBi -7.0 dBi
20 deg -2.2 dBi -2.3 dBi

So over average ground, the low dipole is only 2.5 dB weaker than the vertical at 11 degrees elevation angle. This means that 100 watts to a low dipole will do as well as 56 watts to a vertical at that angle. Over poor ground, the difference is even less. This is nowhere near enough to explain the failure to communicate at all, while others routinely make cross-country contacts on this band with a few watts.

This result can easily be seen with EZNEC, even the free demo version. I assumed 18 ohms of ground system loss for the vertical. MININEC type ground with an 18 ohm load at the base was used for the vertical and High Accuracy type ground for the dipole. You'll find that a low dipole looks even better compared to a vertical as the frequency increases, even if you keep the horizontal antenna the same height in terms of wavelength. That's because the ground looks more resistive due to shallower skin depth at higher frequencies, and its resistance has more effect on the vertical than on the dipole.

People need to get over the tendency to look at an antenna as radiating only at one angle. All antennas radiate at all angles, and you need to compare them at the angles of interest, as I did above.

Roy Lewallen, W7EL

3992. Re: What am I emitting on 80M?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-27 21:54:30 UTC
From: klocko@toad.net
Message-ID: <224d9cd4.0208271354.1163f54b@posting.google.com>
Source record: 135732

richardharrison@webtv.net (Richard Harrison) wrote in message
news:<10204-3D6AEA67-471@storefull-2395.public.lawson.webtv.net>...
> Bill Klocko, N3WK quoted me:
> "The vertical component of this radiation is the only useful part at
> 80-160 meters."
>
> Bill wrote:
> "Where did you read this? This is absolute nonsense."
>
> Richard answered:
> Just read my previous posts in this thread. I gave page and figure
> numbers from the 19th edition of the ARRL Antenna book. I`ve read many
> antenna books and the ARRL book is an echo of what the other books say
> about low dipoles and short verticals.

I assume you're referring to the post from 8/25 where you said:
"Edition 19 of the ARRL Antenna Book shows on page 3-11 patterns of a
full-size,
non-drooping, dipole with real, not imagined, ground clearances.
Propagation gets good at 1/2-wavelength height."

"Compare the groundplane vertical antenna patterns on page 3-13. A
groundplane up only 1/8-wavelength has good low-angle radiation. The
effects of good ground conductivity are apparent in Fig 16-A."

You're comparing vertical-plane patterns for a groundplane antenna
above flat ground and a horizontal half-wave dipole. What you want to
talk about is the low-angle radiation from Ken's antenna, not the
"vertical component of this radiation".

Let's look at those patterns you refer to (I'm using the 18th
edition). All the patterns in Figures 12, 13, 14, and 16 appear to be
referenced to a dipole in free space. For the 1/8-wave groundplane
antenna above real ground (Fig 16A), the max radiation is at a
take-off angle of about 20 degrees. The relative gain is about -8.5
dB. For the horizontal half-wave dipole 1/4-wave above real ground
(Fig 13A), the relative gain at 20 degrees elevation is about -18 dB.
So for these patterns, the horizontal dipole is about 10 dB worse than
the vertical at angles around 20 degrees. Is that significant? Not
really.

Consider something else. The relative gain for the horizontal dipole
(Fig 13A) is -8.5 dB at an elevation angle of 45 degrees. This gain is
identical to the vertical's gain at 20 degrees. The dipole achieves
the same gain as the ground plane, but at an elevation angle that is
25 degrees higher. Is the dipole significantly worse than the

vertical? Not really.

> Bill also wrote:
> "Have you ever tried an inverted Vee or a horizontal dipole in the
> 80-meter band?"
>
> Richard answered:
> Never tried an inverted-V in any band because I never had to make such a
> compromise...
> I have also never erected a dipole for use in the 80-meter amateur band...

Thanks for the honesty, but then you shouldn't dispense biased bad
advice. You would have had Ken needlessly get rid of, or modify, his
commercial antenna.

> That seems not too different to me than the countless horizontal and
> vertical dipoles I have erected for commercial pursuits at frequencies
> above and below the 80-meter ham band. I`ve put them up in Europe, North
> America, and South America. I`ve also erected Curtain Antennas for
> almost every shortwave broadcasting band, more rhombics than I can
> count, and numerous dishes, periscopes, and scop antennas in many
> different microwave systems where I
> was the principal designer. I started in mediumwave broadcasting in
> 1949. I have a BSEE degree thanks to the GI Bill. I`ve installed power
> frequency equipment too.

Good. Then you should be able to put up an inverted Vee for 80 meters.

> This thread is about an antenna that doesn`t work in a couple of bands.
> I`ve thought hard, and I don`t remember one of my antennas that didn`t
> work.

Maybe it's the particular design with coils that Ken has. The bands
that don't work are related to the antenna wires that have the coils.
If something didn't get installed right, the performance could be
degraded. Did you bother to look at the web site Ken listed? 73,
Bill N3WK

3993. Re: What am I emitting on 80M?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-27 22:24:25 UTC
From: cprstn54zz@att.net
Message-ID: <3d6bf9d6.128077453@news-server.optonline.net>
Source record: 135734

On Tue, 27 Aug 2002 14:43:40 -0500 (CDT), richardharrison@webtv.net
(Richard Harrison) wrote:
>Ken`s antenna is reported to work at 30 miles and does not work at
>greater distances.

Update: I made a partial contact last night 110 miles away at 3.525
MHz (where my untuned SWR is quite high = 12.86) using 100 watts, CW.
He copied me a lot better than I copied him, so some other folks are
worse off than I am. I never found out what his rig or antenna
antenna were, tho. For all I know, it was QRP on a coat hanger.

Ken KC2JDY

Ken
(to reply via email
remove "zz" from address)

3994. Re: What am I emitting on 80M?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-27 22:31:37 UTC
From: cprstn54zz@att.net
Message-ID: <3d6bfc75.128748406@news-server.optonline.net>
Source record: 135735

On 27 Aug 2002 14:54:30 -0700, klocko@toad.net (Bill Klocko) wrote:
>Maybe it's the particular design with coils that Ken has. The bands
>that don't work are related to the antenna wires that have the coils.
>If something didn't get installed right, the performance could be
>degraded.

The antenna comes completely assembled except you need to install
standoffs between the three wires. I have two degrees in engineering
(Chem.E., alas) so I think I am qualified to install standoffs. :-)

Ken KC2JDY

Ken
(to reply via email
remove "zz" from address)

3995. Re: What am I emitting on 80M?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-27 22:47:39 UTC
From: fractenna@aol.com
Message-ID: <20020827184739.10661.00002418@mb-cr.aol.com>
Source record: 135736

>
>Roy Lewallen wrote:
>"Why would the radiation from the flue be 180 degrees out of phase?"
>
>Because the flue is only about 3 feet from the coax and the frequency is
>in the 80 or 160 meter band. Also there is evidence of insufficient
>radiation at low angles where some can be expected with the antenna
>used. We are relying on the reports.
>
>Ken`s antenna is reported to work at 30 miles and does not work at
>greater distances. Were it not for radiatiation pattern cancellation at
>low elevation angles, a low horizontal dipole might be a great DX
>antenna. Anecdotes of working the world with a dummy load don`t make it
>the best antenna. The next user may not have the same luck.
>
>We have scoffing at the "waveangle stuff". The FCC publishes approximate
>wave departure angles at 1 MHz versus surface path length It`s a part of
>the rules. Appreciation may be improved by a look at the numbers:
>11 degrees at 500 miles
>20 degrees at 250 miles
>30 degrees at 150 miles
>40 degrees at 120 miles
>50 degrees at 80 miles
>60 degrees at 60 miles
>70 degrees at 40 miles
>80 degrees at 20 miles
>
>Roy mentioned Yagi parasitic elements. The earth is a reflector for the
>low dipole. The low dipole over earth has its energy reflected up, not
>toward or even near the horizon.
>
>The image of the vertical antenna is very different. It produces maximum
>radiation at low elevation angles.
>
>Vertically polarized radiation from Ken`s inverted-V should fill-in the
>sky wave beyond 30 miles. It does not.
>
>Bad coax would not be worse at 80-160 meters than at 40 meters.
>
>A too-short antenna seems to be exciting the zenith well enough because
>Ken reports working stations 30-miles distant at night which he can not
>work during the day.
>
>My speculation is that, removed from the vicinity of Ken`s house and in

>the clear, the low inverted-V would work stations well beyond the
>30-mille limit he has now. I speculate the antenna does not work as it
>should because it is near the house.
>
>I agree the flue is not resonant at 80 or 160 meters, so it is not
>cancelling all vertically polarized radiation, but it is close coupled.
>Point is, Ken does not get enough vertically polarized radiation to
>relieve his situation.
>
>Antenna performance is as surely a function of its environment as it is
>of the wire configuraton. A very low dipole isn`t consistently going to
>reach far via the ionosphere. It will reach near. A short vertical
>antenna can span the globe. You probably have heard DX on a mobile
>radio.
>
>Best regards, Richard Harrison, KB5WZI
>
>

Richard,

You are one patient fellow...

I think its time for Ken to get out there and do soe experimenting via the suggestions so given;-)

73,
Chip N1IR

3996. Re: 2-Meter Co-Linear

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-27 23:00:45 UTC
From: tdonaly@aol.com
Message-ID: <20020827190045.08760.00003096@mb-mw.aol.com>
Source record: 135737

Chuck wrote,
>
>OK, Let me rephrase the question.
>
>How much more gain is there on a three section Co-linear then with a two
>section.
>
>I tried to search, but came up dry. If anyone can point me to some info or
>other web sites that would be great.
>
>Thanks
>
>Chuck
>
High Chuck,
My 16th edition of the ARRL antenna book states that 2 collinear elements have 1.6dBd, 3 have 3.1dBd, and 4 have 4.2dBd. This is theoretical, and I can't vouch for the theory, or the reality, either, but those are the numbers according to the ARRL. You might want to cough up some money for a modeling program if you plan on doing much of this stuff, or, at least get a copy of the Antenna Book.
73,
Tom Donaly KA6RUH

3997. Re: B&W BWD-1.8-30Mhz ?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-27 23:51:49 UTC
From: 'Doc <w5lz@icok.net>
Message-ID: <3D6C107F.D6F3930D@icok.net>
Source record: 135738

N1RZB,
This same question has been asked and answered a number
of times in this NG. If you will check the back posts, you'll
find more than you ever wanted to know about it.
'Doc

3998. Re: What am I emitting on 80M?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-28 00:05:46 UTC
From: richardharrison@webtv.net
Message-ID: <10204-3D6C13DA-568@storefull-2395.public.lawson.webtv.net>
Source record: 135740

Roy Lewallen wrote:
"So over average ground, the low dipole is only 2.5 dB weaker than the vertical at 11 degrees elevation angle."

Then, Roy would probably not dispute the 19th edition of the ARRL Antenna Book, page 3-4:
"Practical installations for 160 and 80 meters rarely allow amateurs to put up a horizontal antenna high enough to radiate effectively at low elevation angles."

The situation over excellent ground and sea water favors a vertical over a horizontal even more. Sea water is a short circuit to horizontally polarized waves. Terman says so in three different places in his 1955 edition. Marconi knew this. Hence the Marconi antenna is a vertical.

Please note that Ken wrote:
"I live in Huntington on the north shore of Long Island Sound. My house is on a neck that extends to the north."

Best regards, Richard Harrison, KB5WZI

3999. Re: B&W BWD-1.8-30Mhz ?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-28 00:07:01 UTC
From: WA6LZH <tangeram@lucent.com>
Message-ID: <3D6C1425.4030600@lucent.com>
Source record: 135739

OM I'm not certain if I have the right antenna but if you are referring to the T2FD, a type of folded dipole with the resistor at the feed point then I have some anecdotal performance measurement for you. The observation was in a three way qso on 75 meters at night with only moderate QSB. One station about 300 miles North of San francisco Bay Area was running the B&W terminated dipole. Myself and the other local station were using dipoles. Considering the vaguaries of most s-meters we took a best guess at the amount of attenuation when the T2FD station swithced ab style between the B&W and an ordinary dipole. We concluded, on balance, about and at least a 10db difference favoring the dipole. There's been quite a bit of prior discussion on this topic on this newsgroup but I'm not sure how to access the archives.

Tony

4000. Re: ARRL Maryland-DC Section Convention & Hamfest

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-28 00:26:31 UTC
From: Al Brown <KZ3AB@ARRL.net>
Message-ID: <3D6C18B7.DAB47890@ARRL.net>
Source record: 135741
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.boatachors,rec.radio.amateur.homebrew

Vito wrote:
>
> "E. Allen Brown, FALLFEST 2002 Programs Manager" wrote:
> >
> > The Foundation for Amateur Radio (F.A.R.) and The Columbia Amateur
> > Radio Association (CARA) have joined forces to create what will
> > become one of the premier Amateur Radio events in the Mid-Atlantic
> > region.
> >
> > The dates are Saturday, September 7 and Sunday, September 8, 2002
> > at the Howard County (MD) Fairgrounds west of Baltimore near the
> > intersection of I-70 and MD-32.
> >
> > See: http://www.fall-fest.com/ for details and directions.....
>
> Das in Merlin near Bomber where the Oreos play, rat?
>
> 73, K3DWW

Das rat! The Oreos play in Bawlmer, Merlin. Dat's north of
Napolis, Hon.

73, Al
--
E. Allen Brown, KZ3AB
FALLFEST 2002 Programs Manager

4001. Re: What am I emitting on 80M?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-28 00:30:55 UTC
From: Fred Hambrecht <w4jle@charter.net>
Message-ID: <umo6e26mbdvi41@corp.supernews.com>
Source record: 135743

See law of reciprocity-, and a 12 to 1 SWR says you do not have the antenna set up correctly. Is there no one in your area or local club with an analyzer?

I am beginning to feel that your notes are more designed to evoke responses than to solve any problems. What is the SWR on the antenna every 100KC from 3.5 to 4 Mc?

Are you really interested in solving the problem?

"Ken" <cprstn54zz@att.net> wrote in message news:3d6bf9d6.128077453@news-server.optonline.net...
> On Tue, 27 Aug 2002 14:43:40 -0500 (CDT), richardharrison@webtv.net
> (Richard Harrison) wrote:
> >Ken`s antenna is reported to work at 30 miles and does not work at
> >greater distances.
>
> Update: I made a partial contact last night 110 miles away at 3.525
> MHz (where my untuned SWR is quite high = 12.86) using 100 watts, CW.
> He copied me a lot better than I copied him, so some other folks are
> worse off than I am. I never found out what his rig or antenna
> antenna were, tho. For all I know, it was QRP on a coat hanger.
>
> Ken KC2JDY
>
> Ken
> (to reply via email
> remove "zz" from address)

4002. Re: 2-Meter Co-Linear

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-28 00:32:25 UTC
From: chuck & shirley hawks <s_hawks@bellsouth.com>
Message-ID: <nFUa9.18216$Hd4.4819492@e3500-atl1.usenetserver.com>
Source record: 135742

Thanks Tom, it did answer my question. I am planning on getting a modeling program and the Antenna Book next time I make it Memphis.

Thanks

Chuck
KE4ETH

--
x-no-archive: yes
"Tdonaly" <tdonaly@aol.com> wrote in message
news:20020827190045.08760.00003096@mb-mw.aol.com...
> Chuck wrote,
> >
> >OK, Let me rephrase the question.
> >
> >How much more gain is there on a three section Co-linear then with a two
> >section.
> >
> >I tried to search, but came up dry. If anyone can point me to some info
or
> >other web sites that would be great.
> >
> >Thanks
> >
> >Chuck
> >
> High Chuck,
> My 16th edition of the ARRL antenna book states that 2 collinear elements
> have 1.6dBd, 3 have 3.1dBd, and 4 have 4.2dBd. This is theoretical, and I
> can't vouch for the theory, or the reality, either, but those are the
numbers
> according to the ARRL. You might want to cough up some money for a
> modeling program if you plan on doing much of this stuff, or, at least get
a
> copy of the Antenna Book.
> 73,
> Tom Donaly KA6RUH
>
>

4003. Re: Need Info on Flat-Top Tee Wire Antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-28 00:40:06 UTC
From: richardharrison@webtv.net
Message-ID: <18205-3D6C1BE6-704@storefull-2392.public.lawson.webtv.net>
Source record: 135747

Jim, W0KSD wrote:
"Is this antenna discussed in any of the ARRL Antenna Compendia or in the ARRL Antenna Book?"

I responded with a reference to ON4UN`s excellent book, "Low-Band DXing".

I since came across references in the 19th edition of the ARRL Antenna Book. Page 6-18 begins a section on "Short Antennas". Page 6-36 shows a vertical-T antenna for lowfers.

Best regards, Richard Harrison, KB5WZI

4004. Re: What am I emitting on 80M?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-28 00:40:18 UTC
From: cprstn54zz@att.net
Message-ID: <3d6c12e6.134494093@news-server.optonline.net>
Source record: 135744

On Wed, 28 Aug 2002 07:37:53 +1000, Owen Duffy <owen@oda.com.au>
wrote:
>The manufacture suggests that the antenna will cover the whole of the
>band with the help of a tuner. We might interpret that to mean that VSWR
>will increase significantly, and with the help of a tuner you will still
>be able to develop rated transmitter power into the tuner / feedline /
>balun / antenna subsystem.

Yes, I think you have hit the nail on the head. The acceptable,
resonant bandwidth for the 80M and 160M bands is quite narrow. The
manufacturer discloses this, but also states that a good tuner will
give you good results across the bands. While it is true that a
wide-range tuner will tame SWR=12.0 down to 1.0 at the radio for this
antenna, this does not appear to be a desirable way to operate because
as much as 95% of the power will be lost in the coax feedline. This
part never was mentioned in the manufacturer's literature. Since I
intend to operate over more than 200 KHz , I need to do something.

That something appears to be adding and subtracting to the wire of the
antenna to move resonance to the middle of where I want to operate in
each band. Then -- because SWR of even 8.0 at the radio will give
unacceptable losses in any form of coax -- I want to switch to ladder
line.

However, one poster here has suggested that this will just shift the
losses to the tuner. No one else has confirmed this and it runs
counter to the the conventional wisdom that ladder line is helpful for
where the antenna is not resonant and SWR is, therefore, high. After
all, what is gained by moving the 95% loss from the coax to the tuner?

Another poster has suggested that there is no point to using a loaded
dipole if you are using ladder line, the implication being that ladder
line will let you get out an equal signal on any piece of wire.
However, it seems to me that if the loading coils lower SWR in a
particularly non-resonant part of a band from, say 30, for a plain
wire to, say 8, for a loaded wire, you have helped matters. Am I
wrong?

Now, you suggest that my description is incompete and that does not
help matters. Well, my situation seems pretty common to me and I am
using very common off-the-shelf components. I am surprised that it
has turned out to be so complicated, with so many different and
inconsistent opinions. It seems to me that my problem should be a
common one with general solutions.

Anyone using one of these shortened dipoles and coax (which is the recommended combo) will be seeing the same very high SWRs and unacceptable losses. Yet I found no discussion of any of this when I read the evaluations of the various shortened dipoles. Rather, the impression is given that a good tuner will solve all problems if you can tune to SWR=1. Not so -- as you confirm.

Ken KC2JDY

Ken
(to reply via email
remove "zz" from address)

4005. Re: RG-14AU?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-28 00:56:49 UTC
From: Mark Hall <mark.hall34@verizon.net>
Message-ID: <ldVa9.1$_c.0@nwrddc01.gnilink.net>
Source record: 135745

Well.. the specs for RG14 (Loss is less) than LMR400, and almost as good as 9913. I've heard that the spiral air core of the 9913 requires some serious connector sealing. At 100 meters on 28 Mhz:

RG14 2.2 dB
LMR400 2.6 dB
9913 2.0 dB

Guess I'll try the RG14 since I ended up with a couple hundred feet with N connectors on it.

'73 KI4Z

"Mark Hall" <mark.hall34@verizon.net> wrote in message news:nqIa9.3170$Hl4.2638@nwrddc03.gnilink.net...
> What are the group's thoughts on using RG-14AU? Specs look real good, it's
> a bit heavy though, and too big for normal connectors. Do they still make
> this stuff, or is it obsolete?
>
> '73
>
>

4006. Re: What am I emitting on 80M?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-28 01:14:02 UTC
From: cprstn54zz@att.net
Message-ID: <3d6c1f03.137594656@news-server.optonline.net>
Source record: 135746

On Tue, 27 Aug 2002 20:30:55 -0400, "Fred Hambrecht"
<w4jle@charter.net> wrote:
>See law of reciprocity-, and a 12 to 1 SWR says you do not have the antenna
>set up correctly. Is there no one in your area or local club with an
>analyzer?
>I am beginning to feel that your notes are more designed to evoke responses
>than to solve any problems. What is the SWR on the antenna every 100KC from
>3.5 to 4 Mc?
>Are you really interested in solving the problem?

Yes, I am and I think I know what it is and there is nothing wrong
with my rig or anything I have done. It is simply a characteristic of
this kind of loaded dipole to have very narrow resonance and high SWR
elsewhere in a band. Coax has unacceptable losses where SWR is high.
The fix appears to be going to ladder line or using a different
antenna. I now think I understand this -- thanks to the discussion
here -- but don't see why it has generated such emotion.

In the 80M band, I get the following untuned SWR readings on my RS
digital SWR meter at the radio, which are roughly confirmed by the
two-needle meter on my MFJ-986 tuner:

3.325, 13.0
3.600, 12.38
3.700, 11.37
3.800, 7.44
3.850, 3.56
3.900, 1.62
3.925, 3.26
3.999, 9.27

Ken KC2JDY

Ken
(to reply via email
remove "zz" from address)

4007. Re: What am I emitting on 80M?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-28 02:24:36 UTC
From: Mike Coslo <mcoslo@adelphia.net>
Message-ID: <3D6C5E93.5090508@adelphia.net>
Source record: 135748

Roy Lewallen wrote:

> I agree.
>
> But even if people do get those pretty patterns, it's possible to work
> hundreds of miles, and even DX. Most people just don't seem to realize
> that the patterns are graphs of field strength vs. elevation angle. Even
> a cursory look at the graphs shows that just because an antenna is
> radiating most strongly at high angles doesn't mean that it's not also
> radiating at lower angles. (Or, for that matter, that the antenna
> doesn't radiate better at low angles than some antennas that do their
> best at low angles.) And often, that amount at lower angles is all you
> need to communicate.

There is sumpin WRONG with dat antenna! And I don't mean just a high takeoff angle. I would be willing to stand corrected if Ken could work other stations in the locale out to a couple hundred miles.

Many people erect antennas with high takeoff angles on purpose for state qso parties so thay have decent local coverage. A person may not even want a low takeoff angle ever if they only plan on working locally.

> But people have a great capacity for oversimplification, and apply it to
> antennas as well as so many other things.

Here I would say that a lot of people are drastically over-complicating the problem.

Now back to Ken:

Ken, as you noticed, you are getting some conflicting information. Conflict or not most of the information is 100 percent correct. You really need to do a little basic research on antennas so that you can sort it all out. I hope I'm not being rude - it's just that you are being overwhelmed with all the info you recieved.

- Mike KB3EIA -

4008. Re: G5RV Question

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-28 02:46:41 UTC
From: kelly@dvol.com
Message-ID: <d22b54c3.0208271846.6e1f583a@posting.google.com>
Source record: 135749

"rob34" <rob34@infinet.com> wrote in message
news:<3d6be29d$0$3571$4c5ecdc7@news.erinet.com>...
> I am building a G5RV antenna for 10 -80 meters and I was wondering if it
> would work out ok to use a "Van Gorden" Hi -Q balun with a 1:1 ratio on the
> end of the ladder line where the coax hooks on or would it be better to make
> an air balun for this? Thanks on any info on this. Rob WB8VWI
>
>
This whole topic area has been beaten to death in the nearby and very
informative thread "Air Wound Balun Design Info?". See Roy Lewallen's
posts. Personally I'd wire the coax directly to the ladder line and
install a string of ferrite beads on the coax at the point where the
coax turns toward the shack or lands on the ground. Feedline radiation
is a good thing with g5rv's, it at least partially fills in the deep
nulls in the patterns found on the higher bands.

w3rv

4009. Re: B&W BWD-1.8-30Mhz ?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-28 03:02:25 UTC
From: Tad Danley <tdanley@nospamatearthlink.net>
Message-ID: <3D6C3D3E.64B493A@earthlink.net>
Source record: 135750

N1RZB wrote:

> If anyone has this broadband folded dipole antenna or has any
> comments, I would be very interested in knowing how they did or didn't
> work out for you.

It proves that any antenna will "work".

Are you considering it for the size or the fact that it is
"broadbanded"?

--
Tad Danley, K3TD
mailto:tdanley@earthlink.net

Caution!
Anti-SPAM e-mail return address in use.

4010. Re: What am I emitting on 80M?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-28 03:16:41 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <1sfomusoi6470of6oa2hg6k3s3ij1po65a@4ax.com>
Source record: 135751

On Wed, 28 Aug 2002 00:40:18 GMT, cprstn54zz@att.net (Ken) wrote:

>However, one poster here has suggested that this will just shift the
>losses to the tuner. No one else has confirmed this and it runs
>counter to the the conventional wisdom that ladder line is helpful for
>where the antenna is not resonant and SWR is, therefore, high. After
>all, what is gained by moving the 95% loss from the coax to the tuner?
>
>Another poster has suggested that there is no point to using a loaded
>dipole if you are using ladder line, the implication being that ladder
>line will let you get out an equal signal on any piece of wire.
>However, it seems to me that if the loading coils lower SWR in a
>particularly non-resonant part of a band from, say 30, for a plain
>wire to, say 8, for a loaded wire, you have helped matters. Am I
>wrong?

Hi Ken,

Tuners run out of steam when pressed hard in the 160M band. 80M isn't
all that far away. There, you can run afoul of marginal designs or
sail right through. This means that the losses don't "have to" find
their way back to the tuner with a shift in antenna design.

You are steadily moving toward a generic solution that is best
illustrated by a tuning technique published by Cecil Moore who,
uncharacteristically, has only made one contribution to this thread:
>cheers, CAM http://www.qsl.net/w5dxp
Follow the lead, study the method, absorb the rationale and it should
come together.

73's
Richard Clark, KB7QHC

4011. Re: RG-14AU?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-28 03:16:56 UTC
From: Crazy George <munschNO@attglobal.net.SPAM>
Message-ID: <3d6c4521_2@news1.prserv.net>
Source record: 135752

If it is specifically RG-14A/U, it is not very new. I would measure the loss at the frequency I intended to use it before I buried it or pulled it up a tower. I've seen several cases where that step would have saved a lot of grief and wasted effort.

--
Crazy George
Remove NO and SPAM from return address
Mark Hall <mark.hall34@verizon.net> wrote in message
news:ldVa9.1$_c.0@nwrddc01.gnilink.net...
> Well.. the specs for RG14 (Loss is less) than LMR400, and almost as good
as
> 9913. I've heard that the spiral air core of the 9913 requires some
serious
> connector sealing. At 100 meters on 28 Mhz:
>
> RG14 2.2 dB
> LMR400 2.6 dB
> 9913 2.0 dB
>
> Guess I'll try the RG14 since I ended up with a couple hundred feet with N
> connectors on it.
>
> '73 KI4Z
>
>
>
>
> "Mark Hall" <mark.hall34@verizon.net> wrote in message
> news:nqIa9.3170$Hl4.2638@nwrddc03.gnilink.net...
> > What are the group's thoughts on using RG-14AU? Specs look real good,
> it's
> > a bit heavy though, and too big for normal connectors. Do they still
make
> > this stuff, or is it obsolete?
> >
> > '73
> >
> >
>
>

4012. Coax stub question

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-28 03:17:38 UTC
From: ve3tmt <ve3tmt@yahoo.com>
Message-ID: <%dXa9.6825$n73.764874@news20.bellglobal.com>
Source record: 135753

I have been experimenting with a homemade HF loop, and am having troubles matching it. I have a high power variable cap on the way from Henry Radio, and have been experimenting with a coax matching stub. I can get the thing to resonate to a 1:1 swr, however after prolonged TX, the coax begins to burn on the end. I have even tried RG213 which is supposed to be good for 4KV. Am I doing something wrong?

Thanks,

Max

4013. Re: What am I emitting on 80M?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-28 03:39:15 UTC
From: 'Doc <w5lz@icok.net>
Message-ID: <3D6C45CB.B48E1826@icok.net>
Source record: 135754

Ken wrote:
> ------clipped------
> 3.325, 13.0
> 3.600, 12.38
> 3.700, 11.37
> 3.800, 7.44
> 3.850, 3.56
> 3.900, 1.62
> 3.925, 3.26
> 3.999, 9.27

Ken,
On 80 meters it's obvious that the antenna is resonant
around 3.900 Mhz. Trying to use it at 3.5+ Mhz is just not
going to work very well, especially with a 'shortened'
antenna. It won't make a lot of difference if you're using
coax or ladder line to feed the antenna. You can only
'stretch' an antenna so far.
'Doc

4014. Re: Coax stub question

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-28 03:51:00 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <6shomu8vb69ua3k8ltv43nh5kfb24jvrbe@4ax.com>
Source record: 135756

On Tue, 27 Aug 2002 23:17:38 -0400, "ve3tmt" <ve3tmt@yahoo.com> wrote:

>I have been experimenting with a homemade HF loop, and am having troubles
>matching it. I have a high power variable cap on the way from Henry Radio,
>and have been experimenting with a coax matching stub. I can get the thing
>to resonate to a 1:1 swr, however after prolonged TX, the coax begins to
>burn on the end. I have even tried RG213 which is supposed to be good for
>4KV. Am I doing something wrong?
>
>Thanks,
>
>Max
>

Hi Max,

The description is a little difficult to follow, but I would guess it
(a stub?) is doing what it was designed to do - what you "want" it to
do may be another matter.

You say you can resonate to a 1:1 - but be advised that means nothing
following the tuner where it is still a jungle. You also describe the
coax being burned on the end. Burned by excessive current, or burned
by excessive arcing? If by arcing, you have to derate the cable's
breakdown specification by dividing it by the SWR.

73's
Richard Clark, KB7QHC

4015. Re: What am I emitting on 80M?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-28 03:51:24 UTC
From: 'Doc <w5lz@icok.net>
Message-ID: <3D6C48A5.F7D2C16F@icok.net>
Source record: 135757

Ken,
The 'thing' about 95% loss of power in the tuner
is just not true, in general. There is some loss,
but except for maybe 160 meters, it's not going to
be anywhere close to 95%. That depends on the specific
tuner, naturally, (all of them are not created equal).
I won't try to offer an alternate for your antenna,
you know your situation better than I do so should be
able figure out something. Good luck.
'Doc

4016. Re: What am I emitting on 80M?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-28 03:55:54 UTC
From: richardharrison@webtv.net
Message-ID: <27891-3D6C49CA-602@storefull-2398.public.lawson.webtv.net>
Source record: 135762

Ken wrote:
"I get the following untuned SWR readings---."

At 3.9 MHz, 1.62 doesn`t look too bad. Guess that`s not the frequency Ken wanted.

The 19th edition of the ARRL Antenna Book has the impedance of a center-fed 66-ft inverted-V dipole at various frequencies over average ground with the associated SWR and loss. It appears in Table 2 on page 26-3.

Ladder line is used. Coax loss should be higher in proportion to its matched loss ratio for the same mismatch. Ladder line db/100ft is listed as .02 at 1 MHz. RG-8 coax is listed as 0.1 to 0.2 db/100ft at 1MHz, depending on available choice. So, coax could be 10 db lossier than ladder line for the same mismatch, but a 450-ohm line is not going to have the same mismatch as a 50 or 75-ohm line. From the range of impedances in the table, the coax would usually have a larger mismatch. Ken may have a balun with a ratio designed to improve matching to the coax by his loaded-V antenna.

Best regards, Richard Harrison, KB5WZI

4017. Re: What am I emitting on 80M?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-28 03:59:30 UTC
From: cprstn54zz@att.net
Message-ID: <3d6c4944.148411734@news-server.optonline.net>
Source record: 135758

On Wed, 28 Aug 2002 03:39:15 GMT, 'Doc <w5lz@icok.net> wrote:

>Ken wrote:
>> ------clipped------
>> 3.325, 13.0
>> 3.600, 12.38
>> 3.700, 11.37
>> 3.800, 7.44
>> 3.850, 3.56
>> 3.900, 1.62
>> 3.925, 3.26
>> 3.999, 9.27
>
>Ken,
> On 80 meters it's obvious that the antenna is resonant
>around 3.900 Mhz. Trying to use it at 3.5+ Mhz is just not
>going to work very well, especially with a 'shortened'
>antenna. It won't make a lot of difference if you're using
>coax or ladder line to feed the antenna. You can only
>'stretch' an antenna so far.

I see a typo in my table: The first reading was at 3.525 MHz, not
3.325.

The plan at this point is to add a one foot pigtail to the outboard
end of the 80M sections, which the manufacturer's modeling program
says will bring resonance down to the low end of the band.

The question remains just how far can you "stretch" this kind of
antenna, if you are using ladder line.

Ken KC2JDY

Ken
(to reply via email
remove "zz" from address)

4018. Re: Coax stub question

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-28 04:01:06 UTC
From: 'Doc <w5lz@icok.net>
Message-ID: <3D6C4AEB.E10EC3BF@icok.net>
Source record: 135759

Max,
Usually, a 'matching section' is made from 75 ohm coax,
but if you're doing okay with the RG-213, good enough (but
I don't understand how that would work). The first solution
that comes to mind for your 'burning' problem is to reduce
power. I'm taking for granted that your running more than
100 watts, right? Not that 100 watts is a limit for using a
'matching section' to feed a loop.
'Doc

4019. Re: Linearity of Bird Wattmeter Slugs?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-28 04:06:30 UTC
From: "Bob M." <xxxxx@yyyy.zzz>
Message-ID: <a%Xa9.239623$m91.9853522@bin5.nnrp.aus1.giganews.com>
Source record: 135760

I also have a little Bird 25-175 MHz wattmeter with 150 watts fwd and 15 watts reflected, a 10:1 ratio. If the meter is reversed, I get 15 watts fwd and 150 watts reflected. I can hook a transmitter to it, set it for 15 watts on either scale, reverse the meter, and it still reads 15 watts. Granted, I'm not swapping elements, just twisting a switch, but two different sampling loops must be involved.

Also, similar accuracies are seen on most multimeters when changing scales.

The Bird's 30 uA meter has an expanded scale at the low end, so it's very easy to read down to 1 watt with a 50 watt element. I guess I just expected more consistency between ranges. The new elements should reduce the amount of error when switching ranges, hopefully.

Bob M.
======
"CAM" <Cecil.A.Moore@ieee.org> wrote in message
news:3D6BB2D9.31DEA79A@ieee.org...
> "Bob M." wrote:
> > One thing I learned is that when a 5w element (200-500 MHz) reads 5
watts,
> > and I put in a 50w element (200-500 MHz), it reads about 7 watts.
Granted
> > the reading is at the low end of the scale, but still unexpected. Well
> > within the meter and element accuracy specs however.
>
> Trying to read 5 watts on a 50 watt scale yields plus or minus
> 50% accuracy at 5 watts. Why was your 7 watt reading unexpected?
> --
> cheers, CAM http://www.qsl.net/w5dxp
>
>
> -----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
> http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
> -----== Over 80,000 Newsgroups - 16 Different Servers! =-----

4020. Re: What am I emitting on 80M?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-28 04:06:54 UTC
From: Owen Duffy <owen@oda.com.au>
Message-ID: <3D6C4C5E.7ED20F13@oda.com.au>
Source record: 135761

Ken wrote:
>
> On Wed, 28 Aug 2002 07:37:53 +1000, Owen Duffy <owen@oda.com.au>
> wrote:
> >The manufacture suggests that the antenna will cover the whole of the
> >band with the help of a tuner. We might interpret that to mean that VSWR
> >will increase significantly, and with the help of a tuner you will still
> >be able to develop rated transmitter power into the tuner / feedline /
> >balun / antenna subsystem.
>
> Yes, I think you have hit the nail on the head. The acceptable,
> resonant bandwidth for the 80M and 160M bands is quite narrow. The
> manufacturer discloses this, but also states that a good tuner will
> give you good results across the bands. While it is true that a
> wide-range tuner will tame SWR=12.0 down to 1.0 at the radio for this
> antenna, this does not appear to be a desirable way to operate because
> as much as 95% of the power will be lost in the coax feedline. This

Don't generalise the outcome of your 100ft of RG8X to all coax
feedlines. If the coax has lower loss (better coax or shorter) the case
is better. The converse applies.

> part never was mentioned in the manufacturer's literature. Since I

Funny, that!

Just for the excercise, and what you may learn from it, work out the
VSWR seen by the transmitter connected to 100ft of RG8X at 3.6MHz with a
short circuit at the far end (that is right, no antenna, just a short
circuit).
Most t match tuners like your MFJ should transform the impedance
presented by the cable (3.6+j18.1 on my reckoning - well Winsmith's
reckoning and help from two of my friends - Mr Hewlett and Mr Packard)
to 50ohms, the rig will see 50ohms or VSWR=1, but 100% of the output
power is lost in the tuner and cable.

Owen

(The answer to the riddle is VSWR=15.8.)

4021. Re: Antenna question

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-28 04:36:56 UTC
From: joe <casavant@nucleus.com>
Message-ID: <3d6c4708$1@news.nucleus.com>
Source record: 135755

I have a what I think is a yaggi screen reflector. It looks like a widow screen with 8 dipoles. It picks up ch. 14-69 up to 150 km away with a 30 db booster. The portable radio is a jvc RC-XC1 with a telescopic antenna. I am mostly interested in FM reception.
thanks
Joe
JGBOYLES <jgboyles@aol.com> wrote in message news:20020827171428.27162.00003891@mb-bh.aol.com...
> >I would like to hook up my roof antenna to my portable radio
>
> Hi Joe, If you could tell us exactly what kind of roof antenna you have, as
> well as what kind of portable radio, might could give you a few ideas. Also
> are you mostly interested in FM/AM or both?
> 73 Gary N4AST

4022. Re: What am I emitting on 80M?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-28 04:38:24 UTC
From: 'Doc <w5lz@icok.net>
Message-ID: <3D6C53A9.275AE11C@icok.net>
Source record: 135763

Ken,
How far can you 'stretch' it using ladder line?
I honestly don't know. Further than if you were
using coax, but even so, it'll never 'stretch' over
all of 80 meters. I would have to guess that 160m
is going to be even more narrow, but still no idea
how much. I'm sure I'm not telling you anything 'new',
but never believe the manufacturer's claims about
antennas! Those claims are always for the 'best' case
installation, and seldom matched in the 'real world'.
It looks like you're learning like I did, the hard way.
(I know it isn't funny now, but it will be 20 years from
now.)
'Doc

4023. Trench for coaxial cables

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-28 04:52:26 UTC
From: Herb Rosenberg <kg6ok@pacbell.net>
Message-ID: <dGYa9.6812$I01.714493219@newssvr13.news.prodigy.com>
Source record: 135764

I am considering running a 30 foot trench from the base of my tower to my ham shack for my coaxial cables, and would like to here comments / suggestions from anyone that has done this before, on things to do / not do, etc.

All of my cables are 9913, and I have a bundle of about 8 feedlines.

I am thinking about a inch conduit, and wondering about a few things: (BTW, I live in Southern California)

How deep should the trench be below ground?

What kind of pipe is best to use?

Should I drill holes in the bottom side of the pipe so water can drain out?

Should I place some gravel on the top of the trench before I lay the pipe on top, to help with drainage?

Anything else I should know?

Thanks for your help.

Herb - KG6OK

4024. Re: Trench for coaxial cables

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-28 04:53:27 UTC
From: Herb Rosenberg <kg6ok@pacbell.net>
Message-ID: <bHYa9.6814$qW.714093986@newssvr13.news.prodigy.com>
Source record: 135768

Correction: That is a four inch conduit!!

"Herb Rosenberg" <kg6ok@pacbell.net> wrote in message news:...
> I am considering running a 30 foot trench from the base of my tower to my
> ham shack for my coaxial cables, and would like to here comments /
> suggestions from anyone that has done this before, on things to do / not
do,
> etc.
>
> All of my cables are 9913, and I have a bundle of about 8 feedlines.
>
> I am thinking about a inch conduit, and wondering about a few things:
(BTW,
> I live in Southern California)
>
> How deep should the trench be below ground?
>
> What kind of pipe is best to use?
>
> Should I drill holes in the bottom side of the pipe so water can drain
out?
>
> Should I place some gravel on the top of the trench before I lay the pipe
on
> top, to help with drainage?
>
> Anything else I should know?
>
> Thanks for your help.
>
> Herb - KG6OK
>
>
>
>
>

4025. ANTENNA QUESTION solarcon A99

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-28 05:09:58 UTC
From: George Kinzer <horseflygk@worldnet.att.net>
Message-ID: <GWYa9.38324$Ke2.2725559@bgtnsc04-news.ops.worldnet.att.net>
Source record: 135765

Im going to co-phase a pair of A99's, one new one, and Im going to make the other from a "wonder pole".
question, has anyone seen the inards of the base? Are there ____ turns of wire for the bottom tuning rings? I cant seem to find the right treads (yet) for the "tuning" rings
If you got a busted bottom, Id love to SEE it.. thanks guys.
--
If first you don't succeed, do the same thing again...see what happens

4026. Re: What am I emitting on 80M?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-28 05:38:48 UTC
From: Owen Duffy <owen@oda.com.au>
Message-ID: <3D6C61E8.C4A84643@oda.com.au>
Source record: 135766

Ken wrote:
>
> On Wed, 28 Aug 2002 03:39:15 GMT, 'Doc <w5lz@icok.net> wrote:
>
> >Ken wrote:
> >> ------clipped------
> >> 3.325, 13.0
> >> 3.600, 12.38
> >> 3.700, 11.37
> >> 3.800, 7.44
> >> 3.850, 3.56
> >> 3.900, 1.62
> >> 3.925, 3.26
> >> 3.999, 9.27
> >>

Looks to me like you are observing VSWR around 8 about 100KHz off centre. Given the loss in your 100ft of RG8X, the VSWR at the antenna end of the cable is around 16.

If you used 100ft of 9913 instead of the RG9X, we might expect that you will observe a VSWR of around 12 at the transmitter end (when the antenna end VSWR=16). This isn't necessarily worse... the line loss (mismatched) is now around 1.5dB instead of around 3dB with the RG8X.

Applyign the same technique to a narrower band, it looks to me like you are observing VSWR around 4 about 50KHz off centre. Given the loss in your 100ft of RG8X, the VSWR at the antenna end of the cable is around 5.

If you used 100ft of 9913 instead of the RG9X, we might expect that you will observe a VSWR of around 4.5 at the transmitter end (when the antenna end VSWR=5). The line loss (mismatched) is now around 0.5dB instead of around 1.2dB with the RG8X. I would be pretty happy with line loss of 0.5dB if your antenna tuning unit can reasonably efficiently transform the load for the transmitter.

Therefore, one possible solution is that you could throw a bit of money at some 9913, shorten the length between the tuner and the antenna if you can (including don't run RG58 tails in the shack), relocate the usable band to be more convenient, and you have 100KHz of coverage with tolerable efficiency from your multiband antenna on 80m.

Owen

4027. Re: Coax stub question

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-28 05:50:52 UTC
From: Zoran Brlecic <WA7AA@attbi.com>
Message-ID: <3D6C64BB.6BD0AC72@attbi.com>
Source record: 135767

ve3tmt wrote:

> I have been experimenting with a homemade HF loop, and am having troubles
> matching it. I have a high power variable cap on the way from Henry Radio,
> and have been experimenting with a coax matching stub. I can get the thing
> to resonate to a 1:1 swr, however after prolonged TX, the coax begins to
> burn on the end. I have even tried RG213 which is supposed to be good for
> 4KV. Am I doing something wrong?

If we're talking about a short loop, then the voltage on the matching cap can be extremely high even with only 100W, depending on the loop size and other factors. You need a HV vacuum cap.

73 .... Zoran WA7AA

4028. Center Fed With 300 Ohm Coax

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-28 07:34:01 UTC
From: marvin rosen <raghead@worldnet.att.net>
Message-ID: <J1%a9.7954$p%3.604403@bgtnsc05-news.ops.worldnet.att.net>
Source record: 135669

Why can't an 80 mtr center fed dipole be fed with
300 ohm coax & tuner & used from 80-10 mtrs?

Outgoing mail is certified Virus Free.
Checked by AVG anti-virus system (http://www.grisoft.com).
Version: 6.0.381 / Virus Database: 214 - Release Date: 8/2/02

4029. Re: ANTENNA QUESTION solarcon A99

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-28 08:58:34 UTC
From: 'Doc <w5lz@icok.net>
Message-ID: <3D6C90A0.1BC76772@icok.net>
Source record: 135670

George,
You mean you left that off of your CD?
Mercy!
'Doc

4030. Re: Trench for coaxial cables

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-28 09:06:21 UTC
From: 'Doc <w5lz@icok.net>
Message-ID: <3D6C926D.B36461F3@icok.net>
Source record: 135671

Herb,
The trench should be deep enough so that you can run a lawn mower over it when it's filled in. Don't drill holes in the bottom of the pipe for drainage, the idea is to not let water in. Use a "U" at the 'stub-out', and seal it some way. PVC pipe works well. Instead of gravel (which will work), I'd use sand, less chance of poking a hole in the pipe. No matter what size pipe you decide on, you'll always wish it were just a little bit bigger later. And always leave a rope 'loop' in the pipe. Lets you pull something through it later.
'Doc

4031. Re: Coax stub question

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-28 09:08:02 UTC
From: 'Doc <w5lz@icok.net>
Message-ID: <3D6C92D9.856F5FE5@icok.net>
Source record: 135672

Max,
If your loop is a small loop, forget my earlier post,
it doesn't apply.
'Doc

4032. Re: Center Fed With 300 Ohm Coax

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-28 12:19:26 UTC
From: n2ey@aol.com
Message-ID: <20020828081926.05850.00000196@mb-mr.aol.com>
Source record: 135673

In article <J1%a9.7954$p%3.604403@bgtnsc05-news.ops.worldnet.att.net>, "marvin rosen" <raghead@worldnet.att.net> writes:

>Why can't an 80 mtr center fed dipole be fed with
>300 ohm coax & tuner & used from 80-10 mtrs?
>
Reason 1: Nobody makes 300 ohm coax

73 de Jim, N2EY

4033. Re: Center Fed With 300 Ohm Coax

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-28 12:35:24 UTC
From: Fulano de Tal <exray@nospamcaribe.net>
Message-ID: <3D6CC38C.A9E5987@nospamcaribe.net>
Source record: 135675

marvin rosen wrote:
>
> Why can't an 80 mtr center fed dipole be fed with
> 300 ohm coax & tuner & used from 80-10 mtrs?
>
Who said it couldn't?
Yes, it will make an effective antenna.

-BM

4034. Re: ANTENNA QUESTION solarcon A99

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-28 12:35:48 UTC
From: George Kinzer <horseflygk@worldnet.att.net>
Message-ID: <Es3b9.38599$Ke2.2756357@bgtnsc04-news.ops.worldnet.att.net>
Source record: 135674

Doc, I know how to co-phase, but Im wanting MORE info on this particular
project.
IF you can help. thanks in advance. If you cant, I WILL get it somehow, even
if it means
taken apart the new bottom. Please stop the nonsence. Thanks

--
If first you don't succeed, do the same thing again...see what happens

4035. Re: Trench for coaxial cables

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-28 12:39:28 UTC
From: John Passaneau <jxp16@psu.edu>
Message-ID: <akiga2$m3e@r02n01.cac.psu.edu>
Source record: 135676

Hi:

I would add to this, use 4" PVC electrical conduit. I you are going to have any bends, use the wide radius "sweeps" that are available for this pipe. Glue the joints very well and water will not get in. Don't drill holes, as the will just let the water in. I have 65' with one 90 deg. bend in my setup. I buried mine down about 18" to the bottom of the trench, so there is about 14" of dirt over it. For grounding, I laid #6 bare copper wire in the trench with the conduit, it's connected to the grounded tower and to 4, 8' ground rods spaced along the 65' run with the last rod just before the ground wire enters the house. Mine comes through the basement wall were there is a copper ground bounding panel that connects the lighting arrestors the ground wire from the tower and the house ground at the power panel. This was required by code and was the only thing the inspectors cared about other than the height of the tower.

If I can be of any help with advice contact me.

--
John Passaneau
Penn State University, State College Pa.
W3JXP
w3jxp@arrl.net

"'Doc" <w5lz@icok.net> wrote in message news:3D6C926D.B36461F3@icok.net...
> Herb,
> The trench should be deep enough so that you can
> run a lawn mower over it when it's filled in. Don't
> drill holes in the bottom of the pipe for drainage,
> the idea is to not let water in. Use a "U" at the
> 'stub-out', and seal it some way. PVC pipe works
> well. Instead of gravel (which will work), I'd use
> sand, less chance of poking a hole in the pipe. No
> matter what size pipe you decide on, you'll always
> wish it were just a little bit bigger later. And
> always leave a rope 'loop' in the pipe. Lets you
> pull something through it later.
> 'Doc

4036. Re: Antenna Theory/Experiment Book Recommendation

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-28 12:54:51 UTC
From: CAM <Cecil.A.Moore@ieee.org>
Message-ID: <3D6CC81B.5350C0A5@ieee.org>
Source record: 135677

JC wrote:
> I also recommend a very good book : "Reflections - transmission lines and
> antennas" written by W2DU - published by ARRL (this is a must).

Actually, "Reflections" is out of print but "Reflections II", published by
Worldradio, is available.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
------== Over 80,000 Newsgroups - 16 Different Servers! =-----

4037. Re: Fractal Antenna for sale

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-28 12:59:56 UTC
From: Smith-Gaspard <jsmith52@tampabay.rr.com>
Message-ID: <3D6CC976.718E2093@tampabay.rr.com>
Source record: 135678

Dear Irv ...

Never are you an "Ex-Navy" ... but "Former Navy!"
Try telling a U. S. Marine who is honorably discharged that
he/she is an "Ex-Marine" and see what happens ... ha ha.

Have a great day!

73 de Jim W4ONO .-.-.
... former U. S. Navy ... Radioman RM2
==============================

Irv Finkleman wrote:

>
> Irv Finkleman,
> Grampa/Ex-Navy/Old Fart/Ham Radio VE6BP
> Calgary, Alberta, Canada

4038. Re: Center Fed With 300 Ohm Coax

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-28 13:09:41 UTC
From: Dan/W4NTI <w4nti@mindspringnospam.com>
Message-ID: <akii0gpna1@slb3.atl.mindspring.net>
Source record: 135679

Do they make 300 ohm coaxial cable in Europe? How much and where can I buy it?

:)

Dan/W4NTI

"Fulano de Tal" <exray@nospamcaribe.net> wrote in message news:3D6CC38C.A9E5987@nospamcaribe.net...
> marvin rosen wrote:
> >
> > Why can't an 80 mtr center fed dipole be fed with
> > 300 ohm coax & tuner & used from 80-10 mtrs?
> >
> Who said it couldn't?
> Yes, it will make an effective antenna.
>
> -BM

4039. Re: G5RV Question

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-28 13:29:02 UTC
From: CAM <Cecil.A.Moore@ieee.org>
Message-ID: <3D6CD01E.83C9F0F9@ieee.org>
Source record: 135680

Dick Hughes wrote:
> According to G5RV http://www.qsl.net/aa3px/g5rv.htm you will degrade
> the performance of the antenna he designed if you use a balun. He
> goes into great detail on why you should not use any kind of balun
> with the G5RV.

It is good engineering practice to install a balun or choke at every balanced to unbalanced transition point. A choke at the coax/twinlead junction on a G5RV will tend to reduce feedline radiation and RF-in-the-Shack. Quoting the above web page:

"It is now known that if a balun is connected to a reactive load presenting a vswr of more than about 2:1, its internal losses increase, resulting in heating of the windings and saturation of its core (if used)."

This is a pretty ridiculous statement. An SWR of 2:1 is close to a good match. In general, the differential current fields in a balun tend to cancel and the differential voltage/current are what we measure to obtain SWR. Baluns are stressed by common mode conditions which most of us don't bother to measure.

"However, later experiments and a better understanding of the theory of operation of the balun indicated that such a device was unsuitable because of the highly reactive load it would "see" at the base of the matching or "make-up" section on most hf bands."

This is a half truth. On the bands where the G5RV performs well, i.e. 80m, 40m, & 20m, the impedance at the coax/twinlead junction is not highly reactive and a 1:1 choke will perform its intended function. Take a look at the charts on my web page to find out why the above statement doesn't apply to 80m, 40m, & 20m (also 12m).
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

4040. Re: B&W BWD-1.8-30Mhz ?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-28 13:34:21 UTC
From: CAM <Cecil.A.Moore@ieee.org>
Message-ID: <3D6CD15D.7BCBFEC2@ieee.org>
Source record: 135681

> N1RZB wrote:
> If anyone has this broadband folded dipole antenna or has any comments, I would be very interested
> in knowing how they did or didn't work out for you.

Do a google search for "T2FD" and you will find loads of information.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
------== Over 80,000 Newsgroups - 16 Different Servers! =-----

4041. Re: What am I emitting on 80M?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-28 13:37:23 UTC
From: CAM <Cecil.A.Moore@ieee.org>
Message-ID: <3D6CD213.786183CD@ieee.org>
Source record: 135682

Fred Hambrecht wrote:
> Are you really interested in solving the problem?

Maybe he's like a lot of other hams - would rather be on
internet than on the air?
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

4042. Kenwood TH-G6A antenna connector type?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-28 13:46:25 UTC
From: Joel Dorfan <bdorfan@fred.icon.co.za>
Message-ID: <3d6cd436$0$18851@hades.is.co.za>
Source record: 135684

What is the name of the type of antenna connector used in the TH-G6A?

Are loose solder or crimp type connectors available? I need to build an external antenna for this radio and would like to get hold of the correct connectors or alternatively an adaptor to BNC.

What other options do I have? My old TH78 was BNC and made life really easy.

Joel
ZS6CBA

4043. Re: What am I emitting on 80M?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-28 13:49:28 UTC
From: cprstn54zz@att.net
Message-ID: <3d6cd443.183995218@news-server.optonline.net>
Source record: 135683

On Wed, 28 Aug 2002 08:37:23 -0500, CAM <Cecil.A.Moore@ieee.org>
wrote:
>Fred Hambrecht wrote:
>> Are you really interested in solving the problem?
>Maybe he's like a lot of other hams - would rather be on
>internet than on the air?

Not the right diagnosis for me. "Analysis paralysis" is what
non-engineers who worked for me used to call it. Most engineers like
to work things out a bit on paper before they roll up their sleeves.

Ken KC2JDY

Ken
(to reply via email
remove "zz" from address)

4044. Re: What am I emitting on 80M?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-28 13:50:31 UTC
From: CAM <Cecil.A.Moore@ieee.org>
Message-ID: <3D6CD527.D35EC33A@ieee.org>
Source record: 135685

Ken wrote:
> However, one poster here has suggested that this will just shift the
> losses to the tuner.

I hope you didn't misread what I posted earlier. Ladder-line will shift the matching problems from the antenna to the tuner where they are easier to solve. Take a look at my All-HF-Band-Antenna on my web page to see what is possible. I use a single 130ft dipole, fed with ladder-line, without an antenna tuner, and cover 80m-10m. If your ladder-line SWR is not too high and you feed the transmission line at a current maximum point, you may not even need an antenna tuner.

> Anyone using one of these shortened dipoles and coax (which is the
> recommended combo) will be seeing the same very high SWRs and
> unacceptable losses. Yet I found no discussion of any of this when I
> read the evaluations of the various shortened dipoles. Rather, the
> impression is given that a good tuner will solve all problems if you
> can tune to SWR=1. Not so -- as you confirm.

Caveat Emptor!
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
------== Over 80,000 Newsgroups - 16 Different Servers! =-----

4045. Re: What am I emitting on 80M?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-28 13:54:33 UTC
From: CAM <Cecil.A.Moore@ieee.org>
Message-ID: <3D6CD619.1CF32753@ieee.org>
Source record: 135686

Ken wrote:
> In the 80M band, I get the following untuned SWR readings on my RS
> digital SWR meter at the radio, which are roughly confirmed by the
> two-needle meter on my MFJ-986 tuner:
>
> 3.325, 13.0
> 3.600, 12.38
> 3.700, 11.37
> 3.800, 7.44
> 3.850, 3.56
> 3.900, 1.62
> 3.925, 3.26
> 3.999, 9.27

So how does the antenna work on 3.9 MHz, the frequency to which
it is tuned?
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
------== Over 80,000 Newsgroups - 16 Different Servers! =-----

4046. Re: G5RV Question

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-28 14:01:01 UTC
From: CAM <Cecil.A.Moore@ieee.org>
Message-ID: <3D6CD79D.5AE4849A@ieee.org>
Source record: 135687

Brian Kelly wrote:
> Feedline radiation
> is a good thing with g5rv's, it at least partially fills in the deep
> nulls in the patterns found on the higher bands.

Whether it is a good thing or not depends upon whether maximum gain
or maximum coverage is most important. Me, I'll take maximum gain
any day. My lobes are aimed at my friends in AZ.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

4047. Re: What am I emitting on 80M?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-28 14:04:26 UTC
From: CAM <Cecil.A.Moore@ieee.org>
Message-ID: <3D6CD86A.34810907@ieee.org>
Source record: 135689

Richard Clark wrote:
> You are steadily moving toward a generic solution that is best
> illustrated by a tuning technique published by Cecil Moore who,
> uncharacteristically, has only made one contribution to this thread:

We've been celebrating my Dad's 90th birthday for the past few
days with loads of kinfolk descending on us.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

4048. MFJ-16010-ST Instructions Needed!

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-28 14:06:51 UTC
From: Richard <flathat@bellsouth.net>
Message-ID: <B992513B.9E71%flathat@bellsouth.net>
Source record: 135688

Has anyone the original instruction sheet for the MFJ-16010-ST antenna tuner? NOT the 16010... but the 16010-ST. Bought one used and have no instructions. Called MFJ, but they have none to send. The tuner is just too old, I guess. I have the schematic... just need the official instructions.

Thanks if you can help

Please reply via e-mail.

Cheers,

Richard K.
FlatHat@bellsouth.net

4049. Re: Coax stub question

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-28 14:08:40 UTC
From: CAM <Cecil.A.Moore@ieee.org>
Message-ID: <3D6CD968.55FE00C8@ieee.org>
Source record: 135690

Richard Clark wrote:
> You also describe the
> coax being burned on the end. Burned by excessive current, or burned
> by excessive arcing? If by arcing, you have to derate the cable's
> breakdown specification by dividing it by the SWR.

What's the SWR on a stub?
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

4050. Re: Linearity of Bird Wattmeter Slugs?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-28 14:08:58 UTC
From: Ralph Mowery <rmowery@cetlink.net>
Message-ID: <akils8$288t$1@newsreader.cetlink.net>
Source record: 135691

People don't understand that the meters are made for field testing to show major errors or defects in equipment . They are not lab instruments made and traceable to the NBS (forgot the new combination of leters that the name was changed to).

"Bob M." <xxxxx@yyyy.zzz> wrote in message news:a%Xa9.239623$m91.9853522@bin5.nnrp.aus1.giganews.com...
> I also have a little Bird 25-175 MHz wattmeter with 150 watts fwd and 15
> watts reflected, a 10:1 ratio. If the meter is reversed, I get 15 watts fwd
> and 150 watts reflected. I can hook a transmitter to it, set it for 15 watts
> on either scale, reverse the meter, and it still reads 15 watts. Granted,
> I'm not swapping elements, just twisting a switch, but two different
> sampling loops must be involved.
>
> Also, similar accuracies are seen on most multimeters when changing scales.
>
> The Bird's 30 uA meter has an expanded scale at the low end, so it's very
> easy to read down to 1 watt with a 50 watt element. I guess I just expected
> more consistency between ranges. The new elements should reduce the amount
> of error when switching ranges, hopefully.

4051. Re: What am I emitting on 80M?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-28 14:10:49 UTC
From: CAM <Cecil.A.Moore@ieee.org>
Message-ID: <3D6CD9E9.98228EC0@ieee.org>
Source record: 135692

Ken wrote:
> The question remains just how far can you "stretch" this kind of
> antenna, if you are using ladder line.

I "stretch" mine from 3.6 MHz to 29.7 MHz.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

4052. Re: What am I emitting on 80M?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-28 14:14:38 UTC
From: CAM <Cecil.A.Moore@ieee.org>
Message-ID: <3D6CDACE.12E5857D@ieee.org>
Source record: 135693

'Doc wrote:
> How far can you 'stretch' it using ladder line?
> I honestly don't know. Further than if you were
> using coax, but even so, it'll never 'stretch' over
> all of 80 meters.

My ladder-line "stretches" my 130 ft dipole over all
of 80m.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

4053. Re: Center Fed With 300 Ohm Coax

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-28 14:17:36 UTC
From: CAM <Cecil.A.Moore@ieee.org>
Message-ID: <3D6CDB80.73180E4A@ieee.org>
Source record: 135694

marvin rosen wrote:
> Why can't an 80 mtr center fed dipole be fed with
> 300 ohm coax & tuner & used from 80-10 mtrs?

Where are you going to get 300 ohm coax?
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

4054. Re: What am I emitting on 80M?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-28 14:23:24 UTC
From: CAM <Cecil.A.Moore@ieee.org>
Message-ID: <3D6CDCDC.303F0F85@ieee.org>
Source record: 135695

Ken wrote:
> Not the right diagnosis for me. "Analysis paralysis" is what
> non-engineers who worked for me used to call it. Most engineers like
> to work things out a bit on paper before they roll up their sleeves.

Yep, I'm an engineer. Often, I am satisfied with a paper-only design.
I have boxes of paper-only designs that I have never brought to reality.
But I have to confess that I spend more time on internet than on the air.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

4055. Re: Ham flavored Linux :)

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-28 14:32:50 UTC
From: Eamon Skelton <Xnospam@oceanfree.net>
Message-ID: <iumika.c3.ln@mylinuxbox.net>
Source record: 135708

In article <Y+dqParSBibMjdOC9ms5pUsXR454@4ax.com>, Bob Miller wrote:

> Can any of you guys run Dos or Windows ham-oriented applications under Linux?

This is very far OT for this group so I will keep
my reply brief and to the point.

Some DOS programs will run under a DOS emulator
called Dosemu.

Some Windows programs will run under a Windows
emulator called WINE.

Murphy's law dictates that all the programs you
don't want to run will work perfectly under WINE
but all the programs you do want to run will
not work at all.

I will send you a more detailed reply via
e-mail.

73, Ed. EI9GQ.

--
Remove 'X' to reply via e-mail.
http://homepage.eircom.net/~ei9gq
Linux 2.4.19

4056. Re: What am I emitting on 80M?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-28 14:34:57 UTC
From: n2ey@aol.com
Message-ID: <20020828103457.28714.00000445@mb-cc.aol.com>
Source record: 135696

In article <3d68d9c0.436476515@news-server.optonline.net>, cprstn54zz@att.net (Ken) writes:

>On 25 Aug 2002 12:06:56 GMT, n2ey@aol.com (N2EY) wrote:
>
>>I don;t know that tuner. Some tuners are better than others at matching
>various
>>loads.
>
>The MFJ-986 has a good rep for being able to tune anything.
>http://www.eham.net/reviews/detail/631

Being able to get a 1:1 match and being able to do so with low loss is another matter. I'm not saying the '986 is a lossy tuner! But without knowing the opeerating conditions it's hard to know what the system efficiency really is.

>
>>Changing to ladderline is a last resort, and negates the need for the
>>Alpha-Delta.
>
>Could you elaborate on this please? Do you mean that I could just use
>a 100 ft long dipole (or whatever I could fit) and just tune that on
>160-10

Yes - in fact the longer the better.

The reason the Alpha Delta is so complex is so that it will provide a decent match to coax on several bands. With a tuned system (dipole and low-loss feeder, matched at the transmitter end), that complexity is not needed.

However, it's important to note that such a system may present some really weird impedances to the tuner. It's also important to note that performance on 160 will be limited because either antenna is quite low and short on that band.

>(because high SWR wouldn't matter)?

It is inaccurate to say that "SWR doesn't matter". Rather, SWR matters less when you use a low-loss feed system.

Think in terms of the feed system as a whole. For example, compare a 50 foot length of RG-213 operated with a 9:1 SWR on 3.5 MHz with a 500 foot length of ladder line operated with a 3:1 SWR on 28 MHz.

>Would it radiate as well
>as my multi-wire dipole on 10 and 20 where it has separate wires?

I don't think you'd notice any difference. But since you have EZNEC, why not model both antennas and see what the results are?

>Or
>do you mean that the 40-80-160 wire with the coils would be
>unnecessary and a simple 50' wire would do the job just as well?

I don't see any reason to use multiple wires with an open-line-and-tuner feed system.

--

Here are some other considerations:

- Do you really need 100 feet of RG-8X to reach from the shack to the antenna feed point?

- Could the shack location change? (I've always favored a basement or first-floor shack, for grounding and feedpoint reasons).

- What sort of results/operation are you looking for on 80 meters? DX (thousands of miles) or regional/local? (dozens to hundreds of miles)? 'Phone, data or CW? Ragchews, nets, dxing, contests?

73 de Jim, N2EY

4057. Re: What am I emitting on 80M?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-28 14:36:45 UTC
From: Fred Hambrecht <w4jle@charter.net>
Message-ID: <umpnvvt0n11r0d@corp.supernews.com>
Source record: 135697

And if you were trying to put together a system guaranteed to work over a given path during specific hours 365 days a year, then I to would follow the given advice.

Your problem is simple, your trying to go from DC to Daylight with a single antenna. Any resonant dipole on 75 will have a 2:1 bandwidth of about 170 KC, if you fatten the antenna by making it a cage, depending on the diameter, you can get about 300KC.

Adjust the resonant point of your antenna from where it is and go from there. My solution given that you have a tuner would be to get a G5RV. HRO and other goodie stores have them for about $40 with ladder line, inline choke and coax lead in. In spite of all the negatives you hear, I have worked over 200 countries on 75 with one. Is it the best antenna in the world, heck no, does it work for someone interested in working all bands with a minimum of effort... Sure does, and besides it irritates the hell out of the diehard 160 bunch when you tell them your running a G5RV.

Another thing you can do is to add a second set of wires from the trap that are longer than the set that is on there. Separate the far end by at least 5 feet and your bandwidth will increase as well. Art Collins had a dual dipole connected this way and covered all of 75.

I guess what I am sayingis that there is a vast difference between the needs of a ham and the engineered needs of the short-wave broadcaster. If everyone listened to what the experts tell you is necessary to communicate, none of us would have ever made a contact.

Good luck and I will probably work you before I work someof the experts that are still determining the takeoff angle of their sterba curtains and calculating their ground conductivity to the 14th decimal place.

"Ken" <cprstn54zz@att.net> wrote in message
news:3d6cd443.183995218@news-server.optonline.net...
> On Wed, 28 Aug 2002 08:37:23 -0500, CAM <Cecil.A.Moore@ieee.org>
> wrote:
> >Fred Hambrecht wrote:
> >> Are you really interested in solving the problem?
> >Maybe he's like a lot of other hams - would rather be on
> >internet than on the air?
>
> Not the right diagnosis for me. "Analysis paralysis" is what
> non-engineers who worked for me used to call it. Most engineers like
> to work things out a bit on paper before they roll up their sleeves.
>
> Ken KC2JDY

>
>
>
>
> Ken
> (to reply via email
> remove "zz" from address)

4058. Re: Center Fed With 300 Ohm Coax

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-28 14:45:12 UTC
From: Fred Hambrecht <w4jle@charter.net>
Message-ID: <umpofqm0u966b5@corp.supernews.com>
Source record: 135698

Not a problem Cam, first you start with 6" copper pipe and go from there.

"CAM" <Cecil.A.Moore@ieee.org> wrote in message
news:3D6CDB80.73180E4A@ieee.org...
> marvin rosen wrote:
> > Why can't an 80 mtr center fed dipole be fed with
> > 300 ohm coax & tuner & used from 80-10 mtrs?
>
> Where are you going to get 300 ohm coax?
> --
> cheers, CAM http://www.qsl.net/w5dxp
>
>
> -----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
> http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
> -----== Over 80,000 Newsgroups - 16 Different Servers! =-----

4059. Re: Center Fed With 300 Ohm Coax

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-28 15:00:05 UTC
From: Fulano de Tal <exray@nospamcaribe.net>
Message-ID: <3D6CE575.48BDFAB3@nospamcaribe.net>
Source record: 135699

N2EY wrote:
>
> In article <J1%a9.7954$p%3.604403@bgtnsc05-news.ops.worldnet.att.net>, "marvin
> rosen" <raghead@worldnet.att.net> writes:
>
> >Why can't an 80 mtr center fed dipole be fed with
> >300 ohm coax & tuner & used from 80-10 mtrs?
> >
> Reason 1: Nobody makes 300 ohm coax
>
> 73 de Jim, N2EY

Oh duh...retract my response. 300 ohm COAX didn't even register :-)
-ex

4060. Re: What am I emitting on 80M?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-28 15:32:01 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <jdrpmu0i9ns6b7u6v3hcr510vj8f2rgjcs@4ax.com>
Source record: 135700

On Wed, 28 Aug 2002 09:04:26 -0500, CAM <Cecil.A.Moore@ieee.org>
wrote:

>Richard Clark wrote:
>> You are steadily moving toward a generic solution that is best
>> illustrated by a tuning technique published by Cecil Moore who,
>> uncharacteristically, has only made one contribution to this thread:
>
>We've been celebrating my Dad's 90th birthday for the past few
>days with loads of kinfolk descending on us.

Hi Cecil,

Happy B'Day to your dad, mine had his 83'rd last week.

73's
Richard Clark, KB7QHC

4061. Re: Linearity of Bird Wattmeter Slugs?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-28 16:06:26 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <9lrpmuoa8q6a2mpol6kp3j95jl98ociklp@4ax.com>
Source record: 135701

On Wed, 28 Aug 2002 10:08:58 -0400, "Ralph Mowery"
<rmowery@cetlink.net> wrote:

>People don't understand that the meters are made for field testing to show
>major errors or defects in equipment . They are not lab instruments made
>and traceable to the NBS (forgot the new combination of leters that the name
>was changed to).
>

Hi Ralph,

The old NBS is now the NIST (National Institutes for Science and
Technology).

During my time at the bench, I saw a lot of Birds come in for tune-up.

UNIVERSALLY and across the board, they required adjustment after 6
months of use, EVERY 6 months. They were submitted not because they
were used as lab instrumentation (far from it); but rather because
they were used on a flight line where FAA mandated all measurements be
traceable.

The Laboratory version of this style of design (a separate, tuned
cavity probe) was found in the Sierra AN/URM-120. Other manufacturers
made this under government contract.

The major source of error for Birds is found in the parts that move
(aside from the meter). The input and output connectors are poor and
introduce SWR on their own. The turret can suffer alignment problems
due to parts erosion. This may sound rather insubstantial, but
geometry is everything and error shows up quite pronouncedly (compared
to a standard).

For example, in making a twist in the turret on the Bird, you may not
go a full 180ï¿½ because the bayonet pin is slightly gummed up with
erosion debris (much less bent and you hit 185ï¿½). Instead you get
175ï¿½ and accuracy literally skids from there.

I have never seen a Bird Power Meter that was in specification.

Every URM-120 that I saw was 90% within calibration (on average with
probably half at 100%).

73's
Richard Clark, KB7QHC

4062. Re: Linearity of Bird Wattmeter Slugs?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-28 16:18:23 UTC
From: gaschafer@attbi.com
Message-ID: <3d6cf804.3696005@netnews.attbi.com>
Source record: 135702

As Bob has demonstrated, the Bird meters are just not as accurate as
most people would like
to believe they are.

73
Gary K4FMX

On Wed, 28 Aug 2002 10:08:58 -0400, "Ralph Mowery"
<rmowery@cetlink.net> wrote:

>People don't understand that the meters are made for field testing to show
>major errors or defects in equipment . They are not lab instruments made
>and traceable to the NBS (forgot the new combination of leters that the name
>was changed to).
>
>
>
>"Bob M." <xxxxx@yyyy.zzz> wrote in message
>news:a%Xa9.239623$m91.9853522@bin5.nnrp.aus1.giganews.com...
>> I also have a little Bird 25-175 MHz wattmeter with 150 watts fwd and 15
>> watts reflected, a 10:1 ratio. If the meter is reversed, I get 15 watts
>fwd
>> and 150 watts reflected. I can hook a transmitter to it, set it for 15
>watts
>> on either scale, reverse the meter, and it still reads 15 watts. Granted,
>> I'm not swapping elements, just twisting a switch, but two different
>> sampling loops must be involved.
>>
>> Also, similar accuracies are seen on most multimeters when changing
>scales.
>>
>> The Bird's 30 uA meter has an expanded scale at the low end, so it's very
>> easy to read down to 1 watt with a 50 watt element. I guess I just
>expected
>> more consistency between ranges. The new elements should reduce the amount
>> of error when switching ranges, hopefully.
>
>

4063. Re: ANTENNA QUESTION solarcon A99

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-28 16:35:31 UTC
From: Major Tom <NonValidAddress@attbi.com>
Message-ID: <nZ6b9.47109$_91.1079@rwcrnsc51.ops.asp.att.net>
Source record: 135703

If you want to see one apart, check this out. You may think
twice about this antenna.

http://www.qsl.net/kg6aoh/a99/

Tom

"George Kinzer" <horseflygk@worldnet.att.net> wrote in message
news:GWYa9.38324$Ke2.2725559@bgtnsc04-news.ops.worldnet.att.net...
> Im going to co-phase a pair of A99's, one new one, and Im going to make the
> other from a "wonder pole".
> question, has anyone seen the inards of the base? Are there ____ turns of
> wire for the bottom tuning rings? I cant seem to find the right treads (yet)
> for the "tuning" rings
> If you got a busted bottom, Id love to SEE it.. thanks guys.
> --
> If first you don't succeed, do the same thing again...see what happens
>
>

4064. Re: Coax stub question

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-28 16:37:45 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <esupmuka1vsrn5st6bq378heuhc7hfjugs@4ax.com>
Source record: 135704

On Wed, 28 Aug 2002 09:08:40 -0500, CAM <Cecil.A.Moore@ieee.org>
wrote:
>What's the SWR on a stub?

Hi Cecil,

I would suppose it depends on the stub's loss. That aside, it seems
it would have a ratio something like 0pen:Short.

73's
Richard Clark, KB7QHC

4065. Can I direct bury RG-213 in ground?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-28 16:48:22 UTC
From: StarGazer <pti@capnet.com>
Message-ID: <3D6CFED6.E44325B2@capnet.com>
Source record: 135705

asdf

4066. Re: G5RV Question

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-28 17:11:18 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <3D6D0436.40302@eznec.com>
Source record: 135706

And, at least for the low frequency ferrites often used for balun cores,
the core will go up in flames or explode due to other losses at flux
levels well below saturation.

Roy Lewallen, W7EL

CAM wrote:
> Dick Hughes wrote:
>
>>According to G5RV http://www.qsl.net/aa3px/g5rv.htm you will degrade
>>the performance of the antenna he designed if you use a balun. He
>>goes into great detail on why you should not use any kind of balun
>>with the G5RV.
>
>
> It is good engineering practice to install a balun or choke at every
> balanced to unbalanced transition point. A choke at the coax/twinlead
> junction on a G5RV will tend to reduce feedline radiation and RF-in-
> the-Shack. Quoting the above web page:
>
> "It is now known that if a balun is connected to a reactive load
presenting
> a vswr of more than about 2:1, its internal losses increase,
resulting in
> heating of the windings and saturation of its core (if used)."
>
> This is a pretty ridiculous statement. . .
>. . .

4067. Re: What am I emitting on 80M?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-28 17:16:24 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <3D6D0568.2040404@eznec.com>
Source record: 135707

Ken wrote:
> On Wed, 28 Aug 2002 08:37:23 -0500, CAM <Cecil.A.Moore@ieee.org>
> wrote:
>
>>Fred Hambrecht wrote:
>>
>>>Are you really interested in solving the problem?
>>
>>Maybe he's like a lot of other hams - would rather be on
>>internet than on the air?
>
>
> Not the right diagnosis for me. "Analysis paralysis" is what
> non-engineers who worked for me used to call it. Most engineers like
> to work things out a bit on paper before they roll up their sleeves.

Y'mean there are some engineers who want to waste all that time figuring out the stresses on the span before they start bolting the bridge together?

Roy Lewallen

4068. Re: Linearity of Bird Wattmeter Slugs?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-28 17:30:46 UTC
From: Ralph Mowery <rmowery@cetlink.net>
Message-ID: <akj1p9$2gld$1@newsreader.cetlink.net>
Source record: 135709

Thanks for the vote of confidence in the Sierra meter. I bought one several years ago at a hamfest. Someone was selling a bunch of them that were still in the sealed box. They were probably 5 or 10 years old but had never been out of the origional packing. It was in a sealed cardboard box that had some very heavy duty aluminum foil over that.

As you know and what I was trying to say is that the slugs are interchangable from one Bird meter to the next and no way can they be all that accurate. Some just expect electronic instruments to be 100 % all the time..

At work we have some caliberation instruments for temperature and pressure that are sent off once a year to be certified. They are used to caliberate instruments that are used on a production line. The computer readouts are to 3 decimal places at around 300 deg. C. The thermocouples that are feeding the computer readouts are only certified to about 2 deg. C. The main thing is that the readouts will repeat the same all the time even if they are not that accurate.

>
> The Laboratory version of this style of design (a separate, tuned
> cavity probe) was found in the Sierra AN/URM-120. Other manufacturers
> made this under government contract.
>
> The major source of error for Birds is found in the parts that move
> (aside from the meter). The input and output connectors are poor and
> introduce SWR on their own. The turret can suffer alignment problems
> due to parts erosion. This may sound rather insubstantial, but
> geometry is everything and error shows up quite pronouncedly (compared
> to a standard).
>
> For example, in making a twist in the turret on the Bird, you may not
> go a full 180ï¿½ because the bayonet pin is slightly gummed up with
> erosion debris (much less bent and you hit 185ï¿½). Instead you get
> 175ï¿½ and accuracy literally skids from there.
>
> I have never seen a Bird Power Meter that was in specification.
>
> Every URM-120 that I saw was 90% within calibration (on average with
> probably half at 100%).
>
> 73's
> Richard Clark, KB7QHC

4069. Re: Can I direct bury RG-213 in ground?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-28 18:01:36 UTC
From: Dennis Kaylor <k4oxg@tampabay.rr.com>
Message-ID: <3D6D100F.7F485A60@tampabay.rr.com>
Source record: 135710

yes you can as long as you go deep enough not to hit it with the mower
or anything but unless its a real long run i would still put it in PVC
pipe just to keep it from being damaged

StarGazer wrote:

> asdf

4070. Re: Center Fed With 300 Ohm Coax

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-28 18:19:23 UTC
From: CAM <Cecil.A.Moore@ieee.org>
Message-ID: <3D6D142B.CF46C2A0@ieee.org>
Source record: 135711

Fred Hambrecht wrote:
> Not a problem Cam, first you start with 6" copper pipe and go from there.

Well, let's see. A quick calculation indicates that the center conductor
for such a piece of coax would be 0.04 inches in diameter so how much
power are you planning to run?

> "CAM" <Cecil.A.Moore@ieee.org> wrote in message
> > Where are you going to get 300 ohm coax?

--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

4071. Re: Coax stub question

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-28 18:34:11 UTC
From: CAM <Cecil.A.Moore@ieee.org>
Message-ID: <3D6D17A3.A285DB31@ieee.org>
Source record: 135712

Richard Clark wrote:
>
> CAM <Cecil.A.Moore@ieee.org> wrote:
> >What's the SWR on a stub?
>
> I would suppose it depends on the stub's loss. That aside, it seems
> it would have a ratio something like 0pen:Short.

I don't remember it being discussed, but seems to me, the
reflection coefficient of any stub is 1.0 giving an SWR of
infinity at the open/short point. The question becomes not
why do coaxial stubs fail but why do some fail to fail? ;-)
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

4072. Re: Can I direct bury RG-213 in ground?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-28 18:37:33 UTC
From: CAM <Cecil.A.Moore@ieee.org>
Message-ID: <3D6D186D.97EDDD31@ieee.org>
Source record: 135713

Dennis Kaylor wrote:
> yes you can as long as you go deep enough not to hit it with the mower
> or anything but unless its a real long run i would still put it in PVC
> pipe just to keep it from being damaged

Doesn't work in Queen Creek, AZ. The gophers ate through the PVC pipe
AND the coax.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

4073. Re: Center Fed With 300 Ohm Coax

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-28 18:50:37 UTC
From: JC <jacques.culot@skynet.be>
Message-ID: <3d6d1ba5$0$209$ba620e4c@news.skynet.be>
Source record: 135714

From Europe: following me there is no 300 ohm coaxial producer in Europe (it would be too big) but you always can use 300 ohm parallel line.

73 de ON5MJ.

4074. Re: Can I direct bury RG-213 in ground?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-28 19:03:35 UTC
From: 'Doc <w5lz@icok.net>
Message-ID: <3D6D1E69.A75E8DD6@icok.net>
Source record: 135715

StarGazer,
Yes.
'Doc

4075. Re: What am I emitting on 80M?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-28 19:13:25 UTC
From: n7ws@nowhere.com
Message-ID: <3d6d204e.48103153@news.triconet.org>
Source record: 135716

On Wed, 28 Aug 2002 03:59:30 GMT, cprstn54zz@att.net (Ken) wrote:

|On Wed, 28 Aug 2002 03:39:15 GMT, 'Doc <w5lz@icok.net> wrote:
|
|>Ken wrote:
|>> ------clipped------
|>> 3.325, 13.0
|>> 3.600, 12.38
|>> 3.700, 11.37
|>> 3.800, 7.44
|>> 3.850, 3.56
|>> 3.900, 1.62
|>> 3.925, 3.26
|>> 3.999, 9.27
|>
|>Ken,
|> On 80 meters it's obvious that the antenna is resonant
|>around 3.900 Mhz. Trying to use it at 3.5+ Mhz is just not
|>going to work very well, especially with a 'shortened'
|>antenna. It won't make a lot of difference if you're using
|>coax or ladder line to feed the antenna. You can only
|>'stretch' an antenna so far.
|
|I see a typo in my table: The first reading was at 3.525 MHz, not
|3.325.
|
|The plan at this point is to add a one foot pigtail to the outboard
|end of the 80M sections, which the manufacturer's modeling program
|says will bring resonance down to the low end of the band.
|
|The question remains just how far can you "stretch" this kind of
|antenna, if you are using ladder line.

I'm going to take one last stab at this and then give up. There has been a hell of a lot of conjecture in this thread but very little real number crunching. All of the following is based on some assumptions, however, I believe they are good ones.

Given that the antenna is resonant at or close to 3.9 MHz and that it is a shortened, loaded, low electrical height, "vee" dipole, I submit that the real part of the radiation + loss resistance is about 29 ohm.

A 29 + j0 load on the end of 100 feet of RG-8X on 3.9 MHz will give an input SWR of approximately 1.6:1, which is alleged to be the measured SWR. The alternative is that the resistance is about 89 ohm which is doubtful in my mind.

The total line loss for this situation is about 0.6 dB.

Skipping to the "almost" bottom of the band, 3.525 MHz, the measured SWR is 13:1. If anything, at this frequency the real part of the load Z will be lower than 29 ohm, but how much is unclear, so I will keep it constant and assume that only the reactance changes.

A 29 -j420 load will present a 50 ohm 13:1 SWR at the input end of the line and the total loss will be just shy of 10 dB. (Note: the SWR on the line will actually be higher than 13:1 due to the line reactance, however, the measuring instrument is calibrated to 50 +j0)

Going through the same exercise for the other frequencies I construct the following table:

Freq SWR(50) R X loss

3.525 13.0 29 -420 9.8
3.600 12.4 29 -337 8.1
3.700 11.4 29 -260 6.3
3.800 7.4 29 -133 2.9
3.850 3.6 29 -61 1.2
3.900 1.6 29 0 0.6
3.925 3.3 29 + 55 1.1
4.000 9.3 29 +175 4.0

Replacing the coax with 100' of Wireman type 554 window line, for which I have published measured data (Zo=360), I get the following:

Freq SWR(Zo) R X loss

3.525 13.0 6790 +2904 1.3
3.600 18.3 741 -2070 1.0
3.700 15.5 189 -956 0.8
3.800 12.2 70 -430 0.5
3.850 11.2 50 -276 0.5
3.900 11.0 40 -175 0.4
3.925 11.3 34 - 99 0.5
4.000 13.5 26 + 29 0.6

Now the ladder line proponents will say, "See, I told you so, look at the reduction in loss."

To which I will say, "How are you going to match this turkey?" Look at the change in Zin with a change of just 75 KHz between 3.525 and 3.6 MHz. The real part changes an order of magnitude and the highly reactive part changes sign. This is a *very* high Q situation.

The usual hi-pass tee (series C, shunt L, series C) can match the load at 3.525 MHz okay. But move up to 3.6 MHz and for an optimum solution, you need a completely different network! The series element in the output side really needs to be an inductor. This holds true until you get to the other end of the band where you need a capacitor again. With say a 500 pF max capacitor in the output leg, about the best you can do at 3.6 MHz is a 6:1 SWR.

I do not want an antenna system where I have to reconfigure my tuner to QSY a few KHz, no matter how "efficient".

All of the foregoing calculations were done using the excellent Excel program XLZIZL by Dan, AC6LA, which can be found at www.qsl.net/ac6la.

Wes

4076. Re: ANTENNA QUESTION solarcon A99

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-28 19:27:43 UTC
From: 'Doc <w5lz@icok.net>
Message-ID: <3D6D2404.85894A91@icok.net>
Source record: 135718

George,
Not really any more nonsense than I've seen from
you.
As when phasing any two antennas, it's much easier
if both are 'tuned' to the same frequency. The easiest
way of doing that is to 'tune' each individually, in
the position they will be in for use. That means a couple
of 'up'n'downs' for each antenna.
If the two antennas are not the same, things get a
bit more difficult, but, it's basically the same procedure.
The 'tuning' part means making the resonant frequency, and
input impedance of each antenna the same.
'Doc

4077. Re: Can I direct bury RG-213 in ground?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-28 19:41:34 UTC
From: Technomage <technomage-hawke@cox.net>
Message-ID: <pan.2002.08.28.12.41.33.85.16454@cox.net>
Source record: 135619

same problem in west phoenix.
however, pvc with an inner cladding of steel conduit does wonders at
keeping the gophers from shewing on things.

Technomage

In article <3D6D186D.97EDDD31@ieee.org>, "CAM" <Cecil.A.Moore@ieee.org>
wrote:

> Dennis Kaylor wrote:
>> yes you can as long as you go deep enough not to hit it with the mower
>> or anything but unless its a real long run i would still put it in PVC
>> pipe just to keep it from being damaged
>
> Doesn't work in Queen Creek, AZ. The gophers ate through the PVC pipe
> AND the coax.

--
I will not be pushed, filed, stamped, indexed, briefed, debriefed, or numbered!
My life is my own - No. 6

4078. Re: Center Fed With 300 Ohm Coax

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-28 19:47:54 UTC
From: Eamon Skelton <Xnospam@oceanfree.net>
Message-ID: <ad9jka.76.ln@mylinuxbox.net>
Source record: 135717

In article <akii0gpna1@slb3.atl.mindspring.net>, Dan/W4NTI wrote:
> Do they make 300 ohm coaxial cable in Europe? How much and where can I buy
> it?

It is great stuff but very hard to bend around
tight corners.

73, Ed. EI9GQ.

--
Remove 'X' to reply via e-mail.
http://homepage.eircom.net/~ei9gq
Linux 2.4.19

4079. Re: G5RV Question

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-28 20:56:54 UTC
From: rob34 <rob34@infinet.com>
Message-ID: <3d6d3927$0$1433$4c5ecdc7@news.erinet.com>
Source record: 135620

I appreciate all the replies and I don`t mean to beat a dead horse, but one thing I forgot to mention was the fact that later on I will probably be running around 800 watts PEP on this antenna. The Van Gorden choke was inexpensive and I was wondering if anybody had any experience with this particular choke for this type of antenna?
"rob34" <rob34@infinet.com> wrote in message news:3d6be29d$0$3571$4c5ecdc7@news.erinet.com...
> I am building a G5RV antenna for 10 -80 meters and I was wondering if it
> would work out ok to use a "Van Gorden" Hi -Q balun with a 1:1 ratio on the
> end of the ladder line where the coax hooks on or would it be better to make
> an air balun for this? Thanks on any info on this. Rob WB8VWI
>
>

4080. Re: Center Fed With 300 Ohm Coax

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-28 20:59:37 UTC
From: Fred Hambrecht <w4jle@charter.net>
Message-ID: <umqedrqkh4au3a@corp.supernews.com>
Source record: 135621

After buying 100 foot of 6" copper pipe you won't be able to afford running
anything over a watt..
.
"CAM" <Cecil.A.Moore@ieee.org> wrote in message
news:3D6D142B.CF46C2A0@ieee.org...
> Fred Hambrecht wrote:
> > Not a problem Cam, first you start with 6" copper pipe and go from
there.
>
> Well, let's see. A quick calculation indicates that the center conductor
> for such a piece of coax would be 0.04 inches in diameter so how much
> power are you planning to run?
>
> > "CAM" <Cecil.A.Moore@ieee.org> wrote in message
> > > Where are you going to get 300 ohm coax?
>
> --
> cheers, CAM http://www.qsl.net/w5dxp
>
>
> -----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
> http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
> ------== Over 80,000 Newsgroups - 16 Different Servers! =-----

4081. Re: Antenna question

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-28 21:23:32 UTC
From: jgboyles@aol.com
Message-ID: <20020828172332.01680.00003633@mb-de.aol.com>
Source record: 135622

>I have a what I think is a yaggi screen reflector. It looks like a widow
>screen with 8 dipoles. It picks up ch. 14-69

That sounds like an 8 bay screen reflector designed for UHF television. The FM radio band (in the USA) is 88-108 mhz, which is between ch. 6 and 7 in the VHf TV bands. As such your antenna is not going to be very directional and have lots of gain as it would if used for UHF TV.
However, since it is up in the air, it could help on some stations. The easiest thing would be just connect the center conductor of your coax to the telescopic whip antenna on the radio. You could do this with an alligator clip, or just strip out a couple of inches and wrap it around the whip. You might connect the coax shield to a ground on the radio, like on an external speaker terminal, or the battery (-) terminal, and see if that helps.
Not sure if the 30db booster would help in this application, may overload the radio, but won't hurt to try and see.
73 Gary N4AST

4082. Re: Coax stub question

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-28 21:43:47 UTC
From: David Robbins <k1ttt@arrl.net>
Message-ID: <akjg6j0mci@enews4.newsguy.com>
Source record: 135623

because it depends on what they are placed in parallel with. not all the
power in the line it is connected to goes down the stub.

"CAM" <Cecil.A.Moore@ieee.org> wrote in message
news:3D6D17A3.A285DB31@ieee.org...
> Richard Clark wrote:
> >
> > CAM <Cecil.A.Moore@ieee.org> wrote:
> > >What's the SWR on a stub?
> >
> > I would suppose it depends on the stub's loss. That aside, it seems
> > it would have a ratio something like 0pen:Short.
>
> I don't remember it being discussed, but seems to me, the
> reflection coefficient of any stub is 1.0 giving an SWR of
> infinity at the open/short point. The question becomes not
> why do coaxial stubs fail but why do some fail to fail? ;-)
> --
> cheers, CAM http://www.qsl.net/w5dxp
>
>
> -----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
> http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
> -----== Over 80,000 Newsgroups - 16 Different Servers! =-----

4083. Re: Coax stub question

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-28 21:50:14 UTC
From: David Robbins <k1ttt@arrl.net>
Message-ID: <akjgim0moa@enews4.newsguy.com>
Source record: 135624

you haven't supplied quite enough information. is this a stub that is open or shorted on the end and connected in parallel with the loop? how long is it in wavelengths at the frequency you are using?

An open ended stub can develop quite high voltages on the far end depending on its length. if you have simply cut off the end flat to tune it the short air gap may develop corona. to prevent corona developing at the far end you can cut back the shield a bit and seal off the end with good electrical tape.

a shorted stub can develop high currents at the far end, again depending on its length. if this is what you have be sure you have a good electrical connection between the center conductor and shield.

"ve3tmt" <ve3tmt@yahoo.com> wrote in message
news:%dXa9.6825$n73.764874@news20.bellglobal.com...
> I have been experimenting with a homemade HF loop, and am having troubles
> matching it. I have a high power variable cap on the way from Henry
Radio,
> and have been experimenting with a coax matching stub. I can get the
thing
> to resonate to a 1:1 swr, however after prolonged TX, the coax begins to
> burn on the end. I have even tried RG213 which is supposed to be good for
> 4KV. Am I doing something wrong?
>
> Thanks,
>
> Max
>
>

4084. Is ALL coax able to be direct buried??

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-28 22:08:45 UTC
From: StarGazer <pti@capnet.com>
Message-ID: <3D6D49ED.155A99DE@capnet.com>
Source record: 135626

adsfg

4085. Re: What am I emitting on 80M?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-28 22:21:33 UTC
From: CAM <Cecil.A.Moore@ieee.org>
Message-ID: <3D6D4CED.1F48C483@ieee.org>
Source record: 135625

Wes Stewart wrote:
> Replacing the coax with 100' of Wireman type 554 window line, for which I have
> published measured data (Zo=360), I get the following:

Replace the coax with 130' of Wireman type 554 window line and the
system will probably resonate just about where Ken wants it resonant.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
------== Over 80,000 Newsgroups - 16 Different Servers! =-----

4086. Re: G5RV Question

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-28 22:58:18 UTC
From: kelly@dvol.com
Message-ID: <d22b54c3.0208281458.7db92ca@posting.google.com>
Source record: 135627

CAM <Cecil.A.Moore@ieee.org> wrote in message news:<3D6CD79D.5AE4849A@ieee.org>...
> Brian Kelly wrote:
> > Feedline radiation
> > is a good thing with g5rv's, it at least partially fills in the deep
> > nulls in the patterns found on the higher bands.
>
> Whether it is a good thing or not depends upon whether maximum gain
> or maximum coverage is most important. Me, I'll take maximum gain
> any day. My lobes are aimed at my friends in AZ.
>
>
That's a pretty special case, most of us'ns prefer patterns which are
as omnidirectional as we can get 'em in most instances. g5rv's are
nasty things, I had an 80m version up horizontally around 65-70 ft.
for FD this year and the thing had a lot of "negative gain" spots
around the compass on 20 & 15. Annoying.

w3rv

4087. Re: G5RV Question

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-28 23:26:33 UTC
From: Fulano de Tal <exray@nospamcaribe.net>
Message-ID: <3D6D5C29.1575ACDA@nospamcaribe.net>
Source record: 135629

Brian Kelly wrote:
>
> CAM <Cecil.A.Moore@ieee.org> wrote in message news:<3D6CD79D.5AE4849A@ieee.org>...
> > Brian Kelly wrote:
> > > Feedline radiation
> > > is a good thing with g5rv's, it at least partially fills in the deep
> > > nulls in the patterns found on the higher bands.
> >
> > Whether it is a good thing or not depends upon whether maximum gain
> > or maximum coverage is most important. Me, I'll take maximum gain
> > any day. My lobes are aimed at my friends in AZ.
> >
> >
> That's a pretty special case, most of us'ns prefer patterns which are
> as omnidirectional as we can get 'em in most instances. g5rv's are
> nasty things, I had an 80m version up horizontally around 65-70 ft.
> for FD this year and the thing had a lot of "negative gain" spots
> around the compass on 20 & 15. Annoying.
>
> w3rv

I have searched and asked here about a website that might give
'predicted' patterns for the G5RV on the various bands but I haven't
seen anything. I too notice what seems to be 'holes' in the pattern and
would like to get a visual handle on what might be typical.
Does anybody have a reference site for such data?
Tnx,
WX4A

4088. Re: Air-Wound Balun Design Info??

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-28 23:26:34 UTC
From: kelly@dvol.com
Message-ID: <d22b54c3.0208281526.4f3efd7f@posting.google.com>
Source record: 135628

Roy Lewallen <w7el@eznec.com> wrote in message news:<3D6BC8E6.4010701@eznec.com>...
> Brian Kelly wrote:
> > . . .
> > I have a 259B, don't know how I managed to get along without it for
> > all those years. But how does one use a 259B to measure the impedance
> > of a balun on the bench? The only other pieces of instrumentation I
> > have so far beyond the 259B are an swr bridge, a decent DMM and a 50
> > ohm dummy load
>
> Connect the two input conductors of the balun together and call it point
> A. Connect the two output conductors of the balun together and call it
> point B. Connect point A to the center conductor of the analyzer input
> and point B to analyzer ground at the connector (or the other way
> around). You'll probably have to keep the analyzer and balun away from
> large conductive objects when you do the measurement, and it won't be
> precise. But it'll get you in the ballpark.
>
>
Simple enough, I'll try it.
>
>
> > [Solid State Design for the Radio Amateur is] not in the ARRL bookstore - who sells it?
>
> Is it finally out of print after all these years? It was published by
> the ARRL. Well, I see Powell's has a copy of it, new, for $15.
> http://www.powells.com. I'm sure that with a little resourcefulness and
> a Google search you can find other sources. It's a very worthwhile
> addition to the library of any amateur interested in experimenting.
>
>
What a nice source for books . . . for $15 I'm not gonna mess with it,
I'll order it tomorrow.
>
> > . . .
>
> Roy Lewallen, W7EL

Tnx again, Brian w3rv

4089. Re: Is ALL coax able to be direct buried??

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-28 23:39:19 UTC
From: Fulano de Tal <exray@nospamcaribe.net>
Message-ID: <3D6D5F27.5C6F01AD@nospamcaribe.net>
Source record: 135630

StarGazer wrote:
>
> adsfg

The simple answer is yes...as long as you have a hole and the cable you can bury it. The tougher answer is still yes but one would want to know how long you want it to last. That depends on local soil conditions (drainage, acidity, etc) and the specific type of jacket on the cable (PVC, PE, etc).
I'm in cable TV work and we have specific grades of cable that are recommended for direct burial and they usually include additional 'goop' between the jacket and sheath to further repel any moisture that migrates thru the jacketing. I don't see this in the ham market.
If you want to throw 'anyole' off-the-shelf cable into a trench and live outside of the Everglades you can probably get 5 years out of it if its of decent quality. Placing it in PVC or being particular about the jacket composition will probably outlive the antennas its connected to.
PVC pipe is cheap. And cable deterioration is inevitable, aerial or underground. Its much easier to replace if its in PVC pipe.
-BM

4090. Re: Center Fed With 300 Ohm Coax

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-29 00:51:21 UTC
From: 'Doc <w5lz@icok.net>
Message-ID: <3D6D6FED.87B6EEFC@icok.net>
Source record: 135631

marvin,
There's nothing in the world stopping you from
doing so (that's with the understanding that I'm
substituting 'feed line' for 'coax. I think that
was just a 'slip'.).
'Doc

4091. G5RV question

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-29 01:03:24 UTC
From: vhfradiobuff@yahoo.com
Message-ID: <1996cb6d.0208281703.55a3bec6@posting.google.com>
Source record: 135632

I've been thinking of picking up a G5RV in preparation for upgrading. I have a large lot that should allow me to put up a full length G5RV. On the back of my property is a wooden fence, about 7 feet high. I plan on putting chimney mounts on the fence posts on both corners of the fence and one in the center (my property/fence is shaped like a rectangle). I plan on putting a 20' pole on each end and a 20' pole in the center. With the G5RV only 20' up, completely horizontally strung, should this work ok for HF? I'd be putting out up to 100 watts. Any recommendations on how to attach the G5RV center and ends to the 10 poles? They're the kind you buy at Radio Shack for around $10 each.

Also, what would be a good coax to feed this with? The run would might be as much as 200'. I don't have a ton of cash to spend on the coax, so some comprimise is needed.

4092. Re: Trench for coaxial cables

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-29 01:11:36 UTC
From: Uncle Peter <radioconnectionNO@cox.netSPAM>
Message-ID: <cxeb9.28220$082.1633013@news1.east.cox.net>
Source record: 135633

If you are having the tower installed under a building permit, the
inspector
may have some say in the depth of the conduit. I had to hire a back to
trench
in my two 4" conduit runs (over 110 feet) between the house and the tower
to satisfy my local building inspector. He wanted it down 36", which
seemed
excessive for low-voltage cables.

Pete

"Herb Rosenberg" <kg6ok@pacbell.net> wrote in message
news:dGYa9.6812$I01.714493219@newssvr13.news.prodigy.com...
> I am considering running a 30 foot trench from the base of my tower to my
> ham shack for my coaxial cables, and would like to here comments /
> suggestions from anyone that has done this before, on things to do / not
do,
> etc.
>
> All of my cables are 9913, and I have a bundle of about 8 feedlines.
>
> I am thinking about a inch conduit, and wondering about a few things:
(BTW,
> I live in Southern California)
>
> How deep should the trench be below ground?
>
> What kind of pipe is best to use?
>
> Should I drill holes in the bottom side of the pipe so water can drain
out?
>
> Should I place some gravel on the top of the trench before I lay the pipe
on
> top, to help with drainage?
>
> Anything else I should know?
>
> Thanks for your help.
>
> Herb - KG6OK
>
>
>
>

>

4093. MFJ-1786 Schematic Wanted

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-29 01:19:20 UTC
From: KA9S - Jeff <ka9s@attbi.com>
Message-ID: <sEeb9.220299$983.441201@rwcrnsc53>
Source record: 135634

I acquired an MFJ-1786 HI-Q Loop antenna at a hamfest for a price I couldn't pass up. It had no documentation. I down loaded the manual from the MFJ web site, but they do not provide schematics. Does anyone have a schematic of the "Deluxe" remote control unit and for the antenna it self? I would prefer a scanned image file that you could e-mail. I am willing to pay postage if you don't have that ability.

Thanks for you help - Jeff - KA9S

4094. Has anyone checked out this antenna site EH ANTENNAS

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-29 01:32:41 UTC
From: Leland Cox <lcox107@comcast.net>
Message-ID: <3D6D7B80.8020509@comcast.net>
Source record: 135635

EH ANTENNAS They claim a 20 M antenna 2'long on 2"

www.eh-antenna.com

4095. Re: Has anyone checked out this antenna site EH ANTENNAS

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-29 01:56:35 UTC
From: Alan Beagley <abeagley@optonline.net>
Message-ID: <3D6D7F53.2090709@optonline.net>
Source record: 135636

Oh dear! I think another religious war is about to break out.

-=-
Alan, AB2OS

Leland Cox wrote:
> EH ANTENNAS They claim a 20 M antenna 2'long on 2"
>
> www.eh-antenna.com
>

4096. Re: Has anyone checked out this antenna site EH ANTENNAS

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-29 02:03:42 UTC
From: Fulano de Tal <exray@nospamcaribe.net>
Message-ID: <3D6D80FE.F202291D@nospamcaribe.net>
Source record: 135637

Leland Cox wrote:
>
> EH ANTENNAS They claim a 20 M antenna 2'long on 2"
>
> www.eh-antenna.com

Yes, it must be a great antenna since one of the reviewers says it works
as well from his basement as it does hanging from a tree-limb.

You're not a troll are you?

-ex

4097. Re: Has anyone checked out this antenna site EH ANTENNAS

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-29 02:07:43 UTC
From: JackR <JackRyan@aol.com>
Message-ID: <Plfb9.51064$_7.5632157@twister.socal.rr.com>
Source record: 135638

I bet its an advanced 'Fractal' design! heh, heh..

de jerry...

"Alan Beagley" <abeagley@optonline.net> wrote in message
news:3D6D7F53.2090709@optonline.net...
> Oh dear! I think another religious war is about to break out.
>
> -=-
> Alan, AB2OS
>
>
> Leland Cox wrote:
> > EH ANTENNAS They claim a 20 M antenna 2'long on 2"
> >
> > www.eh-antenna.com
> >
>

4098. Re: G5RV question

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-29 02:11:49 UTC
From: Fulano de Tal <exray@nospamcaribe.net>
Message-ID: <3D6D82E5.DDE149C9@nospamcaribe.net>
Source record: 135639

"vhfradiobuff@yahoo.comspamsux" wrote:
>
> I've been thinking of picking up a G5RV in preparation for upgrading.
> I have a large lot that should allow me to put up a full length G5RV.
> On the back of my property is a wooden fence, about 7 feet high. I
> plan on putting chimney mounts on the fence posts on both corners of
> the fence and one in the center (my property/fence is shaped like a
> rectangle). I plan on putting a 20' pole on each end and a 20' pole in
> the center. With the G5RV only 20' up, completely horizontally strung,
> should this work ok for HF? I'd be putting out up to 100 watts. Any
> recommendations on how to attach the G5RV center and ends to the 10
> poles? They're the kind you buy at Radio Shack for around $10 each.
>
> Also, what would be a good coax to feed this with? The run would might
> be as much as 200'. I don't have a ton of cash to spend on the coax,
> so some comprimise is needed.

G5RV isn't as bad as everyone says. I use the 'junior' version (40-10)
and its about 40' in a tree on one end, 30' on a mast at the center and
15' on a 2x2 at the other end. I've had better antennas before but for
simplicity I can't complain too much with this one.
But....since you have a 200' run, you'd probably be just as well off
with any 100-150' dipole fed with twin-lead and a tuner. There's no
particular magic about a G5RV that would make it better in such a
situation.

-BM

4099. Re: ANTENNA QUESTION solarcon A99

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-29 02:56:39 UTC
From: George Kinzer <horseflygk@worldnet.att.net>
Message-ID: <H3gb9.39881$Ke2.2830532@bgtnsc04-news.ops.worldnet.att.net>
Source record: 135640

I fully understand HOW TO TUNE THE ANTENNA(s), for the guys who sent me picks and stuff..THANK YOU, this project will now be a success. Ive seen weird stuff inside antenna bases.This is pretty basic.
Doc, all I asked for was a picture. nothing else. But thanks for showing an interest in this project. Next month Ill let you guys know how it went, heck we may even talk on the radio... 73's

--
If first you don't succeed, do the same thing again...see what happens

4100. Re: ANTENNA QUESTION solarcon A99

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-29 02:58:41 UTC
From: George Kinzer <horseflygk@worldnet.att.net>
Message-ID: <B5gb9.39884$Ke2.2832326@bgtnsc04-news.ops.worldnet.att.net>
Source record: 135641

'Doc, how old (or young) are you?

--
If first you don't succeed, do the same thing again...see what happens

4101. Comments on SteppIR Antenna?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-29 03:02:25 UTC
From: "Jim, KK1W" <kk1w@arrl.net>
Message-ID: <3d6d8c3e_1@corp-goliath.newsgroups.com>
Source record: 135642

I'm considering a purchase of the three element version. I would appreciate
any actual user comments, positive or negative, concerning the antenna.

Additionally, comments about the rig interface would also be appreciated.

Thanks & '73..

Jim, KK1W

----------== Posted via Newsfeed.Com - Uncensored Usenet News ==----------
http://www.newsfeed.com The #1 Newsgroup Service in the World!
-----= Over 100,000 Newsgroups - Unlimited Fast Downloads - 19 Servers =-----

4102. Re: Good grounding ?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-29 03:05:40 UTC
From: Bill Turner <w4wnt@carolina.rr.com>
Message-ID: <8cgb9.33370$iX4.1206269@twister.southeast.rr.com>
Source record: 135643

As I understand it, the radials you lay on the ground will become the "ground" as far as the antenna is concerned, so you can use insulated wire.

Any other ideas, real experience with this type of antenna out there?

73, Bill, W4WNT

"Andy M" <andrew.markham@virgin.net> wrote in message news:3d6bb455@news.greennet.net...
> Hi All
>
> I'm putting up a Inverted L antenna for 160 metres Tx / Rx, and going to try
> and give it a good ground.
>
> Question is do the radials I'm going to lay in the ground have to be bare
> wire or can I use insulated wire (I have loads of that) do'es it make a
> difference ??.
>
> Andy
> M3RZA
>
>
>

4103. Re: Can I direct bury RG-213 in ground?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-29 03:09:38 UTC
From: Crazy George <munschNO@attglobal.net.SPAM>
Message-ID: <3d6d9689_4@news1.prserv.net>
Source record: 135646

Cecil:
I had to replace the water system at the farm in South Texas where we had battled gophers as far back as I remember. I wanted to replace the 50 year old iron pipe with PVC, for obvious reasons, but worried about the *(&%&^ gophers. I read up on them, and they have a maximum depth they rarely exceed. I buried the pipe about 28" deep I think (this was 25 years ago) and have not had any problems. Read up on gophers.

Now, someone tell me how to keep the squirrels from shredding my halyards for their nests. Cotton, Dacron, whatever the exotic stuff is, even one run of RG-58 which got in their way became shredded. Steel conduit works there also, but is difficult to install. I thought about using barbed wire, but it won't go through the pulleys.

--
Crazy George
Remove NO and SPAM from return address
CAM <Cecil.A.Moore@ieee.org> wrote in message
news:3D6D186D.97EDDD31@ieee.org...
> Dennis Kaylor wrote:
> > yes you can as long as you go deep enough not to hit it with the mower
> > or anything but unless its a real long run i would still put it in PVC
> > pipe just to keep it from being damaged
>
> Doesn't work in Queen Creek, AZ. The gophers ate through the PVC pipe
> AND the coax.
> --
> cheers, CAM http://www.qsl.net/w5dxp
>
>
> -----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
> http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
> -----== Over 80,000 Newsgroups - 16 Different Servers! =-----

4104. Re: G5RV Question

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-29 03:10:32 UTC
From: CAM <Cecil.A.Moore@ieee.org>
Message-ID: <3D6D90A8.7E76A748@ieee.org>
Source record: 135644

Fulano de Tal wrote:
> I have searched and asked here about a website that might give
> 'predicted' patterns for the G5RV on the various bands but I haven't
> seen anything. I too notice what seems to be 'holes' in the pattern and
> would like to get a visual handle on what might be typical.
> Does anybody have a reference site for such data?

Download the free EZNEC demo from eznec.com. It will tell you everything
you need to know.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

4105. Re: Kenwood TH-G6A antenna connector type?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-29 03:11:05 UTC
From: Crazy George <munschNO@attglobal.net.SPAM>
Message-ID: <3d6d968a_4@news1.prserv.net>
Source record: 135647

I suspect it is SMA. If so, then yes, yes, and yes to your questions.

--
Crazy George
Remove NO and SPAM from return address
Joel Dorfan <bdorfan@fred.icon.co.za> wrote in message
news:3d6cd436$0$18851@hades.is.co.za...
> What is the name of the type of antenna connector used in the TH-G6A?
>
> Are loose solder or crimp type connectors available? I need to build an
> external antenna for this radio and would like to get hold of the correct
> connectors or alternatively an adaptor to BNC.
>
> What other options do I have? My old TH78 was BNC and made life really
easy.
>
> Joel
> ZS6CBA
>
>

4106. Re: G5RV question

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-29 03:12:57 UTC
From: CAM <Cecil.A.Moore@ieee.org>
Message-ID: <3D6D9139.EBC60744@ieee.org>
Source record: 135645

"vhfradiobuff@yahoo.comspamsux" wrote:
> Also, what would be a good coax to feed this with? The run would might
> be as much as 200'. I don't have a ton of cash to spend on the coax,
> so some comprimise is needed.

If you have a 200' run, the logical thing to do is feed it with ladder-
line or open-wire line.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

4107. Re: Trench for coaxial cables

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-29 03:17:29 UTC
From: Crazy George <munschNO@attglobal.net.SPAM>
Message-ID: <3d6d968b_4@news1.prserv.net>
Source record: 135648

He wanted to be sure it was below the frost line so the electrons didn't
freeze and plug it up. You are in Southern California, aren't you?

--
Crazy George
Remove NO and SPAM from return address
Uncle Peter <radioconnectionNO@cox.netSPAM> wrote in message
news:cxeb9.28220$082.1633013@news1.east.cox.net...
> If you are having the tower installed under a building permit, the
> inspector
> may have some say in the depth of the conduit. I had to hire a back to
> trench
> in my two 4" conduit runs (over 110 feet) between the house and the tower
> to satisfy my local building inspector. He wanted it down 36", which
> seemed
> excessive for low-voltage cables.
>
> Pete
>
> "Herb Rosenberg" <kg6ok@pacbell.net> wrote in message
> news:dGYa9.6812$I01.714493219@newssvr13.news.prodigy.com...
> > I am considering running a 30 foot trench from the base of my tower to
my
> > ham shack for my coaxial cables, and would like to here comments /
> > suggestions from anyone that has done this before, on things to do / not
> do,
> > etc.
> >
> > All of my cables are 9913, and I have a bundle of about 8 feedlines.
> >
> > I am thinking about a inch conduit, and wondering about a few things:
> (BTW,
> > I live in Southern California)
> >
> > How deep should the trench be below ground?
> >
> > What kind of pipe is best to use?
> >
> > Should I drill holes in the bottom side of the pipe so water can drain
> out?
> >
> > Should I place some gravel on the top of the trench before I lay the
pipe
> on

> > top, to help with drainage?
> >
> > Anything else I should know?
> >
> > Thanks for your help.
> >
> > Herb - KG6OK
> >
> >
> >
> >
> >
>
>

4108. 9 to 1 balum FA

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-29 03:24:50 UTC
From: eimacman@aol.com
Message-ID: <20020828232450.03930.00003422@mb-fn.aol.com>
Source record: 135649

BALUM AND MORE!!!!

http://cgi6.ebay.com/aw-cgi/eBayISAPI.dll?ViewSellersOtherItems&userid=dod
geman7&include=0&since=-1&sort=3&rows=25

4109. Re: Need Info on Flat-Top Tee Wire Antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-29 03:49:44 UTC
From: nm5k@wt.net
Message-ID: <25eb70d7.0208281949.47de0ea4@posting.google.com>
Source record: 135650

"James P. Rybak" <jrybak@mesastate.edu> wrote in message
news:<1030466510.498251@tshaper.mesastate.edu>...
> Can anyone tell me whether or not the Flat-Top Tee wire antenna with
> counterpoise (shown but not discussed much in the July, 2002 issue of
> CQ) out performs a regular quarter wave vertical? What is the input
> impedance of this antenna.

Any shorter than 1/4 wave radiator will be inferior to a full 1/4 wave
radiator.
The T is a pretty good antenna though. I use a version of one here on
160m.
It has a cleaner vertical pattern than an inv L. Has an overhead null
same as the full 1/4 wave. MK

4110. REQ:Which mobil antenna is better for a Kenwood F6A

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-29 04:14:52 UTC
From: "Chilly Willy"
Message-ID: <vp7rmu8odr11m6pis96iomhqesckqflnug@4ax.com>
Source record: 135651

I'm thinking of getting a Kenwood TH-F6A and need a mobil antenna. It
has to cover 2m/220/and 440.

thanks much
Chilly Willy

Brrrr is it cold in here or is it just me
Forman at the South Pole Ice Plant

4111. Re: MFJ-1786 Schematic Wanted

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-29 04:38:12 UTC
From: Leland Cox <lcox107@comcast.net>
Message-ID: <3D6DA6FB.1080801@comcast.net>
Source record: 135652

Download the manual......

http://www.mfjenterprises.com/manuals.php

Les, AA4F

KA9S - Jeff wrote:

> I acquired an MFJ-1786 HI-Q Loop antenna at a hamfest for a price I couldn't
> pass up. It had no documentation. I down loaded the manual from the MFJ web
> site, but they do not provide schematics. Does anyone have a schematic of
> the "Deluxe" remote control unit and for the antenna it self? I would prefer
> a scanned image file that you could e-mail. I am willing to pay postage if
> you don't have that ability.
>
> Thanks for you help - Jeff - KA9S
>
>
>
>
>
>

4112. Re: ANTENNA QUESTION solarcon A99

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-29 04:58:29 UTC
From: 'Doc <w5lz@icok.net>
Message-ID: <3D6DA9D8.BC667052@icok.net>
Source record: 135653

George,
Old enough to be damn glad I had 1-S deferment in 1966!
'Doc

4113. Re: REQ:Which mobil antenna is better for a Kenwood F6A

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-29 05:03:34 UTC
From: Dennis Kaylor <k4oxg@tampabay.rr.com>
Message-ID: <3D6DAB0E.8702A936@tampabay.rr.com>
Source record: 135654

check into either diamond or comet both make multiband mobile antennas
then all you need to do is look at specs and $$$ and take your pick either
is a good antenna

Chilly Willy wrote:

> I'm thinking of getting a Kenwood TH-F6A and need a mobil antenna. It
> has to cover 2m/220/and 440.
>
> thanks much
> Chilly Willy
>
> Brrrr is it cold in here or is it just me
> Forman at the South Pole Ice Plant

4114. Re: Tired of RS employees pushing Cellphones and DirectTV

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-29 05:14:39 UTC
From: "Dr. John (of Life)" <frellyou@privacy.net>
Message-ID: <H5ib9.535$7i3.8096@eagle.america.net>
Source record: 135655
Cross-posted to: alt.radio.scanner,rec.radio.amateur.antenna,rec.radio.scanner,rec.radio.shortwave

"rmsdec8" <rmsdec8@vgernet.net> wrote in message
news:3D6464D2.DA863088@vgernet.net...
>
>
> "Joe Bramblett, KD5NRH" wrote:
>
> > On Mon, 19 Nov 2001 13:27:40 -0500, "MiamiXJ" <miamixj@bellsouth.net>
> > wrote:
> >
> > >Saturday I walk into RS looking for 20 - 25' of electrical cord and
employee
> > >says don't sell electrical cable by the foot anymore? I say OK how
about an
> > >extension cord I can cut up?
> >
> > Pay no attention to the retard behind the counter. It's usually over
> > there with the spools of speaker wire etc. You'll probably have to
> > buy a 100' spool, though.
> >
> > > Guy shows me cords and all extension cords are
> > >15' or less and expensive as hell.
> >
> > And *all* 2-conductor. Apparently, nothing ever needs a ground lead
> > anymore.
> >
> > >Then he jumps right into the need a phone
> > >need a satellite dish routine. They are so damn annoying. Not to
mention I
> > >have been in there a bunch of times and told them I have a dish and am
> > >wearing a cellphone on my belt!
> >
> > Then the solution is simple; tell them that if they start that crap
> > again, you're taking *all* your business elsewhere.
> >
> > Joe Bramblett, KD5NRH
> > kd5nrh@kd5nrh.net
>
> RS will be much better off without your trade thanks!!!
> Please take you business elsewhere !!
> oh you don't have anywhere else?, too bad!!
> Bye!!!
> I'm one of the so called Morons that work for RS!!
> Ever thought that it might be RS that gets the Staff to try to sell Cell

Phones
> and Sat Dishes? thats where RS makes most profits!
> Like all stock market companies they want the best profits for the stock
> holders!!
> Cell Phones and Sat Dishes pay the best commision to the staff too, Jerk
!!!!

RMS; I learned this at a RS Interview. I brought it up on a crossposted article along the same lines as this. MY beef is that Sprint cellphones have been reported to me as schoddy and I really don't care about Sat Dishes. So leave me the frell alone. If I want that shtuff, I'll ask you if I can buy that schtuff. Customers are always right. Don't push us to do stuff we don't want to do.

John

4115. Re: Antenna question

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-29 05:14:52 UTC
From: Alfred Lorona <alforol@hotmail.com>
Message-ID: <akkakt$1jkr7b$1@ID-49117.news.dfncis.de>
Source record: 135656

"joe" <casavant@nucleus.com> wrote in message
news:3d6be197@news.nucleus.com...
> I would like to hook up my roof antenna to my portable radio but the radio
> does not have the normal am/fm antenna screws. How can I modify the radio
> so I can hook up 75 ohm coaxil to it?
> Thanks
> Joe
>

Joe, if your receiver has screw terminals it probably has a 300 ohm input. Easiest thing to do is buy a Radio Shack 15-1140 matching transformer. It has two leads with spade lugs that connect directly to your receiver screw terminals. The other end has a receptacle so that you can attach a coaxial transmission line directly to it. No soldering, no modifications of any kind required. The thing costs only $2.99.

AL

4116. 40m - 6m rugged mobile eantennas

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-29 05:52:05 UTC
From: Tony M <amahar@snet.net>
Message-ID: <9Eib9.1451$u66.546504724@newssvr10.news.prodigy.com>
Source record: 135657

Hello all,

I'm looking for the best option for running 40m to 6m and between for my jeep. It will see lots of rugged use with low hanging trees pulling on the antenna and lots of garages.

I will be running a Yaesu FT-100 and have the FC-20 autotuner.
I have had good experience in the past with the typical top loaded 4' fiberglass whip CB antennas with cb radios. They are strong, flex like crazy, and hold up to a lot.

What are my options?

Is there a flexible Hamstick pack solution that is durable and flexy?

Should I just tune a 4' 11m fiberglass top loaded? What about a 102" SS whip?

I know ICOM has that AH-2b which is some 8ft whip antenna. any problems cutting down a 102" ss whip to the same size? are there coils in that antenna?

Thanks!
Tony

4117. Re: 9 to 1 balum FA

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-29 05:59:38 UTC
From: Fred Hambrecht <w4jle@charter.net>
Message-ID: <umre2dt6sibv69@corp.supernews.com>
Source record: 135658

What the heck is a balum, and what does it do?

"Eimacman" <eimacman@aol.com> wrote in message
news:20020828232450.03930.00003422@mb-fn.aol.com...
> BALUM AND MORE!!!!
>
> http://cgi6.ebay.com/aw-cgi/eBayISAPI.dll?ViewSellersOtherItems&userid=dod
> geman7&include=0&since=-1&sort=3&rows=25

4118. NEC-Win Plus or EZNEC 3.0 ??

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-29 06:40:43 UTC
From: "James P. Rybak" <jrybak@mesastate.edu>
Message-ID: <1030602925.462507@tshaper.mesastate.edu>
Source record: 135659

I know that both NEC-Win Plus and EZNEC 3.0 are good antenna modeling programs based on NEC-2. I'd like to hear from people who have used both concerning whether there are any significant advantages of using one over the other such as "bugs" in the user interface, ease of use, etc.

If this topic has been discussed to death previously, please reply to me directly.

Thanks.

Jim Rybak W0KSD

4119. Re: Tired of RS employees pushing Cellphones and DirectTV

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-29 07:25:19 UTC
From: Bill Nelson <billn@spock.peak.org>
Message-ID: <akki8u$368$11@quark.scn.rain.com>
Source record: 135660
Cross-posted to: alt.radio.scanner,rec.radio.amateur.antenna,rec.radio.scanner,rec.radio.shortwave

In rec.radio.amateur.antenna rmsdec8 <rmsdec8@vgernet.net> wrote:

>> Then the solution is simple; tell them that if they start that crap
>> again, you're taking *all* your business elsewhere.
>>
>> Joe Bramblett, KD5NRH
>> kd5nrh@kd5nrh.net

> RS will be much better off without your trade thanks!!!
> Please take you business elsewhere !!
> oh you don't have anywhere else?, too bad!!
> Bye!!!
> I'm one of the so called Morons that work for RS!!
> Ever thought that it might be RS that gets the Staff to try to sell Cell Phones
> and Sat Dishes? thats where RS makes most profits!
> Like all stock market companies they want the best profits for the stock
> holders!!
> Cell Phones and Sat Dishes pay the best commision to the staff too, Jerk !!!!

Our local rat shack has a pretty high turnover, but there are two people
who have been there for some time. One is pushy - tries to sell all sorts
of stuff, the other doesn't do so but waits for me to ask.

Guess which one gets all my business - and the commissions that go with it?

--
Bill Nelson (billn@peak.org)

4120. Re: Has anyone checked out this antenna site EH ANTENNAS

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-29 07:54:14 UTC
From: Paulo Calvo <nospam@nospam.nospam>
Message-ID: <3d6dd327$0$9448$4d4efb8e@read.news.pt.uu.net>
Source record: 135661

I use something much smaller, with a nice regular pattern.
I have used it indoors and outdoors, it is not afeccted by the surrounding
and it's not affected by the installation height.
I have done some tests and I have the same performance at ground level or
40' high.
The SWR is flat across all HF bands, around 1.1:1.
The bigger models allow to operate indoors QRO without the adverse effects
of radiaton exposure.

Some OM's call it an artificial non radiating antenna, others call it a
dummy load.

"Leland Cox" <lcox107@comcast.net> wrote in message
news:3D6D7B80.8020509@comcast.net...
> EH ANTENNAS They claim a 20 M antenna 2'long on 2"
>
> www.eh-antenna.com
>

4121. Re: Has anyone checked out this antenna site EH ANTENNAS

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-29 09:52:06 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <2trrmusn4fmu1tmr7ke6li4nq3o4qukge6@4ax.com>
Source record: 135662

On Thu, 29 Aug 2002 08:54:14 +0100, in rec.radio.amateur.antenna you wrote:

>The bigger models

Hi Paulo,

If yours is so good, who needs a bigger model?

73's
Richard Clark, KB7QHC

4122. Re: Lightning Effects Questions

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-29 10:06:46 UTC
From: Bill Nelson <billn@spock.peak.org>
Message-ID: <akkrnm$q90$5@quark.scn.rain.com>
Source record: 135663

Robert Rose <rgsrose@tiac.net> wrote:

> a. The single rod vertical element protruding from the top of the Discone
> ends only about 1 inch from the interior surface of
> my attic's roof (essentially the roofs high point).

> I am therefore wondering if this "might" make the antenna more prone to
> attract a direct lightning hit?

It is a conductor that can have a different voltage potential than the
charged cloud in the sky. So yes, it is a potential lightning target.

> Or, does the roof actually provide "some" protection (due to its being
> something of a dielectric?) ?

Yes, the roof provides some protection.

> If so, why? Differences for a wet vs. dry roof?

It reduces or eliminates any ion streamers that might rise towards the
charged cloud.

> b. Would it still be a good idea to ground the antenna mast (which would
> also ground the elements) to a water pipe in the attic?

No idea. My knowledge of discone antennas is minimal.

> -Does the possibility of a strike, or induced voltages from a nearby
> strike, go to zero if the coax is unplugged from the receiver?
> (which is what I plan on doing, but one sometimes forgets)

No. For one thing, that coax might still provide a lower impedance path to
ground than any path strictly through the air.

And induced voltages can occur in your house wiring or outside wiring that
feeds your house.

> c. A theoretical question: in the general sense, does a grounded mast help
> prevent a counter charge from being developed beneath a charged up cloud, or
> merely provide a well defined path for a lightning bolt to travel to ground?

It provides a better path to ground.

> d. From looking at some catalogs, I see the in-line coax lightning
> protectors seem to come in two flavors:

> there's (a) the type from Alpha Delta which provides a separate lug
> for grounding, and (b) most of the others which
> apparently funnel the charge, when the spark gap breaks down, to the

> coax shield.

> what I'm wondering about, is for for (b). The charge would then
> go directly to the chassis of the radio, and would
> then reach ground via the chassis' ground.

Any charge that gets to the radio is likely to get inside it as well.
Remember that that would mean a large differential voltage between the
inside of the radio and the outside.

That is why, for antennas, the coax shield is grounded in one or more
places before it gets to the inside of the house.

> As it may not be an actual strike, but perhaps a lower induced
> voltage of just enough to break the spark gap,
> what would this do to the radio (e.g., the chassis being raised
> momentarily to 100 V, or so) ?

The induced voltage is more likely to be quite a bit above 100 volts, before
the spark gap can drain off the current.

> Are both types just as safe and useful?
> Any caveats?

I don't like spark gaps. The response time is too slow and they allow
too high a voltage before arcing. There may be receive only suppressors
that don't have this problem - but I am not aware of any.

The best thing to do is get rid of any strike power before it gets
inside your house. With your setup, this is impossible as the antenna
is indoors.

--
Bill Nelson (billn@peak.org)

4123. Re: New from www.magnetic-loop.de

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-29 11:00:21 UTC
From: marvin rosen <raghead@worldnet.att.net>
Message-ID: <99nb9.40476$Ke2.2867637@bgtnsc04-news.ops.worldnet.att.net>
Source record: 135664
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc,rec.radio.amateur.swap

Appears to be a modified loop ant site!!!
"Andre Vaupel" <avaupel@web.de> wrote in message
news:zCjb9.51065$IY.709969@news.easynews.com...
> Hi again!
>
> First...thank you for the high mount of visit to our page :-))
> We are happy that you use our support and info bbs!
>
> Our news is, that we now moved the Board System to another
> host service and can provide now the full speed!
> Delay should be now nearly zero.
>
> We plan to setup a news database wich is not only for Magnetic Loop
> Antennas. Just for all other HAM RADIO News worldwide.
>
> Just enjoy it and test the faster speeed now at
http://www.magnetic.loop.de
>
> Bye!
>
> Andre
>
>
>
>
> ---
> Info about www.magnetic-loop.de:
>
> we build up a new website wich is NON COMMERCIAL and without any ads.
> The site contains information about Magnetic Loop Antennas for shortwave.
> We would be happy if we can find some postings and exchange of experience
> inside the webboard. We would be happy if you take a look and leave some
> interesting question or infos on the board.
>
> http://www.magnetic-loop.de
>
> Thanks a lot!
>
> Andre
>
>
>

Outgoing mail is certified Virus Free.
Checked by AVG anti-virus system (http://www.grisoft.com).
Version: 6.0.381 / Virus Database: 214 - Release Date: 8/2/02

4124. Re: MFJ-1786 Schematic Wanted

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-29 11:27:44 UTC
From: ve3tmt <ve3tmt@yahoo.com>
Message-ID: <gwnb9.6798$uF.1043590@news20.bellglobal.com>
Source record: 135665

"Leland Cox" <lcox107@comcast.net> wrote in message
news:3D6DA6FB.1080801@comcast.net...
>
> Download the manual......
>
> http://www.mfjenterprises.com/manuals.php
>
>
> Les, AA4F

Les,

1. Go back and re-read his original post.
2. Then go to the MFJ site yourself and download the manaul.
3. Try as hard as you can to find the schematic in the manual.
4. Re-read your original reply.

4125. Re: NEC-Win Plus or EZNEC 3.0 ??

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-29 11:42:51 UTC
From: Michael Grenier <mwgrenier@yahoo.com>
Message-ID: <3D6E08BB.7020202@yahoo.com>
Source record: 135666

Also check out MMANA

Its free with competitive features.

http://www.qsl.net/mmhamsoft/mmana/index.htm

-Mike KC0IOC

James P. Rybak wrote:
> I know that both NEC-Win Plus and EZNEC 3.0 are good antenna modeling
> programs based on NEC-2. I'd like to hear from people who have used both
> concerning whether there are any significant advantages of using one over
> the other such as "bugs" in the user interface, ease of use, etc.
>
> If this topic has been discussed to death previously, please reply to me
> directly.
>
> Thanks.
>
> Jim Rybak W0KSD

4126. Re: Is ALL coax able to be direct buried??

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-29 12:33:09 UTC
From: David Ornee <daveornee@mindspring.com>
Message-ID: <akl4gqomb1@slb2.atl.mindspring.net>
Source record: 135667

I am also in the Cable TV business, although not selling coax itself. There
are "flooded" versions of 50 Ohm coax just as there are for 75 Ohm. The
suggestion of using duct for underground applications is a good one. I also
suggest that you significantly oversize the duct and leave a pull
rope/tape/wire in the duct in case you want to pull in an additional cable
later. QST lists a couple of large cable distributors. The distributors
can help you find the right cable for your application. Power handling,
Loss and cost are only starting points for selecting the correct cable.
KQ9W, David Ornee, Western Springs, IL
"Fulano de Tal" <exray@nospamcaribe.net> wrote in message
news:3D6D5F27.5C6F01AD@nospamcaribe.net...
> StarGazer wrote:
> >
> > adsfg
>
> The simple answer is yes...as long as you have a hole and the cable you
> can bury it. The tougher answer is still yes but one would want to know
> how long you want it to last. That depends on local soil conditions
> (drainage, acidity, etc) and the specific type of jacket on the cable
> (PVC, PE, etc).
> I'm in cable TV work and we have specific grades of cable that are
> recommended for direct burial and they usually include additional 'goop'
> between the jacket and sheath to further repel any moisture that
> migrates thru the jacketing. I don't see this in the ham market.
> If you want to throw 'anyole' off-the-shelf cable into a trench and live
> outside of the Everglades you can probably get 5 years out of it if its
> of decent quality. Placing it in PVC or being particular about the
> jacket composition will probably outlive the antennas its connected to.
> PVC pipe is cheap. And cable deterioration is inevitable, aerial or
> underground. Its much easier to replace if its in PVC pipe.
> -BM

4127. Re: 9 to 1 balum FA

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-29 12:41:35 UTC
From: CAM <Cecil.A.Moore@ieee.org>
Message-ID: <3D6E167F.D50536B@ieee.org>
Source record: 135668

Fred Hambrecht wrote:
> What the heck is a balum, and what does it do?

A BALanced UMbrella?
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
------== Over 80,000 Newsgroups - 16 Different Servers! =-----

4128. Re: Can I direct bury RG-213 in ground?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-29 13:05:35 UTC
From: Al <aburzynski@swri.nojunk.edu>
Message-ID: <ums710thnvj4a3@corp.supernews.com>
Source record: 135569

"'Doc" <w5lz@icok.net> wrote in message news:3D6D1E69.A75E8DD6@icok.net...
>
>
> StarGazer,
> Yes.
> 'Doc

Doc, you are just too verbose!

Al
KA5JGV

4129. Re: Trench for coaxial cables

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-29 13:21:07 UTC
From: John Passaneau <jxp16@psu.edu>
Message-ID: <akl74i$loo@r02n01.cac.psu.edu>
Source record: 135570

Hi All:

In my tower installation, one of the requirement was that if I had more than 50' of coax inside the house it had to be UL listed. I don't think that any coax used in ham radio is UL listed.
The inspectors from the county didn't care how much cement I had or if there was re-bar or not or how deep my conduit was. The cared about the grounding, and the height, we have 40' structure limits here, and if my cable was UL listed if I had more than 50' inside the house.

--
John Passaneau
Penn State University, State College Pa.
W3JXP
w3jxp@arrl.net

" Uncle Peter" <radioconnectionNO@cox.netSPAM> wrote in message news:cxeb9.28220$082.1633013@news1.east.cox.net...
> If you are having the tower installed under a building permit, the
> inspector
> may have some say in the depth of the conduit. I had to hire a back to
> trench
> in my two 4" conduit runs (over 110 feet) between the house and the tower
> to satisfy my local building inspector. He wanted it down 36", which
> seemed
> excessive for low-voltage cables.
>
> Pete
>

4130. Re: Lightning Effects Questions

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-29 13:51:50 UTC
From: richardharrison@webtv.net
Message-ID: <27484-3D6E26F6-166@storefull-2394.public.lawson.webtv.net>
Source record: 135571

Bill Nelson wrote:
"Any charge that gets to the radio is likely to get inside as well."

My experience with countless land-mobile base stations, which had antennas as the highest items around, disagrees.

These antennas were grounded to the tower at the top. They were folded monopoles. Coax shields were grounded at the base of the tower. These monopoles were heavily pitted from many lightning strikes. Lightning never got inside a radio. Coax with no protectors barred lightning from the radio input. It is a natural common-mode choke.

Lightning aplenty traveled the outside of the coax. It`s important to dump this energy to ground so it doesn`t enter the shack.

Lightning is a transient event with much energy in alternating current across the spectrum.. Most of this current can`t penetrate the coax or radio box due to skin effect. The rest has no effect inside the conducting radio box because the voltages are the same on all sides of the box. There is no difference of potential to drive current through anything inside the box. Power, audio, etc wires must all be bypassed to the box to limit potential differences they may have with the box and keep lightning out.

Bill wrote:
"I don`t like spark gaps. I agree they are unnecessary and useless on coax in nearly all cases.

Best regards, Richard Harrison, KB5WZI

4131. Re: Comments on SteppIR Antenna?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-29 14:51:27 UTC
From: fractenna@aol.com
Message-ID: <20020829105127.04332.00005326@mb-fo.aol.com>
Source record: 135572

Hi Jim,

Admitting my own bias in pursuing antennas as electrical devices, I nonetheless was impressed by the mechanical approach of the SteppIR system. Probably like yourself, I saw it at Boxboro last weekend.

Certainly it is an elegant brute force system which works by seeking a mechanical solution to tuning. For those unfamiliar, the system use a 'tape measure' dipole approach, which is controlled by motors to change length for tuning.

I would see the main drawback as the fixed element positions (I saw the three element Yagi version). Obviously there are separations which work best in terms of gain and F/B, which you don't have the versatility of changing (even though you can do some tweaking with the element lengths to a limited extent). Now this is also true for trapped Yagis in the same configuration, but such antennae do not have the potential tuning capability across many more bands that the SteppIR system does.

I heard the argument that this antenna is less lossy than trapped Yagis, a valid but probably not important point: for a 3 element Yagi, there is probably no more than a 2 dB difference max --if that. Far better to get theYagi (of any design) up another 10 feet or more to pick up the practical gain of a lower launch angle.

Anyway, it looks neat, and I am confident the performance claims are valid. It is, in my opinion, pricey, but so is replacing trapped Yagis every few years.Its up to you to see if this interesting design is relevant to your need and pocket book..

73,
Chip N1IR

4132. Re: Has anyone checked out this antenna site EH ANTENNAS

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-29 15:04:28 UTC
From: Paulo Calvo <nospam@nospam.nospam>
Message-ID: <3d6e37ff$0$13369$4d4efb8e@read.news.pt.uu.net>
Source record: 135573

Well, sometimes size matters...

For the top band a bigger dummy load will provide a better radiation patern
;-) that way the wave can expand to the full lenght instead of getting
tangled...

Ooops time to take my pills....

73 de CT2IDW

"Richard Clark" <kb7qhc@attbi.com> wrote in message
news:2trrmusn4fmu1tmr7ke6li4nq3o4qukge6@4ax.com...
> On Thu, 29 Aug 2002 08:54:14 +0100, in rec.radio.amateur.antenna you
> wrote:
>
> >The bigger models
>
> Hi Paulo,
>
> If yours is so good, who needs a bigger model?
>
> 73's
> Richard Clark, KB7QHC

4133. Re: Center Fed With 300 Ohm Coax

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-29 15:14:59 UTC
From: richardharrison@webtv.net
Message-ID: <27484-3D6E3A73-171@storefull-2394.public.lawson.webtv.net>
Source record: 135575

CAM, W5DXP wrote:
"Where are you going to get 300 ohm coax?"

The ARRL Antenna Book, page 24-20 in the 19th edition, suggests:
"Paralleled RG-63 (125 ohm) cable would make a balanced transmission line in accord with traditional 300-ohm twin-lead feed line (Zo = 250 ohms)."

Best regards, Richard Harrison, KB5WZI

4134. Re: Can I direct bury RG-213 in ground?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-29 15:43:57 UTC
From: 'Doc <w5lz@icok.net>
Message-ID: <3D6E4121.7D40C097@icok.net>
Source record: 135574

Al,
Sorry, couldn't find a shorter word.
'Doc

4135. Re: Good grounding ?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-29 16:01:48 UTC
From: 'Doc <w5lz@icok.net>
Message-ID: <3D6E4548.53779DEC@icok.net>
Source record: 135576

Bill,
Unless the radials are elevated, the 'dirt' is also
going to be a significant part of the ground system.
That doesn't change the fact that you can use insulated
wire for the radials, direct contact isn't necessary.
An inverted 'L' depends on a ground for how well it
works. The 'better' the ground, the better the antenna
'like's it and the easier it is to use. 'How good' the
ground is usually depends on when you get sick of putting
in more radials. You should have a number of radials
somewhere between 4 and 'fed up with it'. Less than 4
will also work.
An inverted 'L' also works better when the vertical
portion of the antenna is the longest that you can make it.
That depends on what you have available to 'hang' it from,
and what you can get away with without too many problems.
Like other antennas, there is no 'one' best way of putting
up an inverted 'L', and there's no rule that says you can't
change it later.
'Doc

Bill Turner wrote:
>
> As I understand it, the radials you lay on the ground will become the
> "ground" as far as the antenna is concerned, so you can use insulated wire.
>
> Any other ideas, real experience with this type of antenna out there?
>
> 73, Bill, W4WNT
>
> "Andy M" <andrew.markham@virgin.net> wrote in message
> news:3d6bb455@news.greennet.net...
> > Hi All
> >
> > I'm putting up a Inverted L antenna for 160 metres Tx / Rx, and going to
> try
> > and give it a good ground.
> >
> > Question is do the radials I'm going to lay in the ground have to be bare
> > wire or can I use insulated wire (I have loads of that) do'es it make a
> > difference ??.
> >
> > Andy
> > M3RZA

> >
> >
> >

4136. Re: G5RV Question

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-29 16:02:23 UTC
From: richardharrison@webtv.net
Message-ID: <2819-3D6E458F-214@storefull-2392.public.lawson.webtv.net>
Source record: 135578

Fulano de Tal, WX4A wrote:
"I`ve searched and asked here about a website that might give
"predicted" patterns for the various bands---."

The G5RV is a 102-ft dipole. Height and surroundings affect its pattern, but see page 2-12 of the 19th edition of the ARRL Antenna Book for the free-space patterns of a 100-ft dipole. The G5RV won`t be significantly different.

Best regards, Richard Harrison, KB5WZI

4137. Re: MFJ-1786 Schematic Wanted

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-29 16:11:28 UTC
From: Adam <digipoint@hotmail.com>
Message-ID: <aklh85$2u2f$1@news.kabelfoon.nl>
Source record: 135577

"KA9S - Jeff" <ka9s@attbi.com> schreef in bericht
news:sEeb9.220299$983.441201@rwcrnsc53...
> I acquired an MFJ-1786 HI-Q Loop antenna at a hamfest for a price I
couldn't
> pass up. It had no documentation. I down loaded the manual from the MFJ
web
> site, but they do not provide schematics. Does anyone have a schematic of
> the "Deluxe" remote control unit and for the antenna it self? I would
prefer
> a scanned image file that you could e-mail. I am willing to pay postage if
> you don't have that ability.
>
> Thanks for you help - Jeff - KA9S
>

When you ask the MFJ helpdesk they will probably help you and send you the
schematics free of charge. I think that MFJ is careful and selective in
distributing their knowledge. If you can convince them that you need the
diagram for your own antenna and not for commercial purposes I think they
will help you. At least they helped me and despite the sometimes negative
information heard about MFJ I can only say that they gave me very good
service and
sent me very well and quickly the ordered spare parts for my MFJ 1786 and
also
the schematics for the automatic remote control.

73s, Adam

4138. Re: Can I direct bury RG-213 in ground?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-29 16:34:03 UTC
From: Dan/W4NTI <w4nti@mindspringnospam.com>
Message-ID: <aklic4$tc3$1@slb4.atl.mindspring.net>
Source record: 135579

I have found a .22long rifle and a 4 power scope to be the most effective
solution.

Dan/W4NTI

"Crazy George" <munschNO@attglobal.net.SPAM> wrote in message
news:3d6d9689_4@news1.prserv.net...
> Cecil:
> I had to replace the water system at the farm in South Texas where we had
> battled gophers as far back as I remember. I wanted to replace the 50
year
> old iron pipe with PVC, for obvious reasons, but worried about the *(&%&^
> gophers. I read up on them, and they have a maximum depth they rarely
> exceed. I buried the pipe about 28" deep I think (this was 25 years ago)
> and have not had any problems. Read up on gophers.
>
> Now, someone tell me how to keep the squirrels from shredding my halyards
> for their nests. Cotton, Dacron, whatever the exotic stuff is, even one
run
> of RG-58 which got in their way became shredded. Steel conduit works
there
> also, but is difficult to install. I thought about using barbed wire, but
> it won't go through the pulleys.
>
> --
> Crazy George
> Remove NO and SPAM from return address
> CAM <Cecil.A.Moore@ieee.org> wrote in message
> news:3D6D186D.97EDDD31@ieee.org...
> > Dennis Kaylor wrote:
> > > yes you can as long as you go deep enough not to hit it with the mower
> > > or anything but unless its a real long run i would still put it in PVC
> > > pipe just to keep it from being damaged
> >
> > Doesn't work in Queen Creek, AZ. The gophers ate through the PVC pipe
> > AND the coax.
> > --
> > cheers, CAM http://www.qsl.net/w5dxp
> >
> >
> > -----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
> > http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
> > -----== Over 80,000 Newsgroups - 16 Different Servers! =-----
>
>

4139. Re: G5RV Question

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-29 18:06:54 UTC
From: sburgoyne@faux9bit.qc.ca
Message-ID: <3d6e566c.20914196@news.9bit.qc.ca>
Source record: 135580

I've built mine also, starting from scratch, and following the basic
dimensions .

I am using it as an inverted V, about 12m up in the middle and 6-7 m
at the ends. It is the longest dipole antenna that will fit in my
yard.

I have one advice: you probably will have to tweak it a bit on the
dimentions, to get the best match on all bands , for your situation
and your type of balun.

I had to shorten the dipole a bit to raise the center frequency on
20m. Then I played a bit as to where to connect the coax directly on
the matching section. .

I don't use a balun , but I use it on all bands using a transmatch
at the radio end.

I had a funny idea the other day, What if I added a reflector wire
for 20m and one for 15m ? on a 3m boom maybe 4m ...
I could even add a jumper at one end of the wire to turn it in a
director... hmmm I wonder what would happen to the other bands.

>I appreciate all the replies and I don`t mean to beat a dead horse, but one
>thing I forgot to mention was the fact that later on I will probably be
>running around 800 watts PEP on this antenna. The Van Gorden choke was
>inexpensive and I was wondering if anybody had any experience with this
>particular choke for this type of antenna?
>"rob34" <rob34@infinet.com> wrote in message
>news:3d6be29d$0$3571$4c5ecdc7@news.erinet.com...
>> I am building a G5RV antenna for 10 -80 meters and I was wondering if it
>> would work out ok to use a "Van Gorden" Hi -Q balun with a 1:1 ratio on
>the
>> end of the ladder line where the coax hooks on or would it be better to
>make
>> an air balun for this? Thanks on any info on this. Rob WB8VWI
>>
>>
>
>

---
to reply direct, remove "faux" from e-mail address

4140. Re: G5RV Question

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-29 18:12:39 UTC
From: kelly@dvol.com
Message-ID: <d22b54c3.0208291012.382877bd@posting.google.com>
Source record: 135581

Fulano de Tal <exray@nospamcaribe.net> wrote in message
news:<3D6D5C29.1575ACDA@nospamcaribe.net>...
> Brian Kelly wrote:
> >
> > . . . . . as we can get 'em in most instances. g5rv's are
> > nasty things, I had an 80m version up horizontally around 65-70 ft.
> > for FD this year and the thing had a lot of "negative gain" spots
> > around the compass on 20 & 15. Annoying.
> >
> > w3rv
>
> I have searched and asked here about a website that might give
> 'predicted' patterns for the G5RV on the various bands but I haven't
> seen anything. I too notice what seems to be 'holes' in the pattern and
> would like to get a visual handle on what might be typical.
> Does anybody have a reference site for such data?
> Tnx,
> WX4A

I don't know of any websites which show the horizontal patterns for
g5rv's but the ARRL Antenna Book shows the basics. The g5rv behaves
+/- like any dipole which is more than a half-wavelength long. It has
a typical two-lobe half-wave dipole pattern on it's lowest frequency
of operation but on the higher bands the patterns have multiple lobes
with deep nulls between lobes. The higher the frequency the more lobes
and nulls. By the time you get to 10m with an 80m dipole the pattern
looks like daisy petals per the Antenna Book.
>
In the real world however the lobes don't have as much gain and the
nulls are not as deep as shown by modeling because modeling does not
take into account a number of factors like far field effects which
tend to fill in the nulls to some extent.
>
There's nothing magic about a g5rv, it's just a dipole with a trick
feed scheme.

w3rv

4141. Re: Trench for coaxial cables

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-29 18:14:15 UTC
From: BillS <BillS@austin.rr.com>
Message-ID: <3D6E6477.C68F1791@austin.rr.com>
Source record: 135582

I would check with your local building code and bury the cable to the same depth as required for buried electrical cable. That way you won't have any code issues should an inspector come moseying about. Use the same type of conduit used for Buried electrical cable. It is PVC and easy to construct, just like PVC water line. Rent a Ditch Witch gas trencher to dig the hole. It will turn a 4 hour job into 15 minutes. It will be the best investment you evermade after it is all finished. Around here, you can get one for $175 day, less for half a day.
BillS

Herb Rosenberg wrote:

> I am considering running a 30 foot trench from the base of my tower to my
> ham shack for my coaxial cables, and would like to here comments /
> suggestions from anyone that has done this before, on things to do / not do,
> etc.
>
> All of my cables are 9913, and I have a bundle of about 8 feedlines.
>
> I am thinking about a inch conduit, and wondering about a few things: (BTW,
> I live in Southern California)
>
> How deep should the trench be below ground?
>
> What kind of pipe is best to use?
>
> Should I drill holes in the bottom side of the pipe so water can drain out?
>
> Should I place some gravel on the top of the trench before I lay the pipe on
> top, to help with drainage?
>
> Anything else I should know?
>
> Thanks for your help.
>
> Herb - KG6OK

4142. Re: Good grounding ?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-29 19:00:04 UTC
From: G4VGO <rmread@attglobal.net>
Message-ID: <3d6e7248_1@news2.prserv.net>
Source record: 135583

Andy,

I use both insulated and bare wire in the ground system. No difference, and I now have about 2 km of wire at or just under the ground. It is electromagnetic coupling and although there is no difference in performance, insulated wire lasts longer. I also use chicken wire for the first 15 feet or so in all directions bonded to the master earth stake. My 160 metre quarter wave inverted L works a treat!

73 de Bob G4VGO

http://www.qsl.net/g4vgo

4143. Re: MFJ-1786 Schematic Wanted

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-29 19:44:22 UTC
From: vhfradiobuff@yahoo.com
Message-ID: <1996cb6d.0208291144.73cf23d7@posting.google.com>
Source record: 135584

"KA9S - Jeff" <ka9s@attbi.com> wrote in message
news:<sEeb9.220299$983.441201@rwcrnsc53>...
> I acquired an MFJ-1786 HI-Q Loop antenna at a hamfest for a price I couldn't
> pass up. It had no documentation. I down loaded the manual from the MFJ web
> site, but they do not provide schematics. Does anyone have a schematic of
> the "Deluxe" remote control unit and for the antenna it self? I would prefer
> a scanned image file that you could e-mail. I am willing to pay postage if
> you don't have that ability.
>
> Thanks for you help - Jeff - KA9S

Your best bet would be to call MFJ tech support at 601-323-0549 or the
MFJ factory at 601-323-5869.

4144. Manual needed

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-29 21:22:42 UTC
From: K4GA <amckay@rabun.net>
Message-ID: <Fgwb9.35$sA3.17772@news.goodnet.com>
Source record: 135585

Need a manual for Mosley TA 33 Jr. Anyone have I could buy or get a copy of
or borrow and copy and return?
K4GA

4145. Re: Has anyone checked out this antenna site EH ANTENNAS

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-29 22:22:50 UTC
From: k1bqt@aol.com
Message-ID: <20020829182250.24860.00000005@mb-mj.aol.com>
Source record: 135586

I brought up the site. Ted's grasp of RF design looms uncompromising in its creativity! What does he raise on that farm?

Rick K1BQT

4146. antenna radio AM...

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-29 22:31:51 UTC
From: equi-radio <equi-radio@wanadoo.fr>
Message-ID: <akm7dl$c9e$1@wanadoo.fr>
Source record: 135587

Hello,
For a Project regional radio AM (1000watts) in France, what choice of antenna? Ground Plane antena (GPA) or antenna Marconi? Or .....?
How to install(settle) the powerplane groudPlane in the ground? Or to find plans?
Thanks to all,
The president Equi-radio France
CH. TORRE
christophe.torre@wanadoo.fr

equi-radio@wanadoo.fr

4147. Re: Comments on SteppIR Antenna?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-29 23:06:37 UTC
From: Uncle Peter <radioconnectionNO@cox.netSPAM>
Message-ID: <1Oxb9.32579$082.1965701@news1.east.cox.net>
Source record: 135588

"Fractenna" <fractenna@aol.com> wrote in message
news:20020829105127.04332.00005326@mb-fo.aol.com...
> Hi Jim,
>
snip.
>
> I heard the argument that this antenna is less lossy than trapped Yagis, a
> valid but probably not important point: for a 3 element Yagi, there is
probably
> no more than a 2 dB difference max --if that. Far better to get theYagi
(of any
> design) up another 10 feet or more to pick up the practical gain of a
lower
> launch angle.
>
snip

> > 73,
> Chip N1IR

Gosh Chip

2 dB -- or even a little less -- is nothing to sneeze at.

Pete

4148. Re: Has anyone checked out this antenna site EH ANTENNAS

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-30 00:21:38 UTC
From: Fred Hambrecht <w4jle@charter.net>
Message-ID: <umtekmdsd13b6e@corp.supernews.com>
Source record: 135589

You sound like one of those guys that wants to use old physics and formuli on new exciting antennas that can only be explained by yet undiscovered theories. It is people like you that squelch new antenna design.

We watched as you and your ilk destroyed the CFA, fractal, and now EH antennas. We, the true believers, are contacting our lawyers to seek action for defamation and possible hidden conflict of interest. I am sure if allowed to continue, you will next try to tell me my Cell phone stick-on antenna won't work and that my aluminum mind control cap is ineffective!

You are being watched! Govern yourself accordingly!

"Rick Littlefield" <k1bqt@aol.com> wrote in message news:20020829182250.24860.00000005@mb-mj.aol.com...
> I brought up the site. Ted's grasp of RF design looms uncompromising in its
> creativity! What does he raise on that farm?
>
> Rick K1BQT

4149. Re: Comments on SteppIR Antenna?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-30 00:24:53 UTC
From: fractenna@aol.com
Message-ID: <20020829202453.05199.00000075@mb-mk.aol.com>
Source record: 135590

>.east.cox.net>
>
>
>"Fractenna" <fractenna@aol.com> wrote in message
>news:20020829105127.04332.00005326@mb-fo.aol.com...
>> Hi Jim,
>>
> snip.
>>
>> I heard the argument that this antenna is less lossy than trapped Yagis, a
>> valid but probably not important point: for a 3 element Yagi, there is
>probably
>> no more than a 2 dB difference max --if that. Far better to get theYagi
>(of any
>> design) up another 10 feet or more to pick up the practical gain of a
>lower
>> launch angle.
>>
>snip
>
>> > 73,
>> Chip N1IR
>
>Gosh Chip
>
>2 dB -- or even a little less -- is nothing to sneeze at.
>
>Pete
>
>

Its worthwhile for many, that's for sure. But raising the antenna always helps.

I suspect the StepIRR up 100 ft is a whopper of a signal.

73,
Chip N1IR

4150. Re: Comments on SteppIR Antenna?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-30 01:00:54 UTC
From: Fred Hambrecht <w4jle@charter.net>
Message-ID: <umtguaqpiept15@corp.supernews.com>
Source record: 135591

As the young folks say "DUUUUH"

"Fractenna" <fractenna@aol.com> wrote in message
news:20020829202453.05199.00000075@mb-mk.aol.com...

> I suspect the StepIRR up 100 ft is a whopper of a signal.
>
> 73,
> Chip N1IR

4151. Traffie Hex-beam FS

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-30 01:37:40 UTC
From: jimkd1bx@aol.com
Message-ID: <20020829213740.00828.00000049@mb-ms.aol.com>
Source record: 135594

I have a new in the box Traffie Hex-beam for sale, it covers 5 bands, 10-12-15-17-20 mtrs;

Info on it can be found on Traffie.com I believe. Weight is 9 lbs. Wind load is 5 sq ft. and turning radius is 9 ft. Can be turned on a small tv rotator.

It looks like an inverted umbrella.

Looking for offers, list new is $890.

Jim

4152. Re: 9 to 1 balum FA

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-30 01:43:24 UTC
From: CW <clinton.magers@attbi.com>
Message-ID: <05Ab9.228830$983.492338@rwcrnsc53>
Source record: 135595

Check the auction. Notice he has nothing for sale.

"N4LQ" <N4LQ@igLou.com> wrote in message news:3d6ecb38_1@news.iglou.com...
> Balum...he he he duh
>
> --
> Steve Ellington N4LQ.
> "CAM" <Cecil.A.Moore@ieee.org> wrote in message
> news:3D6E167F.D50536B@ieee.org...
> > Fred Hambrecht wrote:
> > > What the heck is a balum, and what does it do?
> >
> > A BALanced UMbrella?
> > --
> > cheers, CAM http://www.qsl.net/w5dxp
> >
> >
> > -----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
> > http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
> > -----== Over 80,000 Newsgroups - 16 Different Servers! =-----
>
>

4153. Re: Tired of RS employees pushing Cellphones and DirectTV

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-30 01:54:55 UTC
From: Fulano de Tal <exray@nospamcaribe.net>
Message-ID: <3D6ED06F.41D7F760@nospamcaribe.net>
Source record: 135597
Cross-posted to: alt.radio.scanner,rec.radio.amateur.antenna,rec.radio.scanner,rec.radio.shortwave

I think its kinda silly to find an an old post from last November to reply to and crosspost across several groups. But he says he is a RS employee so it does tend to prove the point.

-BM

> > > I'm one of the so called Morons that work for RS!!

4154. Re: Traffie Hex-beam FS

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-30 01:55:15 UTC
From: fractenna@aol.com
Message-ID: <20020829215515.10637.00000085@mb-fx.aol.com>
Source record: 135596

>I have a new in the box Traffie Hex-beam for sale, it covers 5 bands,
>10-12-15-17-20 mtrs;
>
>Info on it can be found on Traffie.com I believe. Weight is 9 lbs. Wind load
>is
>5 sq ft. and turning radius is 9 ft. Can be turned on a small tv rotator.
>
>It looks like an inverted umbrella.
>
>Looking for offers, list new is $890.
>
>Jim
>
>

Hmmm...reason for selling?

73,
Chip N1IR

4155. Re: G5RV question

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-30 02:03:46 UTC
From: Bob Miller <bamiller@texas.net>
Message-ID: <C89uPS9XV88Bhx1EliipSVmd=3KY@4ax.com>
Source record: 135598

vhfradiobuff@yahoo.com (vhfradiobuff@yahoo.comspamsux) wrote:

>I've been thinking of picking up a G5RV in preparation for upgrading.
>I have a large lot that should allow me to put up a full length G5RV.
>On the back of my property is a wooden fence, about 7 feet high. I
>plan on putting chimney mounts on the fence posts on both corners of
>the fence and one in the center (my property/fence is shaped like a
>rectangle). I plan on putting a 20' pole on each end and a 20' pole in
>the center. With the G5RV only 20' up, completely horizontally strung,
>should this work ok for HF? I'd be putting out up to 100 watts. Any
>recommendations on how to attach the G5RV center and ends to the 10
>poles? They're the kind you buy at Radio Shack for around $10 each.
>
>Also, what would be a good coax to feed this with? The run would might
>be as much as 200'. I don't have a ton of cash to spend on the coax,
>so some comprimise is needed.

Try Mr. Varney's article at http://www.qsl.net/aa3px/g5rv.htm

He has quite a few installation recommendations.

Bob
k5qwg

4156. Vacuum variable cap needed

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-30 02:20:53 UTC
From: Max <ve3tmt@yahoo.com>
Message-ID: <CBAb9.1181$2V3.252038@news20.bellglobal.com>
Source record: 135599

Looking for the above with a 5-50 or 5-150 pf range. If you have one laying around (I'm hoping!) please let me know what you want for it.

Thanks,

Max

4157. Rohn SCL

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-30 02:22:12 UTC
From: Larry D <slewrate@hotmail.com>
Message-ID: <iKzb9.90$CX2.91419@newsfeed.slurp.net>
Source record: 135592

Anyone seen (in person) the new Rohn SCL tower?

Also looking for places to buy it (Ohio)

Larry N8KU [please reply to larryd AT longwire.com]

4158. Re: Comments on SteppIR Antenna?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-30 02:27:20 UTC
From: Dan/W4NTI <w4nti@mindspringnospam.com>
Message-ID: <akmlkmnt1@slb7.atl.mindspring.net>
Source record: 135601

So would a Light Bulb fed with zip cord.

Dan/W4NTI

"Fractenna" <fractenna@aol.com> wrote in message
news:20020829202453.05199.00000075@mb-mk.aol.com...
> >.east.cox.net>
> >
> >
> >"Fractenna" <fractenna@aol.com> wrote in message
> >news:20020829105127.04332.00005326@mb-fo.aol.com...
> >> Hi Jim,
> >>
> > snip.
> >>
> >> I heard the argument that this antenna is less lossy than trapped
Yagis, a
> >> valid but probably not important point: for a 3 element Yagi, there is
> >probably
> >> no more than a 2 dB difference max --if that. Far better to get theYagi
> >(of any
> >> design) up another 10 feet or more to pick up the practical gain of a
> >lower
> >> launch angle.
> >>
> >snip
> >
> >> > 73,
> >> Chip N1IR
> >
> >Gosh Chip
> >
> >2 dB -- or even a little less -- is nothing to sneeze at.
> >
> >Pete
> >
> >
>
> Its worthwhile for many, that's for sure. But raising the antenna always
helps.
>
> I suspect the StepIRR up 100 ft is a whopper of a signal.
>
> 73,
> Chip N1IR

4159. Re: Comments on SteppIR Antenna?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-30 02:33:13 UTC
From: k3bu@aol.com
Message-ID: <20020829223313.02248.00000097@mb-mu.aol.com>
Source record: 135600

>
>As the young folks say "DUUUUH"
>

That's Ph DuuuuuuuH

4160. Re: 9 to 1 balum FA

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-30 02:44:40 UTC
From: Fulano de Tal <exray@nospamcaribe.net>
Message-ID: <3D6EDC18.43D0B622@nospamcaribe.net>
Source record: 135602

CW wrote:
>
> Check the auction. Notice he has nothing for sale.

Sure he does. Clicking on the clipped link leads you to dod(5). This balum guy is dodgeman7.

-BM

4161. Re: Center Fed With 300 Ohm Coax

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-30 03:36:11 UTC
From: CAM <Cecil.A.Moore@ieee.org>
Message-ID: <3D6EE82B.A33D3BFB@ieee.org>
Source record: 135603

Richard Harrison wrote:
>
> CAM, W5DXP wrote:
> "Where are you going to get 300 ohm coax?"
>
> The ARRL Antenna Book, page 24-20 in the 19th edition, suggests:
> "Paralleled RG-63 (125 ohm) cable would make a balanced transmission
> line in accord with traditional 300-ohm twin-lead feed line (Zo = 250
> ohms)."

Still not as good as 600 ohm open-wire line. :-)
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
------== Over 80,000 Newsgroups - 16 Different Servers! =-----

4162. Resourses for antenna.

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-30 03:51:06 UTC
From: NTLH@hotmail.com
Message-ID: <dca03299.0208291951.189e61f0@posting.google.com>
Source record: 135604

Hi everyone.
I am looking for resourses for antenna such as
size,cost,bandwidth,design ...
of the antenna in different communications systems such as cellular
mobile system, satellite TV system or television broadcast system.
So if anyone knows about it or knows where some resources which are
related to it, please tell me.
thanks alot.

4163. NEWS: Here we go...

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-30 04:20:53 UTC
From: "J. Harvey" <JM002.Harvey_ANTI*SPAM_@Sympatico.ca>
Message-ID: <0oCb9.7508$z21.1540846@news20.bellglobal.com>
Source record: 135605

http://www.eetimes.com/story/OEG20020827S0019

"...negative refractive index..."
"...negative permeability and permittivity..."

Interesting...

I especially like the following extract:

"The tiny wires, 10-nm thick and as long as the wavelength of light they are tuned to enhance, were arranged in pairs parallel to each other. When the resonant wavelength of light hit the wires, they resonated..."

Long time lurkers will remember the hopeless debate about the nature of light (it's simply RF).

::
:-)>
::

"Shalaev's group experimented with many different nano-antenna shapes, from spheres and wires to more complex geometric configurations based on repeated *fractal-like* patterns."

:-)

4164. Re: Traffie Hex-beam FS

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-30 04:31:42 UTC
From: n7ws@nowhere.com
Message-ID: <3d6ef4fc.51916150@news.triconet.org>
Source record: 135606

On 30 Aug 2002 01:55:15 GMT, fractenna@aol.com (Fractenna) wrote:

|
|Hmmm...reason for selling?

Needs money to purchase fractal :)

4165. WTB Yaesu FRT-7700 Antenna Tuner

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-30 04:41:58 UTC
From: Jim <jbollit@ix.netcom.com>
Message-ID: <akmt2p$g49$1@slb6.atl.mindspring.net>
Source record: 135607

Please advise price and condition.

Thanks

Jim
*

4166. Re: Lightning Effects Questions

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-30 05:42:13 UTC
From: Bill Nelson <billn@spock.peak.org>
Message-ID: <akn0jl$pf4$6@quark.scn.rain.com>
Source record: 135608

Richard Harrison <richardharrison@webtv.net> wrote:
> Bill Nelson wrote:
> "Any charge that gets to the radio is likely to get inside as well."

> My experience with countless land-mobile base stations, which had
> antennas as the highest items around, disagrees.

> These antennas were grounded to the tower at the top. They were folded
> monopoles. Coax shields were grounded at the base of the tower. These
> monopoles were heavily pitted from many lightning strikes. Lightning
> never got inside a radio. Coax with no protectors barred lightning from
> the radio input. It is a natural common-mode choke.

The coax shield was probably grounded to the tower near the antenna - and possibly at one or more points elsewhere on the tower (if it was a tall tower). The tower would also be grounded properly and there would be a ground window on the equipment building.

We are not talking about land mobile stations here - with an antenna and coax properly installed on a properly installed tower.

In the proposed installation, the only path to ground from a strike on the antenna (no matter how unlikely) is likely to be via the coax. And it would be the full power of the strike, not one attenuated by proper suppression techniques.

But I agree with your otherwise. I have experience with quite a few repeater stations, and when properly set up, there is no problem with lightning strikes on the antennas. The stations just keep on working, even in the middle of a severe lightning storm.

> Lightning aplenty traveled the outside of the coax. It`s important to
> dump this energy to ground so it doesn`t enter the shack.

Yep. I believe that I stated this elsewhere in that response.

> Lightning is a transient event with much energy in alternating current
> across the spectrum.. Most of this current can`t penetrate the coax or
> radio box due to skin effect. The rest has no effect inside the
> conducting radio box because the voltages are the same on all sides of
> the box. There is no difference of potential to drive current through
> anything inside the box. Power, audio, etc wires must all be bypassed to
> the box to limit potential differences they may have with the box and
> keep lightning out.

Everything must be bypassed etc before entering the shack. Again, that is not what the person proposed.

What you and I would do with a commercial installation is something that few Hams would bother with.

--
Bill Nelson (billn@peak.org)

4167. Re: NEC-Win Plus or EZNEC 3.0 ??

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-30 06:17:44 UTC
From: Pitco <security@vila.net>
Message-ID: <1030686788.866116@santo.vanuatu.com.vu>
Source record: 135609

Try this Excel version, lets you put in your own formulea for what if
situations
Also free.

http://www.qsl.net/ac6la/

Regards Rex YJ8RK

James P. Rybak <jrybak@mesastate.edu> wrote in message
news:1030602925.462507@tshaper.mesastate.edu...
> I know that both NEC-Win Plus and EZNEC 3.0 are good antenna modeling
> programs based on NEC-2. I'd like to hear from people who have used both
> concerning whether there are any significant advantages of using one over
> the other such as "bugs" in the user interface, ease of use, etc.
>
> If this topic has been discussed to death previously, please reply to me
> directly.
>
> Thanks.
>
> Jim Rybak W0KSD

4168. Long Wire's and RF

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-30 08:42:01 UTC
From: Andy M <andrew.markham@virgin.net>
Message-ID: <3d6f597c@news.greennet.net>
Source record: 135610

Hi All

Is there any way of reducing the RF in the shack with a Long Wire, like putting coax on the shack end ??.

Andy

4169. Manual kerotor kr-400rc

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-30 08:43:54 UTC
From: cruza_es@hotmail.com
Message-ID: <6a19677.0208300043.1b8a880@posting.google.com>
Source record: 135611

Hi!

I need a manual of kenrotor kr-400rc, for months it has been changing
to me of house and some manuals were lost.

Thanks and Regards.
Carlos Ruza.

Please Send me a email to cruza_es@hotmail.com

4170. Re: Long Wire's and RF

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-30 10:07:35 UTC
From: KC1DI <elbc@pivot.net>
Message-ID: <3d6f3ffe_4@corp.newsgroups.com>
Source record: 135612

"Andy M" <andrew.markham@virgin.net> wrote in message
news:3d6f597c@news.greennet.net...
> Hi All
>
> Is there any way of reducing the RF in the shack with a Long Wire, like
> putting coax on the shack end ??.
>
> Andy
>
Hi Andy ,
The best Way I know of to reduce RF on a rig with a long wire is to us a
good RF ground system. a 1/4 wave Radial wire attached to the rig works
wonders. The Coax to the outside usually does not affect the RF situation
all that much with a long wire.

73 DAVE KC1DI // All ways qrp .

Outgoing mail is certified Virus Free.
Checked by AVG anti-virus system (http://www.grisoft.com).
Version: 6.0.384 / Virus Database: 216 - Release Date: 8/21/02

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
------== Over 80,000 Newsgroups - 16 Different Servers! =-----

4171. Re: NEC-Win Plus or EZNEC 3.0 ??

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-30 11:29:43 UTC
From: "R.Wilhelm" <nhbiwilh@rrzn-user.uni-hannover.de>
Message-ID: <Pine.GSO.4.44.0208301322380.2397-100000@unics>
Source record: 135613

On Thu, 29 Aug 2002, Michael Grenier wrote:

> Also check out MMANA
>
> Its free with competitive features.
>
> http://www.qsl.net/mmhamsoft/mmana/index.htm
>
>
> -Mike KC0IOC
>
MMANA is a nice program, but it's based on MININEC and doesn't have the
"high accuracy ground"/Sommerfeld approximation NEC-2 based programs
offer.
If you want to model horizontal wires closer than abt. 0.2 lambda to the
ground you will need the Sommerfeld ground model. I would prefer to have
both kinds of programs at hand, i.e.
take MMANA for MININEC and 4nec from www.qsl.net/wb6tpu (unofficial NEC
archive). Latter is a NEC-2 program and has a nice graphical user
interface.

Greetings

Ralf/DL6OAP
==========
Ralf Wilhelm
DL 6 OAP

==========
Hannover, Germany, where mankind's first motorized flight took place:
Karl Jatho, August 18th 1903, 4 months before the Wright Bros.
(When will history notice this ?)

"History is irrelevant" (Star Trek character "Seven of Nine")
==========

4172. Re: Can I direct bury RG-213 in ground?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-30 11:45:18 UTC
From: dan <danlx@execpc.com>
Message-ID: <3d6f5ace$0$1421$272ea4a1@news.execpc.com>
Source record: 135614

On Wed, 28 Aug 2002 22:09:38 -0500, "Crazy George"
<munschNO@attglobal.net.SPAM> wrote:

>Cecil:
>I had to replace the water system at the farm in South Texas where we had
>battled gophers as far back as I remember. I wanted to replace the 50 year
>old iron pipe with PVC, for obvious reasons, but worried about the *(&%&^
>gophers. I read up on them, and they have a maximum depth they rarely
>exceed. I buried the pipe about 28" deep I think (this was 25 years ago)
>and have not had any problems. Read up on gophers.
>
>Now, someone tell me how to keep the squirrels from shredding my halyards
>for their nests. Cotton, Dacron, whatever the exotic stuff is, even one run
>of RG-58 which got in their way became shredded. Steel conduit works there
>also, but is difficult to install. I thought about using barbed wire, but
>it won't go through the pulleys.
George,
Use a product called Tangle Foot. It comes in a caulking tube and
squirrels hate to get it on their feet. Coat areas they use to access
their living/nesting areas. It was designed for birds, but I have
been told it works by others that have used it. Another thing that
works for squirrels is warfarin based poisons. If you try to live
trap them you must take them at least 10 miles away and use scent
killers on all the areas they used for habitat. If you do not they or
others will use the same areas. Professionals recommend putting them
to sleep, using your preferred method.
I had squirrels that deceived my soffit area was going to be their
next home and experimented quite a bit before ridding my area of
squirrels and de-scenting the area.
Dan
N9JBF

I've rambled enough, back to the rocking chair. ZZZZZZZZZ
Remove left x for e-mail reply.

4173. Re: NEC-Win Plus or EZNEC 3.0 ??

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-30 12:41:45 UTC
From: Dan Richardson <k6mhe@mendolink.com>
Message-ID: <etpumuknpfd32bsku7vc2vuajrjic0vccp@4ax.com>
Source record: 135617

Both companies offer demos that can be downloaded from their
respective web pages.

On 29 Aug 2002 06:40:43 GMT, "James P. Rybak" <jrybak@mesastate.edu>
wrote:

>I know that both NEC-Win Plus and EZNEC 3.0 are good antenna modeling
>programs based on NEC-2. I'd like to hear from people who have used both
>concerning whether there are any significant advantages of using one over
>the other such as "bugs" in the user interface, ease of use, etc.
>
>If this topic has been discussed to death previously, please reply to me
>directly.
>
>Thanks.
>
>Jim Rybak W0KSD

4174. Re: Waveguide Antenna.

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-30 12:56:14 UTC
From: dfg <A.Gras@wanadoo.fr>
Message-ID: <aknpr1$b22$1@wanadoo.fr>
Source record: 135615

take a look at :
http://perso.wanadoo.fr/jf.fourcadier/antennes/fentes/fentes_e.htm

i think you can made it.
cheers
Alain

"mhoskins" <mhoskins3@comcast.net> a crit dans le message news:
LYBa9.228406$SS.9270698@bin3.nnrp.aus1.giganews.com...
> I am looking for sources and or detailed plans / diagrams (dimensions),
> design software for a waveguide antenna for 890mhz through 914mhz.
>
> I am also looking for sources and or detailed plans / diagrams
(dimensions),
> design software for a feedhorn for 935mhz through 959mhz.
>
> Any and all assistance and advice will be welcome.
>
>

4175. Re: Rohn SCL

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-30 12:58:03 UTC
From: w9gb <gregory.beat@attbi.com>
Message-ID: <vZJb9.129612$aA.30204@sccrnsc02>
Source record: 135616

Rohn SSV Tower line?

http://www.rohnnet.com/rohnnet2001/catalog/Brochures/SSV-brochure.pdf

http://www.rohnnet.com/rohnnet2001/catalog/pdfs/selfsupport/SSV-2.pdf

w9gb

"Larry D" <slewrate@hotmail.com> wrote in message
news:iKzb9.90$CX2.91419@newsfeed.slurp.net...
> Anyone seen (in person) the new Rohn SCL tower?
>
> Also looking for places to buy it (Ohio)
>
> Larry N8KU [please reply to larryd AT longwire.com]
>

4176. Re: Long Wire's and RF

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-30 13:56:06 UTC
From: richardharrison@webtv.net
Message-ID: <29049-3D6F7976-7@storefull-2394.public.lawson.webtv.net>
Source record: 135618

Dave, KC1DI wrote:
"A 1/4 wave radial wire attached to the rig works wonders."

2, 4, 6, 8 or more radials in opposing directions are better. Balance to their interconnection point is the idea. Radials are supposed not to radiate due to the balance of currents simultaneously flowing away or toward their interconnection point. The unbalanced long wire is supposed to do the radiation.

Balanced currents inside coax or in the wires of a balanced parallel wire feeder are not supposed to radiate either.

Place the feedpoint of your long wire antenna direxctly above the central connection of your radials. Place this feedpoint at some significant distance from your shack. Radiation loses about 22 db in the first wavelength of travel. Make the connection between your radio and the feedpoint with coax or parallel wire feedline.

This is how the radio broadcaster does it. But, he uses 120 1/4-wave radials under each tower, no long wire antennas which don`t have the desired directional characteristics.

Best regards, Richard Harrison, KB5WZI

4177. Re: Lightning Effects Questions

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-30 14:29:09 UTC
From: richardharrison@webtv.net
Message-ID: <12560-3D6F8135-46@storefull-2398.public.lawson.webtv.net>
Source record: 135519

Bill Nelson wrote:
"The tower would also be grounded properly and there would be a ground window in the equipment building."

Radio and tower suppliers have sample specifications. These mirror each other. Many land-mobile users build to these specs. Heft of the tower is based on wind load fears. But nearly all specify a ground rod for each tower leg each connected by a heavy copper cable. A similar copper cable is usually specified to run the length of the tower. I believe the tower-long cable is superfluous, but advise sticking with the specs. As the Russians say, "The salient nail gets driven down".

Best regards, Richard Harrison, KB5WZI

4178. Re: Can I direct bury RG-213 in ground?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-30 15:01:10 UTC
From: richardharrison@webtv.net
Message-ID: <12560-3D6F88B6-54@storefull-2398.public.lawson.webtv.net>
Source record: 135520

CAM wrote:
"Doesn`t work in Queen Creek, AZ. The gophers ate through the PVC pipe
AND the coax."

My experience is that it must really be buried deeply to keep humans
from digging it up.

Best regards, Richard Harrison, KB5WZI

4179. What is the big deal with fractal and EH ????????

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-30 15:17:25 UTC
From: WavyDave <nowaynowhere@yahoo.com>
Message-ID: <ako2ah0v4h@enews3.newsguy.com>
Source record: 135521

I am no EE and new to AR. In looking back I see the mere mention of those two terms brings howls and jeers like nothing I have ever seen on any board in my life. So I decided to check around. Fractal? The guy that invented it is (or was anyway) a professor at Boston U, I see hits relating to research at UCLA, Yale etc etc. People are getting degrees based on papers they wrote on fractal. And yet I see the shit that flies back and forth here..... And then EH. Never heard of it myself, I go to the site, and this fellow has a number of seemingly very satisfied users, well documented.
So what gives here?
Are Hams that closed minded and unprofessional as to summarily drum out anyone with a new idea they dont quite understand? Maybe I should search for another hobby rather than associate with such folks? Or is there something I am missing?
thank you for any insight to this question.

4180. Re: What is the big deal with fractal and EH ????????

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-30 15:48:56 UTC
From: Fulano de Tal <exray@nospamcaribe.net>
Message-ID: <3D6F93E8.C880D75B@nospamcaribe.net>
Source record: 135522

WavyDave wrote:
>
> I am no EE and new to AR. In looking back I see the mere mention of those
> two terms brings howls and jeers like nothing I have ever seen on any board
> in my life. So I decided to check around. Fractal? The guy that invented
> it is (or was anyway) a professor at Boston U, I see hits relating to
> research at UCLA, Yale etc etc. People are getting degrees based on papers
> they wrote on fractal. And yet I see the shit that flies back and forth
> here..... And then EH. Never heard of it myself, I go to the site, and
> this fellow has a number of seemingly very satisfied users, well documented.
> So what gives here?
> Are Hams that closed minded and unprofessional as to summarily drum out
> anyone with a new idea they dont quite understand? Maybe I should search
> for another hobby rather than associate with such folks? Or is there
> something I am missing?
> thank you for any insight to this question.

Try either one on your rig and report back.
-BM

4181. Questions on EZNEC and TLA

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-30 16:00:43 UTC
From: Floyd Sense <sentek@sprintmail.com>
Message-ID: <LEMb9.7719$%D6.707580@newsread1.prod.itd.earthlink.net>
Source record: 135523

The last time I went through this, I just used my Autek analyzer, HP calculator and a couple of formulas from the ARRL Antenna Handbook. All went well and the antenna worked as it should. Now, with more time on my hands, I'm using EZNEC and TLA, and I'm not sure it's any easier! Here's a simple antenna problem I want to solve:

The antenna in question is a 1/4 wavelength vertical for 40 meters, with two quarter wave radials (perfectly horizontal), with the base of the vertical and the radials at 15 feet above ground. I used EZNEC to analyze the situation, and find that the feedpoint impedance is 26 ohms at resonance. So far so good, but it appears that using the EZNEC 3.0 I can't save this antenna design for later use - that requires EZNEC Pro - is that correct? If so, how are you EZNEC users saving your designs? I understand that I can build a file with the wire definitions and maybe that's how users do it?

Next, I want to use a coax stub (shunt connected) near the feedpoint to effect a match to 50 ohm coax (stub of same coax). Is there anyway using EZNEC to determine the stub length and distance from feedpoint? I know about the transmission line stuff in EZNEC, but it isn't clear to me whether this can be of any use in this case.

Last, I have the 18th edition of the ARRL Antenna Book, and the section on stubs talks about using the TLA program on the accompanying diskette to determine stub length and position. So, I installed the TLA program and read the descriptive text, but it's not clear how one would use it for this purpose.

This is an exercise in using the tools - please don't tell me why stub matching is no good or that the antenna would be better with 120 radials! Any other ideas or advice would be greatly appreciated.

K8AC

4182. Re: What is the big deal with fractal and EH ????????

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-30 16:05:17 UTC
From: Jim Pennino <jimp@specsol.com>
Message-ID: <ako53t$2ol$1@mail.specsol.com>
Source record: 135524

WavyDave <nowaynowhere@yahoo.com> wrote:
> I am no EE and new to AR. In looking back I see the mere mention of those
> two terms brings howls and jeers like nothing I have ever seen on any board
> in my life. So I decided to check around. Fractal? The guy that invented
> it is (or was anyway) a professor at Boston U, I see hits relating to
> research at UCLA, Yale etc etc. People are getting degrees based on papers
> they wrote on fractal. And yet I see the shit that flies back and forth
> here..... And then EH. Never heard of it myself, I go to the site, and
> this fellow has a number of seemingly very satisfied users, well documented.
> So what gives here?
> Are Hams that closed minded and unprofessional as to summarily drum out
> anyone with a new idea they dont quite understand? Maybe I should search
> for another hobby rather than associate with such folks? Or is there
> something I am missing?
> thank you for any insight to this question.

Go to http://groups.google.com/advanced_group_search?hl=en

Search for articles authored by fractenna@aol.com.

Find messages containing words such as "lawsuit", "threat", "death", or
"legal".

Make up you own mind.

--
Jim Pennino

4183. Re: Here we go...

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-30 16:35:09 UTC
From: Alan <alannc44@{nospam}ix.netcom.com>
Message-ID: <19Nb9.37938$iX4.1432418@twister.southeast.rr.com>
Source record: 135525

Simply RF?

When did my antenna ever emit photons?

Alan
--
Windsurfing Club: http://www.ibscc.org
Homepage: http://pw1.netcom.com/~alannc44/qsl.htm

>
> Long time lurkers will remember the hopeless debate about the nature of
> light (it's simply RF).
>

4184. Re: What is the big deal with fractal and EH ????????

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-30 16:41:09 UTC
From: WavyDave <nowaynowhere@yahoo.com>
Message-ID: <ako77h01ci8@enews3.newsguy.com>
Source record: 135526

Oh I am not disputing the fact that certain people seem a little 'cracked'
:)
I am interested in the technology, not so much the inventor. Do these
things not work?
If they dont work, why are people able to write dissertations about them
that say they do, and getting a degree for the effort? There is a paradox
here I dont understand.

"Jim Pennino" <jimp@specsol.com> wrote in message
news:ako53t$2ol$1@mail.specsol.com...
> WavyDave <nowaynowhere@yahoo.com> wrote:
> > I am no EE and new to AR. In looking back I see the mere mention of
those
> > two terms brings howls and jeers like nothing I have ever seen on any
board
> > in my life. So I decided to check around. Fractal? The guy that
invented
> > it is (or was anyway) a professor at Boston U, I see hits relating to
> > research at UCLA, Yale etc etc. People are getting degrees based on
papers
> > they wrote on fractal. And yet I see the shit that flies back and forth
> > here..... And then EH. Never heard of it myself, I go to the site,
and
> > this fellow has a number of seemingly very satisfied users, well
documented.
> > So what gives here?
> > Are Hams that closed minded and unprofessional as to summarily drum out
> > anyone with a new idea they dont quite understand? Maybe I should
search
> > for another hobby rather than associate with such folks? Or is there
> > something I am missing?
> > thank you for any insight to this question.
>
> Go to http://groups.google.com/advanced_group_search?hl=en
>
> Search for articles authored by fractenna@aol.com.
>
> Find messages containing words such as "lawsuit", "threat", "death", or
> "legal".
>
> Make up you own mind.
>
> --
> Jim Pennino

4185. Re: Questions on EZNEC and TLA

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-30 17:15:35 UTC
From: Tom Homewood <w1to@adelphia.net>
Message-ID: <XKNb9.29451$WJ3.5424341@news1.news.adelphia.net>
Source record: 135527

You should be able to save the model with EXNEC v3.0, just click on Save As
and give it a file name.

Tom, W1TO

"Floyd Sense" <sentek@sprintmail.com> wrote in message
news:LEMb9.7719$%D6.707580@newsread1.prod.itd.earthlink.net...
> The last time I went through this, I just used my Autek analyzer, HP
> calculator and a couple of formulas from the ARRL Antenna Handbook. All
> went well and the antenna worked as it should. Now, with more time on my
> hands, I'm using EZNEC and TLA, and I'm not sure it's any easier! Here's
a
> simple antenna problem I want to solve:
>
> The antenna in question is a 1/4 wavelength vertical for 40 meters, with
two
> quarter wave radials (perfectly horizontal), with the base of the vertical
> and the radials at 15 feet above ground. I used EZNEC to analyze the
> situation, and find that the feedpoint impedance is 26 ohms at resonance.
> So far so good, but it appears that using the EZNEC 3.0 I can't save this
> antenna design for later use - that requires EZNEC Pro - is that correct?
> If so, how are you EZNEC users saving your designs? I understand that I
can
> build a file with the wire definitions and maybe that's how users do it?
>
> Next, I want to use a coax stub (shunt connected) near the feedpoint to
> effect a match to 50 ohm coax (stub of same coax). Is there anyway using
> EZNEC to determine the stub length and distance from feedpoint? I know
> about the transmission line stuff in EZNEC, but it isn't clear to me
whether
> this can be of any use in this case.
>
> Last, I have the 18th edition of the ARRL Antenna Book, and the section on
> stubs talks about using the TLA program on the accompanying diskette to
> determine stub length and position. So, I installed the TLA program and
> read the descriptive text, but it's not clear how one would use it for
this
> purpose.
>
> This is an exercise in using the tools - please don't tell me why stub
> matching is no good or that the antenna would be better with 120 radials!
> Any other ideas or advice would be greatly appreciated.
>
> K8AC
>

>

4186. Re: What is the big deal with fractal and EH ????????

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-30 17:30:18 UTC
From: Fred Hambrecht <w4jle@charter.net>
Message-ID: <umvate9lt0pm05@corp.supernews.com>
Source record: 135528

Nice troll Phil...

"WavyDave" <nowaynowhere@yahoo.com> wrote in message
news:ako2ah0v4h@enews3.newsguy.com...
> I am no EE and new to AR. In looking back I see the mere mention of those
> two terms brings howls and jeers like nothing I have ever seen on any
board
> in my life. So I decided to check around. Fractal? The guy that
invented
> it is (or was anyway) a professor at Boston U, I see hits relating to
> research at UCLA, Yale etc etc. People are getting degrees based on
papers
> they wrote on fractal. And yet I see the shit that flies back and forth
> here..... And then EH. Never heard of it myself, I go to the site, and
> this fellow has a number of seemingly very satisfied users, well
documented.
> So what gives here?
> Are Hams that closed minded and unprofessional as to summarily drum out
> anyone with a new idea they dont quite understand? Maybe I should search
> for another hobby rather than associate with such folks? Or is there
> something I am missing?
> thank you for any insight to this question.
>
>

4187. Re: Questions on EZNEC and TLA

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-30 17:54:11 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <3D6FB143.6050401@eznec.com>
Source record: 135529

In the main EZNEC window, you'll see a row of buttons. The second one down is labeled "Save". Clicking this will enable you to save a description (antenna model). You'll also find a Save As selection in the File menu, which does the same thing.

I strongly suggest that you, and other new users, read the Getting Started section of the manual. (The manual is accessed by clicking Help near the top of the main windows, then Contents.) It will direct you to the Test Drive, which leads you through the modeling of some simple antennas. One of the things you do along the way is save a description for later use.

You can add a stub to your model using EZNEC, but only on wires and not on a coax transmission line. EZNEC can't help you much with the matching problem -- for that you'll have to use TLA, WinSMITH, or a similar program.

Hopefully someone else will be able to help you with TLA.

Roy Lewallen, W7EL

Floyd Sense wrote:
> The last time I went through this, I just used my Autek analyzer, HP
> calculator and a couple of formulas from the ARRL Antenna Handbook. All
> went well and the antenna worked as it should. Now, with more time on my
> hands, I'm using EZNEC and TLA, and I'm not sure it's any easier! Here's a
> simple antenna problem I want to solve:
>
> The antenna in question is a 1/4 wavelength vertical for 40 meters, with two
> quarter wave radials (perfectly horizontal), with the base of the vertical
> and the radials at 15 feet above ground. I used EZNEC to analyze the
> situation, and find that the feedpoint impedance is 26 ohms at resonance.
> So far so good, but it appears that using the EZNEC 3.0 I can't save this
> antenna design for later use - that requires EZNEC Pro - is that correct?
> If so, how are you EZNEC users saving your designs? I understand that I can
> build a file with the wire definitions and maybe that's how users do it?
>
> Next, I want to use a coax stub (shunt connected) near the feedpoint to
> effect a match to 50 ohm coax (stub of same coax). Is there anyway using
> EZNEC to determine the stub length and distance from feedpoint? I know
> about the transmission line stuff in EZNEC, but it isn't clear to me whether
> this can be of any use in this case.
>
> Last, I have the 18th edition of the ARRL Antenna Book, and the section on
> stubs talks about using the TLA program on the accompanying diskette to
> determine stub length and position. So, I installed the TLA program and
> read the descriptive text, but it's not clear how one would use it for this

> purpose.
>
> This is an exercise in using the tools - please don't tell me why stub
> matching is no good or that the antenna would be better with 120 radials!
> Any other ideas or advice would be greatly appreciated.
>
> K8AC
>
>

4188. Re: Here we go...

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-30 18:49:37 UTC
From: Sylvan Butler <Znospam+noZs_0208@hpb13799Z.Zboi.hpZ.com.invalid>
Message-ID: <slrnamvfhr.bhd.Znospam+noZs_0208@hpb13799Z.Zboi.hpZ.com.invalid>
Source record: 135530

On Fri, 30 Aug 2002 16:35:09 GMT, Alan <alannc44@{nospam}ix.netcom.com> wrote:
>> Long time lurkers will remember the hopeless debate about the nature of
>> light (it's simply RF).
> Simply RF?
>
> When did my antenna ever emit photons?

Is your antenna resonant to the frequency of light? If not, I
expect it radiates photons very poorly.

sdb

--
| Sylvan Butler | Not speaking for Hewlett-Packard | sbutler-boi.hp.com |
| Watch out for my e-mail address. Thank UCE. >>>> change ^ to @ <<<< |
They that can give up essential liberty to obtain a little temporary
safety deserve neither liberty nor safety. --Benjamin Franklin, 1759
Stop Senator Fritz Hollings-S2048, Palladium, and TCPA, NOW!
http://investor.cnet.com/investor/news/newsitem/0-9900-1028-20173919-0.html
http://zdnet.com.com/2100-1106-945976.html

4189. Re: What is the big deal with fractal and EH ????????

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-30 19:23:55 UTC
From: 'Doc <w5lz@icok.net>
Message-ID: <3D6FC644.D9C6CD6F@icok.net>
Source record: 135531

WavyDave,
It's a lot like 'perpetual motion', some of the
theory behind both 'sounds' very convincing, but
when you dig a little deeper, you find a flaw. The
'flaw' with 'fractal' antennas is that there is no
particular benefit from using a fractal 'shape'. A
random 'shape' has been proven to do at ~least~ as
well, if not have better performance.
Exploring 'fractal' antenna properties is a valid
subject for leading to a degree, no matter is the
antenna works, or not. It merely shows that a person
is able to think and reason. Mercy! If you take a look
at some of the other subjects used to get a degree, a
'fractal' antenna isn't even the match that lights the
candle.
Perhaps the primary reason for the reaction that these
'fractal' antenna thingy's got the reaction they did is
the the person/personality/behavior of the person making
their 'discovery'. That is a whole different subject and
not really worth going into.
'Doc

4190. Re: Here we go...

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-30 20:02:10 UTC
From: Alan <alannc44@{nospam}ix.netcom.com>
Message-ID: <6bQb9.37989$iX4.1455074@twister.southeast.rr.com>
Source record: 135533

Seems like I remember reading in one of Asimov's books while in high school
that light is the only 'energy' that has mass (photons) and yet behaves as
though it doesn't.

Alan

--
Windsurfing Club: http://www.ibscc.org
Homepage: http://pw1.netcom.com/~alannc44/qsl.htm

"Sylvan Butler" <Znospam+noZs_0208@hpb13799Z.Zboi.hpZ.com.invalid> wrote in
message
news:slrnamvfhr.bhd.Znospam+noZs_0208@hpb13799Z.Zboi.hpZ.com.invalid...
> On Fri, 30 Aug 2002 16:35:09 GMT, Alan <alannc44@{nospam}ix.netcom.com>
wrote:
> >> Long time lurkers will remember the hopeless debate about the nature of
> >> light (it's simply RF).
> > Simply RF?
> >
> > When did my antenna ever emit photons?
>
> Is your antenna resonant to the frequency of light? If not, I
> expect it radiates photons very poorly.
>
> sdb
>
> --
> | Sylvan Butler | Not speaking for Hewlett-Packard | sbutler-boi.hp.com |
> | Watch out for my e-mail address. Thank UCE. >>>> change ^ to @ <<<< |
> They that can give up essential liberty to obtain a little temporary
> safety deserve neither liberty nor safety. --Benjamin Franklin, 1759
> Stop Senator Fritz Hollings-S2048, Palladium, and TCPA, NOW!
>
http://investor.cnet.com/investor/news/newsitem/0-9900-1028-20173919-0.html
> http://zdnet.com.com/2100-1106-945976.html

4191. Re: Questions on EZNEC and TLA

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-30 20:08:39 UTC
From: Floyd Sense <sentek@sprintmail.com>
Message-ID: <bhQb9.8937$N%4.753137@newsread2.prod.itd.earthlink.net>
Source record: 135532

Thanks for the prompt reply, Roy. Well, you'll be surprised to learn that I did read your help document from front to back and memorized large portions of it. What I read in the section on "Save Description As" was this:

Save Description As - Allows you to save the current antenna description (model) as a file. [EZNEC pro only]: To save a file in NEC format, include the extension .NEC with the file name.

With the wrong pair of glasses on, this came through as saying that one could use this function only with EZNEC pro. Now that I can see all the punctuation, I read it differently. At any rate, changes I made to the model were not preserved in the save. Upon closer inspection, I find a file called "a.EZ" with my model data. When you do a File / Save Description As, the current file name is inserted and selected. Apparently, I accidentally depressed the "a" key just before I hit the Save button and didn't catch the fact that the file was saved as "a.EZ". Sometimes being a touch-typist is a liability. Sorry to have bothered you with such trivia.
--
K8AC

"Roy Lewallen" <w7el@eznec.com> wrote in message
news:3D6FB143.6050401@eznec.com...
> In the main EZNEC window, you'll see a row of buttons. The second one
> down is labeled "Save". Clicking this will enable you to save a
> description (antenna model). You'll also find a Save As selection in the
> File menu, which does the same thing.
>
> I strongly suggest that you, and other new users, read the Getting
> Started section of the manual. (The manual is accessed by clicking Help
> near the top of the main windows, then Contents.) It will direct you to
> the Test Drive, which leads you through the modeling of some simple
> antennas. One of the things you do along the way is save a description
> for later use.
>
> You can add a stub to your model using EZNEC, but only on wires and not
> on a coax transmission line. EZNEC can't help you much with the matching
> problem -- for that you'll have to use TLA, WinSMITH, or a similar
program.
>
> Hopefully someone else will be able to help you with TLA.
>
> Roy Lewallen, W7EL
>
> Floyd Sense wrote:
> > The last time I went through this, I just used my Autek analyzer, HP

> > calculator and a couple of formulas from the ARRL Antenna Handbook. All
> > went well and the antenna worked as it should. Now, with more time on
my
> > hands, I'm using EZNEC and TLA, and I'm not sure it's any easier!
Here's a
> > simple antenna problem I want to solve:
> >
> > The antenna in question is a 1/4 wavelength vertical for 40 meters, with
two
> > quarter wave radials (perfectly horizontal), with the base of the
vertical
> > and the radials at 15 feet above ground. I used EZNEC to analyze the
> > situation, and find that the feedpoint impedance is 26 ohms at
resonance.
> > So far so good, but it appears that using the EZNEC 3.0 I can't save
this
> > antenna design for later use - that requires EZNEC Pro - is that
correct?
> > If so, how are you EZNEC users saving your designs? I understand that I
can
> > build a file with the wire definitions and maybe that's how users do it?
> >
> > Next, I want to use a coax stub (shunt connected) near the feedpoint to
> > effect a match to 50 ohm coax (stub of same coax). Is there anyway
using
> > EZNEC to determine the stub length and distance from feedpoint? I know
> > about the transmission line stuff in EZNEC, but it isn't clear to me
whether
> > this can be of any use in this case.
> >
> > Last, I have the 18th edition of the ARRL Antenna Book, and the section
on
> > stubs talks about using the TLA program on the accompanying diskette to
> > determine stub length and position. So, I installed the TLA program and
> > read the descriptive text, but it's not clear how one would use it for
this
> > purpose.
> >
> > This is an exercise in using the tools - please don't tell me why stub
> > matching is no good or that the antenna would be better with 120
radials!
> > Any other ideas or advice would be greatly appreciated.
> >
> > K8AC
> >
> >
>

4192. Re: What is the big deal with fractal and EH ????????

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-30 21:09:38 UTC
From: k3bu@aol.com
Message-ID: <20020830170938.08830.00000510@mb-cg.aol.com>
Source record: 135534

No big deal, old crapola.

It's a PhilChipwhatever (now aka Wavy Dave) troll!
He must be really deprived of attention or frectaly constipated, so he shows up with another name/personality.
Hethey's done it before - "defending" him/themselves and provoking another barrage of crap.
Fugetaboutit!

bada BUm

Sopranos coming to your HBO screen on Sept. 15

4193. Re: Here we go...

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-30 21:16:49 UTC
From: CAM <Cecil.A.Moore@ieee.org>
Message-ID: <3D6FE0C1.6CE1CA7C@ieee.org>
Source record: 135535

Alan wrote:
> Simply RF? When did my antenna ever emit photons?

Every time you transmit. Radiated RF *IS* photons.
You just can't see them.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

4194. Re: Here we go...

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-30 21:19:58 UTC
From: CAM <Cecil.A.Moore@ieee.org>
Message-ID: <3D6FE17E.141A3994@ieee.org>
Source record: 135536

Sylvan Butler wrote:
> Is your antenna resonant to the frequency of light? If not, I
> expect it radiates photons very poorly.

Egads guys, RF *IS* photons. To the best of my knowledge,
electromagnetic radiation requires photons.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
------== Over 80,000 Newsgroups - 16 Different Servers! =-----

4195. Re: Can I direct bury RG-213 in ground?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-30 21:28:18 UTC
From: Crazy George <munschNO@attglobal.net.SPAM>
Message-ID: <3d6fe9fc_1@news1.prserv.net>
Source record: 135538

Si.

4196. Re: G5RV Question

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-30 21:33:25 UTC
From: CAM <Cecil.A.Moore@ieee.org>
Message-ID: <3D6FE4A5.7A9A44A8@ieee.org>
Source record: 135537

Richard wrote:
>
> CAM <Cecil.A.Moore@ieee.org> wrote:
> >:This is a half truth. On the bands where the G5RV performs well, i.e.
> >:80m, 40m, & 20m, the impedance at the coax/twinlead junction is not
> >:highly reactive and a 1:1 choke will perform its intended function.
> >:Take a look at the charts on my web page to find out why the above
> >:statement doesn't apply to 80m, 40m, & 20m (also 12m).
>
> Mmmm. . . . Not sure how this squares with my experiences. I put
> up a G5RV a few weeks back fed by my Acom 2000A. The Acom did not
> like the load at all! It threw a wobbler and switched itself off, so
> upset was it by the unusual reactance. This was on 80 M. On 40 it
> tolerated the antenna, but showed a considerable SWR.

The G5RV is resonant somewhere on 75m-80m but the feedpoint impedance
at the coax/twinlead junction is around ten ohms. That's not "highly
reactive" even though the 50 ohm SWR is 5:1. The load doesn't have to
be "highly reactive" for your Acom 2000A not to like it. Just because
something shows "a considerable SWR" doesn't mean it is not resonant.
Please don't confuse SWR with reactance. If your antenna is resonant
with a one ohm feedpoint resistance, the 50 ohm SWR will be 50:1 at
resonance.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

4197. Re: Trench for coaxial cables

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-30 21:36:54 UTC
From: Crazy George <munschNO@attglobal.net.SPAM>
Message-ID: <3d6fe9fd_1@news1.prserv.net>
Source record: 135539

Herb:

One of the replies said seal it up and no moisture will get in. This is true if you are in the desert, but everywhere else, the stuff tends to 'breathe' with changes in atmospheric pressure, and condensation forms in the relatively cooler earth. Unless you are in a swamp, some drain provision at the lowest point will eliminate standing water and eventual destruction of the coax. Keeping the drain hole open is another problem that I'll leave that to your imagination, but if you have vegetation with roots around the area, it will find the hole due to the tiny increase in moisture.

And, whatever size pipe or conduit you were considering using, double it (area, not diameter). I know of no one who regrets that. I know a lot of people who regret not doing that, including yours truly. There will always be another project or two requiring another cable or 3.

--
Crazy George
Remove NO and SPAM from return address
Herb Rosenberg <kg6ok@pacbell.net> wrote in message
news:dGYa9.6812$I01.714493219@newssvr13.news.prodigy.com...
> I am considering running a 30 foot trench from the base of my tower to my
> ham shack for my coaxial cables, and would like to here comments /
> suggestions from anyone that has done this before, on things to do / not
do,
> etc.
>
> All of my cables are 9913, and I have a bundle of about 8 feedlines.
>
> I am thinking about a inch conduit, and wondering about a few things:
(BTW,
> I live in Southern California)
>
> How deep should the trench be below ground?
>
> What kind of pipe is best to use?
>
> Should I drill holes in the bottom side of the pipe so water can drain
out?
>
> Should I place some gravel on the top of the trench before I lay the pipe
on
> top, to help with drainage?
>

> Anything else I should know?
>
> Thanks for your help.
>
> Herb - KG6OK
>
>
>
>
>

4198. Re: Questions on EZNEC and TLA

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-30 22:27:01 UTC
From: n7ws@nowhere.com
Message-ID: <3d6fc95f.22334245@news.triconet.org>
Source record: 135540

On Fri, 30 Aug 2002 16:00:43 GMT, "Floyd Sense" <sentek@sprintmail.com> wrote:

|The last time I went through this, I just used my Autek analyzer, HP
|calculator and a couple of formulas from the ARRL Antenna Handbook. All
|went well and the antenna worked as it should. Now, with more time on my
|hands, I'm using EZNEC and TLA, and I'm not sure it's any easier! Here's a
|simple antenna problem I want to solve:
|
|The antenna in question is a 1/4 wavelength vertical for 40 meters, with two
|quarter wave radials (perfectly horizontal), with the base of the vertical
|and the radials at 15 feet above ground. I used EZNEC to analyze the
|situation, and find that the feedpoint impedance is 26 ohms at resonance.
|So far so good, but it appears that using the EZNEC 3.0 I can't save this
|antenna design for later use - that requires EZNEC Pro - is that correct?
|If so, how are you EZNEC users saving your designs? I understand that I can
|build a file with the wire definitions and maybe that's how users do it?
|
|Next, I want to use a coax stub (shunt connected) near the feedpoint to
|effect a match to 50 ohm coax (stub of same coax). Is there anyway using
|EZNEC to determine the stub length and distance from feedpoint? I know
|about the transmission line stuff in EZNEC, but it isn't clear to me whether
|this can be of any use in this case.
|
|Last, I have the 18th edition of the ARRL Antenna Book, and the section on
|stubs talks about using the TLA program on the accompanying diskette to
|determine stub length and position. So, I installed the TLA program and
|read the descriptive text, but it's not clear how one would use it for this
|purpose.
|
|This is an exercise in using the tools - please don't tell me why stub
|matching is no good or that the antenna would be better with 120 radials!
|Any other ideas or advice would be greatly appreciated.

As you've been advised elsewhere, you can save the design in EZNEC. If you want to design your stub matching network at only one frequency, you could simply write down the feedpoint Z using the "Src Dat" button and look at the Impedance. If you want to do a frequency sweep then you can save the data to a file and see the impedance at each frequency.

You can then fiddle with this data in TLA. However, a better way is to download the Excel program XLZIZL.xls from www.qsl.net/ac6la and use it.

EZNEC saves a file named LastZ.txt which can be read directly by XLZIZL. The frequency and R jX then become inputs into the spreadsheet. Now you can use the program to build a matching network of up to 5 elements (or more with

intermediate steps), including transmission lines, and open and shorted stubs. The parameters for all of the common transmission line types are built in and these include the effects of loss.

The common Tee, Pi and L networks can be constructed automatically with the values optimized using the Excel solver or you can "tune" each component while watching the action on a Smith chart.

This is a wonderful program and to top it off, it's free.

It took me about 10 minutes to "build" a version of your antenna and match it.

I used #12 copper wire radiator 34.3', radials 35', RG-213 8.8' from feedpoint to shorted stub of length 30.5'.

A better solution (an exercise left for the reader) is to shorten the vertical element to make the feedpoint capacitive and use a shorted stub across the feed.

Wes N7WS

4199. Re: What is the big deal with fractal and EH ????????

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-30 22:29:57 UTC
From: k1bqt@aol.com
Message-ID: <20020830182957.00941.00000262@mb-ct.aol.com>
Source record: 135541

>... two terms brings howls and jeers like nothing I have ever seen.<

From a technical standpoint, there's really no comparison between fractal loading and EH antennas. In all fairness, fractal loading actually works (although, arguably, not as well as other solutions) and is being studied and reported upon in various forums including the IEEE. The flap on this newsgroup about fractals was probably more personality centered--kinda like witnessing a Tanya Harding vs Paula Jones WWF smackdown.

The EH, on the other hand, appears to be more in the carny catagory ("Heap Big Smoke and No Fire" if you have roots in the 50's). If you go back to the Miltonian era, the supporting literature reads like "Mrs. Malaprop Does Physics". EH proponents are religious in their zeal. "Blessed are the Believers", they whail. Meanwhile, others counter, "No, blessed are the Wee Beavers"! The Wee Beavers, of course, are the ones who actually took time in EE101 to study and comprehend what ole J.C.Maxwell was really trying to say.

Rick K1BQT

4200. Re: Trench for coaxial cables

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-30 22:48:04 UTC
From: Sylvan Butler <Znospam+noZs_0208@hpb13799Z.Zboi.hpZ.com.invalid>
Message-ID: <slrnamvth4.cvo.Znospam+noZs_0208@hpb13799Z.Zboi.hpZ.com.invalid>
Source record: 135542

On Fri, 30 Aug 2002 16:36:54 -0500, Crazy George <munschNO@attglobal.net.SPAM> wrote:
> One of the replies said seal it up and no moisture will get in. This is
> true if you are in the desert, but everywhere else, the stuff tends to
> 'breathe' with changes in atmospheric pressure, and condensation forms in

Exactly. The electrical code recognizes this in requiring
conductors in buried conduit to meet the same standards as
conductors buried in the earth.

Where I live is classifed as "mountain desert" (less than 12in of
moisture per year, relative humidity seldom as high as 20% in the
daytime and often under 30% in the cool of night) but conduit still
fills with water. I once put air pressure into a friend's pipe that
he "knew" was dry, and blew out a gallon or two of water.

> the relatively cooler earth. Unless you are in a swamp, some drain
> provision at the lowest point will eliminate standing water and eventual
> destruction of the coax. Keeping the drain hole open is another problem
> that I'll leave that to your imagination, but if you have vegetation with
> roots around the area, it will find the hole due to the tiny increase in

Bury at least 18in deep and most roots won't bother you. Put a
large area of gravel under/around the drain hole and consider using
a "automatic drain" intended for sprinkler systems. That way you
can pressurize the pipe if need be, plus it prevents all the
critters, dirt, etc. or most of everything from using that opening
to get into your pipe.

> And, whatever size pipe or conduit you were considering using, double it
> (area, not diameter). I know of no one who regrets that. I know a lot of

Yup. And once you are _certain_ the size is big enough, double it
one more time. If that isn't practical (already running a 4" ...)
then run two pipes instead of one. While the hole is open, do it.

sdb
--
| Sylvan Butler | Not speaking for Hewlett-Packard | sbutler-boi.hp.com |
| Watch out for my e-mail address. Thank UCE. >>>> change ^ to @ <<<< |
They that can give up essential liberty to obtain a little temporary
safety deserve neither liberty nor safety. --Benjamin Franklin, 1759
Stop Senator Fritz Hollings-S2048, Palladium, and TCPA, NOW!
http://investor.cnet.com/investor/news/newsitem/0-9900-1028-20173919-0.html
http://zdnet.com.com/2100-1106-945976.html

4201. Re: What is the big deal with fractal and EH ????????

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-30 23:44:12 UTC
From: fractenna@aol.com
Message-ID: <20020830194412.15711.00000124@mb-cv.aol.com>
Source record: 135543

>
>>... two terms brings howls and jeers like nothing I have ever seen.<
>
>From a technical standpoint, there's really no comparison between fractal
>loading and EH antennas. In all fairness, fractal loading actually works
>(although, arguably, not as well as other solutions) and is being studied and
>reported upon in various forums including the IEEE. The flap on this
>newsgroup
>about fractals was probably more personality centered--kinda like witnessing
>a
>Tanya Harding vs Paula Jones WWF smackdown.
>
>The EH, on the other hand, appears to be more in the carny catagory ("Heap
>Big
>Smoke and No Fire" if you have roots in the 50's). If you go back to the
>Miltonian era, the supporting literature reads like "Mrs. Malaprop Does
>Physics". EH proponents are religious in their zeal. "Blessed are the
>Believers", they whail. Meanwhile, others counter, "No, blessed are the Wee
>Beavers"! The Wee Beavers, of course, are the ones who actually took time in
>EE101 to study and comprehend what ole J.C.Maxwell was really trying to say.
>
>Rick K1BQT
>

Hi Rick--

Could you cite a reference which shows, for example, that in a confined form factor, fractal loading--that is the best fractal used-- is no better than other methods?

I am not familiar with said reference; I would also like to know how 'better' is defined.

All the unbiased runs I have seen on our fractal GO (genetic optimizer) FRAGO cluster start with a 'seed' of conventional loading methods--such as meander line loading (MLA's); 'T's; serpentine, and so on, and then iterate to better gains and bandwidths with more complex structure--which end up being fractal in shape. These runs do not in any way bias towards fractals: indeed, many of the early populations are conventional variants, superseded in the figure of merit by more complex, fractal forms. If they were better, or even the same, they would not be superseded, but make it to the final, 'convergent' generation.

One should note that this inherent growth to complexity of structure for optimized antennae was first shown 17 years ago in Landstorfer and Sacher (Optimization of Wire Antennas, Wiley, 1985) using more modest optimization methods and less exhaustive searches.

This FRAGO cluster now does over 30 NEC runs per minute in some simulations, and will surpass 1.5 million sims per month(!) in September. It typically does what a, say, 433 MHz, PC could do in year with a conventional GA in about a week. (I say this to indicate what platform I used the last time we met and to benchmark the progress of the optimization technology--which you appear to be unaware, or unfamilar with). In fact, it is now approaching the benchmark where the TOTAL number of publicly report antenna simulation runs EVER will be exceeded by it sometime in the Fall.

I'm not sure of the relevancy of taking, say, a Koch iteration 3 fractal and comparing it to some other loading method. It works fine in some cases, but is hardly the best in most cases--by a long shot.

I suspect the problem is that there are really only a small number of conventional loading geometries and methods, and as such, one hears 'fractal' and takes AN example as the indicator of all fractal possibilities. Why? I do not understand the scientific basis for such thoughts. It was neither stated nor directly inferential from anything I have written. The fractal geometry set is very, very large: the problem is finding what works best in a practical way. And, of course, what works better.

We are now long, long past the heuristic stage in fractal element antennas (the field is now 14 years old; it seems like yesterday to me!) So perhaps you are under some dated pre-conception? Or am I unaware of some hot, new result?

As I prepare a MS on these and other results, I would kindly be grateful if you could enlighten me. This post and query is informational with no sarcasm; if you speak from knowledge, as you allude to some discussion of s small team of IEEE representatives, then present it please. E-mail is fine.

73,
Chip N1IR

4202. Re: What is the big deal with fractal and EH ????????

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-31 00:00:54 UTC
From: k1bqt@aol.com
Message-ID: <20020830200054.11984.00000198@mb-mw.aol.com>
Source record: 135544

Sigh

K1BQT

4203. Re: What is the big deal with fractal and EH ????????

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-31 00:18:50 UTC
From: Dick Carroll <dixie@townsqr.com>
Message-ID: <3D6F9742.5EE45E7A@townsqr.com>
Source record: 135545

WavyDave wrote:

> I am no EE and new to AR. In looking back I see the mere mention of those
> two terms brings howls and jeers like nothing I have ever seen on any board
> in my life. So I decided to check around. Fractal? The guy that invented
> it is (or was anyway) a professor at Boston U, I see hits relating to
> research at UCLA, Yale etc etc. People are getting degrees based on papers
> they wrote on fractal. And yet I see the shit that flies back and forth
> here..... And then EH. Never heard of it myself, I go to the site, and
> this fellow has a number of seemingly very satisfied users, well documented.
> So what gives here?
> Are Hams that closed minded and unprofessional as to summarily drum out
> anyone with a new idea they dont quite understand? Maybe I should search
> for another hobby rather than associate with such folks? Or is there
> something I am missing?
> thank you for any insight to this question.

Without question, it's something you're missing. Do a Google search on
'fractal'and maybe 'fractenna' and with any luck at all you can rectify that.

Dick

4204. antenna Marconi ?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-31 01:01:26 UTC
From: equi-radio <equi-radio@wanadoo.fr>
Message-ID: <akp4impkd1@wanadoo.fr>
Source record: 135546

That it is the impedance of an antenna Marconi quarter of wave and an
antenna GroundPlane (GPA)?
Thank you

--
CRIS
christophe.torre@wanadoo.fr

4205. Re: antenna Marconi ?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-31 01:09:15 UTC
From: fractenna@aol.com
Message-ID: <20020830210915.03717.00000360@mb-cr.aol.com>
Source record: 135547

>That it is the impedance of an antenna Marconi quarter of wave and an
>antenna GroundPlane (GPA)?
>Thank you
>
>--
>CRIS
>christophe.torre@wanadoo.fr
>
>

That will depend on the GP/counterpoise used and the width of the monopole.
But I suspect you are searching for (about) 37 ohms, which is the real
impedance of a thin monopole on infinite ground.

73,
Chip N1IR

4206. Re: 9 to 1 balum FA

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-31 01:33:14 UTC
From: N4LQ <N4LQ@igLou.com>
Message-ID: <3d6ecb38_1@news.iglou.com>
Source record: 135593

Balum...he he he duh

--
Steve Ellington N4LQ.
"CAM" <Cecil.A.Moore@ieee.org> wrote in message
news:3D6E167F.D50536B@ieee.org...
> Fred Hambrecht wrote:
> > What the heck is a balum, and what does it do?
>
> A BALanced UMbrella?
> --
> cheers, CAM http://www.qsl.net/w5dxp
>
>
> -----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
> http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
> ------== Over 80,000 Newsgroups - 16 Different Servers! =-----

4207. Re: Here we go...

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-31 01:49:26 UTC
From: "J. Harvey" <JM002.Harvey_ANTI*SPAM_@Sympatico.ca>
Message-ID: <RfVb9.37965$n73.1543842@news20.bellglobal.com>
Source record: 135548

"CAM"
> Egads guys, RF *IS* photons. To the best of my
> knowledge, electromagnetic radiation requires photons.

We might as well forget it Cecil - it seems to be hopeless. Some people seem to think that 'photon' theory suddenly stops working at some arbitrary wavelength just below infrared. The fact that someone is now applying resonant wires (nano-antennas) to light (as posted at the start of this thread)... ...well, I guess that some people just aren't capable of making the mental leap and seeing the obvious.

And it's too bad that the 'interesting news' part of the posting ("...negative refractive index...", "...negative permeability and permittivity...") is ignored in favour of latching on to some detail. It's a bit like commenting on the news announcer's tie colour while WWIII is breaking out. This new technology (assuming that it is true) will stretch a few cherished rules regarding antenna theory. It will also keep Moore's Law going strong right down to individual atoms. It's big news.

4208. Re: What is the big deal with fractal and EH ????????

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-31 02:02:58 UTC
From: "J. Harvey" <JM002.Harvey_ANTI*SPAM_@Sympatico.ca>
Message-ID: <xsVb9.37967$n73.1548463@news20.bellglobal.com>
Source record: 135549

"Fractenna"
> The fractal geometry set is very, very large...

The non-fractal 'random squiggle' set is, of course, infinitely larger.
Therefore, by any definition of better, will be.

When your 'million monkeys' PC-cluster does come up with a winner, it will
be unpatentable (but perhaps copyrightable).

4209. Re: Here we go...

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-31 02:19:15 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <en90nukdd9gnkg4f4sfibd2274adtne7se@4ax.com>
Source record: 135550

On Fri, 30 Aug 2002 21:49:26 -0400, "J. Harvey"
<JM002.Harvey_ANTI*SPAM_@Sympatico.ca> wrote:

>"CAM"
>> Egads guys, RF *IS* photons. To the best of my
>> knowledge, electromagnetic radiation requires photons.
>
>We might as well forget it Cecil - it seems to be hopeless. Some people
>seem to think that 'photon' theory suddenly stops working at some arbitrary
>wavelength just below infrared. The fact that someone is now applying
>resonant wires (nano-antennas) to light (as posted at the start of this
>thread)... ...well, I guess that some people just aren't capable of making
>the mental leap and seeing the obvious.
>
>And it's too bad that the 'interesting news' part of the posting
>("...negative refractive index...", "...negative permeability and
>permittivity...") is ignored in favour of latching on to some detail. It's
>a bit like commenting on the news announcer's tie colour while WWIII is
>breaking out. This new technology (assuming that it is true) will stretch a
>few cherished rules regarding antenna theory. It will also keep Moore's Law
>going strong right down to individual atoms. It's big news.
>
>

Hi Jeff,

Take a deep breath, let the blood pulse slower and take note of one,
isolated but compelling observation made by the EE Times
"Now all the researchers have to do is build it."

The nano construction details are truly trivial. The nano factories
can build these like weaving carpet. If validation comes; then it
will be here for christmas. If they still have this on the launch pad
in next January....

73's
Richard Clark, KB7QHC

4210. Re: Here we go...

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-31 02:29:10 UTC
From: "J. Harvey" <JM002.Harvey_ANTI*SPAM_@Sympatico.ca>
Message-ID: <5RVb9.37978$n73.1559437@news20.bellglobal.com>
Source record: 135551

"Richard Clark"
> "Now all the researchers have to do is build it."
> The nano construction details are truly trivial.
> The nano factories can build these like weaving
> carpet. If validation comes; then it will be here
> for Christmas. If they still have this on the launch
> pad in next January....

It will be more like the long (mostly boring) history of the "LASER" (the quotes are for Dr. Evil :-)).

This new concept will be a technology in search of applications for at least 5 years. The chip makers will be happy to have it on the shelf for when they reach the point where they need it and have all the other necessary bits in place.

(Was it ?) Arthur C. Clark (that) said that everyone always optimistically overestimates human progress and change in the short term, and always massively underestimates human progress and change in the long term.

4211. Re: Traffie Hex-beam FS

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-31 03:33:09 UTC
From: jimkd1bx@aol.com
Message-ID: <20020830233309.25439.00000239@mb-mh.aol.com>
Source record: 135552

Don't really feel like taking down my tower and A-3.

Jim

4212. Re: Here we go...

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-31 06:49:12 UTC
From: 'Doc <w5lz@icok.net>
Message-ID: <3D7066D7.99F19B3C@icok.net>
Source record: 135553

Actually, I think it was 'Hal'.
'Doc

4213. Re: NEWS: Here we go...

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-31 08:33:10 UTC
From: "W.G Ewald" <wgewald@att.net>
Message-ID: <ovv0nu001ilunls9ir72h4e0381ppvu8lv@4ax.com>
Source record: 135554

On Fri, 30 Aug 2002 00:20:53 -0400, "J. Harvey"
<JM002.Harvey_ANTI*SPAM_@Sympatico.ca> wrote:

>http://www.eetimes.com/story/OEG20020827S0019
>
>"...negative refractive index..."
>"...negative permeability and permittivity..."
>
>Interesting...
>
>
>I especially like the following extract:
>
>"The tiny wires, 10-nm thick and as long as the wavelength of light they are
>tuned to enhance, were arranged in pairs parallel to each other. When the
>resonant wavelength of light hit the wires, they resonated..."
>
>Long time lurkers will remember the hopeless debate about the nature of
>light (it's simply RF).
>
>::
>:-)>
>::
>
>
>"Shalaev's group experimented with many different nano-antenna shapes, from
>spheres and wires to more complex geometric configurations based on repeated
>*fractal-like* patterns."
>
>:-)
>
>
>From: "Doug Matulis" <doug.matulis@docsense.com>
Newsgroups: rec.radio.amateur.antenna
Subject: New material appears to defy teh laws of physics
Date: Fri, 6 Apr 2001 13:56:02 -0500
X-Priority: 3
X-MSMail-Priority: Normal
X-Newsreader: Microsoft Outlook Express 5.50.4133.2400
X-MimeOLE: Produced By Microsoft MimeOLE V5.50.4133.2400
Lines: 33
Message-ID: <3ace1158$0$5349@wodc7nh6.news.uu.net>
NNTP-Posting-Host: 208.218.113.7
X-Trace: reader2.news.uu.net 986583384 5349 208.218.113.7

WASHINGTON (Reuters) - Experiments on a newly created composite material
have shown that it bends microwaves passing through it in a direction
that seems to defy the laws of physics, scientists said on Thursday, in
a discovery that could help in making more advanced lenses and
antennas.

The composite, made of fiberglass and copper, caused microwaves shot
through it to bend in an opposite direction than the laws of physics
predict, making it the first material to have a ``negative index of
refraction,'' physicists said in a study appearing in the journal
Science.

Electromagnetic radiation -- such as light and microwaves -- passing
through ordinary materials is deflected in the same direction, giving
those materials a ``positive index of refraction,'' they said. An
example is the way light bends when it passes from air to water.

The composite could be useful in developing better antennas and other
technology for the cellular communications industry, said physicist
Sheldon Schultz, who created the material along with colleagues David
Smith and Richard Shelby at the University of California at San Diego.

Although the composite cannot focus visible light, Schultz said he
hopes
that obstacle can be overcome in the future.

Physicist John Pendry of London's Imperial College has said that a
material with a ``negative refraction'' would make possible the
construction of a lens capable of focusing light to limits not
currently
achievable.

http://dailynews.yahoo.com/h/nm/20010405/sc/material_dc.html

4214. Re: Traffie Hex-beam FS

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-31 10:41:32 UTC
From: fractenna@aol.com
Message-ID: <20020831064132.03737.00000276@mb-cr.aol.com>
Source record: 135555

>Don't really feel like taking down my tower and A-3.
>
>Jim
>

Ah, I understand. I used to rule my body through my brain. But as I get older, my knees seem to control things, or at least they have veto power. Hi!

73,
Chip N1IR

4215. 603 beam and tower 4sale

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-31 11:15:04 UTC
From: Me <j.dauphinais@worldnet.att.net>
Message-ID: <Yy1c9.44268$Ke2.3113498@bgtnsc04-news.ops.worldnet.att.net>
Source record: 135556
Cross-posted to:
rec.radio.amateur.digital.misc,rec.radio.amateur.antenna,rec.radio.amateur.equipment,rec.radio.amateur.homebrew

I have for sale 1 full size "HY-Gain" beam 10 meters. fully assembled
for your inspection. 13' Boom and longest element is 22' $100.00 I also
have a steel tower totaling 25'. this is in 3 sections 1 10 foot st8 and 1
5foot st8 and 1 10 foot top section. I don't not have a rotator. $50.00.
pickup only from Nashua,NewHampshire. I am selling these because they are to
big for my new QTH. This beam has spent a large portion of its life in
storage. 73's Jeff AA1GR

4216. B'nut HF5B beam - minimum distance from metalwork?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-31 13:15:38 UTC
From: MW0CDO <gw7lhi@hotmail.com>
Message-ID: <akqfhn$1jo8l8$1@ID-117699.news.dfncis.de>
Source record: 135557

Hi all.

I've recently installed a Butternut HF5B "Butterfly" beam.

It's boom is up around 30ft AGL.

Does anyone have actual practical experience of the minimum distance required from the antenna to nearby metal structures to avoid coupling or detuning issues?

Am I correct in assuming 1/2 wavelength clearance as a minimum?

The reasons for asking as follows:

1) I guyed the support mast with 2mm diameter multistranded steel hawsers, which are attached about 6 feet (2m) below the boom. The 3 guys are at roughly 45 degrees to the mast.

2) I have a Butternut HF6v vertical located about 10 feet (3 m) from the support mast.

3) Neighbour has a large (18ft x 15ft or 6m x 5m) metal clad (sides and roof) outbuilding in his yard... the vertical is around 7 ft (2m) from one side of it, and the beam is around 20 feet (7m) from it.

I note a significant change in SWR when rotating the HF5B beam. Laying the vertical on the ground affects the amount of change in SWR as the antenna is rotated on some bands. on other bands there isn't much difference with or without the vertical in place.

I cannot do anything about the metal clad building next door, but I can move the vertical and replace the guys with polypropylene rope.

I haven't been able to release the metal guys to check for any difference yet, because of winds at the moment.

Despite all of the above, the antenna works well compared to the vertical... and the vertical also works well here, very wet ground and about 400 yards from the sea shore.
The vertical is most definitely influenced by the building next door.. the SWR will alter as wind causes the top of the antenna to move nearer/further away from it.

My neighbour tells me that he does intend to remove the steel cladding from the outbuilding at some point.. still waiting after almost 6 years, but he's a great neighbour so don't want to complain, they don't say anything about the antenna farm in my yard! :-)

I suppose I could move the beam to the house end of my lot, but I don't really want to do this in case it provokes RFI problems etc.

Any thoughts on the above would be appreciated.

Paul MW0CDO.

4217. Re: Questions on EZNEC and TLA

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-31 13:35:12 UTC
From: Floyd Sense <sentek@sprintmail.com>
Message-ID: <kC3c9.440$tp3.46948@newsread1.prod.itd.earthlink.net>
Source record: 135558

Thanks, Wes. I'll get the program and give it a try. A shorted stub would probably give me less problem over the long haul than an open one anyway. For this particular antenna, it appears that an even better solution is to just slope the two radials down towards the ground, thus raising the feedpoint impedance to around 50 ohms.
--
K8AC

>
> As you've been advised elsewhere, you can save the design in EZNEC. If you want
> to design your stub matching network at only one frequency, you could simply
> write down the feedpoint Z using the "Src Dat" button and look at the Impedance.
> If you want to do a frequency sweep then you can save the data to a file and see
> the impedance at each frequency.
>
> You can then fiddle with this data in TLA. However, a better way is to download
> the Excel program XLZIZL.xls from www.qsl.net/ac6la and use it.
>
> EZNEC saves a file named LastZ.txt which can be read directly by XLZIZL. The
> frequency and R jX then become inputs into the spreadsheet. Now you can use the
> program to build a matching network of up to 5 elements (or more with
> intermediate steps), including transmission lines, and open and shorted stubs.
> The parameters for all of the common transmission line types are built in and
> these include the effects of loss.
>
> The common Tee, Pi and L networks can be constructed automatically with the
> values optimized using the Excel solver or you can "tune" each component while
> watching the action on a Smith chart.
>
> This is a wonderful program and to top it off, it's free.
>
> It took me about 10 minutes to "build" a version of your antenna and match it.

>
> I used #12 copper wire radiator 34.3', radials 35', RG-213 8.8' from
feedpoint
> to shorted stub of length 30.5'.
>
> A better solution (an exercise left for the reader) is to shorten the
vertical
> element to make the feedpoint capacitive and use a shorted stub across the
feed.
>
>
> Wes N7WS

4218. Re: Can I direct bury RG-213 in ground?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-31 15:03:50 UTC
From: Irv Finkleman <finkirv@shaw.ca>
Message-ID: <3D70DA9C.BEB4B327@shaw.ca>
Source record: 135559

Crazy George wrote:
>
> Si.

"
--
Diagnosed Type II Diabetes March 5 2001
Beating it with diet and exercise!
297/215/210 (to be revised lower)
58"/43"(!)/44" (already lower too!)

Visit my FINALLY UPDATED website at
http://members.shaw.ca/finkirv/

Irv Finkleman,
Grampa/Ex-Navy/Old Fart/Ham Radio VE6BP
Calgary, Alberta, Canada

4219. Muli-element wide-band J-Pole?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-31 15:13:38 UTC
From: cprstn54zz@att.net
Message-ID: <3d70d9d7.93974000@news-server.optonline.net>
Source record: 135560

Can I put two or more portable J-Pole antennas (made of twinlead or ladderline) into one PVC pipe, attach them to the same coax feedline and get a wide-band VHF antenna that will cover say from 144 MHz-165 MHz?

My inclination would be to just sandwich them together.

Ken KC2JDY
Ken
(to reply via email
remove "zz" from address)

4220. Re: What is the big deal with fractal and EH ????????

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-31 15:47:01 UTC
From: VE9SRB <srbest@att.net>
Message-ID: <Vx5c9.44537$Ke2.3136190@bgtnsc04-news.ops.worldnet.att.net>
Source record: 135561

"Fractenna" <fractenna@aol.com> wrote in message
news:20020830194412.15711.00000124@mb-cv.aol.com...
> >
>
> Hi Rick--
>
> Could you cite a reference which shows, for example, that in a confined
form
> factor, fractal loading--that is the best fractal used-- is no better than
> other methods?
>
> I am not familiar with said reference; I would also like to know how
'better'
> is defined.
>
> All the unbiased runs I have seen on our fractal GO (genetic optimizer)
FRAGO
> cluster start with a 'seed' of conventional loading methods--such as
meander
> line loading (MLA's); 'T's; serpentine, and so on, and then iterate to
better
> gains and bandwidths with more complex structure--which end up being
fractal in
> shape. These runs do not in any way bias towards fractals: indeed, many of
the
> early populations are conventional variants, superseded in the figure of
merit
> by more complex, fractal forms. If they were better, or even the same,
they
> would not be superseded, but make it to the final, 'convergent'
generation.
>
> One should note that this inherent growth to complexity of structure for
> optimized antennae was first shown 17 years ago in Landstorfer and Sacher
> (Optimization of Wire Antennas, Wiley, 1985) using more modest
optimization
> methods and less exhaustive searches.
>
> This FRAGO cluster now does over 30 NEC runs per minute in some
simulations,
> and will surpass 1.5 million sims per month(!) in September. It typically
does
> what a, say, 433 MHz, PC could do in year with a conventional GA in about
a

> week. (I say this to indicate what platform I used the last time we met
and to
> benchmark the progress of the optimization technology--which you appear to
be
> unaware, or unfamilar with). In fact, it is now approaching the benchmark
where
> the TOTAL number of publicly report antenna simulation runs EVER will be
> exceeded by it sometime in the Fall.
>
> I'm not sure of the relevancy of taking, say, a Koch iteration 3 fractal
and
> comparing it to some other loading method. It works fine in some cases,
but is
> hardly the best in most cases--by a long shot.
>
> I suspect the problem is that there are really only a small number of
> conventional loading geometries and methods, and as such, one hears
'fractal'
> and takes AN example as the indicator of all fractal possibilities. Why?
I do
> not understand the scientific basis for such thoughts. It was neither
stated
> nor directly inferential from anything I have written. The fractal
geometry
> set is very, very large: the problem is finding what works best in a
practical
> way. And, of course, what works better.
>
> We are now long, long past the heuristic stage in fractal element antennas
(the
> field is now 14 years old; it seems like yesterday to me!) So perhaps you
are
> under some dated pre-conception? Or am I unaware of some hot, new result?
>
> As I prepare a MS on these and other results, I would kindly be grateful
if you
> could enlighten me. This post and query is informational with no sarcasm;
if
> you speak from knowledge, as you allude to some discussion of s small
team of
> IEEE representatives, then present it please. E-mail is fine.
>
> 73,
> Chip N1IR

Chip,

Can you site a reference that shows, for a fixed volume, fixed total wire length and/or fixed resonant frequency, that fractal loading is the best geometry or even better than classic geometries such as a normal mode helix? Most, if not all of the articles discussing fractal antennas don't even

bother to compare the fractal geometry with other geometries

The fact of the matter is that for the electrically small resonant monopole like antenna, the height relative to the resonant wavelength primarily defines the resonant properties of the antenna (resonant resistance and bandwidth). Geometry is really only significant in its relation to how much total wire length is required to achieve resonance at a particular frequency. From that perspective, the self similar fractal geometry is inherently ineffective relative to simple meander line or normal mode helix antennas.

For a height of 6 cm, and a width 3 cm by 3 cm, and a fixed resonant frequency of 350 MHz, can your GO come up with the "best fractal geometry"? I'd like to see it and then compare it to some classic geometries.

Steve VE9SRB

4221. Re: What is the big deal with fractal and EH ????????

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-31 16:20:27 UTC
From: JWheeler <kd5bcu@yahoo.com>
Message-ID: <un1r68476deif6@corp.supernews.com>
Source record: 135562

"J. Harvey" <JM002.Harvey_ANTI*SPAM_@Sympatico.ca> wrote in message
news:xsVb9.37967$n73.1548463@news20.bellglobal.com...
> "Fractenna"
> > The fractal geometry set is very, very large...
>
> The non-fractal 'random squiggle' set is, of course, infinitely larger.
> Therefore, by any definition of better, will be.
>
> When your 'million monkeys' PC-cluster does come up with a winner, it will
> be unpatentable (but perhaps copyrightable).
>
>
Or maybe they will come up with the unabridged works of Wm. Shakespeare.
Who knows?

JWheeler

4222. Cushcraft MA5B --painted?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-31 16:27:14 UTC
From: rcuffee@hotmail.com
Message-ID: <df27559b.0208310827.17ab79a9@posting.google.com>
Source record: 135563

I live in a subdivision that has antenna restrictions; however, I am thinking about installing a MA5B mini beam at 25 feet. Can this antenna be painted to reduce its visibility without affecting the performance?

Thanks,

Reggie

4223. Re: What is the big deal with fractal and EH ????????

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-31 16:27:52 UTC
From: k1bqt@aol.com
Message-ID: <20020831122752.15145.00000540@mb-fy.aol.com>
Source record: 135564

Chip--

I think Steve has the right idea. If your monkey has generated a fractal shape you believe to be superior to all conventional loading methods, present it. If it's new, the burdon's on you.

Rick K1BQT

4224. Re: Cushcraft MA5B --painted?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-31 18:02:02 UTC
From: k1bqt@aol.com
Message-ID: <20020831140202.11994.00000401@mb-mw.aol.com>
Source record: 135565

Most paints won't destroy an antenna's ability to function. However, it may lower the beam's resonant frequnecies a little due to dielectric loading. If you use a caustic solution to prep the aluminum, however, that treatment could create a corrosion problem.

Rick K1BQT

4225. Re: Muli-element wide-band J-Pole?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-31 18:50:50 UTC
From: chuck & shirley hawks <s_hawks@bellsouth.com>
Message-ID: <N28c9.12361$FJ1.653403@e3500-atl1.usenetserver.com>
Source record: 135566

Try a GOOGLE search for cactus J-Pole. it is a multi-band antenna.

--

Chuck
KE4ETH

x-no-archive: yes
"Ken" <cprstn54zz@att.net> wrote in message
news:3d70d9d7.93974000@news-server.optonline.net...
> Can I put two or more portable J-Pole antennas (made of twinlead or
> ladderline) into one PVC pipe, attach them to the same coax feedline
> and get a wide-band VHF antenna that will cover say from 144 MHz-165
> MHz?
>
> My inclination would be to just sandwich them together.
>
> Ken KC2JDY
> Ken
> (to reply via email
> remove "zz" from address)

4226. Re: What is the big deal with fractal and EH ????????

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-31 19:05:15 UTC
From: fractenna@aol.com
Message-ID: <20020831150515.02708.00000002@mb-cc.aol.com>
Source record: 135567

>Chip--
>
>I think Steve has the right idea. If your monkey has generated a fractal
>shape
>you believe to be superior to all conventional loading methods, present it.
>If
>it's new, the burdon's on you.
>
>Rick K1BQT
>
>

Rick-

Kindly read my posts; I said I was preparing a MS, and asked you to provide references for the assertions you have made. In other words, we are quite in accord on this issue.

In addition, Steve Best has been asked to publicly debate fractal antennas, and without an answer yet from him, it makes it somewhat challenging to publish a result if it is intended to be published as part of a debate proceedings. I, for one, would like closure. I also want it clear that as an ethical scientist, I gave a colleague the opportunity to respond in a means defined within the purview of scientific dissemination.

You go on the false premise that I have either something to hide, or am not honest. Neither is correct Rick. Please: as your colleague, kindly provide me the info I requested to enlighten your comments.

With Many Thanks,

Chip N1IR

4227. Re: Muli-element wide-band J-Pole?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-31 19:12:34 UTC
From: cprstn54zz@att.net
Message-ID: <3d711301.108607843@news-server.optonline.net>
Source record: 135568

On Sat, 31 Aug 2002 13:50:50 -0500, "chuck & shirley hawks"
<s_hawks@bellsouth.com> wrote:
>Try a GOOGLE search for cactus J-Pole. it is a multi-band antenna.

As best I can tell, the "cactus J-Pole" is a standard 2m/70cm J-Pole
out of pipe that looks like a cactus. I am talking about stacking
J-Poles to broaden the 2m part to 144-165 and I don't much care about
the 70cm part (at present).

I don't think I can just add a third (shorter) branch to the standard
cactus to get 156-65 MHz, either. The stub would be too long. It
would require a second stub. Better just to stack two of them, if it
works.

Ken KC2JDY

Ken
(to reply via email
remove "zz" from address)

4228. Re: What is the big deal with fractal and EH ????????

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-31 21:09:23 UTC
From: k1bqt@aol.com
Message-ID: <20020831170923.03130.00000508@mb-cs.aol.com>
Source record: 135469

>I said I was preparing a MS....and asked you to provide references for the assertions you have made.<

If I elect to write an article that asserts fractal loading is less efficient than other forms, I will be duty-bound to provide both references and ample data. However, an opinion stated in passing doesn't require it.
>...Steve Best has been asked to publicly debate fractal antennas...<

A dead horse. There's already an inclusive IEEE-sponsored forum dedicated to discussing fractals. Why would you wish to circumvent that process?

>You go on the false premise that I have either something to hide, or am not honest.<

Objection! Speculation drawing a false conclusion! Would you care to rephrase?

Rick K1BQT

4229. Re: Cushcraft MA5B --painted?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-31 21:10:32 UTC
From: "Malky @ Westhill" <alcedo.atthis@talk21.com>
Message-ID: <akrbc9$1l40aj$1@ID-113788.news.dfncis.de>
Source record: 135470

> I live in a subdivision that has antenna restrictions; however, I am
> thinking about installing a MA5B mini beam at 25 feet. Can this
> antenna be painted to reduce its visibility without affecting the
> performance?
> Thanks,
>
> Reggie

If you wish to paint Aluminium, then it would be best to use a P.V.B based primer.
(Poly vinyl butyl)

Malky

4230. Re: Cushcraft MA5B --painted?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-31 21:52:51 UTC
From: George Kinzer <horseflygk@worldnet.att.net>
Message-ID: <TUac9.45023$Ke2.3172835@bgtnsc04-news.ops.worldnet.att.net>
Source record: 135471

naw, just clean well,<aluminum with white vinegar>, prime gray and have a
nice day..done this many a time, still gray....

--
If first you don't succeed, do the same thing again...see what happens

4231. Re: What is the big deal with fractal and EH ????????

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-31 21:58:38 UTC
From: fractenna@aol.com
Message-ID: <20020831175838.02698.00000025@mb-cc.aol.com>
Source record: 135472

>
>If I elect to write an article that asserts fractal loading is less efficient
>than other forms, I will be duty-bound to provide both references and ample
>data. However, an opinion stated in passing doesn't require it.
>>...Steve Best has been asked to publicly debate fractal antennas...<
>
>A dead horse. There's already an inclusive IEEE-sponsored forum dedicated to
>discussing fractals. Why would you wish to circumvent that process?
>

What, exactly, is that forum? I am not familiar with it. I hardly wish to circumvent anything. Why would you think that? It seems to me you are assuming knowledge I do not possess in this regard.

>>You go on the false premise that I have either something to hide, or am not
>honest.<
>
>Objection! Speculation drawing a false conclusion! Would you care to
>rephrase?
>
>Rick K1BQT
>

No; I would like to invite you to lunch. C'mon down and I'll show you the machine. Always open to good tests, benchmarks, and so on. A sincere offer.

73,
Chip N1IR

4232. Re: What is the big deal with fractal and EH ????????

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-31 22:00:35 UTC
From: 'Doc <w5lz@icok.net>
Message-ID: <3D713C76.4EA8A789@icok.net>
Source record: 135473

Chipy,
You sure have a convenient memory. Forgot about the responce from Steve posted here ~several~ times. Do I think you're dishonest? Yes! And you 'welsh' on your bets too. All it takes to prove that is to go back a year or two and take a look at the posts.
Careful for what you ask for, you may get it...
'Doc

4233. Re: Muli-element wide-band J-Pole?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-31 22:22:23 UTC
From: Bob Miller <bamiller@texas.net>
Message-ID: <G0FxPbR0YHYZDw9z2MsrmDQdKFE=@4ax.com>
Source record: 135474

cprstn54zz@att.net (Ken) wrote:

>On Sat, 31 Aug 2002 13:50:50 -0500, "chuck & shirley hawks"
><s_hawks@bellsouth.com> wrote:
>>Try a GOOGLE search for cactus J-Pole. it is a multi-band antenna.
>
>As best I can tell, the "cactus J-Pole" is a standard 2m/70cm J-Pole
>out of pipe that looks like a cactus. I am talking about stacking
>J-Poles to broaden the 2m part to 144-165 and I don't much care about
>the 70cm part (at present).
>
>I don't think I can just add a third (shorter) branch to the standard
>cactus to get 156-65 MHz, either. The stub would be too long. It
>would require a second stub. Better just to stack two of them, if it
>works.
>
>Ken KC2JDY

Or, you could use the twin-lead as twin vertical dipoles on a single feedline,
one side cut for 2 meters, the other for the marine band or whatever you're
trying to hit.

Bob
k5qwg

>
>
>Ken
>(to reply via email
>remove "zz" from address)

4234. Dr. Kabbary's New EM Equations

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-31 22:25:36 UTC
From: Mont O'Leary <k0ycn@arrl.net>
Message-ID: <akrg5j$di4$1@news.chatlink.com>
Source record: 135475

Current issue of AntennaX has an article by a Dr. Kabbary which purports to show that Ampere had it wrong when he determined that conduction current caused the magnetic field. This guy claims that, even with direct current, magnetic fields are entirely caused by displacement current. Thus Maxwell's fourth equation is wrong. See http://www.antennex.com/shack/Sep02/em.html for details. Comments?
73, Mont - K0YCN

4235. Re: Dr. Kabbary's New EM Equations

Newsgroup: rec.radio.amateur.antenna
Date: 2002-08-31 23:33:22 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <7pj2nusvbejquq6b6d65jagk8h1i9uksec@4ax.com>
Source record: 135476

On Sat, 31 Aug 2002 17:25:36 -0500, "Mont O'Leary" <k0ycn@arrl.net>
wrote:

>Current issue of AntennaX has an article by a Dr. Kabbary which purports to
>show that Ampere had it wrong when he determined that conduction current
>caused the magnetic field. This guy claims that, even with direct current,
>magnetic fields are entirely caused by displacement current. Thus Maxwell's
>fourth equation is wrong. See http://www.antennex.com/shack/Sep02/em.html
>for details. Comments?
>73, Mont - K0YCN
>

Hi Mont,

It is incredibly difficult to get beyond the paragraph sized sentences
that wander the intellectual dustheap in search of a jewel:

"Also to get the correct antenna theory rather than the present
antenna theory which is full of the well known many
approximations, assumptions and the unknown near field mechanism
of field reaction of building wave propagation or power radiation,
only the assumed far field, and its magnetic vector potential
related to the assumed sinusoidal (of no proof) current
distribution on the antenna elements, using moment methods and
mode theory; both full of the severe approximations of the phase
relationship in both macro and the neglected microscopic level,
this microscopic level in which field reactions occurs."

The baloney only gets thicker wading further into this drek.

73's
Richard Clark, KB7QHC

4236. Re: Dr. Kabbary's New EM Equations

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-01 00:11:38 UTC
From: k1bqt@aol.com
Message-ID: <20020831201138.18884.00000468@mb-fz.aol.com>
Source record: 135477

You're right Richard, it's impossible to address such gibble! It's like reading a Jack Keroac three-page rim-shot run-on bagetelle blah-blah sentence that paints a Jose Cuervo stained sepia-tone likeness of some franco-file nowhere venture into a frosted Quebec City universe of self-impregnated genius!

Oh-oh, did I really write this?. No more Tequila for me!

Rick K1BQT

4237. characteristic impedance of 14ga 2 conductor as dipole

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-01 00:17:42 UTC
From: 0junk4me@bellsouth.net
Message-ID: <G0dc9.16209$vY2.286994@e3500-atl2.usenetserver.com>
Source record: 135478

HI folks,

I live in an inner city townhouse, two story, building's total length around 108 feet. Once the roof tower is installed for the 2 meter vertical I"ll have enough room to get a 75 meter dipole up easily I'm certain. However I'm curious about a couple of things.

I bought some regular 14ga 2 conductor wire for another job at Lowes a few months ago and have about 150ft of it left. TO my way of thinking this should not exhibit any strange characteristics when fed as a regular center fed dipole.

STill debating whether I should go to the expense of a commercially made balun (probably wouldn't hurt anything and might help with rf issues0 but looking for input from those who've been able to do a little more playing with this stuff.

tHis antenna would be basically a flattop with the ends drooping slightly but secured by ropes to not be in physical contact with the building. Any thoughts anyone? I've about a week before I get my climber up to do the work so want to do it right once and then only have to send somebody up for periodic maintenance as I don't climb anymore.

73 de kb0ruu

Richard WEbb

Electric SPider Productions,
amateur radio call kb0ruu

Replace anything before the at symbol with elspider for real email reply or use my callsign at mmsn.org

4238. Re: characteristic impedance of 14ga 2 conductor as dipole

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-01 02:03:49 UTC
From: 'Doc <w5lz@icok.net>
Message-ID: <3D717577.C822246D@icok.net>
Source record: 135479

Richard,
Concidering how and where you will be mounting
the '75' meter antenna, the balun will probably be
unnecessary.
'Doc

4239. 12-13 years of CQ-QST Magazines

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-01 02:21:30 UTC
From: EAG <sales@unihat.com>
Message-ID: <KQec9.10908$IT6.3043141801@newssvr11.news.prodigy.com>
Source record: 135480

I have 12-13 years (1989-2002) of CQ and QST Magazines for anyone who wants to pick them up (Dallas, TX). They would be great for a club library. Cleaning house and need to get rid of them. 73, Ed - N5NUG

4240. Re: NEWS: Here we go...

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-01 07:27:51 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <r6e3nuksf102e4o32mmce5i5hu96esa53n@4ax.com>
Source record: 135481

On Sat, 31 Aug 2002 08:33:10 GMT, W.G Ewald <wgewald@att.net> wrote:

>On Fri, 30 Aug 2002 00:20:53 -0400, "J. Harvey"
><JM002.Harvey_ANTI*SPAM_@Sympatico.ca> wrote:
>
>>http://www.eetimes.com/story/OEG20020827S0019
>>
>>"...negative refractive index..."
>>"...negative permeability and permittivity..."
>>
>>Interesting...
>>
snip
>
>Physicist John Pendry of London's Imperial College has said that a
>material with a ``negative refraction'' would make possible the
>construction of a lens capable of focusing light to limits not
>currently
>achievable.
>
>http://dailynews.yahoo.com/h/nm/20010405/sc/material_dc.html
>

Hi All,

These two links offer what I have been seeing demanded by others: the consideration of a novel idea that could revolutionize antennas.

True to form, those whose stentorian calls for a new order, only pound the drum for a new order when their favorite design appeared to be ignored (call it eh/cfa/fractal/loops on a stick/what-have-you). When it comes to real news with real content by real scientists - silence and total indifference from those same proud trailblazing experimenters. reminds me of those once-in-a-lifetime queries (see sillyWilly or whatever he called himself) posted here about the miracles of fractals (you know, those folks who appear out of nowhere and pine away about the poor treatment afforded to the pioneers who struggle to educate us in the ways of these new physiks). Strange how they appear in concert with the maligned and offended innocent not far behind who bravely steps up to reclaim dignity and to present new "findings" (which turns out to be long on claim and short on content - still). The strange part (as some have already second guessed) is how these "seemingly" chance postings precede those announcements. Not so strange is their total abandonment of the topic once the "star" comes on stage for a performance (with trained GO chimps?). Pathetic as a

keyword still seems operative.

I found W.G Ewald's link to be far more productive, leading to actual details of the experiment and its results by Sheldon Schultz. It also revealed the actual photograph of the artificial dielectric constructed to exhibit a negative refraction. Jeff's link to Shalaev reveals a bibliography and speaking tour that easily eclipses the shallow psuedo-academic nonsense offered by the fractal community.

The body of work exposed by these two links, and the pages they link to in turn, reveal a considerable effort of thought and basic study so often discarded by our wanabee nobel laureates who would rather tell of how they sold matches on snow covered street corners rather than be traduced by the smarmy intellectuals who pooh-poohed (what cloying pathos) their ideas.

I can't say that I am convinced of these revelations, but they do offer more data than the previous 6 years of fractal/cfa/eh babble combined.

73's
Richard Clark, KB7QHC

4241. Wanted: Cable with N's, SMA's

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-01 12:09:34 UTC
From: fractenna@aol.com
Message-ID: <20020901080934.11925.00000501@mb-mw.aol.com>
Source record: 135482

Hi!

I am looking for used cable for testing from 433 Megs up. If you are liquidating anything in 15-25 ft lengths, please let me know; looking for minimum ripple. Would need to see S11 for open; short; and 50 ohms.

Kindly e-mail response.

Thanks!

73,
Chip N1IR

4242. Re: Cobbweb antenna question

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-01 12:17:55 UTC
From: rckchp@comcast.net
Message-ID: <6dc33f40.0209010417.2cb08138@posting.google.com>
Source record: 135483

I have no info about the performance of the Cobbweb antenna......several months aga I was considering purchasing one and I sent several email inquires to the manufacturer but they didn't bother to reply. Perhaps they think its too much trouble to market/sell to hams in US.....draw your own conclusions.....

Rich A. K2CPE

4243. Re: Cobbweb antenna question

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-01 12:28:00 UTC
From: rckchp@comcast.net
Message-ID: <6dc33f40.0209010428.1e3e27ec@posting.google.com>
Source record: 135484

Follow up to my previous message :

The correct spelling is : Cobwebb

Here is their URL : http://www.g3tpw.ukgateway.net/

4244. Six meter antenna height...

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-01 12:47:47 UTC
From: "John S." <jsurace@carolina.rr.com>
Message-ID: <T%nc9.66540$iP2.2927560@twister.southeast.rr.com>
Source record: 135485
Cross-posted to: alt.ham-radio.vhf-uhf,rec.radio.amateur.antenna

I have a 5/8 wave vertical for six meters and I am asking what the proper height this antenna should be installed for best performance.Is it possible to mount it too high for example on a 55' tower? I heard someone say mount it 20' to 30' off the ground not much higher.Interesting band six meters.

4245. Re: Cushcraft MA5B --painted?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-01 12:51:18 UTC
From: 'Doc <w5lz@icok.net>
Message-ID: <3D720D36.CE9D73F2@icok.net>
Source record: 135486

Reggie,
Yes, it can be painted. But is that really going to
do a lot of good? Might ought to paint the tower/mast too.
'Doc

4246. Re: Dr. Kabbary's New EM Equations

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-01 12:54:04 UTC
From: Mont O'Leary <k0ycn@arrl.net>
Message-ID: <akt31t$v2e$1@news.chatlink.com>
Source record: 135487

That was my impression too. I was kind of wondering how one might construct a zero hertz antenna... I suspect that the fractal/EH boys are already working on this though <grin>.
73, Mont - K0YCN

4247. Re: Tired of RS employees pushing Cellphones and DirectTV

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-01 13:06:44 UTC
From: Dave <ws2l@NOSPAMoptonline.net>
Message-ID: <xhoc9.4930$NV6.77759@news4.srv.hcvlny.cv.net>
Source record: 135488
Cross-posted to: alt.radio.scanner,rec.radio.amateur.antenna,rec.radio.scanner,rec.radio.shortwave

I'm an Asst. Manager for RS & if you frequent your local RS you know who the people are & who to avoid. As far as pushing cell phones goes we are under siege by our higher up's to push this stuff. Personally, if I see someone with a cell phone I don't even bother to ask I just get you what you need & get you on your way as quickly as possible. I still earn plenty of commission but after working with people directly for over 15 years (Previous Job) you can tell who might be interested & the person who knows what they want. I agree w/the other RS employee on this one, if you don't like being jumped on about wireless & satellite then take your business elsewhere. You have the right to tell an RS employee before he/she opens their mouth that you don't want to be offered a great deal & I'm sure they will back off. As far as product pricing goes, WE DO NOT make up the prices so don't bitch at us, these prices are set at the main office in Ft Worth and we have NO control over the cost of products. In fact we have no control over a lot of things and I myself would appreciate it if customers stop complaining to me & take to Ft.Worth 1-800-843-7422 or 1-800-THE SHACK if that's easier to remember.

"Dr. John (of Life)" <frellyou@privacy.net> wrote in message
news:H5ib9.535$7i3.8096@eagle.america.net...
> "rmsdec8" <rmsdec8@vgernet.net> wrote in message
> news:3D6464D2.DA863088@vgernet.net...
> >
> >
> > "Joe Bramblett, KD5NRH" wrote:
> >
> > > On Mon, 19 Nov 2001 13:27:40 -0500, "MiamiXJ" <miamixj@bellsouth.net>
> > > wrote:
> > >
> > > >Saturday I walk into RS looking for 20 - 25' of electrical cord and
> employee
> > > >says don't sell electrical cable by the foot anymore? I say OK how
> about an
> > > >extension cord I can cut up?
> > >
> > > Pay no attention to the retard behind the counter. It's usually over
> > > there with the spools of speaker wire etc. You'll probably have to
> > > buy a 100' spool, though.
> > >
> > > > Guy shows me cords and all extension cords are
> > > >15' or less and expensive as hell.
> > >
> > > And *all* 2-conductor. Apparently, nothing ever needs a ground lead

> > > anymore.
> > >
> > > >Then he jumps right into the need a phone
> > > >need a satellite dish routine. They are so damn annoying. Not to
> mention I
> > > >have been in there a bunch of times and told them I have a dish and
am
> > > >wearing a cellphone on my belt!
> > >
> > > Then the solution is simple; tell them that if they start that crap
> > > again, you're taking *all* your business elsewhere.
> > >
> > > Joe Bramblett, KD5NRH
> > > kd5nrh@kd5nrh.net
> >
> > RS will be much better off without your trade thanks!!!
> > Please take you business elsewhere !!
> > oh you don't have anywhere else?, too bad!!
> > Bye!!!
> > I'm one of the so called Morons that work for RS!!
> > Ever thought that it might be RS that gets the Staff to try to sell Cell
> Phones
> > and Sat Dishes? thats where RS makes most profits!
> > Like all stock market companies they want the best profits for the stock
> > holders!!
> > Cell Phones and Sat Dishes pay the best commision to the staff too, Jerk
> !!!!
>
> RMS; I learned this at a RS Interview. I brought it up on a crossposted
> article along the same lines as this. MY beef is that Sprint cellphones
> have been reported to me as schoddy and I really don't care about Sat
> Dishes. So leave me the frell alone. If I want that shtuff, I'll ask you
> if I can buy that schtuff. Customers are always right. Don't push us to
do
> stuff we don't want to do.
>
> John
>
>

4248. Re: Dr. Kabbary's New EM Equations

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-01 13:11:00 UTC
From: richardharrison@webtv.net
Message-ID: <23378-3D7211E4-6@storefull-2395.public.lawson.webtv.net>
Source record: 135493

Mont, K0YCN wrote:
"Current issue of Antenna X has an article by a Dr. Kabbary which purports to show that Ampere had it wrong when he determined that conduction current caused the magnetic field."

Haven`t looked this up to check, but I seem to remember it was Ampere who said: "The induced voltage is proportional to minus d phi / dt".

The Faraday screen proves coupling relies on the magnetic field when reducing the capacitive field to zero. Coupling loss is negligible using the Faraday screen. Nearly every AM broadcast station uses a Faraday screen to reduce coupling harmonics to the antenna.

Best regards, Richard Harrison, KB5WZI

4249. Re: Dr. Kabbary's New EM Equations

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-01 13:14:54 UTC
From: k1bqt@aol.com
Message-ID: <20020901091454.24588.00000563@mb-mj.aol.com>
Source record: 135489

> I suspect that the fractal/EH boys are already working on this though
<grin>.<

Fractal antennas work. The fight has always been over how efficiently. CF and
EH antennas, on the other hand, appear to have a little steeper hill to climb!

Rick K1BQT

4250. Re: Six meter antenna height...

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-01 13:19:35 UTC
From: Dennis Kaylor <k4oxg@tampabay.rr.com>
Message-ID: <3D7213F8.F744737A@tampabay.rr.com>
Source record: 135490
Cross-posted to: alt.ham-radio.vhf-uhf,rec.radio.amateur.antenna

i had a mosley diplomat 5/8 wave vertical at 60 feet and it worked wonderfully
it performed nearly as well as my 5 ele yagi 10 feet below it
i think as long as you dont go crazy high what ever you can put it at will work
just use the best feedline you can afford

"John S." wrote:

> I have a 5/8 wave vertical for six meters and I am asking what the proper
> height this antenna should be installed for best performance.Is it possible
> to mount it too high for example on a 55' tower? I heard someone say mount
> it 20' to 30' off the ground not much higher.Interesting band six meters.

4251. Re: Six meter antenna height...

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-01 13:26:00 UTC
From: W6DKN <w6dkn@qsl.net>
Message-ID: <Nsoc9.626$Ie6.584@fe02>
Source record: 135491
Cross-posted to: alt.ham-radio.vhf-uhf,rec.radio.amateur.antenna

"John S." <jsurace@carolina.rr.com> wrote in message
news:T%nc9.66540$iP2.2927560@twister.southeast.rr.com...
> I have a 5/8 wave vertical for six meters and I am asking what the proper
> height this antenna should be installed for best performance.Is it
possible
> to mount it too high for example on a 55' tower? I heard someone say
mount
> it 20' to 30' off the ground not much higher.Interesting band six meters.
>
>

My VHF/UHF antennas are on a separate 60' tower. At the top of the mast (75') is a 6 meter quad. In several tests I've found that the 2 meter and 6 meter antennas work best for local (100-300 miles) communications if I lower the tower so the antennas are at about 35'. At the lower height, I consistently get local signal reports of 10-15 db stronger signals than with the antennas at full height. However, for 2/6 meter DX it doesn't seem to make much difference.

73 de W6DKN

4252. Re: Dr. Kabbary's New EM Equations

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-01 13:42:40 UTC
From: fractenna@aol.com
Message-ID: <20020901094240.12007.00000434@mb-mw.aol.com>
Source record: 135492

>Fractal antennas work. The fight has always been over how efficiently. CF and
>EH antennas, on the other hand, appear to have a little steeper hill to
>climb!
>
>
>Rick K1BQT
>

A little strongly worded, but basically correct in a limited way.

It's not just about efficiency Rick; the bottom line is directivity;gain;form factor; multiband; broadband; frequency independence; and so on.

In other words, as it always has been: what problem are you trying to solve?

BTW, that's a serious offer on lunch. Malden has a decent Chinese buffet place.

73,
Chip N1IR

4253. Re: Tower resrtictions near an airport

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-01 16:09:08 UTC
From: SeaQuest <seaquest@canada.com>
Message-ID: <EYqc9.232035$v53.12498034@news3.calgary.shaw.ca>
Source record: 135494

The antenna height and lighting restriction depends not just on proximity to the airport. All airports have a "circuit" or route that aircraft follow as they approach and depart a given runway. It's like a big square with the runway forming one side of the square. If you are directly on the approach or departure path to a given runway, you will have much more stringent antenna restrictions than if you are well away from that path. Similarly if you are on the crosswind, base or downwind legs of the circuit the restrictions will be tight but not as bad as if you are on the approach/departure leg. Best way to tell is that if you have aircraft flying directly overhead, you are on the circuit path. Check with your aviation authority Transport Canada or FAA in the US.

"Bill Nelson" <billn@spock.peak.org> wrote in message
news:ajsn63$2md$5@quark.scn.rain.com...
> Jim <yoda581@msn.com> wrote:
> > Sorry, I should have explained myself more, but this won't be for an
amateur
> > antenna and I will be close to a small airport.
>
> It depends on what you mean by "small airport".
>
> I used to fly out of a small airport. There were three tall commercial
> radio towers only 300 ft or so off to the side of the main runway. I
> forget the height of the towers, but they were well over 200 feet tall.
>
> The airport was there long before the towers were erected.
>
> --
> Bill Nelson (billn@peak.org)
>

4254. G5RV Feedline

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-01 16:34:43 UTC
From: SeaQuest <seaquest@canada.com>
Message-ID: <Dkrc9.232064$v53.12503647@news3.calgary.shaw.ca>
Source record: 135495

I've been reading tons about the G5RV as I am just about to build my first one. I can't get a straight answer on one thing. If I am building one from scratch and will naturally be using a tuner, would I be better off with a coax feedline to the ladder line matching section or would it be better to run the ladderline right into the shack to my tuner (which handles both coax or balanced line). If coax should I go with RG8 (50 ohm) or would I be better off with RG59 (75 ohom). I should add that the run from the antenna to the tuner is 70 feet.

Jim

4255. Re: G5RV Feedline

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-01 18:28:55 UTC
From: 'Doc <w5lz@icok.net>
Message-ID: <3D725C57.D52208C6@icok.net>
Source record: 135497

Jim,
If you want to make a "G5RV" antenna, you have to
use a coax feed line to the twin lead matching section.
If you use twin lead all the way to the radio, the
antenna is no longer a "G5RV". It would still work, it
just couldn't be called a 'G5RV'.
'Doc

4256. Re: Dr. Kabbary's New EM Equations

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-01 18:36:05 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <iel4nugt2qb9s74g7lqek6ha2ads1b6fje@4ax.com>
Source record: 135498

On Sat, 31 Aug 2002 23:33:22 GMT, Richard Clark <kb7qhc@attbi.com>
wrote:

snip
> "Also to get the correct antenna theory rather than the present
> antenna theory which is full of the well known many
> approximations, assumptions and the unknown near field mechanism
> of field reaction of building wave propagation or power radiation,
> only the assumed far field, and its magnetic vector potential
> related to the assumed sinusoidal (of no proof) current
> distribution on the antenna elements, using moment methods and
> mode theory; both full of the severe approximations of the phase
> relationship in both macro and the neglected microscopic level,
> this microscopic level in which field reactions occurs."

Hi All,

I was more struck by the publisher's comment preceding this piece:
"I have left Dr. Kabbary's words as he sent them to me, with only
minor edits for punctuation and spelling. ... We would not wish to
alter the intended thought by a revision of the language of
presentation. Dr. Kabbary promises that more will follow on this
subject. ï¿½ Jack L. Stone, Publisher"

Such delicacy, such diplomacy. All window dressing to a brass-nuckled
backhand in a velvet glove. T'is a pity that when these rash
experimenteurs are given their proscenium, the actors on that stage
start hawking peanuts, popcorn and crackerjacks. When the audience
stirs for the show to get on, the cast boo the audience. Then they
expect Oscars.

On the other hand, the audience is not prime cut either.

On such a slow weekend we have the announcement of two revolutionary
ideas. One is exemplified in this tedious recitation above that falls
into the canon of standard fractal-babble (the same nonsense is found
at all scales of examination). The other comes from real science that
has implications that impact us all.

What's the difference? The cfa/eh/fractal crowd (maybe a dozen all
told) need a new theory of physiks to explain their claims - oh, and
yes, to make some money along the way(marketing being fungible for
science in their minds). The negative refraction side of the aisle
have their claims supported by conventional physics applied in
non-conventional ways - and with demonstrated results against physical
models. Is that a yawn, or what?

The cfa/fractal/eh actors strut about the stage to an audience that jeers them to offset their loss in the price of admission. This has all the hallmarks of the fascination that flies have for shit. [well, as this is my second post I must have a particular taste for it too]

It is enough that the good Dr. mocks himself by his own words (a familiar characteristic) - why not participate in a thread of substance instead?

73's
Richard Clark, KB7QHC

4257. Re: G5RV Feedline

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-01 18:57:56 UTC
From: CAM <Cecil.A.Moore@ieee.org>
Message-ID: <3D726334.AFD7E83C@ieee.org>
Source record: 135499

SeaQuest wrote:
> I've been reading tons about the G5RV as I am just about to build my first
> one. I can't get a straight answer on one thing. If I am building one from
> scratch and will naturally be using a tuner, would I be better off with a
> coax feedline to the ladder line matching section or would it be better to
> run the ladderline right into the shack to my tuner (which handles both coax
> or balanced line). If coax should I go with RG8 (50 ohm) or would I be
> better off with RG59 (75 ohom). I should add that the run from the antenna
> to the tuner is 70 feet.

The standard G5RV works well on 75m, 40m, 20m, 12m, and fairly well on 15m.
If you want to use 30m, 17m, and 10m, it would be better to go with ladder-
line all the way to the shack. In fact, G5RV himself recommended the all
ladder-line approach. This is not to say that ladder-line will solve all
the matching problems however. You will probably still have some problems
to solve on some HF bands. The free demo version of EZNEC will tell you
all you need to know. Download from www.eznec.com
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

4258. Re: NEWS: Here we go...

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-01 19:02:46 UTC
From: K7JEB <k7jeb@arrl.no_spam.net>
Message-ID: <qvtc9.46236$Ke2.3278027@bgtnsc04-news.ops.worldnet.att.net>
Source record: 135500

> The composite, made of fiberglass and copper, caused microwaves shot
> through it to bend in an opposite direction than the laws of physics
> predict, making it the first material to have a ``negative index of
> refraction,'' physicists said in a study appearing in the journal
> Science.

From the descriptions posted of the material, I am
reminded of microwave lenses made from closely
stacked-together waveguide sections. Because the
phase velocity of waves propagating through a waveguide
near cutoff is greater than the speed of light,
the artificial "dielectric" thus created exhibits an
apparent negative index of refraction. This material
seemly extends the idea to higher frequencies and to
metallic elements that can be randomly oriented and
still exhibit the required wave interactions.

--
Jim Bromley, K7JEB k7jeb @ arrl.net
Glendale, Arizona

4259. Re: Six meter antenna height...

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-01 19:19:32 UTC
From: vhfradiobuff@yahoo.com
Message-ID: <1996cb6d.0209011119.577c4e10@posting.google.com>
Source record: 135501
Cross-posted to: alt.ham-radio.vhf-uhf,rec.radio.amateur.antenna

"John S." <jsurace@carolina.rr.com> wrote in message
news:<T%nc9.66540$iP2.2927560@twister.southeast.rr.com>...
> I have a 5/8 wave vertical for six meters and I am asking what the proper
> height this antenna should be installed for best performance.Is it possible
> to mount it too high for example on a 55' tower? I heard someone say mount
> it 20' to 30' off the ground not much higher.Interesting band six meters.

Mine is only about 22 feet from the ground. I have 2 10' masts
strapped to the side of my house (it's a ranch house). The top of the
second mast is just above the top of the roof. I am currently using a
double zep antenna, which is basically two 5/8 antennas, center fed so
one whip goes up and one goes down, kind of like a sideways T. The top
whip is above the roof. The bottom whip is below the roof. I've also
used a 1/4 wave ground plane antenna at 15'. One time during a
contest, I thought I was using my 3 element yagi on the roof and it
turned out I forgot to move the antenna switch. I was actually using
the 1/4 GP antenna and was making contacts halfway across the country.

Just my $.02.

4260. Re: Radio Shack Discone Antenna Opinions ?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-01 19:23:25 UTC
From: Mike <"km6ab(nospam)"@pacbell.net>
Message-ID: <3D72693A.D2CA5788@pacbell.net>
Source record: 135502

The Radio Shack Discone is probably the bottom of the barrel of Discones in my opinion. The hollow elements are crimped to the threaded stud that secures them and they are always loose. I have had 3 Radio Shack Discones at several locations and two elements fell off my oldest one. I had an early Diamond Discone which was very similar in construction but the element attachment was far superior. The other brands may cost a little more but you will have an antenna that will last longer.

4261. Re: Tired of RS employees pushing Cellphones and DirectTV

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-01 19:31:41 UTC
From: Mike Coslo <mcoslo@adelphia.net>
Message-ID: <3D729556.3040201@adelphia.net>
Source record: 135503
Cross-posted to: alt.radio.scanner,rec.radio.amateur.antenna,rec.radio.scanner,rec.radio.shortwave

Dave wrote:

> I'm an Asst. Manager for RS & if you frequent your local RS you know who the
> people are & who to avoid. As far as pushing cell phones goes we are under
> siege by our higher up's to push this stuff. Personally, if I see someone
> with a cell phone I don't even bother to ask I just get you what you need &
> get you on your way as quickly as possible. I still earn plenty of
> commission but after working with people directly for over 15 years
> (Previous Job) you can tell who might be interested & the person who knows
> what they want. I agree w/the other RS employee on this one, if you don't
> like being jumped on about wireless & satellite then take your business
> elsewhere. You have the right to tell an RS employee before he/she opens
> their mouth that you don't want to be offered a great deal & I'm sure they
> will back off. As far as product pricing goes, WE DO NOT make up the prices
> so don't bitch at us, these prices are set at the main office in Ft Worth
> and we have NO control over the cost of products. In fact we have no control
> over a lot of things and I myself would appreciate it if customers stop
> complaining to me & take to Ft.Worth 1-800-843-7422 or 1-800-THE SHACK if
> that's easier to remember.

Let's put it this way. Some years ago, I quit going to Radio Shack because Even if I wanted to buy a couple AA batteries, I would have to give my name, address, telephone address, and other stuff EVERY single time. If I bought something on a corp account, I had to sign something like six forms, and the transaction took what seemed like forever.

I started going again because they eliminated that stupid idea.

But I can assure you, if I get prodded to buy a cellular phone every time I walk in the store, I'll stop buying anything there again.

The corporate suits who run the show are seriously misinformed about the shopping public. They will turn away business for the sales push.

The really interesting thing is that after the big cell phone push, which will drive the non-cell seeking public away, which means that the store sales will become mostly cellular, the suits will be convinced that their idea was right, because nobody will be buying anything else by then.

Remember the old "Jump Frog, Jump joke?

- Mike KB3EIA -

4262. Re: Tired of RS employees pushing Cellphones and DirectTV

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-01 20:03:56 UTC
From: 0junk4me@bellsouth.net
Message-ID: <Mouc9.32090$vY2.652451@e3500-atl2.usenetserver.com>
Source record: 135504
Cross-posted to: alt.radio.scanner,rec.radio.amateur.antenna,rec.radio.scanner,rec.radio.shortwave

On 2002-09-01 ws2l@NOSPAMoptonline.net said:
>I'm an Asst. Manager for RS & if
>you frequent your local RS you know who the people are & who to
>avoid. As far as pushing cell phones goes we are under siege by our
>higher up's to push this stuff. Personally, if I see someone with a
>cell phone I don't even bother to ask I just get you what you need
>& get you on your way as quickly as possible. I still earn plenty
>of commission but after working with people directly for over 15
>years (Previous Job) you can tell who might be interested & the
>person who knows what they want. I agree w/the other RS employee on
>this one, if you don't like being jumped on about wireless &
>satellite then take your business elsewhere. You have the right to
>tell an RS employee before he/she opens their mouth that you don't
>want to be offered a great deal & I'm sure they will back off.
True, and I've been known to do that. My main bitch with the RS
stores I've run across in some communities where an actual outlet for
electronics parts has gone the way of the dodo such as the store in
Burlington Iowa where I used to reside until last spring.

I'd go in there looking for something, say pl259 connectors, and since
I"m a blind man i have trouble finding stuff in all those bubble
packs. SO I ask the employee. I tell him/her/it with no knowledge of
electronics that I do not want the crimp on connectors. WHen I arrive
at the house ... you guessed it.

I don't carry a cell phone but often carry a dual band handheld
transceiver with me. i"m not interested in a cellular phone. WHen
I"m away from my desk, I"m away from my desk and don't want to be
bothered by a damned incessantly ringing telephone thankyaverrymuch.
Hence, no cell phone for this old grouch.

Last summer I called the local rs store in Burlington to find out if
they had any transfer grease. THe little girl didn't know what it was
but could sell me all sorts of lube. FInally I grabbed a friend and
we went to the store anyway, but no transfer grease.

My worst gripe with RS is paying cash for something adn just wanting
to getr my purchase and walk out the door. IT's something small, a
connector or a crimping tool and I've still got to go through the
"what's your name and address bull***. Since you don't send me a
printed catalog anymore why bother getting my name and address? I
don't want a cell phone for a penny and I don'twant to give you my
name and address because I bought $8 worth of small parts.

I usually tell the sales droid that I don't even own a freakin'
television so why the hell would I want a direct-tv dish?
TV is one of the reasons we feed our kids dope pushed on them by
psychiatrists. iF we shoved 'em away from the box and sent 'em out to
do some physical activity maybe they wouldn't need the dope pushers in
the white coats pushing ritalin on 'em.

73 de kb0ruu/5

Richard WEbb

Electric SPider Productions,
amateur radio call kb0ruu

Replace anything before the at symbol with elspider for real email reply
or use my callsign at mmsn.org

4263. Re: B&W BWD-1.8-30Mhz ?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-01 20:14:21 UTC
From: richardharrison@webtv.net
Message-ID: <27107-3D72751D-4@storefull-2394.public.lawson.webtv.net>
Source record: 135505

N1RZB wrote:
"---comments---."

Search on "Cebik".

W4RNL has modeled the T2FD.

Click on "Tales and Technicals". Then on, "Practical Antenna Notes".
Finally, click on "Modeling the T2FD".

Best regards, Richard Harrison, KB5WZI

4264. Re: Dr. Kabbary's New EM Equations

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-01 20:31:19 UTC
From: richardharrison@webtv.net
Message-ID: <27105-3D727917-45@storefull-2394.public.lawson.webtv.net>
Source record: 135506

Richard Clark wrote:
"---as this is my second post I must have a particular taste for it
too."

An old Portuguese proverb says: "It`s only the flies that change!"

Best regards, Richard Harrison, KB5WZI

4265. Re: Tired of RS employees pushing Cellphones and DirectTV

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-01 21:19:10 UTC
From: Paul N3EOP <n3eop@arrl.or.callsign.net>
Message-ID: <Xns927C91B263F08n3eophotmailcom@64.164.98.7>
Source record: 135514
Cross-posted to: alt.radio.scanner,rec.radio.amateur.antenna,rec.radio.scanner,rec.radio.shortwave

My favorite "trick" when they get pushy about satellite dishes...

First, I ask all kinds of questions that I already know the answers to, like what if there's a tree in my yard? How long of a cable run can I use from the dish before the picture starts getting fuzzy? (I really like that one... most don't have a clue. The pic doesn't get fuzzy.) Various things like that. Make 'em work for it, tho I do sound interested.

Let 'em talk me into a receiver for the bedroom, too. Go to the counter, they're drooling over the sale. Get to the point where they ask me for the credit card, in case of "early termination fee" is needed. Then I tell 'em I don't have a credit card; I do cash only. You can actually see their face fall.

To be honest, I don't do this much (at all) at RS. (Circuit City is much more fun.) The only thing I get from them is TV masting, cause I have a bit of theirs already. (Doesn't match the stuff from local the hardware store.)

4266. Re: G5RV Feedline

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-01 22:00:23 UTC
From: n7ws@nowhere.com
Message-ID: <3d728de2.4320889@news.triconet.org>
Source record: 135507

On Sun, 01 Sep 2002 18:28:55 GMT, 'Doc <w5lz@icok.net> wrote:

|Jim,
| If you want to make a "G5RV" antenna, you have to
|use a coax feed line to the twin lead matching section.
|If you use twin lead all the way to the radio, the
|antenna is no longer a "G5RV". It would still work, it
|just couldn't be called a 'G5RV'.
| 'Doc

Nonsense.

4267. Re: Dr. Kabbary's New EM Equations

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-01 22:05:53 UTC
From: "Peter O. Brackett" <ab4bc@ix.netcom.com>
Message-ID: <aku301$dp0$1@slb6.atl.mindspring.net>
Source record: 135508

Rick:

[snip]
> BTW, that's a serious offer on lunch. Malden has a decent Chinese buffet
place.
>
> 73,
> Chip N1IR
[snip]

Chinese buffet?

If I was you I would insist that Chip buy me lunch at the Colonial Inn in
Concord.

And... be careful that, for the price of a lunch you don't sell your soul,
and let Chip try to get you to cross over to the "dark side"!

Heh, heh...

--Peter K1PO
Indialantic By-the-Sea, FL.

4268. Re: Dr. Kabbary's New EM Equations

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-01 22:10:28 UTC
From: "Peter O. Brackett" <ab4bc@ix.netcom.com>
Message-ID: <aku38kujc1@slb6.atl.mindspring.net>
Source record: 135509

Mont:

[snip]
"Mont O'Leary" <k0ycn@arrl.net> wrote in message
news:akt31t$v2e$1@news.chatlink.com...
> That was my impression too. I was kind of wondering how one might
construct
> a zero hertz antenna... I suspect that the fractal/EH boys are already
> working on this though <grin>.
> 73, Mont - K0YCN
[snip]

Hey... what's wrong with zero Hz. Is it any different from any other Hertz?

Surely all "real" frequencies, both positive and negative extending from
negative infintiy to positive infinity
including zero are valid frequencies. Why discriminate against f = 0?

BTW... At which "magical frequency" f does em phenomena stop being valid.
Come on
give me a number!

Best,

--Peter K1PO
Indialantic By-the-Sea, FL

4269. Re: Radio Shack Discone Antenna Opinions ?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-01 22:11:12 UTC
From: CW <clinton.magers@attbi.com>
Message-ID: <4gwc9.323693$UU1.55733@sccrnsc03>
Source record: 135510

Others are probably better. I'll replace my RS discone with a better one
when it needs it. So far, it has been up for 7 or 8 years enduring rain,
snow, ice and wind. For what I paid for it, it could fall apart tomorrow an
I would consider it a good deal.
"Mike" <"km6ab(nospam)"@pacbell.net> wrote in message
news:3D72693A.D2CA5788@pacbell.net...
> The Radio Shack Discone is probably the bottom of the barrel of Discones
> in my opinion. The hollow elements are crimped to the threaded stud that
> secures them and they are always loose. I have had 3 Radio Shack
> Discones at several locations and two elements fell off my oldest one. I
> had an early Diamond Discone which was very similar in construction but
> the element attachment was far superior. The other brands may cost a
> little more but you will have an antenna that will last longer.
>

4270. Re: Dr. Kabbary's New EM Equations

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-01 22:55:02 UTC
From: "J. Harvey" <JM002.Harvey_ANTI*SPAM_@Sympatico.ca>
Message-ID: <uUwc9.293$7x5.160391@news20.bellglobal.com>
Source record: 135512

"Peter O. Brackett"
> BTW... At which "magical frequency" f does EM
> phenomena stop being valid. Come on give me
> a number!

Zero.

4271. Re: NEWS: Here we go...

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-01 23:30:52 UTC
From: fractenna@aol.com
Message-ID: <20020901193052.29947.00000700@mb-mb.aol.com>
Source record: 135513

The Q is too high....

73
Chip N1IR

4272. Re: G5RV Feedline

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-01 23:36:32 UTC
From: 'Doc <w5lz@icok.net>
Message-ID: <3D72A46F.99206DCC@icok.net>
Source record: 135515

Wes,
Okay, so tell me what I said that wasn't
correct?
'Doc

4273. Re: Dr. Kabbary's New EM Equations

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-01 23:38:01 UTC
From: 'Doc <w5lz@icok.net>
Message-ID: <3D72A4C8.71BF375D@icok.net>
Source record: 135516

What's a 'negative' frequency?
'Doc

4274. FA****AMIDON 9 TO 1 B A L U "N" **** FA

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-02 00:13:45 UTC
From: eimacman@aol.com
Message-ID: <20020901201345.25100.00000642@mb-fw.aol.com>
Source record: 135517

http://cgi.ebay.com/ws/eBayISAPI.dll?ViewItem&item=1376968228

please...no flames.....im pretty sore as it is guys!!!!

joe

4275. technical references

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-02 00:18:17 UTC
From: Francois Pare <francoisfpare2002@yahoo.ca>
Message-ID: <d7yc9.1304$016.113075@charlie.risq.qc.ca>
Source record: 135518

Marvelous references indeed.
I forgot one important ; i consult it quite much also... simply
The ARRL HANDBOOK for radio amateurs (ARRL). Very Interesting all
around bible for antennas ect...

4276. Re: G5RV Feedline

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-02 01:49:13 UTC
From: Eskay <Nospamve3jua@rac.ca>
Message-ID: <3D72C399.A8287122@rac.ca>
Source record: 135511

If I was to build a G5RV I would use 450 ohm ladderline and 75 ohm RG59 coax.
If I wanted to use ladderline all the way into the shack I would make the dipole
at least a half wave on 80 meters ie 132 ft end to end.
73 de VE3JUA..

SeaQuest wrote:

> I've been reading tons about the G5RV as I am just about to build my first
> one. I can't get a straight answer on one thing. If I am building one from
> scratch and will naturally be using a tuner, would I be better off with a
> coax feedline to the ladder line matching section or would it be better to
> run the ladderline right into the shack to my tuner (which handles both coax
> or balanced line). If coax should I go with RG8 (50 ohm) or would I be
> better off with RG59 (75 ohom). I should add that the run from the antenna
> to the tuner is 70 feet.
>
> Jim

4277. What If You Could Tune Out Polarization Mis-Match?

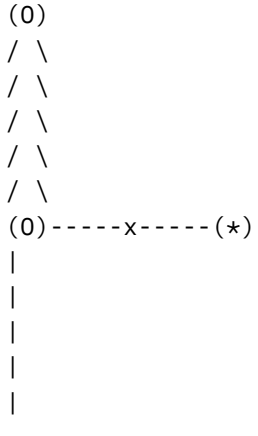
Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-02 02:18:47 UTC
From: John Seney <wd1v@amsat.org>
Message-ID: <wd1v-A2A6A7.22184901092002@netnews.attbi.com>
Source record: 135419

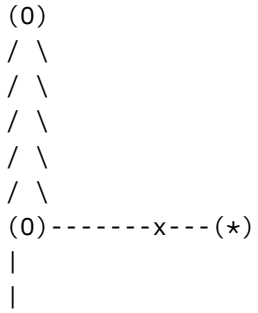
This is an idea for a new kind of HF antenna that might boost signal levels by as much as 10 dB or more.

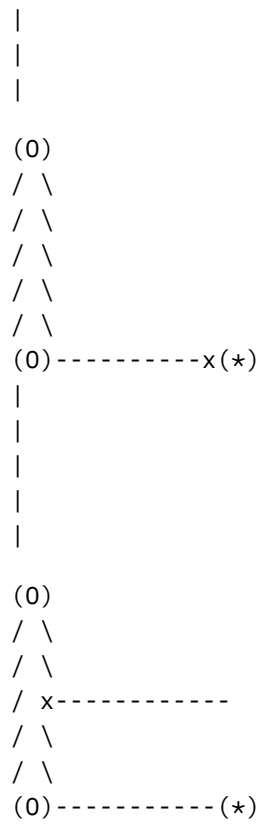
I should also relate that this reeks of "a little knowlege is a dangerous thing". I'm not an antenna designer. But maybe some of the gurus can set me straight if this concept stands a chance of being fun to play with and a useful enhancement for working HF.

The premise is based on the concept that as HF waves bounce off the ionosphere and bounce back to earth, the polarization of the wave changes. If the ionosphere is actively moving up and down, we may experience QSB (fading) due to polarization changes.

So this idea is to create a HF antenna that can change phase very quickly to reduce and perhaps eliminate the polarization mismatch. Consider a delta loop with a stepper motor and pulleys at each support. By advancing the motor (*), the feedline of the loop advances much like a clothesline carrys the wash out further for drying. The polarization changes accordingly - and given a fast enough motor, the potential exists to cancel the effect of non-complimentary polarization reception loss. (The effective gain by matching 2 yagis with the same polarization is dramatic. I have seen nulls approaching 40 dB when one yagi rotates 90 degrees from the other.)







Perhaps this won't work for reasons unseen.

Maybe it will work but there are better ways (electronic vs. mechanical)
ways of changing the polarization of an antenna?

I welcome your comments.

JS
Scope FAQ at http://www.qsl.net/wd1v

4278. Re: Dr. Kabbary's New EM Equations

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-02 02:54:17 UTC
From: Your name <kb1gej@localnet.com>
Message-ID: <un5kmpolsc7q49@corp.supernews.com>
Source record: 135420

'Doc <w5lz@icok.net> wrote in news:3D72A4C8.71BF375D@icok.net:

>
>
> What's a 'negative' frequency?
> 'Doc

If frequency is sec^-1 then negative frequency must be traveling back
in time?

KB1GEJ

4279. Re: What If You Could Tune Out Polarization Mis-Match?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-02 02:58:23 UTC
From: Crazy George <munschNO@attglobal.net.SPAM>
Message-ID: <3d72d9c9_1@news1.prserv.net>
Source record: 135421

Since this is necessary only for receiving, the preferred method is to use crossed loops and a two channel receiver. You see, it only matters when the signal is within a few degrees of orthogonal to a particular antenna structure, and the rest of the angles are no more than a couple or 3 dB down. So you have a lot of margin to play with. You really should build a polarization interferometer with a angle and channel amplitude displays and watch the polarization wind around and the effects. The sharp null is usually from multipath, although it is occasionally from orthogonal polarization. Another approach to solving the problem is space diversity, either with a large aperture, multi element antenna like the CDAAs, or simply several dipoles spaced several wavelengths apart with appropriate combiners.

--
Crazy George
Remove NO and SPAM from return address
John Seney <wd1v@amsat.org> wrote in message
news:wd1v-A2A6A7.22184901092002@netnews.attbi.com...
> This is an idea for a new kind of HF antenna that might boost
> signal levels by as much as 10 dB or more.
>
> I should also relate that this reeks of "a little knowlege is a
> dangerous thing". I'm not an antenna designer. But maybe some of the
> gurus can set me straight if this concept stands a chance of being fun
> to play with and a useful enhancement for working HF.
>
> The premise is based on the concept that as HF waves bounce off
> the ionosphere and bounce back to earth, the polarization of the
> wave changes. If the ionosphere is actively moving up and down,
> we may experience QSB (fading) due to polarization changes.
>
> So this idea is to create a HF antenna that can change phase
> very quickly to reduce and perhaps eliminate the polarization
> mismatch. Consider a delta loop with a stepper motor and pulleys at each
> support. By advancing the motor (*), the feedline of the loop advances
> much like a clothesline carrys the wash out further for drying.
> The polarization changes accordingly - and given a fast enough motor,
> the potential exists to cancel the effect of non-complimentary
> polarization reception loss. (The effective gain by matching 2 yagis
> with the same polarization is dramatic. I have seen nulls approaching 40
> dB when one yagi rotates 90 degrees from the other.)
>
>
> (O)

```
> / \
> / \
> / \
> / \
> / \
> (O)-----x-----(*)
> |
> |
> |
> |
> |
>
>
> (O)
> / \
> / \
> / \
> / \
> / \
> (O)-------x---(*)
> |
> |
> |
> |
> |
>
>
> (O)
> / \
> / \
> / \
> / \
> / \
> (O)----------x(*)
> |
> |
> |
> |
> |
>
>
> (O)
> / \
> / \
> / x------------
> / \
> / \
> (O)-----------(*)
>
> Perhaps this won't work for reasons unseen.
```

>
> Maybe it will work but there are better ways (electronic vs. mechanical)
> ways of changing the polarization of an antenna?
>
> I welcome your comments.
>
> JS
> Scope FAQ at http://www.qsl.net/wd1v
>
>

4280. How do you handle coax runs through outside to inside ?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-02 04:03:54 UTC
From: Steve <someone@knology.net>
Message-ID: <un5ojb5aqs69f2@corp.supernews.com>
Source record: 135422

Just curious as to how others handle this?

4281. Re: How do you handle coax runs through outside to inside ?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-02 04:12:25 UTC
From: Roger Leone <arleoneSPAMBLOCK@inreach.com>
Message-ID: <8yBc9.488$YR1.124288133@news.inreach.com>
Source record: 135425

You either use existing holes or drill new ones.

Roger K6XQ

4282. Re: What If You Could Tune Out Polarization Mis-Match?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-02 04:18:23 UTC
From: richardharrison@webtv.net
Message-ID: <19702-3D72E68F-102@storefull-2397.public.lawson.webtv.net>
Source record: 135424

John Seney wrote:
"The premise is based on the concept that as HF waves bounce off the ionosphere and bounce back to earth, the polarization of the wave changes."

Diversity reception is an ancient technique to improve reliability and quality.
Space, frequency, and polarization diversity are used.

Frequency diversity works well almost anywhere in the spectrum but requires double the bandwidth for double diversity or triple the bandwidth for triple diversity reception. Regulators usually only allow special services including the military and common carriers to use the bandwidth required for frequency diversity transmission and reception.

Another technique is to select the upper or lower sideband of a double sideband transmission. This is often used in combination with the other means of diversity as there is usually not enough independence in the fading characteristics of related sidebands but sometimes interference is worse on one sideband than on the other.

Space diversity is available to everyone as it only requires multiple reception equipment.

Polarization diversity is little used at HF. That is evidence that it is not of much use where the polarization is scrambled by the ionosphere. Polarization diversity does find wide use in terrestrial microwave systems. It requires only one reflecter with cross-polarized feeds. One for each receiver.

Microwave space diversity requires at least two completely separate antennas in addition to two completely separate receivers, in most cases. Two separate antennas only get you a phased array. There is always some combination of signals received by antennas in a wild medium that will produce complete cancellation.

Switching diversity combiners are almost universal. The best receiver output is selected for utilization and the other or others are switched out of service. Long ago, multiple receivers were sometimes used and their AGC circuits were paralleled. A receiver with a hot siignal would turn down the gain on the poorer received signals. Noise output of this type of diversity reception wasn`t as good as a system which completely switched out the receivers with inferior signals, regardless of the type of diversity reception.

Short answer: Polarization diversity has been tried for HF and isn`t worth the effort.

Best regards, Richard Harrison, KB5WZI

4283. Re: How do you handle coax runs through outside to inside ?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-02 04:30:57 UTC
From: W6DKN <w6dkn@qsl.net>
Message-ID: <cJBc9.1231$Ie6.830@fe02>
Source record: 135423

"Steve" <someone@knology.net> wrote in message
news:un5ojb5aqs69f2@corp.supernews.com...
> Just curious as to how others handle this?
>
>

Cut a hole through the wall, put in a piece of 4" electrical conduit,
sealed the conduit to the interior and exterior walls, ran the cables into
the house, plugged both ends of the conduit with plumbers putty, then
sealed both ends with plastic weather wrap and duct tape.

73 de W6DKN

4284. FS: cd

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-02 05:09:39 UTC
From: George Kinzer <horseflygk@worldnet.att.net>
Message-ID: <noCc9.47466$Ke2.3337020@bgtnsc04-news.ops.worldnet.att.net>
Source record: 135426

Plans on how to make and install your own base and mobile antennas, from quarter waves
to beams, quads, and MORE. Programs included. (no downloads)

Understanding above antennas, coax, swr's, line loss, co-phasing, grounding and MORE.

CD also includes tuning and modifications on just about every cb as well as 10 meter radios and MORE

Mic wiring to all cb's, D104, Sedelata, Turner, standard and of course MORE.

PLL convertions, adding talk-back, swing kits, roger beeps and MORE

Packed with pictures, how toos, pdf files, schematics, and MORE.

email for more info, over 100 megs in EASY to understand format,
carefully organized for EASY reference. over 2300 files, 500 folders
who needs MORE< MORE< MORE ?

This IS NOT the one seen on ebay, I know this has MORE .
One repair-use, pays for itself in 10 minutes.

--
If first you don't succeed, try MORE<MORE<MORE...see what happens

4285. Re: G5RV Feedline

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-02 05:28:11 UTC
From: n7ws@nowhere.com
Message-ID: <3d72f3df.30433872@news.triconet.org>
Source record: 135427

On Sun, 01 Sep 2002 23:36:32 GMT, 'Doc <w5lz@icok.net> wrote:

|
|
|Wes,
| Okay, so tell me what I said that wasn't
|correct?
| 'Doc

Mostly everything.

The original G5RV paper is available several places on the Internet, including here:

http://users.triconet.org/wesandlinda/g5rv.pdf

If you will look at it closely (sorry it's a scanned version of a Zerox copy) you can read: "Alternatively, open-wire feeder may be employed from the centre of the aerial right back to the transmitter output or ATU.

Figure 1 shows a "convenient length of open wire feeder" without any coax. The text above the figure includes "Here again, results are better with a tuned feeder....."

So, Varney (G5RV) in the original paper, seems to recommend a feed system *without* any coax. Does this not mean that a dipole fed without any coax can still be a "G5RV" or am I missing something?

4286. Re: How do you handle coax runs through outside to inside ?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-02 06:15:04 UTC
From: W5LL <mattpatt@1starnet.com>
Message-ID: <IIDc9.93578$On.4187932@bin3.nnrp.aus1.giganews.com>
Source record: 135428

Get a big masonry bit and go for it. Rat Shack sells a insert you can put in the hole. I just ran the cables though.. and plugged up the hole with some steel wool and then put duct tape over it. This will weatherproof it and it's easy to take off in case you ever need to make another cable run. If you used putty or something like that to plug up the hole it would be hard to remove should you ever need to run more cable.

"Steve" <someone@knology.net> wrote in message
news:un5ojb5aqs69f2@corp.supernews.com...
> Just curious as to how others handle this?
>
>
>

4287. Re: FS: cd

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-02 06:24:14 UTC
From: 'Doc <w5lz@icok.net>
Message-ID: <3D7303FC.E1EDE706@icok.net>
Source record: 135429

George,
Please take your "more, more, more" junk somewhere
else.
'Doc

4288. Re: What If You Could Tune Out Polarization Mis-Match?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-02 06:30:57 UTC
From: 'Doc <w5lz@icok.net>
Message-ID: <3D73058F.55285654@icok.net>
Source record: 135430

John,
I think you're going at it from the wrong direction.
Instead of messing with the antenna to change the signal's
polarity, why not stabilize the ionosphere? Then you
wouldn't have to worry about the changing polarity.
'Doc

4289. Re: G5RV Feedline

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-02 06:38:47 UTC
From: 'Doc <w5lz@icok.net>
Message-ID: <3D730765.D4A632B7@icok.net>
Source record: 135431

Wes,
I think you're missing quite a bit. The horizontal
center fed doublet fed with some form of twin lead has
been around almost forever, Mr. Varney didn't invent it.
The antenna that Mr. Varney is given credit for uses a
twin lead 'matching transformer' as part of the antenna
system.
'Doc

4290. Re: Dr. Kabbary's New EM Equations

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-02 06:40:21 UTC
From: 'Doc <w5lz@icok.net>
Message-ID: <3D7307C4.47F1F474@icok.net>
Source record: 135432

Oh! You mean like in the movie?
'Doc

4291. Re: NEWS: Here we go...

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-02 07:18:34 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <kp36nusq7ghl30eqdd6oplu9r5nagacqt0@4ax.com>
Source record: 135433

On Sun, 01 Sep 2002 19:02:46 GMT, "K7JEB" <k7jeb@arrl.no_spam.net>
wrote:

>> The composite, made of fiberglass and copper, caused microwaves shot
>> through it to bend in an opposite direction than the laws of physics
>> predict, making it the first material to have a ``negative index of
>> refraction,'' physicists said in a study appearing in the journal
>> Science.
>
>From the descriptions posted of the material, I am
>reminded of microwave lenses made from closely
>stacked-together waveguide sections. Because the
>phase velocity of waves propagating through a waveguide
>near cutoff is greater than the speed of light,
>the artificial "dielectric" thus created exhibits an
>apparent negative index of refraction. This material
>seemly extends the idea to higher frequencies and to
>metallic elements that can be randomly oriented and
>still exhibit the required wave interactions.

Hi Jim,

I've been reflecting on what you've posted, and it seems that the
phase velocity is one of those things I remember from elementary
physics classes, but only as a footnote condition of the math.

That is, the phase velocity is not the velocity of the wave itself,
but rather the difference between waves (or an interference pattern);
that is, something that is neither real nor contains any information.
As such it both presents a FTL condition and offers nothing
substantive.

The stumbling point for me is, as you've narrowed it down, with this
issue of speed and the discussion of speeding up transit time, the
inversion of the Doppler effect, and the near perfect focus ability.
Strange stuff to say the least, but at least no one claims that a
higher consciousness is required to follow the math.

Your observations of the physical construction being similar to
stacked waveguides is right on target to their presentation. They
offer a simpler condition, but still nothing more than the lumped
circuit equivalent of your description.

73's
Richard Clark, KB7QHC

4292. Re: FS: cd

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-02 07:19:51 UTC
From: George Kinzer <horseflygk@worldnet.att.net>
Message-ID: <riEc9.47543$Ke2.3348894@bgtnsc04-news.ops.worldnet.att.net>
Source record: 135434

NO, go take your Geritol..
You've not seen this product, so how can you call it junk? More info here
youll ever know, your brain cant handle 100 meg, much less three sentences.

--
If first you don't succeed, do the same thing again...see what happens

4293. Re: cd

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-02 07:29:08 UTC
From: Allan <kd7dsk@cox.net>
Message-ID: <8rEc9.37405$Fb.1796016@news1.west.cox.net>
Source record: 135435

You claim to be selling these CD's, therefore you must be a buisness.
Question No1. What is your state liscense number? Question No2. What is your
federal liscense number? No1. Being state taxes and No2. being federal
taxes.

"George Kinzer" <horseflygk@worldnet.att.net> wrote in message
news:noCc9.47466$Ke2.3337020@bgtnsc04-news.ops.worldnet.att.net...
> Plans on how to make and install your own base and mobile antennas, from
> quarter waves
> to beams, quads, and MORE. Programs included. (no downloads)
>
> Understanding above antennas, coax, swr's, line loss, co-phasing,
grounding
> and MORE.
>
> CD also includes tuning and modifications on just about every cb as well
as
> 10 meter radios and MORE
>
> Mic wiring to all cb's, D104, Sedelata, Turner, standard and of course
> MORE.
>
> PLL convertions, adding talk-back, swing kits, roger beeps and MORE
>
> Packed with pictures, how toos, pdf files, schematics, and MORE.
>
> email for more info, over 100 megs in EASY to understand format,
> carefully organized for EASY reference. over 2300 files, 500 folders
> who needs MORE< MORE< MORE ?
>
> This IS NOT the one seen on ebay, I know this has MORE .
> One repair-use, pays for itself in 10 minutes.
>
>
> --
> If first you don't succeed, try MORE<MORE<MORE...see what happens
>
>
>
>
>

4294. Re: Dr. Kabbary's New EM Equations

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-02 08:13:16 UTC
From: "Peter O. Brackett" <ab4bc@ix.netcom.com>
Message-ID: <akv6is$i23$1@slb1.atl.mindspring.net>
Source record: 135436

"'Doc" <w5lz@icok.net> wrote in message news:3D72A4C8.71BF375D@icok.net...
>
>
> What's a 'negative' frequency?
> 'Doc

4295. Re: What is the big deal with fractal and EH ????????

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-02 08:15:46 UTC
From: Paulo Calvo <nospam@nospam.nospam>
Message-ID: <3d731e33$0$9445$4d4efb8e@read.news.pt.uu.net>
Source record: 135437

"WavyDave" <nowaynowhere@yahoo.com> wrote in message
news:ako2ah0v4h@enews3.newsguy.com...
> Are Hams that closed minded and unprofessional:

Hams are radioamateurs not radio professionals...
So unlike most "professionals" we don't have shareholders cash to waste on
crap...
We don't trust marketeers, we need to have solid proof of performance and
reliability before we buy.

In my humble opinion some of the miracle designs are expensive forms of
tunned dummy loads.

73 DE CT2IDW

4296. Re: Dr. Kabbary's New EM Equations

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-02 08:20:20 UTC
From: "Peter O. Brackett" <ab4bc@ix.netcom.com>
Message-ID: <akv709$653$1@slb6.atl.mindspring.net>
Source record: 135438

Doc:

[snip]
"'Doc" <w5lz@icok.net> wrote in message news:3D72A4C8.71BF375D@icok.net...
>
>
> What's a 'negative' frequency?
> 'Doc
[snip]

Hey!

No problem...

Negative frequency [-f] is very similar to positive frequency, it just rotates in the opposite direction to positive frequency [+f]. Depending upon your co-ordinate system defintion... positive frequency rotates counterclockwise, while negative frequency rotates clockwise.

I have a neat homemade frequency generator here in my home lab with a frequency dial that begins with approximately -10kHz and passes through 0Hz and goes all the way up to +10kHz as you turn the dial. I use that generator for testing the filters that I design, build and use for separating positive from negative frequencies and vice-versa.

I kid you not!

Best,

--Peter K1PO
Indialantic By-the-Sea, FL

4297. Dipole problems

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-02 08:32:30 UTC
From: jonathan.bowes@sepa.org.uk
Message-ID: <6820e6ce.0209020032.59f7e41f@posting.google.com>
Source record: 135439

I have just strung up 2 dipoles over the weekend. One for 40m and the other for 18m. I used a 10ft aluminium pole with a 1ft piece of plastic conduit tapered into the end. This was to prevent the dipole "seeing" the mast since it wouldn't tune at all just lashed to the mast. Just below each dipole centre I inserted a RF choke into each feedline (rg58) to prevent shield rediation. The choke was 4 turns of rg58 through a ferrite core (2.5cm diam) to produce a loop of about 10-12cm in diam. I had taken advice from an antenna book on doing this. The dipoles tuned OK but RX signal strengths are well well down (5-7 S-points) than on my mates 17m dipole just up the road in Perth. We compared signal strengths whilst on the phone. He has a FT-920 fed with rg58 (twice as much as my feed) and I have a TS-570. Interestingly my dipole is about 3x the height of his and orientated pretty much the same (N-S).

Just wondering if that RF choke is the cause or what else could be strangling it. Can anyone help out here before I have to pull the mast down.

Thanks alot in advance.

Jonathan

4298. Re: cd

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-02 08:39:56 UTC
From: Allan <kd7dsk@cox.net>
Message-ID: <wtFc9.37840$Fb.1808181@news1.west.cox.net>
Source record: 135440

Let me re phrase that, I meant City liscense (San Francisco acording to another thread of yours) and of course California for state liscense.

"Allan" <kd7dsk@cox.net> wrote in message news:8rEc9.37405$Fb.1796016@news1.west.cox.net...
> You claim to be selling these CD's, therefore you must be a buisness.
> Question No1. What is your state liscense number? Question No2. What is your
> federal liscense number? No1. Being state taxes and No2. being federal
> taxes.
>
>
> "George Kinzer" <horseflygk@worldnet.att.net> wrote in message
> news:noCc9.47466$Ke2.3337020@bgtnsc04-news.ops.worldnet.att.net...
> > Plans on how to make and install your own base and mobile antennas, from
> > quarter waves
> > to beams, quads, and MORE. Programs included. (no downloads)
> >
> > Understanding above antennas, coax, swr's, line loss, co-phasing,
> grounding
> > and MORE.
> >
> > CD also includes tuning and modifications on just about every cb as well
> as
> > 10 meter radios and MORE
> >
> > Mic wiring to all cb's, D104, Sedelata, Turner, standard and of course
> > MORE.
> >
> > PLL convertions, adding talk-back, swing kits, roger beeps and MORE
> >
> > Packed with pictures, how toos, pdf files, schematics, and MORE.
> >
> > email for more info, over 100 megs in EASY to understand format,
> > carefully organized for EASY reference. over 2300 files, 500 folders
> > who needs MORE< MORE< MORE ?
> >
> > This IS NOT the one seen on ebay, I know this has MORE .
> > One repair-use, pays for itself in 10 minutes.
> >
> >
> > --
> > If first you don't succeed, try MORE<MORE<MORE...see what happens
> >

> >
> >
> >
> >
>
>

4299. Re: What is the big deal with fractal and EH ????????

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-02 08:44:01 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <3D7324D1.9060103@eznec.com>
Source record: 135441

Let me assure you, professionals also need solid proof of performance
and reliability before they buy. Much more so, in fact, than amateurs.
And that's precisely why you don't see these miracle antennas being used
in commercial installations.

Roy Lewallen, W7EL

Paulo Calvo wrote:
> "WavyDave" <nowaynowhere@yahoo.com> wrote in message
> news:ako2ah0v4h@enews3.newsguy.com...
>
>>Are Hams that closed minded and unprofessional:
>
>
> Hams are radioamateurs not radio professionals...
> So unlike most "professionals" we don't have shareholders cash to waste on
> crap...
> We don't trust marketeers, we need to have solid proof of performance and
> reliability before we buy.
>
>
> In my humble opinion some of the miracle designs are expensive forms of
> tunned dummy loads.
>
>
> 73 DE CT2IDW
>
>

4300. Re: How do you handle coax runs through outside to inside ?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-02 08:52:29 UTC
From: W6DKN <w6dkn@qsl.net>
Message-ID: <oyFc9.1270$Ie6.740@fe02>
Source record: 135442

"W5LL" <mattpatt@1starnet.com> wrote in message
news:IlDc9.93578$On.4187932@bin3.nnrp.aus1.giganews.com...
> Get a big masonry bit and go for it. Rat Shack sells a insert you can
put
> in the hole. I just ran the cables though.. and plugged up the hole
with
> some steel wool and then put duct tape over it. This will weatherproof
it
> and it's easy to take off in case you ever need to make another cable
run.
> If you used putty or something like that to plug up the hole it would be
> hard to remove should you ever need to run more cable.
>

I use commercial plumbers putty with very good results. It's waterproof, not overly sticky and it only semi-hardens. I have opened my 4" pipe lead-through to add wires many times and the plumbers putty comes right out - kind of like a big donut. Little effort is needed, and there is no residue to scrape from the pipe or the cables.

How can steel wool be waterproof? I have seen it turn into a big lump of rust if even a little moisture gets on it.

73 de W6DKN

4301. Re: Dipole problems

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-02 09:19:09 UTC
From: Fred Hambrecht <w4jle@charter.net>
Message-ID: <un6b8gkk2h20d1@corp.supernews.com>
Source record: 135444

First carry your rig over to your mates, set up a means to switch the
antenna between rigs and compare the S-meter readings.

Comparing s-meters on different rigs, on different antennas has too many
variables to begin to come to any conclusion. What is the difference in the
height of the antenna, orientation, etc.?

"Jonathan Bowes" <jonathan.bowes@sepa.org.uk> wrote in message
news:6820e6ce.0209020032.59f7e41f@posting.google.com...
> I have just strung up 2 dipoles over the weekend. One for 40m and the
> other for 18m. I used a 10ft aluminium pole with a 1ft piece of
> plastic conduit tapered into the end. This was to prevent the dipole
> "seeing" the mast since it wouldn't tune at all just lashed to the
> mast. Just below each dipole centre I inserted a RF choke into each
> feedline (rg58) to prevent shield rediation. The choke was 4 turns of
> rg58 through a ferrite core (2.5cm diam) to produce a loop of about
> 10-12cm in diam. I had taken advice from an antenna book on doing
> this. The dipoles tuned OK but RX signal strengths are well well down
> (5-7 S-points) than on my mates 17m dipole just up the road in Perth.
> We compared signal strengths whilst on the phone. He has a FT-920 fed
> with rg58 (twice as much as my feed) and I have a TS-570.
> Interestingly my dipole is about 3x the height of his and orientated
> pretty much the same (N-S).
>
> Just wondering if that RF choke is the cause or what else could be
> strangling it. Can anyone help out here before I have to pull the mast
> down.
>
> Thanks alot in advance.
>
> Jonathan

4302. Re: Dipole problems

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-02 09:19:16 UTC
From: jgboyles@aol.com
Message-ID: <20020902051916.10515.00000923@mb-ca.aol.com>
Source record: 135443

>I have just strung up 2 dipoles over the weekend.

>Just below each dipole centre I inserted a RF choke into each
>feedline (rg58) to prevent shield rediation.

>The dipoles tuned OK but RX signal strengths are well well down
>(5-7 S-points) than on my mates 17m dipole

>Just wondering if that RF choke is the cause or what else could be
>strangling it.

HI Jonathan, The choke would almost certainly not be the problem. You say the dipole tunes ok, so I assume the swr is acceptable on transmit. If this is indeed the case, then the dipole is performing as it should.
Some possible reasons for different S meter readings than your mates: The S meters are not calibrated exactly to each other (almost a certainty). Your mate may have a preamp switched in the rx and you have an antenuator switched in. The dipoles may not be exactly pointed the same and you are getting some directional effects.
Try contacting several distant stations in various directions with your mate on the air at the same time. Ask the distant station to give both of you signal reports. That should tell you how the dipoles stack up.
73 Gary N4AST

4303. Re: What am I emitting on 80M?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-02 10:47:15 UTC
From: cprstn54zz@att.net
Message-ID: <3d734174.251571921@news-server.optonline.net>
Source record: 135445

On Wed, 28 Aug 2002 08:54:33 -0500, CAM <Cecil.A.Moore@ieee.org>
wrote:
>So how does the antenna work on 3.9 MHz, the frequency to which
>it is tuned?

Sorry, didn't see your post. No luck so far on three tries. Will
keep trying.

Ken KC2JDY

Ken
(to reply via email
remove "zz" from address)

4304. antenna tuner question

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-02 12:29:37 UTC
From: pdrunen@aol.com
Message-ID: <20020902082937.01022.00000727@mb-ms.aol.com>
Source record: 135446

Hi Group,

I use a old 5/8 CB ground plane with 20 feet of RG-58 as the line feed. The antenna is not very high. I use a MFJ tuner to operate on 20,17,15,12,10.

It works ok but not great. Would there be any advantage to putting the tuner at the antenna end? How about if I moved the antenna up to 40 feet and still used 58 cable and located the tuner at the antenna?

Does anyone make a remote tuner box which mounts at the antenna end?

Tnx, de KJ4UO

4305. Re: What is the big deal with fractal?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-02 12:48:12 UTC
From: "W.G Ewald" <wgewald@att.net>
Message-ID: <9om6nu0kefn11kcp7kjdsgsd08ljlfcg09@4ax.com>
Source record: 135447

On Mon, 2 Sep 2002 09:15:46 +0100, "Paulo Calvo"
<nospam@nospam.nospam> wrote:

>
>"WavyDave" <nowaynowhere@yahoo.com> wrote in message
>news:ako2ah0v4h@enews3.newsguy.com...

>> Are Hams that closed minded and unprofessional:
>
>Hams are radio amateurs not radio professionals...

WavyDave is probably just another Cohen "personality" anyway.

Cohen wants to "debate" Steve best, but he should just read Steve's
article in March 2002 QEX.

4306. Re: What If You Could Tune Out Polarization Mis-Match?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-02 12:48:13 UTC
From: "W.G Ewald" <wgewald@att.net>
Message-ID: <r6n6nuc6p1t1ldr6bf3vqeqsv21ato8bt7@4ax.com>
Source record: 135448

On Mon, 02 Sep 2002 06:30:57 GMT, 'Doc <w5lz@icok.net> wrote:

>
>
>John,
> I think you're going at it from the wrong direction.
>Instead of messing with the antenna to change the signal's
>polarity, why not stabilize the ionosphere? Then you
>wouldn't have to worry about the changing polarity.
> 'Doc

He'd have to worry about HAARP. :-)

4307. Re: G5RV Feedline

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-02 13:10:38 UTC
From: Dick Carroll <dixie@townsqr.com>
Message-ID: <3D736323.B40EDD5B@townsqr.com>
Source record: 135449

'Doc wrote:

The horizontal

> center fed doublet fed with some form of twin lead has
> been around almost forever, Mr. Varney didn't invent it.

I thought Art Collins did, in the 1920's.

Dick

4308. Re: G5RV Feedline

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-02 13:24:52 UTC
From: n7ws@nowhere.com
Message-ID: <3d736480.991983@news.triconet.org>
Source record: 135450

On Mon, 02 Sep 2002 06:38:47 GMT, 'Doc <w5lz@icok.net> wrote:

|
|
|Wes,
| I think you're missing quite a bit. The horizontal
|center fed doublet fed with some form of twin lead has
|been around almost forever, Mr. Varney didn't invent it.
|The antenna that Mr. Varney is given credit for uses a
|twin lead 'matching transformer' as part of the antenna
|system.
| 'Doc

I don't know how many times I have to say this.

In a thread in Dec 2001 I wrote:

"Since the *only* thing special about Varney's antenna is the "magic"
102 foot length, the *only* antenna that can properly be called a
"G5RV" is a 102 foot long, center-fed dipole.

Besides "G5RV"s there are "YAGI"s, "MARCONI"s, "W8JK"s, "LAPORT"s,
"ZEPP"s, "WINDOM"s, "BRUCE"s, et cetera.

But henceforth, all other center-fed dipoles, whether fed with coax
(with or without baluns (choke, current or voltage), ladderline,
twinlead, or zip cord should be called by their proper name: "N7WS"s""

SK

N7WS

4309. Re: Dipole problems

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-02 13:29:05 UTC
From: Dick Carroll <dixie@townsqr.com>
Message-ID: <3D736775.53FD8187@townsqr.com>
Source record: 135451

Jonathan Bowes wrote:

> I have just strung up 2 dipoles over the weekend. One for 40m and the
> other for 18m. I used a 10ft aluminium pole with a 1ft piece of
> plastic conduit tapered into the end. This was to prevent the dipole
> "seeing" the mast since it wouldn't tune at all just lashed to the
> mast. Just below each dipole centre I inserted a RF choke into each
> feedline (rg58) to prevent shield rediation. The choke was 4 turns of
> rg58 through a ferrite core (2.5cm diam) to produce a loop of about
> 10-12cm in diam. I had taken advice from an antenna book on doing
> this. The dipoles tuned OK but RX signal strengths are well well down
> (5-7 S-points) than on my mates 17m dipole just up the road in Perth.
> We compared signal strengths whilst on the phone. He has a FT-920 fed
> with rg58 (twice as much as my feed) and I have a TS-570.
> Interestingly my dipole is about 3x the height of his and orientated
> pretty much the same (N-S).
>
> Just wondering if that RF choke is the cause or what else could be
> strangling it. Can anyone help out here before I have to pull the mast
> down.
>
> Thanks alot in advance.
>
> Jonathan

1. Take your radio to his location and compare it with his, using his antenna system, then have him bring his radio to your place and use your antennas for comparison. It may all end here. There can be lots of difference in receiver s-meters.

2. The RF choke you're using on the outer shield of the coax cannot affect what happens inside the coax where the signal travels. Removing it won't raise your recieved signal strength. UNLESS his sytem is using the coax outer shield as part of the antenna, for yours is not, with the choke in place. THAT may be the difference. Might be worth placing a choke in his feedline, same as yours, and comparing again. Or taking yours out. The outer shield does indeed often act as a part of the antenna when a balun or choke is not used.

3. Always suspect coax connector problems in such cases.

4. There are often working differences in antenna systems in different locations that are difficult or impossible to easily explain. First sort out that which can be easily explained, as above.

Dick

4310. Re: Dr. Kabbary's New EM Equations

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-02 13:30:07 UTC
From: k3bu@aol.com
Message-ID: <20020902093007.01966.00001035@mb-mu.aol.com>
Source record: 135452

K1PO wrotted:
>
>I have a neat homemade frequency generator here in my home lab with a
>frequency dial that begins with approximately -10kHz and passes through 0Hz
>and goes all the way up to +10kHz as you turn the dial.

Wow!
Shhhh!
Don't tell that to Freakytennas crowd. That could produce antennas that are negative size, have more gain than full size antennas and put us all out of business. I bet the patent bees are already Philing out patent pendings.
("Way of Tuning Freaktall (or Freakshort) antennas of Slurpinski third irritation for negative and positive phrequencies for infinite gain, broadbanded in all directions")

Happy E-Labor Day!

Bada BUm

4311. Re: How do you handle coax runs through outside to inside ?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-02 13:53:50 UTC
From: dan <danlx@execpc.com>
Message-ID: <3d736d78$0$1433$272ea4a1@news.execpc.com>
Source record: 135453

On Sun, 1 Sep 2002 23:03:54 -0500, "Steve" <someone@knology.net>
wrote:

>Just curious as to how others handle this?
>
Hi Steve,
There are several ways it can be done.
If one is available, use a basement window. Cut a piece of plywood or plastic to fit the size of the window frame, +1/8" in height. Drill a line of holes horizontally across the piece. Put in more holes than you will need. The holes will be large enough so that when they are finished and you run the piece through a saw cutting it in half, going through the middle of the holes, they are the size of your coax when put together. Screw the lower piece into the window opening, after removing the window of course, lay your coax pieces into the half holes and then install the top half. Use your favorite sealant to seal the coax and a piece of wood /plastic to seal up the open holes for future use. When you move/sell you can put the original window back in.

If you do not care about leaving holes, use a rotary hammer drill. If you do not have one rent it and the bit. Drill through the concrete or block/brick and bring the coax in that way. Unless you are good at measuring get a bit long enough to go al the way through the wall you are drilling. Again, use your favorite sealant.

Wood trim areas around windows may also be used. These may also be patched and painted after removal to hide them on the outside but are hard to hide on the inside. You may want to experiment.

Soffit areas can be used if you have a closet or other way to introduce the coax into the hose without getting your mate in a frenzy. Cut a rectangle hole in the soffit to fit a soffit vent screen, buy one at the hardware store. Run the coax into the house and bring it down through a closet ceiling. Make a hole or an access door with trim so it looks good later.

There are just about as many ways to do this as there are hams. These are some of the ways I have used in the past.
I hope this helps.
Dan
N9JBF

I've rambled enough, back to the rocking chair. ZZZZZZZZZ
Remove left x for e-mail reply.

4312. Re: What am I emitting on 80M?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-02 14:23:43 UTC
From: richardharrison@webtv.net
Message-ID: <23540-3D73746F-150@storefull-2391.public.lawson.webtv.net>
Source record: 135455

Ken wrote:
"No luck so far on three tries."

I was impressed by a demonstration of an ordinary HF mobile unit (no big amplifier) one evening by one of our radio club members. He is a native of Malta and his brother who is also a ham still lives there.

The local ham picked up the microphone on his mobile rig, gave a call, and his brother on Malta immediately responded loudly and clearly. It was very early in the morning on Malta.

The local ham was using a short vertical whip on his mobile. Low verticles work better than low horizontals for DX.

Best regards, Richard Harrison, KB5WZI

4313. Re: How do you handle coax runs through outside to inside ?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-02 14:29:29 UTC
From: klocko@toad.net
Message-ID: <224d9cd4.0209020629.1ac41e8@posting.google.com>
Source record: 135454

"Steve" <someone@knology.net> wrote in message news:<un5ojb5aqs69f2@corp.supernews.com>...
> Just curious as to how others handle this?

Hi Steve,
One of my basement windows is a small sliding type. A small wood frame with a piece of plexiglass fits in the opening for the window. (One of the sections of the window is moved over by this frame, but I jammed some foam insulation between the sections to keep bugs and cold air out). A bulkhead coax connector is inserted in a hole in the plexiglass. A ground wire is connected to the outside coax connector using a hose clamp. There's also a big screw going through the plexiglass for the ground wire from the rig. It ain't pretty but it works. 73,
Bill N3WK

4314. Re: Dr. Kabbary's New EM Equations

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-02 14:45:25 UTC
From: "Peter O. Brackett" <ab4bc@ix.netcom.com>
Message-ID: <akvtqk$r6j$1@slb5.atl.mindspring.net>
Source record: 135456

Jeff:

Hi Jeff...

[snip]
"J. Harvey" <JM002.Harvey_ANTI*SPAM_@Sympatico.ca> wrote in message
news:uUwc9.293$7x5.160391@news20.bellglobal.com...
> "Peter O. Brackett"
> > BTW... At which "magical frequency" f does EM
> > phenomena stop being valid. Come on give me
> > a number!
>
> Zero.
[snip]

Zero? Great!

So then f = 0.0001 Hz is still OK, and...

...so is f = 10^-20!

"Wow"... as the Engineer said to the Mathematician... "that's as good as
zero".

Now that we can use f = 10^-20 as a "good" frequency maybe we can get Cecil
and Steve to calculate some reflection mechanics for us at that frequency
using Smith Charts, etc...

I'd love to see the where the reflected power from a 50 Ohm load resistor at
the end of 100 feet of RG-93 fed by a 100 Watt 50 Ohm 10^-20 Hz transmitter
is dissipated.

--Peter K1PO
Indialantic By-the-Sea, FL

4315. Re: characteristic impedance of 14ga 2 conductor as dipole

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-02 15:10:01 UTC
From: kelly@dvol.com
Message-ID: <d22b54c3.0209020710.5db157bf@posting.google.com>
Source record: 135457

0junk4me@bellsouth.net wrote in message
news:<G0dc9.16209$vY2.286994@e3500-atl2.usenetserver.com>...
>
>
I'd forget the two conductor 14 which I assume is Romex, I don't like
solid copper conductors for dipoles. I've built many HF dipoles with
garden variety #14 stranded insulated THHN general purpose "house
wire". The stuff is less than $20 for a 500 ft. roll at Home Depot and
Lowes. You'd even get to pick your color . . A W2DU balun is about as
good as choke baluns get although home-brewing one from a pile of
beads is better. But that would probably take more than a week to pull
together.
>
> 73 de kb0ruu

w3rv

4316. WTB 70-110ft FreeStanding Tower SOCAL

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-02 15:19:40 UTC
From: "John F. Feist" <aa6qn@pacbell.net>
Message-ID: <3D738186.93A0FC93@pacbell.net>
Source record: 135460

Hi, I am looking for a 70~110 ft Free Standing Crankup or Motorizied tower (perfer the motorized version). I live in the San Diego area. I also want the tilt over base so I can lower the tower as well. If you have such a item please drop me a line at: aa6qn@nospam.excite.com (remove the nospam.). I can also be reached via packet at aa6qn@aa6qn.#sca.ca.usa.noam

Thank you in Advance, 73, John AA6QN

4317. Re: G5RV Feedline

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-02 15:45:17 UTC
From: CAM <Cecil.A.Moore@ieee.org>
Message-ID: <3D73878D.577B75D8@ieee.org>
Source record: 135458

Dick Hughes wrote:
> The standard G5RV is basically a 102' flat-top fed in the center with
> 34' of ladder-line (matching section.)

The length of the matching section depends on the VF of the line
that is used. The length is 1/2 wavelength on the 20m design
frequency. The 300 ohm ladder-line that I use has a VF of about
0.8. My design frequency is 14.2 MHz. That gives a matching
section length of 27.7 ft.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

4318. Re: Dr. Kabbary's New EM Equations

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-02 15:47:09 UTC
From: "J. Harvey" <JM002.Harvey_ANTI*SPAM_@Sympatico.ca>
Message-ID: <lJLc9.2988$7x5.356087@news20.bellglobal.com>
Source record: 135462

"Peter O. Brackett"
> Zero? Great!
> So then f = 0.0001 Hz is still OK, and...
> ...so is f = 10^-20!

Provided you can spare the time*, that that's as good a frequency as any.
(*The time for the completion of a single cycle exceeds the guestimated
remaining life-span of the Universe...). Given the wavelength, you might
have problems with nearfield wrap around.

4319. Faraday Screens

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-02 15:49:34 UTC
From: Prefered Customer <jfriley@no.thanks.ieee.org>
Message-ID: <8C049819D4DD4E75.5E924D6B420E4E17.B7ABF98676CDAE21@lp.airnews.net>
Source record: 135459

richardharrison@webtv.net (Richard Harrison) wrote:
>Nearly every AM broadcast station uses a Faraday
>screen to reduce coupling harmonics to the antenna.

Afraid not, Richard. At least not in the last half century. I only know one transmitter that uses a Faraday shield and it's for HF use. And yet almost every station has a Faraday shield somewhere in the station to prevent capacitive coupling.

Fred, W8OY
jfriley@ieee.nospam.org

4320. Re: Dr. Kabbary's New EM Equations

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-02 15:53:52 UTC
From: Dean Craft <w4ihk@mindspring.com>
Message-ID: <al01j3$8sp$1@slb3.atl.mindspring.net>
Source record: 135461

Peter O. Brackett wrote in message ...
>Doc:
>
>[snip]
>"'Doc" <w5lz@icok.net> wrote in message news:3D72A4C8.71BF375D@icok.net...
>>
>>
>> What's a 'negative' frequency?
>> 'Doc
>[snip]
>
>Hey!
>
>No problem...
>
>Negative frequency [-f] is very similar to positive frequency, it just
>rotates in the opposite direction to positive frequency [+f].
>
>
>Best,
>
>--Peter K1PO
> Indialantic By-the-Sea, FL
>

I am really surprised that this topic appears to be giving heart burn to so many people. Peter is the only one that has given any indication of having an understanding. Old time DXers know; however, that the power in positive frequencies travels the short path to the distant end while the power in the negative frequencies traverses the long path. It is just the way DX IS!

Dean -- W4IHK

4321. Re: Dr. Kabbary's New EM Equations

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-02 15:59:37 UTC
From: "Peter O. Brackett" <ab4bc@ix.netcom.com>
Message-ID: <al01tagai1@slb3.atl.mindspring.net>
Source record: 135463

Hi Yuri:

[snip]
"Yuri Blanarovich" <k3bu@aol.com> wrote in message
news:20020902093007.01966.00001035@mb-mu.aol.com...
> K1PO wrotted:
> >
> >I have a neat homemade frequency generator here in my home lab with a
> >frequency dial that begins with approximately -10kHz and passes through
0Hz
> >and goes all the way up to +10kHz as you turn the dial.
>
>
> Wow!
> Shhhh!
> Don't tell that to Freakytennas crowd. That could produce antennas that
are
> negative size, have more gain than full size antennas and put us all out
of
> business. I bet the patent bees are already Philing out patent pendings.
> ("Way of Tuning Freaktall (or Freakshort) antennas of Slurpinski third
> irritation for negative and positive phrequencies for infinite gain,
> broadbanded in all directions")
>
> Happy E-Labor Day!
>
> Bada BUm
[snip]

Happy Labor Day to you as well.

Yuri, I have found that running my satellite rigs with both positive and negative frequencies allows me to change the "sense" of my circular polarization antennas without having to rewind them. I don't know why no one else hasn't thought of this neat set up.

For instance if I use positive frequencies with a clockwise polarization antenna I get regular clockwise polarization, then with negative frequencies applied to the same antenna I get counter-clockwise polarization. There are other amazing results from operating this way... for instance.

I find this useful for full duplex moon bounce where, as you know, the reflection off the moon reverses the circular polarization so that usually, to avoid polarization losses, one requires two circularly polarized antennas, one for transmit and one for receive.

My moon bounce set up just uses *one* circularly polarized antennna. I transmit on the positive frequencies and receive on the negative frequencies.

Of course the duplexing is easily accomplished without the use of hybrids, etc... by just using single sideband filters with the transition band at zero frequency. The upper side band filter then passes only the positive frequencies, from the transmitter, while the lower side band filter passes only the negative frequencies for the receiver.

I've been using this postive/negative set up for a few years now and I've almost reached DXCC on EME using it.

The EME DX hunting has kept me so busy that I just haven't had the time to write up an article on the technical details for QEX.

When I do, I'll be sure to let ya'll know...

Best,

--Peter K1PO
Indialantic By-the-Sea, FL.

4322. Re: NEED MFJ-16010 ST Instructions/Schematic

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-02 16:07:48 UTC
From: Steve Silverwood <kb6ojs@arrl.net>
Message-ID: <MPG.17dc671482804d3b98968d@news-server.socal.rr.com>
Source record: 135464

In article <B98416D8.8A4D%flathat@bellsouth.net>, flathat@bellsouth.net
says...
> Just bought a used MFJ-16010 ST, but there are no instructions. I'm going to
> use it for receiving only with a random wire antenna. I'd like to know the
> best way to connect everything.

MFJ has copies of the manuals for most all of their products on their
web site. www.mfjenterprises.com

--

-- //Steve//

Steve Silverwood, KB6OJS
Fountain Valley, CA
Email: kb6ojs@arrl.net
Web: http://home.socal.rr.com/silverwood

4323. Re: Cushcraft going out of business?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-02 16:07:48 UTC
From: Steve Silverwood <kb6ojs@arrl.net>
Message-ID: <MPG.17dc6469b11cedfc98968c@news-server.socal.rr.com>
Source record: 135465

There is one factor you're omitting. Hams by nature are exceptionally
tight with a buck. They may spend thousands of dollars for a rig, but
they'll also go from dealer to dealer to try and squeeze an extra five
bucks' discount out of them. They'll also do things like buy a rig from
a dealer, get it home and try it out, then ship it back to the dealer
and try to get a full refund out of it. HRO has moved to discourage
this by charging a restocking fee of something like 15% since they can't
resell the unit as new once it's been sold and opened.

This is one of the reasons why margins are so tight -- you have to cut
the price to the bare minimum in order to be able to stay in the market.

Just my two cents' worth.

In article <20020803180455.01254.00001324@mb-cr.aol.com>,
fractenna@aol.com says...
> >When Bob Cushman left the business, it started the downward sprial into
> >oblivion. Cushcraft, if it fails as a company, will be yet another example of
> >what happens when your customer service becomes customary lack of service.
> >
>
> I think this is unfair.
>
> Cushcraft is obviously aware of the issues and solves them. From time to time
> we all see these gripes on this NG, and as best as I can tell, all of them get
> resolved. So why is it a 'downhill spiral'?
>
> The fact is that its hard to be in business selling ham radio antennas, or
> anything else to hams for that matter. I suspect the margins on ham antennas
> are VERY low and has gone down--not up-- in the last twenty years. Most OEM's
> would answer that challenge by going offshore. Obviously Cushcraft is an
> American company which , I presume, takes pride in being an American OEM.
>
> I just looked at their news page and they make a comment on defining a new
> focus on wireless devices, if I read that correctly. One would hope, for the
> sake of needy hams, that they don't chuck the ham antenna business. I see no
> indication of that, mind you, but its a tough road out there selling to a
> smaller--and aging-- ham audience.
>
> If one of the remaining ham antenna companies moves on to other markets, many,
> many hams will be scrambling for alternatives.
>
> Not good for the ham community.
>
> Just my opinions, take them or leave them as you wish.

>
> 73,
> Chip N1IR
>

--

-- //Steve//

Steve Silverwood, KB6OJS
Fountain Valley, CA
Email: kb6ojs@arrl.net
Web: http://home.socal.rr.com/silverwood

4324. Re: Antenna Switches: Opinions On ?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-02 16:07:49 UTC
From: Steve Silverwood <kb6ojs@arrl.net>
Message-ID: <MPG.17dc6775a7d4df0898968e@news-server.socal.rr.com>
Source record: 135466

In article <ajrnb5moo1@slb1.atl.mindspring.net>, rgsrose@tiac.net
says...
> Would appreciate any opinions on, and experiences with, the four brands in
> the Universal Radio catalog, or on any others.

I have a couple of Daiwa switches, they work fine.

--

-- //Steve//

Steve Silverwood, KB6OJS
Fountain Valley, CA
Email: kb6ojs@arrl.net
Web: http://home.socal.rr.com/silverwood

4325. Aviation scanning on a CB Antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-02 16:08:49 UTC
From: Steve Danhof <stevedanhof@attbi.com>
Message-ID: <l2Mc9.172237$aA.34468@sccrnsc02>
Source record: 135467

I have a handheld Sportys SP200 Nav/Com than sends and receives between 118.000 MHz and 136.975 MHz and receives 137.000 MHz to 142.975 and 108.000 to 117.950 MHz.

I have a mobile Wilson 2000 CB antenna and some other base antenna at my house.

All I want to do is monitor these frequencies with the scan feature on my tranciever. I will not be transmitting at all while using these antennas.

Is this possible and safe for the radio?

Thanks for your help

4326. Re: Dr. Kabbary's New EM Equations

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-02 16:11:37 UTC
From: richardharrison@webtv.net
Message-ID: <24978-3D738DB9-49@storefull-2393.public.lawson.webtv.net>
Source record: 135371

Peter, K1PO wrote:
"I`d love to see where the reflected power from a 50 Ohm load resistor at the end of 100 feet of RG-93 fed by a 100 Watt 50 Ohm 10^-20 Hz transmitter is dissipated."

As Peter says, the frequency is as good as zero Hz. The coax is surely low in d-c resistance as compared with the 50-ohm load resistor.

The load resistor soon burns out and the resulting open circuit accepts no more power.
The transmitter is designed to deliver and dissipate internally the power associated with 100 watts. The load is only designed to take 50 watts I have assumed.

Best regards, Richard Harrison, KB5WZI

4327. Re: Dr. Kabbary's New EM Equations

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-02 16:18:30 UTC
From: k3bu@aol.com
Message-ID: <20020902121830.02248.00001210@mb-mu.aol.com>
Source record: 135468

K1PO wrotes:

>
>My moon bounce set up just uses *one* circularly polarized antennna. I
>transmit on the positive frequencies and receive on the negative
>frequencies.
>
>Of course the duplexing is easily accomplished without the use of hybrids,
>etc... by just using single sideband filters with the transition band at
>zero frequency. The upper side band filter then passes only the positive
>frequencies, from the transmitter, while the lower side band filter passes
>only the negative frequencies for the receiver.
>
>I've been using this postive/negative set up for a few years now and I've
>almost reached DXCC on EME using it.
>
>The EME DX hunting has kept me so busy that I just haven't had the time to
>write up an article on the technical details for QEX.
>

Wow!
Awesome dude!
Without trying to expose your patentable tings, I gather that LSB/USB filters are edge parked at 0 Heartz. I wish I had time to get to bounce the moon, I am still trying to recover for the teorethical beating in the contests I didn't go head to head with team Freaktall on 10m. I am trying now to concentrate on low bands before the Freaktalls get there. It could poison the low bands for all those guys with them stupid big antennas, forsquares etc.
You better get patents going because many scientwists are closing in with all them faster than light antennas, Freak-Fracs, EH?
Have Phun!

Bada BUm

4328. Re: Faraday Screens

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-02 16:31:21 UTC
From: richardharrison@webtv.net
Message-ID: <24977-3D739259-167@storefull-2393.public.lawson.webtv.net>
Source record: 135370

Fred, W8OY wrote:
"And yet almost every station has a Faraday shield somewhere in the station to prevent capacitive coupling."

Yes. That is what I meant to say. All medium wave broadcasters I`ve seen use the Faraday shield in the tower dog house where the transmission line is coupled to the antenna tower. It does double duty there. It grounds out harmonics and it grounds out lightning strokes.

Best regards, Richard Harrison, KB5WZI

4329. Antenna switch question

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-02 16:31:47 UTC
From: xrecho@eminem2000.com
Message-ID: <18d5aac7.0209020831.581e47dc@posting.google.com>
Source record: 135369

I have 3 antennae that I would like to connect to the rig for different frequencies, using a Diawa coax switch. The switch only switches the center conducter of the 3 coax lines, leaving the braid of all 3 antennae connected together. The center conducter is connected to the "right side" of the antennae so there is no problem with that.

If I switch to antenna #2, for example, I am feeding the "right side" of antenna #2, but also feeding the "left side" of antennae #1, #2, and #3. It would seem to me that I have the equivalent of a dipole with one short side and one extremely long side (unless I could disconnect the braided side of these antennae).

I asked one ham about this and he said the braid side (left side in this case) was connected to a common ground and would present no problem. I do not understand the logic in this, since "RF Ground" switches between the left side and right side 14,300,000 times per second on 20 meters. It would seem that the radio would see the right side of one antenna and the left side of all 3 antennae for as long as the coax was connected together. Can anyone explain this puzzlement? Thanks, Justin

4330. Re: How do you handle coax runs through outside to inside ?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-02 16:45:46 UTC
From: Jack Poulter <jpoulter@islandnet.com>
Message-ID: <1030985166.985790@news.islandnet.com>
Source record: 135373

"W5LL" <mattpatt@1starnet.com> wrote in message ...
> Get a big masonry bit and go for it. Rat Shack sells a insert you can
put
> in the hole. I just ran the cables though.. and plugged up the hole
with
> some steel wool and then put duct tape over it. This will
weatherproof it
> and it's easy to take off in case you ever need to make another cable
run.
> If you used putty or something like that to plug up the hole it would
be
> hard to remove should you ever need to run more cable.

The people who install satellite TV cables have a sealant that does not harden like putty. I imagine many hardware or perhaps electronic supply houses can identify the products.

Jack Poulter
VA7JCP

4331. Re: Cushcraft going out of business?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-02 16:47:26 UTC
From: fractenna@aol.com
Message-ID: <20020902124726.27742.00000769@mb-df.aol.com>
Source record: 135372

>
>There is one factor you're omitting. Hams by nature are exceptionally
>tight with a buck. They may spend thousands of dollars for a rig, but
>they'll also go from dealer to dealer to try and squeeze an extra five
>bucks' discount out of them. They'll also do things like buy a rig from
>a dealer, get it home and try it out, then ship it back to the dealer
>and try to get a full refund out of it. HRO has moved to discourage
>this by charging a restocking fee of something like 15% since they can't
>resell the unit as new once it's been sold and opened.
>
>This is one of the reasons why margins are so tight -- you have to cut
>the price to the bare minimum in order to be able to stay in the market.
>
>Just my two cents' worth.
>
>In article <20020803180455.01254.00001324@mb-cr.aol.com>,
>fractenna@aol.com says...
>> >When Bob Cushman left the business, it started the downward sprial into
>> >oblivion. Cushcraft, if it fails as a company, will be yet another example
>of
>> >what happens when your customer service becomes customary lack of service.
>
>> >
>>
>> I think this is unfair.
>>
>> Cushcraft is obviously aware of the issues and solves them. From time to
>time
>> we all see these gripes on this NG, and as best as I can tell, all of them
>get
>> resolved. So why is it a 'downhill spiral'?
>>
>> The fact is that its hard to be in business selling ham radio antennas, or
>> anything else to hams for that matter. I suspect the margins on ham
>antennas
>> are VERY low and has gone down--not up-- in the last twenty years. Most
>OEM's
>> would answer that challenge by going offshore. Obviously Cushcraft is an
>> American company which , I presume, takes pride in being an American OEM.
>>
>> I just looked at their news page and they make a comment on defining a new
>> focus on wireless devices, if I read that correctly. One would hope, for
>the
>> sake of needy hams, that they don't chuck the ham antenna business. I see

>no
>> indication of that, mind you, but its a tough road out there selling to a
>> smaller--and aging-- ham audience.
>>
>> If one of the remaining ham antenna companies moves on to other markets,
>many,
>> many hams will be scrambling for alternatives.
>>
>> Not good for the ham community.
>>
>> Just my opinions, take them or leave them as you wish.
>>
>> 73,
>> Chip N1IR
>>
>
>--
>
>-- //Steve//
>
>Steve Silverwood, KB6OJS
>Fountain Valley, CA
>Email: kb6ojs@arrl.net
>Web: http://home.socal.rr.com/silverwood
>
>

Hi Steve--

I respect your opinion.

Of course, the situation is further exacerbated by the declining ham population; the (presumably) high unemployment rate of hams (who are disproportionately in the telecom/related industries), and the fact that most antenna companies that sell to hams aren't focused on hams to start with.

A major antenna company closed their NY state facility last month and many will post record losses for the year (my informed speculation). Also, I have never seen so many antenna engineers looking for jobs: decent, well-qualified folk with great backgrounds, and, unfortunately very few jobs to fill.

Tough times, indeed. Maybe we hams should break open our piggy banks:-)?

73,
Chip N1IR

4332. Re: Cushcraft MA5B --painted?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-02 16:54:08 UTC
From: G4VGO <rmread@attglobal.net>
Message-ID: <3d739acd_2@news2.prserv.net>
Source record: 135374

I think you should do the whole tower, mast, rotating device...and the antenna.

In the military, a dusty gray, kind of a powder gray, between white and real gray was the color we used for sky camo. If you are going below the tree line....that is will the neighbors see trees in the background while looking at your antenna, use a camo combo of green, brown, and black, random sploches.

Krylon will detune a bit, but you can fix that.

Good luck!

Bob G4VGO

http://www.qsl.net/g4vgo

4333. Re: antenna tuner question

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-02 16:57:38 UTC
From: 'Doc <w5lz@icok.net>
Message-ID: <3D73986E.42B793BF@icok.net>
Source record: 135375

KJ4UO,
Sure it would work 'better'. It would act
like an impedance matching device at the input
of the antenna (a gamma, etc.). does anyone
make a tuner specifically to do that? Not that
I'm aware of, but remote tuners such as the 'SGC's
would do it. Kinda expensive, not sure it would
be worth it...
'Doc

4334. Re: What is the big deal with fractal and EH ????????

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-02 17:09:14 UTC
From: "Alexander S. Wood" <alec_wood@dont.spam.me.ntlworld.com>
Message-ID: <WINc9.942$dE3.18494@newsfep3-gui.server.ntli.net>
Source record: 135378

"Fractenna" <fractenna@aol.com> wrote in message
news:20020830194412.15711.00000124@mb-cv.aol.com...
> >
<snip>
> All the unbiased runs I have seen <snip>
> 73,
> Chip N1IR

See Chip (and supporters) you have just encapsulated in those few words the core of the problem, the reason for the disdain with which your technology is regarded in some quarters. I will explain.....

I am no Luddite believing that only a straight wire can radiate, or similar closed-minded soul. I am optomistic that all antenna theory is not yet known, and new discoveries await us. However, I have great difficulty picturing in my "mind's eye" as it were, the working of a fractal antenna. Simlarly the EH antenna seemed at first glance a flight of fancy. However, I and any one of my peers can go to various websites and find design information and explanation of the EH antenna so that we may better understand the thinking of its proponents. We can even build one from published design parameters. Not so fractal antennas. Anyone who attempts to spread a little understanding on this subject is met quickly with the sound of you firing a full broadside of potential litigation from every gun you can find.

My EH antenna did not work very well. I have theorised on a number of reasons why this may be, and why those "good" installation were so. By discussing them with the "inventers" and my peers, and probably having many of my theories debunked, we shall acheive a better understanding of this technology. Indeed, through theorising and the subsequent debate, even the inventors will come to better understand their own technology. Thus it may be that in a few years we are all using EH antennas, or it may not.

I would love to be able to try a similar exercise with fractal antennmas but I cannot. My antenna knowledge, despite being what many would call "advanced", does not allow me to see the concept behind the "specialness" of the fractal from an antenna loading point of view. Unfortunately, you closing of the "ham" page on your site (reason given is ridiculous, you need to cool the paranoia. If bin Laden wants one of you antennas he'd have got someone to steal one well before now) and your bullying of anyone who attempts open discussion of the technology means that I am likely to always remain ignorant on this subject.

Underneath the bloody-minded face you present the population of this NG, I am sure that there is a reasonable guy. Come on, as a scientist you know that any theory must stand up to peer scrutiny. Ignore the shouting Luddites

and let the more reasonable of your peers have an informed debate on the subject. Allow the information to be disseminated. Allow websites to publish non-commercial designs and critiques. Only in this way will the true value of "fractal" antenna technology become known.

Kind regards

Alec Wood M1BNK
Teesside UK.

4335. Re: Aviation scanning on a CB Antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-02 17:13:06 UTC
From: "Alexander S. Wood" <alec_wood@dont.spam.me.ntlworld.com>
Message-ID: <WINc9.943$dE3.18494@newsfep3-gui.server.ntli.net>
Source record: 135379

"Steve Danhof" <stevedanhof@attbi.com> wrote in message
news:l2Mc9.172237$aA.34468@sccrnsc02...
> I have a handheld Sportys SP200 Nav/Com than sends and receives between
> 118.000 MHz and 136.975 MHz and receives 137.000 MHz to 142.975 and
108.000
> to 117.950 MHz.
>
> I have a mobile Wilson 2000 CB antenna and some other base antenna at my
> house.
>
> All I want to do is monitor these frequencies with the scan feature on my
> tranciever. I will not be transmitting at all while using these antennas.
>
> Is this possible and safe for the radio?
>
> Thanks for your help
>
Yes, it's possible. It's also safe for the radio. However the reception
would be better if you use some kind of VHF antenna instead of a CB whip.

Alec Wood M1BNK
Teesside UK

4336. Re: Dr. Kabbary's New EM Equations

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-02 17:15:07 UTC
From: 'Doc <w5lz@icok.net>
Message-ID: <3D739C87.B7950289@icok.net>
Source record: 135376

Yuri & Peter,
I think both of you have been sitting too close
to ol'Frac at those seminars...
'Doc

4337. Re: Dr. Kabbary's New EM Equations

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-02 17:21:14 UTC
From: k3bu@aol.com
Message-ID: <20020902132114.02276.00000866@mb-mu.aol.com>
Source record: 135377

>
>
>Yuri & Peter,
> I think both of you have been sitting too close
>to ol'Frac at those seminars...
> 'Doc
>
>
>
>

Are you threatening us? Are you trying to damage our professional reputation
and respect for authorities?
Please see and desee your further comments.
Juice having some phun on a rainy day.

BUm BUm

4338. Re: G5RV Feedline

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-02 17:25:55 UTC
From: N4LQ <N4LQ@igLou.com>
Message-ID: <3d724d7f$1_3@news.iglou.com>
Source record: 135496

Mr. G5RV recommended using ladder line for multiband use. For 20m use only,
he recommended using the matching section with coax.
There's the straight answer.

--
Steve Ellington N4LQ.
"SeaQuest" <seaquest@canada.com> wrote in message
news:Dkrc9.232064$v53.12503647@news3.calgary.shaw.ca...
> I've been reading tons about the G5RV as I am just about to build my first
> one. I can't get a straight answer on one thing. If I am building one from
> scratch and will naturally be using a tuner, would I be better off with a
> coax feedline to the ladder line matching section or would it be better to
> run the ladderline right into the shack to my tuner (which handles both
coax
> or balanced line). If coax should I go with RG8 (50 ohm) or would I be
> better off with RG59 (75 ohom). I should add that the run from the antenna
> to the tuner is 70 feet.
>
> Jim
>
>

4339. Re: How do you handle coax runs through outside to inside ?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-02 17:38:00 UTC
From: Allodoxaphobia <QSB@QRM-QRN.net>
Message-ID: <slrnan78fn.qtr.QSB@animas.frontier.net>
Source record: 135380

On Mon, 02 Sep 2002 08:53:50 -0500, dan scribbled:
> On Sun, 1 Sep 2002 23:03:54 -0500, "Steve" <someone@knology.net>
> wrote:
>
>>Just curious as to how others handle this?
>>
> Hi Steve,
> There are several ways it can be done.
> If one is available, use a basement window. Cut a piece of plywood or
> plastic to fit the size of the window frame, +1/8" in height.

Plastic -s usually better. Basements are dark enough to begin with....
I took out the double-pane, stationary section of my 2 piece sliding
glass window and built a double-pane *plastic* panel to replace it.
Not at all that difficult. (Then I used silicone glue to affix
a *third* plastic panel on the outside frame. It's 7703' (2345m)
here.) 'Tis easy to drill through for coax and rotator cables.
I used a hole saw for 2 runs of 3/4" hardline. I apply a bead of
"strippable" weather caulking around each cable/coax at the outer
plastic panel. (This was mentioned in another post here. What you're
lookin' for is, either Red Devil "Zip-A-Way", or DAP "Seal 'N Peel".)

HTH,
Jonesy
--
| Marvin L Jones | jonz | W3DHJ | OS/2
| Gunnison, Colorado | @ | Jonesy | linux __
| 7,703' -- 2,345m | frontier.net | DM68mn SK

4340. Re: G5RV Feedline

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-02 18:01:16 UTC
From: n7ws@nowhere.com
Message-ID: <3d73a384.7993278@news.triconet.org>
Source record: 135381

On Mon, 02 Sep 2002 08:21:57 -0700, Dick Hughes
<rhughes33@cableone.net> wrote:

|I disagree Wes. Varney even states, "For installation in a very
|limited space, the dimensions of both the "flat-top" and the matching
|section can be divided by a factor of two to make the half-size G5RV,
|which is a very efficient antenna from 7 to 28 mhz." Therefore, a 51'
|flat-top is still a G5RV antenna. The "special" part of the G5RV
|design is the use a specific length of ladderline to serve as a
|matching transformer on 20-meters.
|
|Varney goes on to say, "In contradistinction to multiband antennas in
|general, the full size G5RV antenna was not designed as a half-wave
|dipole on the lowest frequency of operation, but as a 1 1/2 wave
|centre-fed long-wire antenna on 14mhz, where the 34ft (10.36m)
|open-wire matching section functions as a 1:1 impedance transformer,
|enabling the 75ohm twinlead or 50/80ohm coaxial cable feeder to "see"
|a close impedance match on that band with a consequently low vswr on
|the feeder. However,on all the other hf bands the function of this
|section is to act as a " make-up" section to accommodate that part of
|the standing-wave (current and voltage components) which, on certain
|of the operating frequencies, cannot be completely accommodated on the
|"flat-top" (or inverted-V)radiation portion."
|
|Dick - W6CCD

Reeling him in I reply:

Nope, you're reading a different paper than I am. The *original*
paper says no such thing.

And that "special" length of ladder as Varney himself says, "..in this
case, acts as a one-to-one impedance transformer..." Therefore, it
does *no* matching on 20 meters and contrary to what he claims, it
doesn't "make up" part of the antenna on other bands any more than the
200' of Heliax feeding my beam "makes up" part of the antenna.

4341. Re: What is the big deal with fractal and EH ????????

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-02 18:08:09 UTC
From: fractenna@aol.com
Message-ID: <20020902140809.15270.00000678@mb-mn.aol.com>
Source record: 135382

>See Chip (and supporters) you have just encapsulated in those few words the
>core of the problem, the reason for the disdain with which your technology
>is regarded in some quarters. I will explain.....
>
>I am no Luddite believing that only a straight wire can radiate, or similar
>closed-minded soul. I am optomistic that all antenna theory is not yet
>known, and new discoveries await us. However, I have great difficulty
>picturing in my "mind's eye" as it were, the working of a fractal antenna.
>Simlarly the EH antenna seemed at first glance a flight of fancy. However, I
>and any one of my peers can go to various websites and find design
>information and explanation of the EH antenna so that we may better
>understand the thinking of its proponents. We can even build one from
>published design parameters. Not so fractal antennas. Anyone who attempts
>to spread a little understanding on this subject is met quickly with the
>sound of you firing a full broadside of potential litigation from every gun
>you can find.
>
>My EH antenna did not work very well. I have theorised on a number of
>reasons why this may be, and why those "good" installation were so. By
>discussing them with the "inventers" and my peers, and probably having many
>of my theories debunked, we shall acheive a better understanding of this
>technology. Indeed, through theorising and the subsequent debate, even the
>inventors will come to better understand their own technology. Thus it may
>be that in a few years we are all using EH antennas, or it may not.
>
>I would love to be able to try a similar exercise with fractal antennmas but
>I cannot. My antenna knowledge, despite being what many would call
>"advanced", does not allow me to see the concept behind the "specialness" of
>the fractal from an antenna loading point of view. Unfortunately, you
>closing of the "ham" page on your site (reason given is ridiculous, you need
>to cool the paranoia. If bin Laden wants one of you antennas he'd have got
>someone to steal one well before now) and your bullying of anyone who
>attempts open discussion of the technology means that I am likely to always
>remain ignorant on this subject.
>
>Underneath the bloody-minded face you present the population of this NG, I
>am sure that there is a reasonable guy. Come on, as a scientist you know
>that any theory must stand up to peer scrutiny. Ignore the shouting Luddites
>and let the more reasonable of your peers have an informed debate on the
>subject. Allow the information to be disseminated. Allow websites to publish
>non-commercial designs and critiques. Only in this way will the true value
>of "fractal" antenna technology become known.
>
>Kind regards

>
>Alec Wood M1BNK
>Teesside UK.
>

Hello Alec,

Nice to hear from you.

I fear you are doing me a disservice: from 1995 to 1991(late) I published several ham articles, and had web-based construction instructions, available for hams.

That has changed since last Summer, as I do not wish to make any construction discussions available. I cannot vouch for the accuracy--indeed clearly , in many cases, inaccuracies-- of other such ham-based discussions.

Call me over-cautious if you wish: that's quite OK.

I request that you respect my wishes on this and kindly not make such requests of me or my affiliates. It will continue through the duration, regrettably.

And please do not make such false attributions: a quick e-mail or check of the records would have indicated the situation.

I thank you.

73,
Chip N1IR

4342. Re: What is the big deal with fractal and EH ????????

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-02 18:12:34 UTC
From: fractenna@aol.com
Message-ID: <20020902141234.15322.00000559@mb-mn.aol.com>
Source record: 135383

```
>from 1995 to 1991(late) I published
>several ham articles

Pardon me; that's obviously 2001, not 1991.

73,
Chip N1IR
```

4343. Re: What If You Could Tune Out Polarization Mis-Match?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-02 18:13:15 UTC
From: gaschafer@attbi.com
Message-ID: <3d73aa38.12658559@netnews.attbi.com>
Source record: 135384

On Mon, 02 Sep 2002 02:18:47 GMT, John Seney <wd1v@amsat.org> wrote:

>This is an idea for a new kind of HF antenna that might boost
>signal levels by as much as 10 dB or more.
>

Polarization selection is worth well at times on some bands. A Couple
of years ago I did some
experiments on 10 meters. I mounted a vertical dipole at the end of
the boom on my 3 element
beam. Mounting it at the end of the boom kept it away from the tower
somewhat. I used feed
lines of the proper length for each so that the vertical dipole and
driven element of the beam
were electrically at the same point. (zero distance between them)

In the shack I could then switch in various combinations of delay
lines so that I could get various
polarization's. Right hand circular, left hand circular, vertical,
horizontal or vertical and horizontal
in phase.

I kept a schedule with a friend in Northern Michigan from my qth in
south Florida. About an
1800 mile path. It was interesting to note that at times each
polarization had it's moment. Some
times right hand circular was best and switching to left hand would
drop the signal way down.
Other times the opposite would happen with left hand being dominant.
Other times vertical alone was the best and at times the horizontal
alone was best.

The polarization rotated rather fast. It would stay at one
polarization for only about 5 to 10
seconds. Then another combination would be best. You had to constantly
keep switching.

The fact that there was a marked difference between right hand and
left hand polarization made
it clear that the polarization was rotating and that the differences
were not just caused by multi
path propagation causing cancellations and re enforcement's. Although
some multipath may also
have been present.

There were times on the band when polarization seemed to be more stable and changing
antenna combinations didn't help much at all.

The best combination for overall signal stability when the polarization was changing rapidly was
the horizontal and vertical antennas in phase. This cost some overall gain but the signals were the
most stable with this combination and no switching was needed.

The station at the other end of the path was always using a large horizontal loop. (about 150
feet on each leg) We wanted to get a vertical antenna up at his end in addition to be able to try
combinations on both ends but the band closed down before we got to it.

By the way when I switched from horizontal to vertical polarization the path was not always the
same in both directions. It was kind of hard to tell as things changed rapidly but from what we
could determine some times when I received best with vertical polarization, he would receive
best when I transmitted horizontal polarization. Other times it was best both ways with the same
polarization.

We did try to make allowances for the difference in the difference in gain between the 3 element
beam (horizontal) and the vertical dipole. But the difference in signal strength at times was much
more the difference in gain of the vertical and horizontal antennas. At times his signal would be
say around S 7 on the vertical and unreadable on the beam and at times the opposite would
occur.

I had also hooked up two receivers running them both on common oscillators (vfo, hf and bfo)
so that the phase relationship would be constant with the two receivers. I connected one to each
antenna, horizontal and vertical. Watching the IF's with a two channel scope I could see the
phase change between the two signals.

I tried listening to the two phased locked receivers at the same time too. It was interesting to
watch how dramatic the change in signal levels between horizontal and vertical was at times.

On the lower bands it is a little more difficult to do the same experiments but it would be
interesting to try.

I also briefly tried an electronic switch, switching between vertical and horizontal rapidly with
one receiver. The thought was that the average signal level would be better. Switching speed
was cranked up to several KC, above the audible range, so as to be inaudible. Problem was
that the switch created inter mod.
Maybe someone has an idea for switching?

73
Gary K4FMX

4344. Re: Cushcraft going out of business?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-02 18:25:06 UTC
From: k1bqt@aol.com
Message-ID: <20020902142506.15102.00001029@mb-fy.aol.com>
Source record: 135385

For what it's worth, one of my former compatriots at MFJ reported hams at Boxboro were spending like crazy this year. Amateur sales, which seems to enjoy a level of immunity from the general economy, appears to be experiencing what Alan Greenspan might term "a minor up-tick".

As the sunspot cycle heads for the locker room, I don't anticipate hot sales for HF antennas over the next five or six years, but sales for VHF and above should remain active. And, while the overall ham market will continue to shrink as active numbers decline, all those licensed boomers and yups are shipping the last kid off to college. Think of it! They, along with scads of marginally employed professionals from the technology sector, will have more spare time than ever to....do whatever they want (I don't know about you, but it was always lack of time and not the lack of money that kept me off the air).

Heck, even PCs aren't taking the huge bite out of expendable income they did five years ago. Many hams are keeping the rag-tag old 1.2-GHz Pentium III so they can spring for a DSP "dream rig" instead. With digital voice lurking around the corner (it's already driving VHF scanner entusiasts nuts on the public servce bands), the first significant mode shift since the '60s will soon be upon us. Imagine, thousands of servicable SSB and FM radios headed straight to the attic. What a beautiful sight!

It may not prove all that lucrative for the antenna guys, but it's sure gonna be fun to watch!

Rick K1BQT

4345. Re: Long Wire's and RF

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-02 18:32:46 UTC
From: Murray Neece <radioranch@cableone.net>
Message-ID: <3D73AECE.7EEA1E5A@cableone.net>
Source record: 135386
Body handling: Binary attachment payload not displayed: radioranch.vcf

Also an artificial ground from MFJ would help...73 K5MDM

Andy M wrote:

> Hi All
>
> Is there any way of reducing the RF in the shack with a Long Wire, like
> putting coax on the shack end ??.
>
> Andy

[One or more binary attachments are retained only in the source text.]

4346. Re: Aviation scanning on a CB Antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-02 18:36:13 UTC
From: Tarmo Tammaru <t-tammaru@home.com>
Message-ID: <xcOc9.248776$Aw4.10591494@bin2.nnrp.aus1.giganews.com>
Source record: 135387

I would be concerned about loading coils or baluns that might be part any HF antenna. They may make tha antenna unusable at VHF, in which case you would be better of with just 3 or 4 feet of wire for the antenna. Or, you might try TV rabbit ears with a 300 to 75 ohm TV balun. BTW, I think 108 -118 is VOR, not voice.

Tam/WB2TT

"Steve Danhof" <stevedanhof@attbi.com> wrote in message news:l2Mc9.172237$aA.34468@sccrnsc02...
> I have a handheld Sportys SP200 Nav/Com than sends and receives between
> 118.000 MHz and 136.975 MHz and receives 137.000 MHz to 142.975 and 108.000
> to 117.950 MHz.
>
> I have a mobile Wilson 2000 CB antenna and some other base antenna at my
> house.
>
> All I want to do is monitor these frequencies with the scan feature on my
> tranciever. I will not be transmitting at all while using these antennas.
>
> Is this possible and safe for the radio?
>
> Thanks for your help
>
>
>

4347. Re: Cushcraft going out of business?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-02 18:42:40 UTC
From: fractenna@aol.com
Message-ID: <20020902144240.10372.00000818@mb-fx.aol.com>
Source record: 135388

>
>For what it's worth, one of my former compatriots at MFJ reported hams at
>Boxboro were spending like crazy this year. Amateur sales, which seems to
>enjoy a level of immunity from the general economy, appears to be
>experiencing
>what Alan Greenspan might term "a minor up-tick".
>
>As the sunspot cycle heads for the locker room, I don't anticipate hot sales
>for HF antennas over the next five or six years, but sales for VHF and above
>should remain active. And, while the overall ham market will continue to
>shrink
>as active numbers decline, all those licensed boomers and yups are shipping
>the
>last kid off to college. Think of it! They, along with scads of marginally
>employed professionals from the technology sector, will have more spare time
>than ever to....do whatever they want (I don't know about you, but it was
>always lack of time and not the lack of money that kept me off the air).
>
>Heck, even PCs aren't taking the huge bite out of expendable income they did
>five years ago. Many hams are keeping the rag-tag old 1.2-GHz Pentium III so
>they can spring for a DSP "dream rig" instead. With digital voice lurking
>around the corner (it's already driving VHF scanner entusiasts nuts on the
>public servce bands), the first significant mode shift since the '60s will
>soon
>be upon us. Imagine, thousands of servicable SSB and FM radios headed
>straight
>to the attic. What a beautiful sight!
>
>It may not prove all that lucrative for the antenna guys, but it's sure gonna
>be fun to watch!
>
>Rick K1BQT
>

Well, I hope Rick is right on this.

But...let's not forget the prominent absence at Boxboro this year of a noted ham antenna OEM. Maybe the market upswing, if it is real, will make it possible for that OEM to again join future Boxboro's

They were missed, IMHO.

73,
Chip N1IR

4348. Re: DSP Voice

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-02 18:51:51 UTC
From: fractenna@aol.com
Message-ID: <20020902145151.10411.00000885@mb-fx.aol.com>
Source record: 135389

Hey Rick--

Got a question for you; assume also of interest to others.

The main virtue of SSB as a voice mode is that it is not, per se, a 'matched filter' approach to rejection of unwanted signals and noise. Thus, we can all hear each other with the minor inconvenience of tuning properly, and rejecting some fidelity of the spoken word.

In DSP voice, you have a A/D/A matched filter, and the more you match, the tighter the rejection; higher S/N, and so on.

What happens in a ham 'contest', where one seeks to kick up the rejection, yet also has to deal with being able to get the message across. Do we all use a priori settings that are agreed upon before the contest?

I don' know anyone who has successfully demonstrated the efficacy of DSP voice in such situations, but would be fascinated to see who has. Basically it is very good in 'low probability of intercept', whereas we hams usually want a 'high probability of intercept'.

Perhaps you can enlighten?

73,
Chip N1IR

4349. Re: NEWS: Here we go...

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-02 19:02:16 UTC
From: K7JEB <k7jeb@arrl.no_spam.net>
Message-ID: <YAOc9.7122$jG2.516310@bgtnsc05-news.ops.worldnet.att.net>
Source record: 135390

>>> The composite, made of fiberglass and copper, caused microwaves shot
>>> through it to bend in an opposite direction than the laws of physics
>>> predict...

K7JEB:
>> From the descriptions posted of the material, I am
>> reminded of microwave lenses made from closely
>> stacked-together waveguide sections....

Richard Clark, KB7QHC:
> I've been reflecting on what you've posted, and it seems that the
> phase velocity is one of those things I remember from elementary
> physics classes, but only as a footnote condition of the math.
>
> That is, the phase velocity is not the velocity of the wave itself,
> but rather the difference between waves (or an interference pattern);
> that is, something that is neither real nor contains any information.
> As such it both presents a FTL condition and offers nothing
> substantive.

Yeah, it's an *apparent* velocity. In the waveguides mentioned
above, it's what you would get if you multiplied the wavelength
observed inside the guide by the frequency of the exciting source.
Doesn't mean jack. The waves inside are just bouncing from
wall to wall rather than propagating through the guide in a
straight-through manner.

The lenses made from such structures can be analyzed as having
a refractive index less than 1.0 and exhibit the "opposite"
quality of a concave surface bringing a plane wave to a focal
point.

> The stumbling point for me is, as you've narrowed it down, with this
> issue of speed and the discussion of speeding up transit time, the
> inversion of the Doppler effect, and the near perfect focus ability.
> Strange stuff to say the least, but at least no one claims that a
> higher consciousness is required to follow the math.

Mathematical reasoning *is* a higher consciousness. ;-)

> Your observations of the physical construction being similar to
> stacked waveguides is right on target to their presentation. They
> offer a simpler condition, but still nothing more than the lumped
> circuit equivalent of your description

My take on the development is that by embedding the very
small, wire structures in the dielectric they were able to

create a slow-wave medium that could be made to have a
wide range of group-delay and phase-delay characteristics.
Your drawing a parallel to lumped L-C networks (and I
would add coupled resonators) is particularly apt.

However, no physical laws appear to have been violated
in the process. Nor were any small animals harmed.

--
Jim Bromley, K7JEB k7jeb @ arrl (dot) net
Glendale, Arizona

4350. Re: Dr. Kabbary's New EM Equations

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-02 19:48:16 UTC
From: "Peter O. Brackett" <ab4bc@ix.netcom.com>
Message-ID: <al0fa4$2dc$1@slb3.atl.mindspring.net>
Source record: 135391

Doc:

How dare you question our technical integrity?

Cordially,

--Peter K1PO Dh.P.

"Yuri Blanarovich" <k3bu@aol.com> wrote in message
news:20020902132114.02276.00000866@mb-mu.aol.com...
> >
> >
> >Yuri & Peter,
> > I think both of you have been sitting too close
> >to ol'Frac at those seminars...
> > 'Doc
> >
> >
> >
> >
>
> Are you threatening us? Are you trying to damage our professional
reputation
> and respect for authorities?
> Please see and desee your further comments.
> Juice having some phun on a rainy day.
>
> BUm BUm
>

4351. KLM 8ele-6m Beam

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-02 19:55:39 UTC
From: nedrog@aol.comNOSPAM
Message-ID: <20020902155539.10323.00000090@mb-fx.aol.com>
Source record: 135392

I have an old KLM 8 element 6m beam that I need some replacement Element to Boom mounting brackets.

I did look at dxengineering.com web page, but the prices are ridiculos.

Soes anybody have either an old antenna like this that they may be parting out, or a suggestion as to whom might have some replacement brackets at a more reasonable price?

73'

Please respond to either the group or to w3cqh@arrl.net, as my AOL account email is BLOCKED because of an unusual amount of unsolicited mail.

Howard W3CQH

4352. Re: Dr. Kabbary's New EM Equations

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-02 20:22:37 UTC
From: "Peter O. Brackett" <ab4bc@ix.netcom.com>
Message-ID: <al0hab$5m9$1@nntp9.atl.mindspring.net>
Source record: 135393

Dean:

[snip]
"Dean Craft" <w4ihk@mindspring.com> wrote in message
news:al01j3$8sp$1@slb3.atl.mindspring.net...
>
> I am really surprised that this topic appears to be giving heart burn to
so
> many people. Peter is the only one that has given any indication of
having
> an understanding. Old time DXers know; however, that the power in
positive
> frequencies travels the short path to the distant end while the power in
the
> negative frequencies traverses the long path. It is just the way DX IS!
>
> Dean -- W4IHK
[snip]

Yep...

Hey, I always use the positive frequencies on long path and negative frequencies on short path.

Also I have found that when you work "split" using the positive-negative frequency set up you don't have to remember and control two different frequencies if you....

...Just call on the + freq and listen on the -freq.

Works great!

Of course my whole HF pos-neg transceiver is homebrew... Can't buy this stuff yet!

I use the PNP transistors in the positive frequency oscillators of the rig and the NPN transistors in the negative frequency oscillators. Potential users beware this idea is: Patent Pending, Copyright and Trademark. The schematics for the design have been kept in a wax sealed Mason Jar on Funk and Wagnal's front porch since Johhny Carson retired!

But... ahem... I think I've already told you guys too much...

I have been afraid to write up the "pos-neg" designs for QEX until my pending patents issue, just in case those greedy amateur equipment manufacturers try to steal my ideas.

Eat your heart out MFJ!

Best,

--Peter K1PO
Indialantic By-the-Sea, FL.

4353. Re: G5RV Feedline

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-02 20:29:52 UTC
From: Bibby <bibby@attbi.com>
Message-ID: <4TPc9.174109$aA.35490@sccrnsc02>
Source record: 135394

There must be somebody in this group with good connections to the other side. Why don't they arrange to contact G5RV directly and get the straight scoop!

Malcolm W1/GW3NJY

"Dick Hughes" <rhughes33@cableone.net> wrote in message news:7lg7nuk7u8r6inojcspuk5pgp8n0q07v1p@4ax.com...
> Here is another reference to a different size G5RV. In this case it
> is double the original. http://www.qsl.net/aa3px/g5rv.htm . Now we
> have an original 102', a half-size and a double-size. All of which
> supports my contention that 102' is not the unique part of the G5RV as
> you maintain, but rather it is the length of the open-wire feed.
>
> How you can compare radiation from Heliax with open-wire feeders is
> beyond me.
>
> Dick - W6CCD
>
> On Mon, 02 Sep 2002 18:01:16 GMT, n7ws@nowhere.com (Wes Stewart)
> wrote:
>
> >Reeling him in I reply:
> >
> >Nope, you're reading a different paper than I am. The *original*
> >paper says no such thing.
> >
> >And that "special" length of ladder as Varney himself says, "..in this
> >case, acts as a one-to-one impedance transformer..." Therefore, it
> >does *no* matching on 20 meters and contrary to what he claims, it
> >doesn't "make up" part of the antenna on other bands any more than the
> >200' of Heliax feeding my beam "makes up" part of the antenna.
> >
>

4354. TGM Antennas

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-02 20:33:34 UTC
From: jmperge@attglobal.net
Message-ID: <1833cf4b.0209021233.30323d9@posting.google.com>
Source record: 135395

Any comments from users of the TGM hybrid 2 element antennas would be appreciated. I read the Eham reviews. Thanks,Joe,WB8HWF

4355. Re: G5RV Feedline

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-02 20:47:42 UTC
From: Bob Miller <bamiller@texas.net>
Message-ID: <P81zPbZ4MdfTXwfFetV1XgrSTJBp@4ax.com>
Source record: 135396

Dick Hughes <rhughes33@cableone.net> wrote:

>Here is another reference to a different size G5RV. In this case it
>is double the original. http://www.qsl.net/aa3px/g5rv.htm .

Where does this article refer to a "double the original" size of the g5rv? I see a reference where the feedline can be strapped for 160 meter operation, and a reference to a 1/2 size g5rv, but "double"?

Have a good day...

Bob
k5qwg

> Now we
>have an original 102', a half-size and a double-size. All of which
>supports my contention that 102' is not the unique part of the G5RV as
>you maintain, but rather it is the length of the open-wire feed.
>
>How you can compare radiation from Heliax with open-wire feeders is
>beyond me.
>
>Dick - W6CCD
>
>On Mon, 02 Sep 2002 18:01:16 GMT, n7ws@nowhere.com (Wes Stewart)
>wrote:
>
>>Reeling him in I reply:
>>
>>Nope, you're reading a different paper than I am. The *original*
>>paper says no such thing.
>>
>>And that "special" length of ladder as Varney himself says, "..in this
>>case, acts as a one-to-one impedance transformer..." Therefore, it
>>does *no* matching on 20 meters and contrary to what he claims, it
>>doesn't "make up" part of the antenna on other bands any more than the
>>200' of Heliax feeding my beam "makes up" part of the antenna.
>>

4356. Re: Dr. Kabbary's New EM Equations

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-02 21:11:18 UTC
From: "Sverre Holm (LA3ZA)" <0junk4me@qsl.net>
Message-ID: <WtQc9.17030$sR2.303489@news4.ulv.nextra.no>
Source record: 135397

"Peter O. Brackett" <ab4bc@ix.netcom.com> wrote in message
news:al0hab$5m9$1@nntp9.atl.mindspring.net...
>
> Of course my whole HF pos-neg transceiver is homebrew... Can't buy this
> stuff yet!
>

You've got to be using toroids with right-hand winding for the positive
frequency selecitivty filters and left-hand winding for the negative ones
for this to work, don't you?

Sverre LA3ZA

4357. Re: Rohn SCL

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-02 21:21:15 UTC
From: w9gb <gregory.beat@attbi.com>
Message-ID: <eDQc9.174467$aA.35800@sccrnsc02>
Source record: 135398

Larry -

Here is the specifications of the new Rohn SCL tower series
http://www.rohnnet.com/rohnnet2001/html/whatsnew/SCL%20Tower%20Flier.pdf

Have you tried AES Cleveland or R&L Electronics ?

W9GB

"Larry D" <slewrate@hotmail.com> wrote in message
news:iKzb9.90$CX2.91419@newsfeed.slurp.net...
> Anyone seen (in person) the new Rohn SCL tower?
>
> Also looking for places to buy it (Ohio)
>
> Larry N8KU [please reply to larryd AT longwire.com]
>

4358. Re: Cushcraft going out of business?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-02 21:35:07 UTC
From: k1bqt@aol.com
Message-ID: <20020902173507.09292.00000044@mb-da.aol.com>
Source record: 135399

>But...let's not forget the prominent absence at Boxboro this year of a noted ham antenna OEM.<

I'm not involved with the sales side of the house, but I know Cushcraft plans to exhibit at Hosstraders.

--Rick

4359. Re: What If You Could Tune Out Polarization Mis-Match?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-02 21:37:06 UTC
From: richardharrison@webtv.net
Message-ID: <27104-3D73DA02-251@storefull-2394.public.lawson.webtv.net>
Source record: 135400

Gary, K4FMX wrote:
"Polarization selection is worth well at times on some bands."

Yes. It is used for diversity reception in the microwave bands because it`s cheaper to mount one dish with cross-feeds than two dishes as needed for space diversity. Space diversity is more common at microwaves than is polarization diversity despite its higher cost.

As far as I know, all commercial HF diversity is either space diversity or frequency diversity. This is cut and dried. The military used TDR`s in WW-2. Signal Corps rhombic kits (3 ea) were erected at two to ten wavelengths apart. More is better but 10 is good enough. Hammarlund Super Pro`s were the usual TDR receivers (3 ea), one connected to each antenna for each frequency being received. Multiple receiver triads were connected to the same antennas, one receiver triad for each frequency being received.

One antenna would suffice for frequency diversity in a single direction were frequency diversity the only mode in use. All three receivers tuned to different frequencies carrying the same signal could simply be connected to the same antenna.

An additional TDR receiver group of three antennas is required for each direction of reception as a rhombic has a very narrow beamwidth in most cases. Multiple groups of three receivers for each frequency in use can be used with each group of three antennas as above.

The TDR switching combiners used by military and commercial users automatically picked the strongest clean signal from the three (or two) available in a group, and switched it to the output terminals.

U.S. Commercial receiving stations usually also used Hammerlund SP-600 receivers and Crosby or Pioneer combiners, just like "government issue".

You may be able to find a surplus combiner of the old or a newer type. These switch almost imperceptibly.

Best regards, Richard Harrison, KB5WZI

4360. Re: Antenna switch question

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-02 21:55:00 UTC
From: Fred Hambrecht <w4jle@charter.net>
Message-ID: <un7nhmo8g2pub9@corp.supernews.com>
Source record: 135403

A simple explanation is like the wiring to a light bulb, only one wire is switched. Because no current flows to the other antennas, none returns. Just like dancing it takes two to tango and two of the antennas have no partner...

"Justin Time" <xrecho@eminem2000.com> wrote in message news:18d5aac7.0209020831.581e47dc@posting.google.com...
> I have 3 antennae that I would like to connect to the rig for
> different frequencies, using a Diawa coax switch. The switch only
> switches the center conducter of the 3 coax lines, leaving the braid
> of all 3 antennae connected together. The center conducter is
> connected to the "right side" of the antennae so there is no problem
> with that.
>
> If I switch to antenna #2, for example, I am feeding the "right side"
> of antenna #2, but also feeding the "left side" of antennae #1, #2,
> and #3. It would seem to me that I have the equivalent of a dipole
> with one short side and one extremely long side (unless I could
> disconnect the braided side of these antennae).
>
> I asked one ham about this and he said the braid side (left side in
> this case) was connected to a common ground and would present no
> problem. I do not understand the logic in this, since "RF Ground"
> switches between the left side and right side 14,300,000 times per
> second on 20 meters. It would seem that the radio would see the right
> side of one antenna and the left side of all 3 antennae for as long as
> the coax was connected together. Can anyone explain this puzzlement?
> Thanks, Justin

4361. Re: G5RV Feedline

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-02 21:56:25 UTC
From: Bibby <bibby@attbi.com>
Message-ID: <d8Rc9.336284$UU1.56730@sccrnsc03>
Source record: 135402

Dick, I did say the "other side" and I didn't mean of the Atlantic!

Get it?

Malcolm

"Dick Hughes" <rhughes33@cableone.net> wrote in message
news:8em7nuc5t8ir44b50kq5q1thgf5ucfi9p9@4ax.com...
> Unfortunately, Louis Varney passed away in June of 2000. All we have
> left is his writings and our interpretation thereof.
>
> Dick - W6CCD
>
> On Mon, 02 Sep 2002 20:29:52 GMT, "Bibby" <bibby@attbi.com> wrote:
>
> >There must be somebody in this group with good connections to the other
> >side. Why don't they arrange to contact G5RV directly and get the
straight
> >scoop!
> >
> >Malcolm W1/GW3NJY
>

4362. Re: How do you handle coax runs through outside to inside ?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-02 21:56:54 UTC
From: Pict <rogerspam@spammaitland9.freeserve.co.uk>
Message-ID: <al0mielq1@newsg4.svr.pol.co.uk>
Source record: 135401

"Bill Klocko" <klocko@toad.net> wrote in message
news:224d9cd4.0209020629.1ac41e8@posting.google.com...
> "Steve" <someone@knology.net> wrote in message
news:<un5ojb5aqs69f2@corp.supernews.com>...
> > Just curious as to how others handle this?
>
> Hi Steve,
> One of my basement windows is a small sliding type. A small wood frame
> with a piece of plexiglass fits in the opening for the window. (One of
> the sections of the window is moved over by this frame, but I jammed
> some foam insulation between the sections to keep bugs and cold air
> out). A bulkhead coax connector is inserted in a hole in the
> plexiglass. A ground wire is connected to the outside coax connector
> using a hose clamp. There's also a big screw going through the
> plexiglass for the ground wire from the rig. It ain't pretty but it
> works. 73,
> Bill N3WK

OK on coax ideas - how does anyone get balanced feeder outside?

cheers
GM0TUB

4363. Re: Dipole problems

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-02 23:22:34 UTC
From: "Sverre Holm (LA3ZA)" <0junk4me@qsl.net>
Message-ID: <_oSc9.17074$sR2.303833@news4.ulv.nextra.no>
Source record: 135404

"Jonathan Bowes" <jonathan.bowes@sepa.org.uk> wrote in message
news:6820e6ce.0209020032.59f7e41f@posting.google.com...
> I have just strung up 2 dipoles over the weekend. One for 40m and the
> other for 18m. I used a 10ft aluminium pole with a 1ft piece of
> plastic conduit tapered into the end.
...
> this. The dipoles tuned OK but RX signal strengths are well well down
> (5-7 S-points) than on my mates 17m dipole just up the road in Perth.
....
> Interestingly my dipole is about 3x the height of his and orientated
> pretty much the same (N-S).
>

From the height difference it appears that your antenna would have a lower elevation take-off angle than your mate's. What was the distance to the station that you were listening to? 5-7 S-poins, if correct, should be something like 30-40 dB, which is much more than the take-off angle effect, but anyway, just something that came to mind in additional to the other inputs you got.

Sverre LA3ZA
www.qsl.net/la3za

4364. Re: Dr. Kabbary's New EM Equations

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-02 23:36:54 UTC
From: "Peter O. Brackett" <ab4bc@ix.netcom.com>
Message-ID: <al0sucdfs1@slb5.atl.mindspring.net>
Source record: 135405

Sverre:

[snip]
> You've got to be using toroids with right-hand winding for the positive
> frequency selecitivty filters and left-hand winding for the negative ones
> for this to work, don't you?
>
>
> Sverre LA3ZA
[snip]

Hi Sverre! Yet another negative frequency enthusiast. And they say ham radio is dying! What?

Yes that's correct.

Of course you have to use power supplies which supply positrons to the negative rails and other supplies which supply electrons to the postitive rails, etc... those detailed technology issues should be obvious to anyone skilled in the art.

The real problem, and that's where the pending patents lie, is in the pole-zero arrangement for those filters...

For the positive frequency filters the poles are in the left half plane and for the negative filters the poles are in the right half plane. The trick is in the phase compensation required to keep those left half plane poles stable. And... you gotta make sure the power supply sequencing is such that the positive supplies come on before the negative supplies, etc...

Best,

--Peter K1PO
Indialantic By-the-Sea, FL.

4365. Re: Dr. Kabbary's New EM Equations

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-02 23:45:17 UTC
From: 'Doc <w5lz@icok.net>
Message-ID: <3D73F7F8.683598A5@icok.net>
Source record: 135406

Yuri & Pete,
Far be it for me to besmerch you guys reputations,
professional or otherwise! I was tying to warn you that
you're starting to sound a bit like the 'Frac', and that
you might take care to keep a wise distance (it do seem
to rub off, you know)...
'Doc

4366. Re: Dr. Kabbary's New EM Equations

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-02 23:46:56 UTC
From: 'Doc <w5lz@icok.net>
Message-ID: <3D73F85C.8F43A809@icok.net>
Source record: 135407

Pete,
It was a brain infact! I would never do such
a think knowingly. Mea culpa...
'Doc (Union Pacific)

4367. Re: G5RV Feedline

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-02 23:58:59 UTC
From: n7ws@nowhere.com
Message-ID: <3d73f7fa.29618312@news.triconet.org>
Source record: 135408

On Mon, 02 Sep 2002 13:18:45 -0700, Dick Hughes
<rhughes33@cableone.net> wrote:

|How you can compare radiation from Heliax with open-wire feeders is
|beyond me.

Since when is a balanced line supposed to radiate?

The LADDER LINE IS A TRANSMISSION LINE. It is NOT PART OF A RADIATING STRUCTURE! It has no magical properties. Neither does a "G5RV" antenna. It's a frigging dipole for goodness sake. The antenna does not "fold into the transmission line". The transmission line does not "make up" part of the antenna. They have TWO SEPARATE FUNCTIONS. Put a battery-powered transmitter at the feedpoint and there will not be a dime's worth of difference in operation.

Varney is dead. I wish he would have taken his old wives with him.

This is definately my last response to this thread, tongue-in-cheek or otherwise.

4368. Re: G5RV Feedline

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-03 01:34:10 UTC
From: Bibby <bibby@attbi.com>
Message-ID: <IkUc9.176788$aA.36027@sccrnsc02>
Source record: 135409

Jim, this has been one of the most entertaining threads I've watched/read.
Did you get an answer to your question? What are going to do?

Malcolm W1/GW3NJY

"SeaQuest" <seaquest@canada.com> wrote in message
news:Dkrc9.232064$v53.12503647@news3.calgary.shaw.ca...
> I've been reading tons about the G5RV as I am just about to build my first
> one. I can't get a straight answer on one thing. If I am building one from
> scratch and will naturally be using a tuner, would I be better off with a
> coax feedline to the ladder line matching section or would it be better to
> run the ladderline right into the shack to my tuner (which handles both
coax
> or balanced line). If coax should I go with RG8 (50 ohm) or would I be
> better off with RG59 (75 ohom). I should add that the run from the antenna
> to the tuner is 70 feet.
>
> Jim
>
>

4369. Re: FS: cd

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-03 01:44:03 UTC
From: George Kinzer <horseflygk@worldnet.att.net>
Message-ID: <DtUc9.7633$jG2.559286@bgtnsc05-news.ops.worldnet.att.net>
Source record: 135410

ok, cd will be free, shipping and handling will be $20.oo

--
If first you don't succeed, do the same thing again...see what happens

4370. Re: G5RV Feedline

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-03 01:55:19 UTC
From: CAM <Cecil.A.Moore@ieee.org>
Message-ID: <3D741687.952B224C@ieee.org>
Source record: 135411

Bibby wrote:
> There must be somebody in this group with good connections to the other
> side. Why don't they arrange to contact G5RV directly and get the straight
> scoop!

He wrote quite extensively. For instance, in the ARRL Antenna Compendium,
Vol. 1, he wrote about the G5RV antenna. Speaking of the feeder length:
"A convenient length of open-wire feeder is 84 ft. ... This is not a rigid
feeder-length requirement, and almost any mechanically convenient length
may be used."
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

4371. Re: G5RV Feedline

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-03 01:58:31 UTC
From: CAM <Cecil.A.Moore@ieee.org>
Message-ID: <3D741747.E3A84AF3@ieee.org>
Source record: 135412

Dick Hughes wrote:
> Unfortunately, Louis Varney passed away in June of 2000. All we have
> left is his writings and our interpretation thereof.

Well, Malcolm did suggest that we contact the "other side". There's
some guy on TV who does it regularly.

> On Mon, 02 Sep 2002 20:29:52 GMT, "Bibby" <bibby@attbi.com> wrote:
> >There must be somebody in this group with good connections to the other
> >side. Why don't they arrange to contact G5RV directly and get the straight
> >scoop! Malcolm W1/GW3NJY
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
------== Over 80,000 Newsgroups - 16 Different Servers! =-----

4372. Re: G5RV Feedline

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-03 02:08:49 UTC
From: CAM <Cecil.A.Moore@ieee.org>
Message-ID: <3D7419B1.7C46C893@ieee.org>
Source record: 135413

Wes Stewart wrote:
> The LADDER LINE IS A TRANSMISSION LINE. It is NOT PART OF A RADIATING
> STRUCTURE! It has no magical properties. Neither does a "G5RV"
> antenna. It's a frigging dipole for goodness sake. The antenna does
> not "fold into the transmission line". The transmission line does not
> "make up" part of the antenna. They have TWO SEPARATE FUNCTIONS.

All true. But I did an experiment one time in which I tried varying the
length of the dipole in order to achieve resonance at different frequencies.
It was sort of like the Yo-Yo dipole except I had two pulleys at the
center of the antenna and a pulley at each end with a weight on each
end. I pulled on the feedline and the dipole shortened. At the same
time, the dipole "folded into the transmission line", i.e. part of the
dipole became parallel transmission line. I was sure surprised when that
antenna system didn't change resonance by very much. In lengthening the
feedline by the same amount that the antenna is shortened, the resonant
frequency didn't change by very much, certainly not nearly as much as
shortening a coax fed dipole.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
------== Over 80,000 Newsgroups - 16 Different Servers! =-----

4373. Re: What is the big deal with fractal and EH ????????

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-03 02:44:29 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <2p78nuc8o4is6c8tpibk38gm6k0eqftot1@4ax.com>
Source record: 135414

On Mon, 2 Sep 2002 18:09:14 +0100, "Alexander S. Wood"
<alec_wood@dont.spam.me.ntlworld.com> wrote:

>I would love to be able to try a similar exercise with fractal antennmas but
>I cannot. My antenna knowledge, despite being what many would call
>"advanced", does not allow me to see the concept behind the "specialness" of
>the fractal from an antenna loading point of view. Unfortunately, you
>closing of the "ham" page on your site (reason given is ridiculous

Hi Alexander,

I'm not sure of the type of exercise you speak of. Construction? In
that regard, my site is not of any particular note:
http://www.qsl.net/kb7qhc/antenna/fractal/index.htm
My work simply explores the variety of shape, iteration, against two
simple criteria: how tall, how much wire. As noted by Steve Best, a
published fractal antenna designer, little research effort from the
run-of-the-mill fractal papers goes to the scientific standard of
establishing a control. My analysis at my pages does only that and
nothing more.

You speak of "specialness" - there is none. [Unless you misspelled
speciousness for which this field is notable.] All characteristics
conform to the usual expectations - no surprise either. Differences?
Yes, certainly. Significant? Perhaps, if you approach it as Zen
Archery.

73's
Richard Clark, KB7QHC

4374. Re: What If You Could Tune Out Polarization Mis-Match?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-03 02:46:14 UTC
From: richardharrison@webtv.net
Message-ID: <24977-3D742276-215@storefull-2393.public.lawson.webtv.net>
Source record: 135415

I wrote:
"All three receivers tuned to different frequencies could simply be
connected to the same antenna. (for frequency diversity)"

I oversimplified the usual case. To avoid interaction between receivers,
a broadband amplifier with one input and multiple isolated outputs is
usually interposed between the antenna and the receivers coupled to it.

Best regards, Richard Harrison, KB5WZI

4375. Re: How do you handle coax runs through outside to inside ?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-03 03:13:08 UTC
From: denton <denton@oregontrail.net>
Message-ID: <al19am$d7o$1@news.apaynet.com>
Source record: 135416

I use one of those thick white plastic cutting boards...for kitchen use
normally..cut a part of it into 88" squares.
Then cut a smaller square hole in the wall.
After installing each of the squares on either side of the hole with long
sheetrock screws (my house is old type, with wooden siding in and out) I
then made a few holes slightly larger than the coax on one side and ran a
couple of small holes to feed my twin lead thru.
Nice and weather tight.
Steve <someone@knology.net> wrote in message
news:un5ojb5aqs69f2@corp.supernews.com...
> Just curious as to how others handle this?
>
>

4376. Re: What If You Could Tune Out Polarization Mis-Match?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-03 03:24:48 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <3D742B80.4000703@eznec.com>
Source record: 135417

Gary Schafer wrote:
> . . .
> I also briefly tried an electronic switch, switching between vertical
> and horizontal rapidly with
> one receiver. The thought was that the average signal level would be
> better. Switching speed
> was cranked up to several KC, above the audible range, so as to be
> inaudible. Problem was
> that the switch created inter mod.
> Maybe someone has an idea for switching?

I think the trick is to have a separate receiver for each antenna (the receivers having non-coherent local oscillators), and switch between the receiver outputs.

Roy Lewallen, W7EL

4377. Re: How do you handle coax runs through outside to inside ?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-03 03:32:52 UTC
From: Fulano de Tal <exray@nospamcaribe.net>
Message-ID: <3D742D64.C39DEDB1@nospamcaribe.net>
Source record: 135418

denton wrote:
>
> I use one of those thick white plastic cutting boards...for kitchen use
> normally..cut a part of it into 88" squares.

Wow, that must have been a monster cutting board!

:-)

4378. Hamsticks and Impedance

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-03 04:50:46 UTC
From: Scott Vanzandt <vzandt@midsouth.rr.com>
Message-ID: <4kf8nu8497ki7dcqggk36f17blat3tcqgi@4ax.com>
Source record: 135269

I have just installed a new ball mount and spring in the process of
getting a new HF mobile unit on the air. I put the antenna analyzer on
and with a 20M hastick, I got the SWR down in a good range, but the
impedance was almost 0...nowhere near the 50 ohm target. Do I need
some type of inductor or something added? Nothing in the directions
mentions anything except adjusting the length for best match. What am
I missing if anything?
Scott

N2WMD

>and for the spam bots:
>president@whitehouse.gov
>vicepresident@whitehouse.gov
>vento@mail.house.gov
>gephardt@mail.house.gov
>senator@feinstein.senate.gov
>senator_mccain@mccain.senate.gov
>senator@wellstone.senate.gov
>senator_byrd@byrd.senate.gov
>classonde@psbgm.qc.ca
>root@localhost
>admin@localhost
>root@mailloop.com
>Chairman Reed Hundt: rhundt@fcc.gov
>Commissioner James Quello: jquello@fcc.gov
>Commissioner Susan Ness: sness@fcc.gov
>Commissioner Rachelle Chong: rchong@fcc.gov
>postmaster@localhost
>admin@localhost
>
>Eat that, spam! PLEASE copy this and paste it to your sig card.

4379. Re: Hamsticks and Impedance

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-03 05:31:42 UTC
From: Allan <kd7dsk@cox.net>
Message-ID: <2PXc9.43896$Fb.2078097@news1.west.cox.net>
Source record: 135270

Try it without the (spring) and see what you get for impedance.

"Scott Vanzandt" <vzandt@midsouth.rr.com> wrote in message
news:4kf8nu8497ki7dcqggk36f17blat3tcqgi@4ax.com...
> I have just installed a new ball mount and spring in the process of
> getting a new HF mobile unit on the air. I put the antenna analyzer on
> and with a 20M hastick, I got the SWR down in a good range, but the
> impedance was almost 0...nowhere near the 50 ohm target. Do I need
> some type of inductor or something added? Nothing in the directions
> mentions anything except adjusting the length for best match. What am
> I missing if anything?
> Scott
>
> N2WMD
>
> >and for the spam bots:
> >president@whitehouse.gov
> >vicepresident@whitehouse.gov
> >vento@mail.house.gov
> >gephardt@mail.house.gov
> >senator@feinstein.senate.gov
> >senator_mccain@mccain.senate.gov
> >senator@wellstone.senate.gov
> >senator_byrd@byrd.senate.gov
> >classonde@psbgm.qc.ca
> >root@localhost
> >admin@localhost
> >root@mailloop.com
> >Chairman Reed Hundt: rhundt@fcc.gov
> >Commissioner James Quello: jquello@fcc.gov
> >Commissioner Susan Ness: sness@fcc.gov
> >Commissioner Rachelle Chong: rchong@fcc.gov
> >postmaster@localhost
> >admin@localhost
> >
> >Eat that, spam! PLEASE copy this and paste it to your sig card.

4380. Re: G5RV Feedline

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-03 06:27:00 UTC
From: "George, W5YR" <w5yr@att.net>
Message-ID: <3D745632.49CCDC74@att.net>
Source record: 135271

Good for you, Wes!

Amazing that Varney could develop his famous antenna and evidently not understand the first thing about how it functions on other than 20 meters . . .

At least he got the 3/2-wavelength part right . . .

73/72, George
Fairview, TX 30 mi NE of Dallas in Collin county EM13qe
Amateur Radio W5YR - the Yellow Rose of Texas
In the 57th year and it just keeps getting better!

Wes Stewart wrote:
> The LADDER LINE IS A TRANSMISSION LINE. It is NOT PART OF A RADIATING
> STRUCTURE! It has no magical properties. Neither does a "G5RV"
> antenna. It's a frigging dipole for goodness sake. The antenna does
> not "fold into the transmission line". The transmission line does not
> "make up" part of the antenna. They have TWO SEPARATE FUNCTIONS. Put
> a battery-powered transmitter at the feedpoint and there will not be a
> dime's worth of difference in operation.
>
> Varney is dead. I wish he would have taken his old wives with him.

4381. Re: G5RV Feedline

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-03 06:30:01 UTC
From: "George, W5YR" <w5yr@att.net>
Message-ID: <3D7456E7.6FBC512A@att.net>
Source record: 135272

Try looking at the direction of the currents in the balanced line as
compared with the currents in the flat-top. They are in phase in the
flat-top but opposing in the balanced line.

Now, how can that balanced line possibly be a radiating part of the antenna
when 99.9999% of the power in the line is NOT radiated?

If you can figure out how to get the two line currents in phase, then
please explain it to us. And what effect that would have on the input
impedance of the line . . .

73/72, George
Fairview, TX 30 mi NE of Dallas in Collin county EM13qe
Amateur Radio W5YR - the Yellow Rose of Texas
In the 57th year and it just keeps getting better!

Dick Hughes wrote:
>
> On most of these points Walter Maxwell agrees with you and I can't
> argue with Maxwell. I still believe, however, that there is some
> point where the vertical portion of the "feedline" becomes part of the
> radiating system. At some distance the two conductors would be too
> far apart for the opposite flowing fields in the two conductors to
> cancel each other. At that point they would become part of the
> antenna.
>
> Nice chatting with you Wes. Love your car!
>
> Dick
>
> On Mon, 02 Sep 2002 23:58:59 GMT, n7ws@nowhere.com (Wes Stewart)
> wrote:
>
> >On Mon, 02 Sep 2002 13:18:45 -0700, Dick Hughes
> ><rhughes33@cableone.net> wrote:
> >
> >
> >|How you can compare radiation from Heliax with open-wire feeders is
> >|beyond me.
> >
> >
> >Since when is a balanced line supposed to radiate?
> >
> >The LADDER LINE IS A TRANSMISSION LINE. It is NOT PART OF A RADIATING
> >STRUCTURE! It has no magical properties. Neither does a "G5RV"

> >antenna. It's a frigging dipole for goodness sake. The antenna does
> >not "fold into the transmission line". The transmission line does not
> >"make up" part of the antenna. They have TWO SEPARATE FUNCTIONS. Put
> >a battery-powered transmitter at the feedpoint and there will not be a
> >dime's worth of difference in operation.
> >
> >Varney is dead. I wish he would have taken his old wives with him.
> >
> >This is definately my last response to this thread, tongue-in-cheek or
> >otherwise.

4382. Re: Can I direct bury RG-213 in ground?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-03 08:22:17 UTC
From: "David G. Nagel" <nagel@core.com>
Message-ID: <3D747139.30808@core.com>
Source record: 135273

Si

Dave wd9bdz

'Doc wrote:

>Al,
> Sorry, couldn't find a shorter word.
> 'Doc
>
>

4383. Combining antenna modeling with real-world feedline calculations

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-03 08:28:51 UTC
From: ac6la@arrl.net
Message-ID: <960228f1.0209030028.638b7cb5@posting.google.com>
Source record: 135274

The latest version of the freeware MultiNEC program can incorporate real-world feedline calculations into your antenna model. You have a choice of approximately 50 different types of coaxial and parallel wire lines and you may add, remove, or change the feedline at any time. The feedline calculations are done external to the normal NEC or EZNEC calculations for the model.

The advantages of doing separate calculations for a feedline, as opposed to using the NEC TL facility, include: no need to add a separate wire to the model to serve as the anchor for the station end of the line; no need to re-calculate the entire model just to change feedline parameters such as characteristic impedance or length; and the ability to include the effects of line loss in the calculations.

Note that this function models only the impedance transformation effects of a non-radiating transmission line attached to the antenna source point. Transmission lines that serve as an integral part of the model, such as those used with phased arrays, must still be modeled with the NEC TL facility.

MultiNEC now also includes a Smith chart sheet. You can see an example at www.qsl.net/ac6la/adhoc/mnsmith1.gif (~30 KB). The antenna in this case is everybody's-favorite-to-talk-about 102 foot doublet of #12 copper at 50 feet above real ground, calculated with a frequency set of 3.5 to 4.0 MHz, 7.0 to 7.3 MHz, and 10.1 to 10.2 MHz in 0.1 MHz steps and with frequency steps between the bands of 0.25 MHz. (Frequencies in a MultiNEC sweep need not be evenly spaced.) The wire was divided into 53 segments, about 50 segments per wavelength at the upper end of the sweep range. In the above Smith chart example the blue trace shows the R and X values at the antenna source and the red trace shows the impedances as transformed with 40 feet of Wireman 554 ladder line. (Parameters for Wireman line courtesy Wes Stewart, N7WS.) The chart is shown with a 50 ohm center and with the green dot marker placed at the 3.5 MHz point. You can change the Smith prime center if desired. The screen shot at www.qsl.net/ac6la/adhoc/mnsmith2.gif shows the same impedance points but on a chart with a 360 ohm center (the Ro value of the feedline) and with the marker on the 10.2 MHz point.

The latest MultiNEC release has several other enhancements, including the ability to show 3D radiation plots using the EZNEC, NecVu (Nittany Scientific), or 4nec2 viewers. For more details and a free download file see www.qsl.net/ac6la/. MultiNEC requires Excel 97 or later.

73,
Dan AC6LA

4384. Baby Boomer Quad

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-03 10:48:05 UTC
From: G&R <"stop the spam"@limbo.hell>
Message-ID: <fp0d9.6724$QS6.607367@news20.bellglobal.com>
Source record: 135275

Degen Designs is please to announce that Carl M. Chernan WA3UER is our US Representative.

He can be reached at wa3uer@degendesigns.com

Our web page wil be updated shortly to reflect this addition.

www.degendesigns.com

73,

Guenther Schweigl
info@degendesigns.com

4385. Home built discone antenna needed

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-03 11:52:31 UTC
From: Paolo Mattiolo <paolomattiolo@yahoo.it>
Message-ID: <In1d9.6393$L12.663997@news.edisontel.com>
Source record: 135276

I want to build a wideband or a discone antenna for indoor use
Do you have a project or a site.
Thanks paolo

Mattiolo Paolo Valentino
Webmaster Freelance

Flash Designer

paolomattiolo@yahoo.it
Tel. 0473/290911
Cel. 347/9454207

See My Photos at Photosig

4386. Re: Antenna switch question

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-03 11:57:09 UTC
From: xrecho@eminem2000.com
Message-ID: <18d5aac7.0209030357.454512d@posting.google.com>
Source record: 135277

"Fred Hambrecht" <w4jle@charter.net> wrote in message
news:<un7nhmo8g2pub9@corp.supernews.com>...
> A simple explanation is like the wiring to a light bulb, only one wire is
> switched. Because no current flows to the other antennas, none returns. Just
> like dancing it takes two to tango and two of the antennas have no
> partner...

Hi Fred, Thanks for the input. I can't quite see the logic in this
though. I believe current does flow on the braid side of the antenna.
I sure wouldn't want to touch the braid while trasmitting. (While I
was in the Army signal corps, a fellow was sitting in the radio room
and heard a sizzling sound coming from one of the coax lines. Out of
curiosity he touched the connector! He had a really bad finger for
several months afterward.)

If current does flow on the braided side, it would stand to reason
that those sides of all 3 antennae would be hot. If no current flows
on that side, it seems a waste of time and money to have it there at
all. No?

I appreciate your reply, but it still doesn't seem to make a lot of
sense to me, how this works. Respectfully, Justin

4387. Re: Hamsticks and Impedance

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-03 12:18:08 UTC
From: Allan <kd7dsk@cox.net>
Message-ID: <4M1d9.53283$Fb.2137471@news1.west.cox.net>
Source record: 135278

One other thing, make damn shure you have a good ground from the ball mount
to the automobile in question.

"Allan" <kd7dsk@cox.net> wrote in message
news:2PXc9.43896$Fb.2078097@news1.west.cox.net...
> Try it without the (spring) and see what you get for impedance.
>
>
> "Scott Vanzandt" <vzandt@midsouth.rr.com> wrote in message
> news:4kf8nu8497ki7dcqggk36f17blat3tcqgi@4ax.com...
> > I have just installed a new ball mount and spring in the process of
> > getting a new HF mobile unit on the air. I put the antenna analyzer on
> > and with a 20M hastick, I got the SWR down in a good range, but the
> > impedance was almost 0...nowhere near the 50 ohm target. Do I need
> > some type of inductor or something added? Nothing in the directions
> > mentions anything except adjusting the length for best match. What am
> > I missing if anything?
> > Scott
> >
> > N2WMD
> >
> > >and for the spam bots:
> > >president@whitehouse.gov
> > >vicepresident@whitehouse.gov
> > >vento@mail.house.gov
> > >gephardt@mail.house.gov
> > >senator@feinstein.senate.gov
> > >senator_mccain@mccain.senate.gov
> > >senator@wellstone.senate.gov
> > >senator_byrd@byrd.senate.gov
> > >classonde@psbgm.qc.ca
> > >root@localhost
> > >admin@localhost
> > >root@mailloop.com
> > >Chairman Reed Hundt: rhundt@fcc.gov
> > >Commissioner James Quello: jquello@fcc.gov
> > >Commissioner Susan Ness: sness@fcc.gov
> > >Commissioner Rachelle Chong: rchong@fcc.gov
> > >postmaster@localhost
> > >admin@localhost
> > >
> > >Eat that, spam! PLEASE copy this and paste it to your sig card.
>
>

4388. Re: What If You Could Tune Out Polarization Mis-Match?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-03 12:29:40 UTC
From: Jack Smith <jsmith@mnsinc.com>
Message-ID: <n7a9nugteiv9q2hu2aoplu3vitpnnsen8l@4ax.com>
Source record: 135279

Roy & Gary:

Diversity reception has been extensively studied for cellular radio
and is widely used there.

Roy is describing "switched baseband diversity," the oldest and
simplest to implement. Monitor output S/N (not necessarily a simple
task to determine on an HF circuit) and switch to the receiver with
best S/N. Simplified version would be to switch on AGC, if you have
two receivers that track, and assume (hope?) that the noise levels are
similar for all diversity channels.

If you want to see an interesting diversity schemes, go a Google
search for "maximal ratio combining," originally developed by
Motorola, I believe. As I recall, you can pick up 3 dB gain in the
best case with maximal ratio combining. This scheme could be used for
HF as well.

At cellular (800 MHz) and PCS (1800 MHz) frequencies, polarization
diversity (V & H feeds ona common antenna) are increasingly popular.
In significant part, this is due to the expense of separate
receive-only antenna and feedline. But, the Rayleigh fading
environment at these frequencies is quite different than the two-ray
fading that often characterizes HF ionospheric propagation.

Jack K8ZOA

On Mon, 02 Sep 2002 20:24:48 -0700, Roy Lewallen <w7el@eznec.com>
wrote:

>Gary Schafer wrote:
>> . . .
>> I also briefly tried an electronic switch, switching between vertical
>> and horizontal rapidly with
>> one receiver. The thought was that the average signal level would be
>> better. Switching speed
>> was cranked up to several KC, above the audible range, so as to be
>> inaudible. Problem was
>> that the switch created inter mod.
>> Maybe someone has an idea for switching?
>
>I think the trick is to have a separate receiver for each antenna (the
>receivers having non-coherent local oscillators), and switch between the
>receiver outputs.
>
>Roy Lewallen, W7EL

4389. Re: Hamsticks and Impedance

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-03 13:06:22 UTC
From: nm5k@wt.net
Message-ID: <25eb70d7.0209030506.3fee750f@posting.google.com>
Source record: 135280

Scott Vanzandt <vzandt@midsouth.rr.com> wrote in message
news:<4kf8nu8497ki7dcqggk36f17blat3tcqgi@4ax.com>...
> I have just installed a new ball mount and spring in the process of
> getting a new HF mobile unit on the air. I put the antenna analyzer on
> and with a 20M hastick, I got the SWR down in a good range, but the
> impedance was almost 0...nowhere near the 50 ohm target. Do I need
> some type of inductor or something added? Nothing in the directions
> mentions anything except adjusting the length for best match. What am
> I missing if anything?
> Scott
>
> N2WMD

Sounds like a measurement error. If your SWR is ok, "under 2:1" and
you read the impedance as nearly 0, something seems wrong. "Not with
the antenna". I can see a fairly low impedance as normal, but not
quite that low. MK

4390. Re: What is the big deal with fractal and EH ????????

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-03 13:07:01 UTC
From: VE9SRB <srbest@att.net>
Message-ID: <Vt2d9.49940$Ke2.3503306@bgtnsc04-news.ops.worldnet.att.net>
Source record: 135281

"Fractenna" <fractenna@aol.com> wrote in message
news:20020831150515.02708.00000002@mb-cc.aol.com...
>

Hi Chip,

> <snip>
> In addition, Steve Best has been asked to publicly debate fractal
antennas, and
> without an answer yet from him, it makes it somewhat challenging to
publish a
> result if it is intended to be published as part of a debate proceedings.
I,
> for one, would like closure.

Closure? How so? Why?

>I also want it clear that as an ethical scientist,
> I gave a colleague the opportunity to respond in a means defined within
the
> purview of scientific dissemination.
>

Scientific dissemination - I have presented my opinions and results on the subject of fractal antennas in numerous publications and venues. You are welcome to respond or provide rebuttal in the appropriate forum.

> You go on the false premise that I have either something to hide, or am
not
> honest. Neither is correct Rick. Please: as your colleague, kindly provide
me
> the info I requested to enlighten your comments.
>
> With Many Thanks,
>
> Chip N1IR
>

If you are interested in a "public debate", lets discuss the merits of a very simple example. Presume that you have a cylindrical volume: 6 cm in height and a radius of 1.5 cm. We want to design a monopole (no capacitive top loading, no short-circuit folds, only a single piece of wire) that is self-resonant at 350 MHz. The wire diameter is 0.5 mm. Use your Genetic Optimizer to design a fractal antenna that exhibits maximum radiation resistance, maximum bandwidth and maximum efficiency. Geometry and total wire length are your variables. The antenna is to be base fed and mounted

over an infinite ground plane. Once you present an optimum fractal design, we will compare it to some classic and arbitrary designs (geometries).

This simple exercise will highlight the fundamental relationships that exist between the physical properties of the antenna and its electrical properties. Additionally, it will illustrate the fundamental trade-offs that exist in trying to simultaneously maximize these three electrical properties of the antenna.

My hypothesis is that the antenna geometry and total wire length together establish the effective height and effective volume of the antenna, which, as a function of resonant wavelength, determine the antenna's radiation resistance and bandwidth properties. Maximum radiation resistance will be exhibited by the design with the smallest physical diameter within the volume, while the maximum bandwidth will be exhibited by the design with the greatest physical diameter within the volume. However, occupying the same physical height and physical volume, and being resonant at the same frequency, all of the designs will essentially exhibit the same radiation resistance and bandwidth. There is no special geometry, fractal or otherwise. There is no fractal geometry that exhibits special or unique characteristics. The only real trade-off will be in the antenna efficiency, where the geometry that is self-resonant with the least total wire length will exhibit the highest efficiency.

Additionally, with a very simple formula, I can predict (approximately) your radiation resistance and bandwidth independent of both geometry and total wire length.

Steve VE9SRB

4391. Re: Baby Boomer Quad

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-03 13:20:48 UTC
From: G&R <"stop the spam"@limbo.hell>
Message-ID: <LD2d9.5768$7x5.665953@news20.bellglobal.com>
Source record: 135282

Web page has been updated to reflect Carl's addition.

www.degendesigns.com

73,

Guenther
info@degendesigns.com

"G&R" <stop the spam@limbo.hell> wrote in message
news:fp0d9.6724$QS6.607367@news20.bellglobal.com...
> Degen Designs is please to announce that Carl M. Chernan WA3UER is our US
> Representative.
>
> He can be reached at wa3uer@degendesigns.com
>
> Our web page wil be updated shortly to reflect this addition.
>
> www.degendesigns.com
>
> 73,
>
> Guenther Schweigl
> info@degendesigns.com
>
>
>

4392. Re: Antenna switch question

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-03 13:38:30 UTC
From: Dick Carroll <dixie@townsqr.com>
Message-ID: <3D74BB2B.1223E388@townsqr.com>
Source record: 135283

Justin Time wrote:

> "Fred Hambrecht" <w4jle@charter.net> wrote in message
news:<un7nhmo8g2pub9@corp.supernews.com>...
> > A simple explanation is like the wiring to a light bulb, only one wire is
> > switched. Because no current flows to the other antennas, none returns. Just
> > like dancing it takes two to tango and two of the antennas have no
> > partner...
>
> Hi Fred, Thanks for the input. I can't quite see the logic in this
> though. I believe current does flow on the braid side of the antenna.
> I sure wouldn't want to touch the braid while trasmitting. (While I
> was in the Army signal corps, a fellow was sitting in the radio room
> and heard a sizzling sound coming from one of the coax lines. Out of
> curiosity he touched the connector! He had a really bad finger for
> several months afterward.)
>
> If current does flow on the braided side, it would stand to reason
> that those sides of all 3 antennae would be hot. If no current flows
> on that side, it seems a waste of time and money to have it there at
> all. No?

If RF current flows on the outside of coax cable you have developed a real problem in the antenna or
feedline system. Your buddy who heard the sizzle inside a connector was hearing the result of that
problem, and the RF which bit him resulted from that problem, not from normal operation. The fault
caused the RF to go to the outside of the shield where it will not go under normal operating
conditions.

Moral of the story is, when it sounds like something is abnormal, keepa ya fingers off! Or else!

Dick

4393. Re: What is the big deal with fractal and EH ????????

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-03 13:42:57 UTC
From: k3bu@aol.com
Message-ID: <20020903094257.23118.00000084@mb-fp.aol.com>
Source record: 135284

>
>Additionally, with a very simple formula, I can predict (approximately) your
>radiation resistance and bandwidth independent of both geometry and total
>wire length.
>
>Steve VE9SRB
>
>

Very well summarized!

What? No room for special patent pending fractal-electromagnetodynamics EH?

Time to brace ourselves for another troll e-line of misfirings, challenges,
accusations, psychobabble, culminating in lawsuit threats ad nauseam...

Let the games begin!
only 13 more days to Sopranos

Bada 3BUm

4394. Re: Antenna switch question

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-03 14:34:09 UTC
From: richardharrison@webtv.net
Message-ID: <13770-3D74C861-375@storefull-2396.public.lawson.webtv.net>
Source record: 135285

Dick Carrol wrote:
"Your buddy who heard the sizzle inside a connector was hearing the result of that problem (RF flows on the outside of the cable)--."

Could be, but maybe not. Sizzle can result from a problem completely within the connector where no RF appears on the outside of the cable. Nature of the sound may be an indicator.

The connector may not allow RF to escape but is never the less a good heat conductor and burns your buddy`s hand.

Dick Carroll`s advice is good. If it might be hot, don`t touch it.

Best regards, Richard Harrison, KB5WZI

4395. Re: Hamsticks and Impedance

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-03 14:41:23 UTC
From: CAM <Cecil.A.Moore@ieee.org>
Message-ID: <3D74CA13.6B859C20@ieee.org>
Source record: 135286

Scott Vanzandt wrote:
> I have just installed a new ball mount and spring in the process of
> getting a new HF mobile unit on the air. I put the antenna analyzer on
> and with a 20M hastick, I got the SWR down in a good range, but the
> impedance was almost 0...nowhere near the 50 ohm target.

So how do you explain that to yourself? If the impedance "was almost 0"
then the SWR would be sky high. If the SWR is "down in a good range"
then the impedance cannot possibly be "almost 0".
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

4396. Re: G5RV Feedline

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-03 14:47:19 UTC
From: Dan Richardson <k6mhe@mendolink.com>
Message-ID: <qoi9nu8gfhbt6trvdjvi46kdo946lftatb@4ax.com>
Source record: 135287

On Tue, 03 Sep 2002 06:15:13 -0700, Dick Hughes
<rhughes33@cableone.net> wrote:

>What if the lines are 20-feet apart?

Then at the HF frequencies it isn't a transmission line is it?

Come on now compare apples with apples no fair dropping in an orange.

Danny

4397. Re: G5RV Feedline

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-03 15:13:39 UTC
From: richardharrison@webtv.net
Message-ID: <19702-3D74D1A3-307@storefull-2397.public.lawson.webtv.net>
Source record: 135290

Dick, W6CCD wrote:
"What if the lines are 20-feet apard?"

Assuming 20 feet is significant in terms of wavelength, substantial radiation may result. Over ordinary earth, unless the height were many times 20 feet, substantial loss could be experienced in the earth and not much r-f might get away. Lotsa variables here, line length, etc.

The effective antenna produced by transmission line spacing is the distance between the wires and it has the same polarization as the route between the wires.

George made the same point by benting one transmission wire 90 degrees in one direction and the other by 90 degrees in the opposite direction to form a dipole. One could also widen the transmission line into a Vee or a rhombic. These radiate very well. Current is in-phase in the perpendicular wire componrent while it is out of phase in the parallel wires.

Best regards, Richard Harrison, KB5WZI

4398. Re: What is the big deal with fractal and EH ????????

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-03 15:17:52 UTC
From: JackR <JackRyan@aol.com>
Message-ID: <Ao4d9.8027$MV5.3385283@twister.socal.rr.com>
Source record: 135288

Whoa! Great response! Guess you told him how the cookie crumbles! ...heh, heh...

"VE9SRB" <srbest@att.net> wrote in message news:Vt2d9.49940$Ke2.3503306@bgtnsc04-news.ops.worldnet.att.net...
>
> "Fractenna" <fractenna@aol.com> wrote in message
> news:20020831150515.02708.00000002@mb-cc.aol.com...
> >
snip!
>
> > Chip N1IR
> >
>
> If you are interested in a "public debate", lets discuss the merits of a
> very simple example. Presume that you have a cylindrical volume: 6 cm in
> height and a radius of 1.5 cm. We want to design a monopole (no capacitive
> top loading, no short-circuit folds, only a single piece of wire) that is
> self-resonant at 350 MHz. The wire diameter is 0.5 mm. Use your Genetic
> Optimizer to design a fractal antenna that exhibits maximum radiation
> resistance, maximum bandwidth and maximum efficiency. Geometry and total
> wire length are your variables. The antenna is to be base fed and mounted
> over an infinite ground plane. Once you present an optimum fractal design,
> we will compare it to some classic and arbitrary designs (geometries).
>
> This simple exercise will highlight the fundamental relationships that exist
> between the physical properties of the antenna and its electrical
> properties. Additionally, it will illustrate the fundamental trade-offs
> that exist in trying to simultaneously maximize these three electrical
> properties of the antenna.
>
> My hypothesis is that the antenna geometry and total wire length together
> establish the effective height and effective volume of the antenna, which,
> as a function of resonant wavelength, determine the antenna's radiation
> resistance and bandwidth properties. Maximum radiation resistance will be
> exhibited by the design with the smallest physical diameter within the
> volume, while the maximum bandwidth will be exhibited by the design with the
> greatest physical diameter within the volume. However, occupying the same
> physical height and physical volume, and being resonant at the same
> frequency, all of the designs will essentially exhibit the same radiation

> resistance and bandwidth. There is no special geometry, fractal or
> otherwise. There is no fractal geometry that exhibits special or unique
> characteristics. The only real trade-off will be in the antenna
efficiency,
> where the geometry that is self-resonant with the least total wire length
> will exhibit the highest efficiency.
>
> Additionally, with a very simple formula, I can predict (approximately)
your
> radiation resistance and bandwidth independent of both geometry and total
> wire length.
>
> Steve VE9SRB
>
>

4399. Re: Hamsticks and Impedance

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-03 15:38:51 UTC
From: 'Doc <w5lz@icok.net>
Message-ID: <3D74D773.47568C98@icok.net>
Source record: 135289

Scott,
Using either an inductive or capacitive impedance matching device is a good idea. At best, the 'R' of the match (R+/-J) is only going to be something around 25-35 ohms without the matching device. With one, you can get the (R+/-J) much closer to 50+/-0J. Just adjusting the length of the HamStick won't do it, with any 1/4 wave vertical.
'Doc

4400. Re: Antenna switch question

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-03 16:01:03 UTC
From: Tarmo Tammaru <t-tammaru@home.com>
Message-ID: <315d9.133408$On.5349565@bin3.nnrp.aus1.giganews.com>
Source record: 135291

Justin,

Actually, you came up with a good reason for using a balun. If each antenna had a balun at the feedpoint, there would be no RF on the braid; that is why they are sold. As for the switch, it will work regardless. The side of the connector on the back of the radio that connects to the braid is GROUND. So, the part of the unused antenna that is switched off is just grounded.

You can reduce the amount of RF floating around by connecting the grounding lug on the back of your radio to a cold water pipe or some other ground. Or, perhaps in addition, ground the braid of the coax at the point where it enters the house

Tam/WB2TT

"Justin Time" <xrecho@eminem2000.com> wrote in message
news:18d5aac7.0209030357.454512d@posting.google.com...
> "Fred Hambrecht" <w4jle@charter.net> wrote in message
news:<un7nhmo8g2pub9@corp.supernews.com>...
> > A simple explanation is like the wiring to a light bulb, only one wire
is
> > switched. Because no current flows to the other antennas, none returns.
Just
> > like dancing it takes two to tango and two of the antennas have no
> > partner...
>
> Hi Fred, Thanks for the input. I can't quite see the logic in this
> though. I believe current does flow on the braid side of the antenna.
> I sure wouldn't want to touch the braid while trasmitting. (While I
> was in the Army signal corps, a fellow was sitting in the radio room
> and heard a sizzling sound coming from one of the coax lines. Out of
> curiosity he touched the connector! He had a really bad finger for
> several months afterward.)
>
> If current does flow on the braided side, it would stand to reason
> that those sides of all 3 antennae would be hot. If no current flows
> on that side, it seems a waste of time and money to have it there at
> all. No?
>
> I appreciate your reply, but it still doesn't seem to make a lot of
> sense to me, how this works. Respectfully, Justin

4401. Re: What is the big deal with fractal and EH ????????

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-03 17:07:52 UTC
From: "Alexander S. Wood" <alec_wood@dont.spam.me.ntlworld.com>
Message-ID: <anad9.3231$Cy6.23405@newsfep3-gui.server.ntli.net>
Source record: 135308

"Fractenna" <fractenna@aol.com> wrote in message
news:20020902140809.15270.00000678@mb-mn.aol.com...
>
> Hello Alec,
>
> Nice to hear from you.
>
> I fear you are doing me a disservice: from 1995 to 1991(late) I published
> several ham articles, and had web-based construction instructions,
available
> for hams.

<snip>

> I request that you respect my wishes on this and kindly not make such
requests
> of me or my affiliates. It will continue through the duration,
regrettably.
>
> And please do not make such false attributions: a quick e-mail or check of
the
> records would have indicated the situation.
>
> I thank you.
>
> 73,
> Chip N1IR

Hi Chip

Thanks for the quick reply. To your first point, I have not seen any of your work in print, and it is my belief from reading your own posts that you have had all web-based information on this subject removed - those requests for removal that I have seen have always been accompanied by various threats of legal consequences for non-compliance. This seemingly agressive stance may perhaps have tainted the debate somewhat to the point where all sensible discussion seems to end in a flame war of which I wish to have no part.

To your second point, I will indeed respect your wishes and not ask you or those persons I know to be your affiliates for further details of your technology. It is your right to remain silent if you wish. I trust however that I will not cause offence if I ask from time to time if you have changed your mind yet. Furthermore I trust I am free to continue to investigate and discuss fractal antennas with whomsoever I see fit, so long as they are not your affiliates, nor is it a discussion of a commercial nature.

In your last paragraph you reprimand me for the making of "false attriibutions". Personally I don't email people from NG's since I don't like uninvited emails myself. Record checking, via the web anyway, reveals an endless stream of dead-ends. A bit like stumbling around a dark rabbit warren without a torch. My interest in alternative antenna design theories is a recent one, certainly post 1995. My comments in my previous post were in all sincerity my take of the situation as I see it. I would be grateful if you did not assume that just because I disagree with some aspects of the manner in which you have addressed the debate that it therefore follows that I am attacking you. That is not the case.

Kind regards

Alec Wood M1BNK
Teesside UK

4402. Re: What is the big deal with fractal and EH ????????

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-03 17:20:41 UTC
From: "Alexander S. Wood" <alec_wood@dont.spam.me.ntlworld.com>
Message-ID: <anad9.3232$Cy6.23405@newsfep3-gui.server.ntli.net>
Source record: 135309

"Richard Clark" <kb7qhc@attbi.com> wrote in message
news:2p78nuc8o4is6c8tpibk38gm6k0eqftot1@4ax.com...
> Hi Alexander,
>
<snip>
>
> You speak of "specialness" - there is none. [Unless you misspelled
> speciousness for which this field is notable.] All characteristics
> conform to the usual expectations - no surprise either. Differences?
> Yes, certainly. Significant? Perhaps, if you approach it as Zen
> Archery.
>
> 73's
> Richard Clark, KB7QHC

Thanks Richard. Indeed my spelling was correct. My trouble in understanding this fractal antenna business is that I fail to understand why fractal form would radiate better than any other wire bending technique.

Interesting looking site by the way. I have bookmarked it for a proper visit later.

Kind regards

Alec Wood M1BNK
Teesside UK

4403. Good HT antenna for Sat work

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-03 17:37:12 UTC
From: rustyb <rustyb78@gate.net>
Message-ID: <cr6d9.87$UY2.6454@kent.svc.tds.net>
Source record: 135292

Can anyone recommend a good HT antenna for my TH-D7 Kenwood HT for working LEO's such as UO-14. I have an Arrow antenna that's just wonderful, i just want to try something different and maybe it will give me better HT coverage in general.

Thanks
Rusty
WB4BSD

4404. Re: Dr. Kabbary's New EM Equations

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-03 17:51:51 UTC
From: Dick Carroll <dixie@townsqr.com>
Message-ID: <3D74F68D.BC855E28@townsqr.com>
Source record: 135293

"Peter O. Brackett" wrote:

>
> Eat your heart out MFJ!

You too, Fractalanium!

4405. Re: Questions on EZNEC and TLA

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-03 18:14:00 UTC
From: ac6la@arrl.net
Message-ID: <960228f1.0209031014.1f5b28b6@posting.google.com>
Source record: 135294

In discussing matching possibilities for Floyd's vertical antenna, Wes Stewart wrote...

> A better solution (an exercise left for the reader) is to shorten the vertical
> element to make the feedpoint capacitive and use a shorted stub across the feed.

Another Excel program, MultiNEC, can do the calculations for you. As a matter of fact one of the MultiNEC examples is almost this same situation, except that the antenna is a Yagi and the shorted stub is open wire line, in which case the stub is called a "hairpin" match. However, if you assume that the length of the vertical section of Floyd's antenna can be adjusted to give a capacitive feedpoint reactance while changing the resistive portion of the feedpoint reactance only slightly, and you can mentally switch between thinking of the stub as a section of open wire line to thinking of it as a section of coax (both with a shorted far end), then you can read the MultiNEC example description at www.qsl.net/ac6la/mnex5.html. This example shows how to use the MultiNEC "automatically change the model" function in order to resonate the model.

Now I'll be the first to admit that MultiNEC is not the right tool for everybody. It requires that Excel 97 be available and assumes that you have at least a bit of experience using Excel. It loads and runs slower than a compiled program. And it has a learning curve to be climbed before you can take full advantage of it. As the above example cites, you can also use alternative techniques to determine the parameters of matching sections. The HAMCALC suite from George Murphy has several such programs, and a Google search on "impedance matching stubs" yields 2070 hits (the first of which is probably not what you had in mind). I think one or more of Reg's programs will do the job also. Using MultiNEC per the above example is just another method.

Dan AC6LA

4406. Re: antenna tuner question

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-03 18:40:15 UTC
From: Per Enocson <per.enocson@telia.com>
Message-ID: <jm7d9.9116$HY3.2065519@newsc.telia.net>
Source record: 135295

LDG Electronics makes fine remote ATU:s, also available as kits. See
http://www.ldgelectronics.com/rt-11_description.html. I built one from a kit
(average kit builder) and use it with my HF2V vertical for multiband use.
Great tuner and good company to deal with! Agree with Docï¿½s comments that it
would improve your situation.
73ï¿½s/ Per SM0WRA

"PDRUNEN" <pdrunen@aol.com> skrev i meddelandet
news:20020902082937.01022.00000727@mb-ms.aol.com...
> Hi Group,
>
> I use a old 5/8 CB ground plane with 20 feet of RG-58 as the line feed.
The
> antenna is not very high. I use a MFJ tuner to operate on 20,17,15,12,10.
>
> It works ok but not great. Would there be any advantage to putting the
tuner
> at the antenna end? How about if I moved the antenna up to 40 feet and
still
> used 58 cable and located the tuner at the antenna?
>
> Does anyone make a remote tuner box which mounts at the antenna end?
>
> Tnx, de KJ4UO
>
>

4407. RS Kudos

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-03 18:50:18 UTC
From: Dave Allen <david_e_allen@agilent.com>
Message-ID: <3D75046A.C279B2A7@agilent.com>
Source record: 135296
Cross-posted to: rec.radio.amateur.antenna,rec.radio.scanner,rec.radio.shortwave

I was building cables this weekend, and the DIN connectors I bought from the old, established electronics supply house were junk. Shell halves barely stayed together, no numbering on the pins. All the DIN connectors I get from RS fit together nicely and have the pins numbered.

And my "cure" for the satellite / cell pitch? I'm there often enough looking for little piddly stuff that they know I'm not interested in anything that costs more than $5. :-)

dave allen, colorado

4408. Fan Antenna?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-03 19:02:10 UTC
From: Vito <vito@crosslink.net>
Message-ID: <3D750732.15613490@crosslink.net>
Source record: 135297

Hi,
Reading a book "Shipboard Antennas", I see many "fan" communications antennas comprising 3 or 4 wires tied together at the top of a mast but fanning out toward the deck with each wire fed some distance (can't be sure from photos but looks like about 5 to 10 feet) from the top.
Anybody familiar with the details and pros/cons of such configurations??
TIA, K3DWW

4409. Re: ANTENNA QUESTION solarcon A99

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-03 19:20:50 UTC
From: yeah_right@noway.com
Message-ID: <3d750bf7.18941332@news.verizon.net>
Source record: 135298

On Wed, 28 Aug 2002 16:35:31 GMT, "Major Tom"
<NonValidAddress@attbi.com> wrote:

>If you want to see one apart, check this out. You may think
>twice about this antenna.
>
>http://www.qsl.net/kg6aoh/a99/
>
>Tom

The problem is that the A99 works, and the performance to cost ration
is really good. Yes, it's cheaply made, and you'll probably have to
replace it in three years after the fiberglass wears out.....but then
you can get the next great coaxial antenna that hits the market. :)

Scott

4410. Re: antenna tuner question

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-03 19:35:17 UTC
From: Ralph Mowery <rmoery@cetlink.net>
Message-ID: <al36pd$212g$1@newsreader.cetlink.net>
Source record: 135301

The few 5/8 cb antennas I have seen use a shunt fed loding coil. Remove the coil and it will probably werk beter in the bands other than maybe 10 meters.

PDRUNEN <pdrunen@aol.com> wrote in message news:20020902082937.01022.00000727@mb-ms.aol.com...
> Hi Group,
>
> I use a old 5/8 CB ground plane with 20 feet of RG-58 as the line feed. The
> antenna is not very high. I use a MFJ tuner to operate on 20,17,15,12,10.
>
> It works ok but not great. Would there be any advantage to putting the tuner
> at the antenna end? How about if I moved the antenna up to 40 feet and still
> used 58 cable and located the tuner at the antenna?
>
> Does anyone make a remote tuner box which mounts at the antenna end?
>
> Tnx, de KJ4UO
>
>

4411. Prop Pitch Rotor Power

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-03 19:40:36 UTC
From: Bob Dixon <Bob_Dixon@osu.edu>
Message-ID: <Bob_Dixon-671998.15403603092002@nntp.service.ohio-state.edu>
Source record: 135299

I know that Prop Pitch Rotors can be run on either AC or DC power.
My question is - is DC better than AC? Does it make any difference as
far as rotation speed, torque, lifetime, etc?

4412. Re: What is the big deal with fractal and EH ????????

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-03 20:11:27 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <692anuonmb9qt1shcvvj5mbummprkdab6a@4ax.com>
Source record: 135300

On Tue, 03 Sep 2002 13:07:01 GMT, "VE9SRB" <srbest@att.net> wrote:

>
>If you are interested in a "public debate",

Oh come on now, photo-op is more the desire of any marketeer, that or any press coverage being suitable to no press coverage. After-all this isn't about science, its about money. All should note that there is absolutely no amateur support from this source crying a need for debate - strictly consistent in attitude to our fraternity whereby this source declaimed AND NAMED one of our brothers, AN INNOCENT, as a vicious serial killer in the Boston area. In short, any coverage, no matter how insidiously arrived at, goes to the bottom line of commerce.

> lets discuss the merits of a
>very simple example. Presume that you have a cylindrical volume: 6 cm in
>height and a radius of 1.5 cm. We want to design a monopole (no capacitive
>top loading, no short-circuit folds, only a single piece of wire) that is
>self-resonant at 350 MHz. The wire diameter is 0.5 mm. Use your Genetic
>Optimizer to design a fractal antenna that exhibits maximum radiation
>resistance, maximum bandwidth and maximum efficiency.

This, of course, presumes there is some element of truth to the speculative optimizer package. Again, Genetic Optimization further underlines that total lack of science in this form of hi-grading the population of all antenna forms for suitability - and then comes the back fill of claims of invention and scientific advancement (again, without supporting documentation).

Basically, the fractal community appears to be migrating away from their inability to support their claims or describe their processes; towards an anonymous software packages that admittedly convey no sense of what they are doing much less why. This makes the fractal community's job so much easier when asked "howcum," and they can now respond (with genuine honesty) "dunno." This, of course, can abrade some tender egos and from that quarter you can fully expect a response somewhat more lame such as "fully optimized" (self referential tendencies predominate from the shallow end of the academic pool).

>Geometry and total
>wire length are your variables. The antenna is to be base fed and mounted
>over an infinite ground plane. Once you present an optimum fractal design,
>we will compare it to some classic and arbitrary designs (geometries).

This would be novel indeed, if it actually comes to fruition.

>
>This simple exercise will highlight the fundamental relationships that exist
>between the physical properties of the antenna and its electrical
>properties. Additionally, it will illustrate the fundamental trade-offs
>that exist in trying to simultaneously maximize these three electrical
>properties of the antenna.

You stand in danger of revealing trade secrets. Note trade secrets
are not always intellectual properties, they can consist of simple
verities that expose fractal-babble (absolute guff at all levels of
examination).

>
>My hypothesis is that the antenna geometry and total wire length together
>establish the effective height and effective volume of the antenna, which,
>as a function of resonant wavelength, determine the antenna's radiation
>resistance and bandwidth properties. Maximum radiation resistance will be
>exhibited by the design with the smallest physical diameter within the
>volume, while the maximum bandwidth will be exhibited by the design with the
>greatest physical diameter within the volume. However, occupying the same
>physical height and physical volume, and being resonant at the same
>frequency, all of the designs will essentially exhibit the same radiation
>resistance and bandwidth. There is no special geometry, fractal or
>otherwise. There is no fractal geometry that exhibits special or unique
>characteristics. The only real trade-off will be in the antenna efficiency,
>where the geometry that is self-resonant with the least total wire length
>will exhibit the highest efficiency.
>
>Additionally, with a very simple formula, I can predict (approximately) your
>radiation resistance and bandwidth independent of both geometry and total
>wire length.
>
>Steve VE9SRB
>

Hi Steve,

You may not be aware of it, but it appears you have already won the
debate. You have been too clear in the format of discussion and there
is scant chance that marketing can respond without swapping the
dictionary of basic electrical design for Roget's Thesaurus.

fractal emergence:
an undocument occassion at roughly 4 AM some years back
when the sudden release of design tension brought forth a new
marketing product;
fractal challenge:
losses to the extent of 6:1 overwhelm fractal champion;
fractal science:
none known to exist;
fractal publication:
failure to respond, fractals cannot compete in the real world,
fractal scientists (sic) have to travel in pairs to accomplish one

presentation of newly discovered marketing terms;
fractal debate:
failure to appear, fractals move into the infomercial 4AM time slot after the porn channels go off the air. Marketing reports new enthusiasm from their core constituency - they weren't all ready to turn off the TV yet (or they were otherwise occupied such that they could not free a hand to turn it off). Marketing offers that they will soon have proof from Arbitron that fractals elevate libido....
fractals challenge viagra:
venture capitalists storm the gates.
fractal bubble bursts (actually sags, tumescent):
venture capitalists demand their money back. Genzu knives replace the 4AM infomercial spot and simultaneously kill the porn channels as the collapse cascades across the board.
fractal rescue:
Bush makes a speech noting the impressive marketing terms that have been brought to us by fractals;
fractal end:
The market plunges 342 more points on Bush's announcement.

Now we have closure.

73's
Richard Clark, KB7QHC

4413. Re: Fan Antenna?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-03 20:51:57 UTC
From: VE9SRB <srbest@att.net>
Message-ID: <Nh9d9.50661$Ke2.3543130@bgtnsc04-news.ops.worldnet.att.net>
Source record: 135302

"Vito" <vito@crosslink.net> wrote in message
news:3D750732.15613490@crosslink.net...
> Hi,
> Reading a book "Shipboard Antennas", I see many "fan" communications
> antennas comprising 3 or 4 wires tied together at the top of a mast but
> fanning out toward the deck with each wire fed some distance (can't be
> sure from photos but looks like about 5 to 10 feet) from the top.
> Anybody familiar with the details and pros/cons of such configurations??
> TIA, K3DWW

Vito:

The "Fan" or more commonly, the "Twin Fan" is an HF antenna used on Naval ships to cover the 2 - 4 MHz, 2 - 6 MHz or sometimes the 2 - 8 MHz frequency spectrum. In many cases, they may be used at higher frequencies for receive purposes.

The twin fan antenna is comprised of two sets of 3 or 4 wire ropes which are fabricated from insulated phosphor bronze wire and are suspended from the yard arm of a foremast or mainmast using Delrin insulators. The three or four fan wires will be typically connected to a single point at some deck level using another Delrin insulator. The antenna is top fed with a broadband matching network located on the mast. The matching network is designed such that these antennas exhibit a maximum SWR of about 3:1 over their full operating band.

3 or 4 wire ropes are deployed in a fan configuration as the bandwidth of this structure is enhanced relative to a single wire rope. "Fans" are used in place of a vertical monopole because, as you are aware, low frequency wavelengths would require a vertical structure that would not be deployable onboard ship. The fan lengths may typically be on the order of 60 - 80+ feet in length.

The purpose of the fan is not to act as an antenna in and of itself, but rather, it excites currents on the ship's superstructure which are then re-radiated. The twin fan is typically optimized to excite vertical currents within the mast to which it is connected. At these low frequencies, the ship's superstructure is acting as the "antenna".

The advantage of the fan antenna is its bandwidth characteristics and its low vertical profile relative to a full size 1/4 wave monopole.

Steve VE9SRB

4414. Re: Fan Antenna?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-03 21:00:19 UTC
From: fractenna@aol.com
Message-ID: <20020903170019.01209.00001469@mb-mq.aol.com>
Source record: 135303

>Hi,
>Reading a book "Shipboard Antennas", I see many "fan" communications
>antennas comprising 3 or 4 wires tied together at the top of a mast but
>fanning out toward the deck with each wire fed some distance (can't be
>sure from photos but looks like about 5 to 10 feet) from the top.
>Anybody familiar with the details and pros/cons of such configurations??
>TIA, K3DWW
>

Such antennas are directly taken from Oliver Lodge's work: these included the first (1897) patents on antennas, a far as I can tell. Lodge's work was simultaneous with that of Hertz and led to the first practical wireless system. Note that Marconi bought up Lodge's patents.

Lodge realized that particular geometry gave him broad band characteristics, effectively 'bow tie' geometry. Ironically, Lodge wanted syntony--narrow band resonance-- and to do this he placed inductance (coil) between the two 'bow tie' like fans.

In Lodge's own words, this fan/bow tie arrangement was his intepretation of a broad band capacitor or 'Leyden jar'.

Your ship used fans as broad band antennas.

73,
Chip N1IR

4415. Re: Antenna switch question

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-03 21:29:33 UTC
From: Marty <vk2umj@NOSPAM.yahoo.com.au>
Message-ID: <4J9d9.23415$g9.68601@newsfeeds.bigpond.com>
Source record: 135304

>The side of the
> connector on the back of the radio that connects to the braid is GROUND.
So,
> the part of the unused antenna that is switched off is just grounded.
>
> You can reduce the amount of RF floating around by connecting the
grounding
> lug on the back of your radio to a cold water pipe or some other ground.
Or,
> perhaps in addition, ground the braid of the coax at the point where it
> enters the house
>

So far this seems like the simplest answer to the question, needing no further explanation. Just accept that the braid of the co-ax is basically ground, and therefore all 3 antenna's (should) have a common ground connection anyway. If you mount more than one antenna on a pole or mast, usually the ground of all the antenna will be common (i.e. the mast), and if you earth the mast to a earth stake, then you are again creating a common earth for all antenna, radio, etc.

In fact, I have had installations where I didn't need to connect the radio to the power supply negative as the ground connection was made through the antenna. So, what's the use of disconnecting the braid at the antenna switch if they are all connected together anyway via the earth???

--
Martin, VK2UMJ
vk2umj@NOSPAMyahoo.com.au

Remove NOSPAM from e-mail address to reply

Outgoing mail is certified Virus Free.
Checked by AVG anti-virus system (http://www.grisoft.com).
Version: 6.0.384 / Virus Database: 216 - Release Date: 21/08/2002

4416. Help ref a G5RV

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-03 21:52:14 UTC
From: Biggles <infoyes2001@yahoo.com>
Message-ID: <enbanugk1hfqepp61992i1qg763k0586po@4ax.com>
Source record: 135305

Hi I am about to put a G5RV up in my garden and because of length restrictions it will have to be mounted in an inverted V configuration. Also one end of the wire will have to run along side and close to the end of the house. The drive wire will be out in the open.
Will having part of the aerial close to the side of the house degrade the signal, etc.

73s Tony

4417. What antennas are you using on your FT-817

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-03 21:52:29 UTC
From: Larry Bratcher <lbratche@swbell.net>
Message-ID: <xaad9.5903$Cm1.1383365741@newssvr30.news.prodigy.com>
Source record: 135306

I'm interested in hearing about some of the portable antennas (commercial and homebrew) that people are using on their Yaesu FT-817s. I just bought a 817 and LDG Z-11 tuner (haven't even received it yet) and am thinking about antennas. Thinking about just a long wire with the tuner. How short of a wire could I get by with for 20 meters? Any good QRP portable antenna homebrew sites? What about the Miracle Whip, ATX, and Maldol antennas (others)?

Thanks

Larry

4418. Re: Cushcraft going out of business?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-03 21:58:59 UTC
From: Dick Carroll <dixie@townsqr.com>
Message-ID: <3D753076.4426CC55@townsqr.com>
Source record: 135307

Rick Littlefield wrote:

> Imagine, thousands of servicable SSB and FM radios headed straight

> to the attic. What a beautiful sight!

I'm not the only ham who'll believe it only when we see it.

Dick

4419. Re: What is the big deal with fractal and EH ????????

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-03 22:06:55 UTC
From: Dick Carroll <dixie@townsqr.com>
Message-ID: <3D753253.388D7353@townsqr.com>
Source record: 135310

Fractenna wrote:

> >from 1995 to 1991(late) I published
> >several ham articles
>
> Pardon me; that's obviously 2001, not 1991.
>
> 73,
> Chip N1IR

No, actually it wasn't obvious. I thought you had finally
revealed the secret of Fractennas - negative time warp.

4420. Re: Dr. Kabbary's New EM Equations

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-03 22:14:09 UTC
From: richardharrison@webtv.net
Message-ID: <24978-3D753431-121@storefull-2393.public.lawson.webtv.net>
Source record: 135312

This is a CORRECTION.
I wrote"---it was Ampere who said: "The induced voltage is proportional to minus d phi / dt."
Bart Rowlett e-mailed me: "Nope, it was Faraday."

I looked it up as I should have before posting something that proves wrong. Bart is exactly right.

I am sorry for misleading with a wrong statement and will try to check my facts if in doubt, or remain silent.

Best regards, Richard Harrison, KB5WZI

4421. Re: What is the big deal with fractal and EH ????????

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-03 22:19:42 UTC
From: "J. Harvey" <JM002.Harvey_ANTI*SPAM_@Sympatico.ca>
Message-ID: <mzad9.6019$7x5.798301@news20.bellglobal.com>
Source record: 135311

"Alexander S. Wood"
> ...I will indeed respect your wishes and not ask you or
> those persons I know to be your affiliates for further
> details of your technology. It is your right to remain
> silent if you wish. ...

The issued patents are (of course !) available on-line at www.uspto.gov.
They're fairly easy to find using the search function and a few well-chosen
keywords or perhaps a name. You may need a TIFF file reader (such as
Apple's QuickTime, or InterneTiff) if you wish to see the images.

It's all pretty easy, but post again if you have any problems.

4422. Re: Help ref a G5RV

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-03 22:50:07 UTC
From: Ralph Mowery <rmowery@ctc.net>
Message-ID: <z0bd9.143750$On.5654850@bin3.nnrp.aus1.giganews.com>
Source record: 135313

What is a 'drive wire' on a g5rv ?

Anytime the antenna is not out in the open there is some degrading of the signal.. It might be measured in tenths of a db or less . If it is mounted mext to a metal guttering it could be a lot.

Biggles <infoyes2001@yahoo.com> wrote in message news:enbanugk1hfqepp61992i1qg763k0586po@4ax.com...
> Hi I am about to put a G5RV up in my garden and because of length
> restrictions it will have to be mounted in an inverted V
> configuration. Also one end of the wire will have to run along side
> and close to the end of the house. The drive wire will be out in the
> open.
> Will having part of the aerial close to the side of the house degrade
> the signal, etc.
>
> 73s Tony

4423. Re: What is the big deal with fractal and EH ????????

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-03 23:26:25 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <3D754521.4020707@eznec.com>
Source record: 135314

Alexander S. Wood wrote:
> . . .
> Thanks Richard. Indeed my spelling was correct. My trouble in understanding
> this fractal antenna business is that I fail to understand why fractal form
> would radiate better than any other wire bending technique.

Numerous papers have been published touting the advantages of fractal antennas, and a number of them have claimed that the fractal form is innately superior in one way or another to all possible alternate forms. However, to my knowledge, no real evidence has been provided in any of these papers to substantiate the claimed superiority. Steve Best, VE9SRB, has presented at professional forums a number of non-fractal designs which are equal or superior to similar fractal antennas by a number of criteria. Some of these can be found as EZNEC files (with accompanying explanatory text files) at my web site, at ftp://eznec.com/pub/MI2/. They were also at the ARRL web site, unless the ARRL has been intimidated into removing them.

If anyone does know of a published paper that presents testable evidence that fractal antennas are superior in any way to all other folding methods, I'd appreciate a reference.

Roy Lewallen, W7EL

4424. Re: What is the big deal with fractal and EH ????????

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-03 23:41:17 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <jceanu0u8buv7oh1apsd3avjnb8o7np2iu@4ax.com>
Source record: 135315

On Tue, 3 Sep 2002 18:20:41 +0100, "Alexander S. Wood"
<alec_wood@dont.spam.me.ntlworld.com> wrote:

>
>"Richard Clark" <kb7qhc@attbi.com> wrote in message
>news:2p78nuc8o4is6c8tpibk38gm6k0eqftot1@4ax.com...
>> Hi Alexander,
>>
><snip>
>>
>> You speak of "specialness" - there is none. [Unless you misspelled
>> speciousness for which this field is notable.] All characteristics
>> conform to the usual expectations - no surprise either. Differences?
>> Yes, certainly. Significant? Perhaps, if you approach it as Zen
>> Archery.
>>
>> 73's
>> Richard Clark, KB7QHC
>
>Thanks Richard. Indeed my spelling was correct. My trouble in understanding
>this fractal antenna business is that I fail to understand why fractal form
>would radiate better than any other wire bending technique.
>
>Interesting looking site by the way. I have bookmarked it for a proper visit
>later.
>
>Kind regards
>
>Alec Wood M1BNK
>Teesside UK
>

Hi Alec,

Please feel free to correspond (or better yet) offer questions on this
board or make observations that relate to this subject (which is, of
course, the raison d'etre of this assembly).

As my site extends to some 300+ files of data, models, and reporting;
it can be overwhelming to the casual visitor. In fact, I will be the
first to admit it takes considerable patience to even begin a review
of the data.

The practical approach is to abandon any notion that these structures
are suitable for erection. You should note that I employ "perfect"
scenarios and only monopoles by and large. The reasons for these

choices are they level the playing field for cross-correlation between all the different models; and by being monopoles I can double the number of points available to me through the 'mirroring' of ground.

I approached this family of design through two key variables:
height,
amount of wire consumed
I typically constrain the height to 16 meters tall
OR
I constrain the wire consumed to 64 meters of wire.

Either results in a structure that would find some HF application, with modest height. I thereby have two interleaved studies being conducted when I take a family of fractal curves and drive them over a frequency span of 5 to 30 MHz. This range of frequencies constitutes a third constraint.

For each fractal form, I further elaborate by extending the survey to include up to 6 iterations for that form. So these studies then go to look at the response across all similarly constrained iterations for the several fractal forms (about half a dozen or so). This constitutes a third parallel study into the affect of iteration, specifically and generally (compared with its cohorts). This work also offers a fourth constraint to the general fractal.

So there should be a pay-off. When asked a general question, this work should support a general answer (much like the equation for a dipole's length). That element is there too, but very provisional. Just within these four constraints I describe, you find that same 300 pages of data - I can offer a general statement: it's in the kinks - there is no shape attribute. This was confirmed some years later by Steve Best's V9SRB designs shown to this group in Oct/Nov 2000.

73's
Richard Clark, KB7QHC

4425. Re: Aviation scanning on a CB Antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-04 00:05:13 UTC
From: Steve Danhof <stevedanhof@attbi.com>
Message-ID: <Z6cd9.348871$UU1.59589@sccrnsc03>
Source record: 135316

Thanks for the info, I will probably just run some wire for now till I can buy a good antenna.

You are correct, 108 to 117.95 are NAV frequencies, but these freqs are often used by Flight Service Stations to reply to pilots requesting information on a different frequency.

"Tarmo Tammaru" <t-tammaru@home.com> wrote in message news:xcOc9.248776$Aw4.10591494@bin2.nnrp.aus1.giganews.com...
> I would be concerned about loading coils or baluns that might be part any HF
> antenna. They may make tha antenna unusable at VHF, in which case you would
> be better of with just 3 or 4 feet of wire for the antenna. Or, you might
> try TV rabbit ears with a 300 to 75 ohm TV balun. BTW, I think 108 -118 is
> VOR, not voice.
>
> Tam/WB2TT
>
>
> "Steve Danhof" <stevedanhof@attbi.com> wrote in message
> news:l2Mc9.172237$aA.34468@sccrnsc02...
> > I have a handheld Sportys SP200 Nav/Com than sends and receives between
> > 118.000 MHz and 136.975 MHz and receives 137.000 MHz to 142.975 and
> 108.000
> > to 117.950 MHz.
> >
> > I have a mobile Wilson 2000 CB antenna and some other base antenna at my
> > house.
> >
> > All I want to do is monitor these frequencies with the scan feature on
> my
> > tranciever. I will not be transmitting at all while using these
> antennas.
> >
> > Is this possible and safe for the radio?
> >
> > Thanks for your help
> >
> >
> >
>
>

4426. Re: Prop Pitch Rotor Power

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-04 00:06:52 UTC
From: n2ey@aol.com
Message-ID: <20020903200652.04751.00000629@mb-mw.aol.com>
Source record: 135317

In article <Bob_Dixon-671998.15403603092002@nntp.service.ohio-state.edu>, Bob Dixon <Bob_Dixon@osu.edu> writes:

>I know that Prop Pitch Rotors can be run on either AC or DC power.
>My question is - is DC better than AC? Does it make any difference as
>far as rotation speed, torque, lifetime, etc?

DC is definitely better than AC because of less sparking at brushes. Longer brush and commutator life is the result. The motors were designed for 24-28 volts DC.

There were excellent articles in QST about 1971 describing maintenace, lubrication, and control circuits.

73 de Jim, N2EY

4427. type N adapter - Where to buy?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-04 01:11:51 UTC
From: gnaik@iname.com
Message-ID: <47bedac3.0209031711.292b361f@posting.google.com>
Source record: 135318

I have an interesting problem. I have two ends of a cable that are both Female Type N. So, I'm looking for some type of adapter that will allow me to connect both of them together. I am assuming aMale to Male type N twist adapter is available - somewhere...I was able to find Female to Female connectors, but nothing else: http://www.radio-ware.com/products/ncoup.htm.

Can anyone point me to a shop in the Philadelphia area? If not, How about an online/mail order retailer that carries such a part. I would prefer a shop in this area, because I need the part ASAP.

Thanks for your prompt response.

4428. RE: Steve Best and Debate Status

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-04 02:10:16 UTC
From: fractenna@aol.com
Message-ID: <20020903221016.06895.00000950@mb-cq.aol.com>
Source record: 135319

Hi Steve,

Great to hear from you; trust things are going well. Hope to see you in Baltimore, if I can break away..

You publicly posed an interesting benchmark for the Fractal Genetic Optimizer which I think sounds like a great idea to try to beat. I have some initial thoughts for you as we move towards proceeding:

1) Please write up the figure of merit (cost function) you wish to pursue. In this way, there can be no disagreements that the FOM was chosen a posteriori, and thus bias any result in some way. Merely saying 'best bandwidth; best radiation resistance'; and so on begs the issue. It needs to be defined mathematically in a way that includes all the criteria and weights them in a reasonable way. I will step out of the process entirely so as to not even project a hint of bias. A good source on cost functions is: "Practical Genetic Algorithms" by our colleagues Haupt and Haupt, (Wiley, 1997). Our colleague Ed Altshuler is also well known in this context (he and Derek Linden have a patent for 3D optimized antennas from conventional GA's) and may be helpful in fine-tuning.I also understand that you are in conference with other well known antenna folks, who should have a good bit of knowledge on this.I strongly encourage this.Let's all have some fun!

2) The most scientifically compelling way of demonstrating whether an antenna design is 'better' than the one you want to benchmark is to include it directly into the first generation of the genetic optimization. The best always stays at the top, so to speak, so if your design is the best it will remain so through several generations, and remain the best to the last generation. If not, well, we can stop in just a couple of hours of sims!

3) The modeling of such an antenna on infinite ground is problematic. First, by forcing mirror symmetry, you constrain other non-mirror symmetries in the design space. Why throw options away? Second, there are NEC problems modeling wires very close, and with a parallel projection to, ground. Third, we need to think about a practically realizable antenna, that others won't bicker about being a remnant of the sim. My suggestion is that we dispose of the infinite ground and force any ground plane/counterpoise to fit within the form factor you specified.Alternatively, turn your monopole into a dipole. Fourth, are we talking about an antenna or an antenna system? Are you allowing for funky 'v' shaped excursions that short to ground? Fifth, let's agree that for an antenna with a single current max, the radiation resistance is the resistance at the maximum current position.

I hope we can all make some progress on this; I seem to recall extending you such an invitation 3 months ago to present such an interesting design problem. But we are all busy, so the delay is understandable. Here, we just finished a

science project on the FRAGO, and it will stay on a series of commercial projects until about 15 Oct. Then a short break; a good time to pursue. That interregnum from now should give you plenty of time to iron out the above, for which I am happy to continue discussions.

I think we will both find this exercise enjoyable, as well as benificial for the edification of our antenna comrades.

I am posting this so others may follow our progress.

With Warm Regards,

Chip N1IR

4429. RE: Steve Best and Debate Status

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-04 02:32:37 UTC
From: k1bqt@aol.com
Message-ID: <20020903223237.19108.00001320@mb-fz.aol.com>
Source record: 135320

Guess that means the monkey can't do it.

Rick K1BQT

4430. Re: What antennas are you using on your FT-817

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-04 02:43:53 UTC
From: Lars Edwards <larse@hiwaay.net>
Message-ID: <unasg8m717oscc@corp.supernews.com>
Source record: 135321

Larry,

The most successful portable type antenna I have used so far is a shortened 20 meter dipole made from 2 hamstick type antennas. I picked up 2 of these new at a local hamfest for a total of $26.

Assembly is very fast (~ 10 minutes)and I'm using an extendable "paint pole" as the support. Total length of the dipole when assembled is around 14 ft and it is very light in weight.

With this antenna at only 12-15 ft. I've been able to work a lot of stateside and a good bit of cw DX (Europe, Africa, South America).

I have also been using a "12avq" (as a ground plane) -- not as a portable -- and even at a modest 10 ft. or less off the ground I have had very good success on 20, 15 and 10 meters.

On both of these I have been using a MFJ-971 tuner

Lars
WB2ORD

"Larry Bratcher" <lbratche@swbell.net> wrote in message
news:xaad9.5903$Cm1.1383365741@newssvr30.news.prodigy.com...
> I'm interested in hearing about some of the portable antennas (commercial
> and homebrew) that people are using on their Yaesu FT-817s. I just bought
a
> 817 and LDG Z-11 tuner (haven't even received it yet) and am thinking
about
> antennas. Thinking about just a long wire with the tuner. How short of a
> wire could I get by with for 20 meters? Any good QRP portable antenna
> homebrew sites? What about the Miracle Whip, ATX, and Maldol antennas
> (others)?
>
> Thanks
>
> Larry
>
>

4431. Re: What antennas are you using on your FT-817

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-04 02:46:37 UTC
From: Larry Bratcher <lbratche@swbell.net>
Message-ID: <hued9.5935$aT5.1416747157@newssvr30.news.prodigy.com>
Source record: 135322

Lars,

I was thinking about doing the same thing with two Hustler MO4 - 22" masks and Rm-20 resonators. It would be a little shorter thant the ham sticks (and perhaps not as effective). Question - how do you connect the two antennas together to for the dipole?

"Lars Edwards" <larse@hiwaay.net> wrote in message news:unasg8m717oscc@corp.supernews.com...
> Larry,
>
> The most successful portable type antenna I have used so far is a shortened
> 20 meter dipole made from 2 hamstick type antennas. I picked up 2 of these
> new at a local hamfest for a total of $26.
>
> Assembly is very fast (~ 10 minutes)and I'm using an extendable "paint pole"
> as the support. Total length of the dipole when assembled is around 14 ft
> and it is very light in weight.
>
> With this antenna at only 12-15 ft. I've been able to work a lot of
> stateside and a good bit of cw DX (Europe, Africa, South America).
>
> I have also been using a "12avq" (as a ground plane) -- not as a portable --
> and even at a modest 10 ft. or less off the ground I have had very good
> success on 20, 15 and 10 meters.
>
> On both of these I have been using a MFJ-971 tuner
>
> Lars
> WB2ORD
>
>
>
> "Larry Bratcher" <lbratche@swbell.net> wrote in message
> news:xaad9.5903$Cm1.1383365741@newssvr30.news.prodigy.com...
> > I'm interested in hearing about some of the portable antennas (commercial
> > and homebrew) that people are using on their Yaesu FT-817s. I just bought
> a
> > 817 and LDG Z-11 tuner (haven't even received it yet) and am thinking

> about
> > antennas. Thinking about just a long wire with the tuner. How short of
a
> > wire could I get by with for 20 meters? Any good QRP portable antenna
> > homebrew sites? What about the Miracle Whip, ATX, and Maldol antennas
> > (others)?
> >
> > Thanks
> >
> > Larry
> >
> >
>
>
>

4432. RE: Steve Best and Debate Status

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-04 03:07:13 UTC
From: k3bu@aol.com
Message-ID: <20020903230713.00965.00002000@mb-ch.aol.com>
Source record: 135323

>
>I think we will both find this exercise enjoyable, as well as benificial for
>the edification of our antenna comrades.
>
>I am posting this so others may follow our progress.
>
>With Warm Regards,
>
>Chip N1IR
>

Aaah, yes my antenna comrade! Can't wait to get "benifited" and edificated!
Interesting (fractal?) twist :-)
I am lighting up fine cigar, getting my feet up and waiting how long will it
take Freaks to start screaming "patent infringement" and dance around the
facts.
Like wasn't there enough edification done already by W7EL, VE9SRB, KB7QHC?
Someone just don't getit?
Let the games begin!

Bada BUm

4433. Re: type N adapter - Where to buy?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-04 03:32:47 UTC
From: W6DKN <w6dkn@qsl.net>
Message-ID: <G2fd9.2983$Ie6.1418@fe02>
Source record: 135324

"G. Naik" <gnaik@iname.com> wrote in message
news:47bedac3.0209031711.292b361f@posting.google.com...
> I have an interesting problem. I have two ends of a cable that are
> both Female Type N. So, I'm looking for some type of adapter that
> will allow me to connect both of them together. I am assuming aMale
> to Male type N twist adapter is available - somewhere...I was able to
> find Female to Female connectors, but nothing else:
> http://www.radio-ware.com/products/ncoup.htm.
>
> Can anyone point me to a shop in the Philadelphia area? If not, How
> about an online/mail order retailer that carries such a part. I would
> prefer a shop in this area, because I need the part ASAP.
>
>
> Thanks for your prompt response.

http://makeashorterlink.com/?I12A21FA1

73 de W6DKN

4434. Re: KLM 8ele-6m Beam

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-04 03:36:41 UTC
From: Tarmo Tammaru <t-tammaru@home.com>
Message-ID: <ddfd9.397859$m91.15750058@bin5.nnrp.aus1.giganews.com>
Source record: 135325

A lot of the KLM antennas are still being made by M*Squared. Go to
www.m2inc.com .

Tam/WB2TT

"NEDROG" <nedrog@aol.comNOSPAM> wrote in message
news:20020902155539.10323.00000090@mb-fx.aol.com...
> I have an old KLM 8 element 6m beam that I need some replacement Element
to
> Boom mounting brackets.
>
> I did look at dxengineering.com web page, but the prices are ridiculos.
>
> Soes anybody have either an old antenna like this that they may be parting
out,
> or a suggestion as to whom might have some replacement brackets at a more
> reasonable price?
>
> 73'
>
> Please respond to either the group or to w3cqh@arrl.net, as my AOL account
> email is BLOCKED because of an unusual amount of unsolicited mail.
>
> Howard W3CQH
>

4435. Re: type N adapter - Where to buy?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-04 04:14:26 UTC
From: Butch Magee <lynyrd@cableone.net>
Message-ID: <3D7588A2.90105@cableone.net>
Source record: 135326

www.radioworks.com

Butch KF5DE

G. Naik wrote:

>I have an interesting problem. I have two ends of a cable that are
>both Female Type N. So, I'm looking for some type of adapter that
>will allow me to connect both of them together. I am assuming aMale
>to Male type N twist adapter is available - somewhere...I was able to
>find Female to Female connectors, but nothing else:
>http://www.radio-ware.com/products/ncoup.htm.
>
>Can anyone point me to a shop in the Philadelphia area? If not, How
>about an online/mail order retailer that carries such a part. I would
>prefer a shop in this area, because I need the part ASAP.
>
>
>Thanks for your prompt response.
>

4436. Re: How do you handle coax runs through outside to inside ?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-04 04:51:12 UTC
From: 'Doc <w5lz@icok.net>
Message-ID: <3D759125.DACB23FD@icok.net>
Source record: 135327

> OK on coax ideas - how does anyone get balanced feeder outside?
>
> cheers
> GM0TUB

Pict,
basically, the same way. I use a wooden board made to fit
in a window. Drilled a couple of holes to pass the two
conductors of the ladder-line through, shut window on board
to hold it. The board makes an impedance 'lump' in the feed
line, but it doesn't amount to anything significant.
The board also makes for a good place to mount 'bulkhead'
connectors for coax...
'Doc

4437. Whats the best 40M mobile?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-04 06:54:01 UTC
From: dq70@yahoo.com
Message-ID: <d8b00739.0209032254.7c0b5cc9@posting.google.com>
Source record: 135328

Can I get some opinions on the best 40 meter mobile antennas out there.
Also I need replacement magnets for my tri mount, know of anyplace cheap??

4438. Re: What am I emitting on 80M?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-04 07:15:19 UTC
From: Arend Harteveld <a.harteveld@noio.tudelft.nl>
Message-ID: <al4bu9mel1@news.tudelft.nl>
Source record: 135329

Richard Harrison wrote:
<snip>
Sea water is a short circuit to horizontally polarized waves.
<snip>

So it should act as a excellent reflector favouring low angle radiation...

73, Arend PA1ARE

4439. Re: Antenna switch question

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-04 07:18:36 UTC
From: Fred Hambrecht <w4jle@charter.net>
Message-ID: <unbcufjegb2ka6@corp.supernews.com>
Source record: 135330

The wire can ONLY flow on the outside if it has a return path on the inside.
In most antenna switches the center conductor of the unused antenna is
connected to ground as well.

"Justin Time" <xrecho@eminem2000.com> wrote in message
news:18d5aac7.0209030357.454512d@posting.google.com...
> "Fred Hambrecht" <w4jle@charter.net> wrote in message
news:<un7nhmo8g2pub9@corp.supernews.com>...
> > A simple explanation is like the wiring to a light bulb, only one wire
is
> > switched. Because no current flows to the other antennas, none returns.
Just
> > like dancing it takes two to tango and two of the antennas have no
> > partner...
>
> Hi Fred, Thanks for the input. I can't quite see the logic in this
> though. I believe current does flow on the braid side of the antenna.
> I sure wouldn't want to touch the braid while trasmitting. (While I
> was in the Army signal corps, a fellow was sitting in the radio room
> and heard a sizzling sound coming from one of the coax lines. Out of
> curiosity he touched the connector! He had a really bad finger for
> several months afterward.)
>
> If current does flow on the braided side, it would stand to reason
> that those sides of all 3 antennae would be hot. If no current flows
> on that side, it seems a waste of time and money to have it there at
> all. No?
>
> I appreciate your reply, but it still doesn't seem to make a lot of
> sense to me, how this works. Respectfully, Justin

4440. Isotron antennal. Info wanted.

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-04 07:23:23 UTC
From: Nisse <Nisse@hotmail.com>
Message-ID: <3D75B4EB.2D2D565C@hotmail.com>
Source record: 135331

Hi group.

I've been looking on the net, searching for a limited-space antenna for 80mtrs. As these small antennas always has low efficiency, I would like to use 100W output. If I modify my magloop for higher power, I'd need a capacitor good for some 8kV. These thiongs are hard to find, and very expensive. The home-brew-capacitors are all to small (in capacitace).

So, I by accident triped on the "Isotron". It is claimed to be quite broadband, but yet very small. This in my eyes means not low, but VERY,VERY poor efficiency.

1) What is this thingamajig anyhow? Is it some magic "EH"-stuff, or is it a real antenna?

2) What is claimed in terms of dB relative dipole for the isotron (magloop claim for 80: -6dB in GOOD cases, approx -10dB according to my own experience)

3) Is it possible to build one at home, and where can I find the neccesary data to build one for myself?

73 de N.

4441. Re: What am I emitting on 80M?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-04 07:27:51 UTC
From: Arend Harteveld <a.harteveld@noio.tudelft.nl>
Message-ID: <al4clqmka1@news.tudelft.nl>
Source record: 135332

"'Doc" <w5lz@icok.net> wrote in message news:3D6C45CB.B48E1826@icok.net...
<snip>
It won't make a lot of difference if you're using
coax or ladder line to feed the antenna. You can only
'stretch' an antenna so far.
'Doc
<snip>

Unless you mean mechanical stretching ;-) I see no reason other than line losses and losses in the matching circuit why the antenna length has anything to do with it being an effective radiator or not.

Arend PA1ARE

4442. Tunable Balun Idea

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-04 10:40:36 UTC
From: marvin rosen <raghead@worldnet.att.net>
Message-ID: <Eqld9.9726$jG2.734324@bgtnsc05-news.ops.worldnet.att.net>
Source record: 135333

A 1:1 balun can be made by winding 6-10 turns of
coax around a 5" diameter form. Would it be feasable
to insert a 7.5" X .5" ferrite rod in the middle of this
form to vary the inductance by sliding it back & forth?
The above would only be used with 100 watts output.

Outgoing mail is certified Virus Free.
Checked by AVG anti-virus system (http://www.grisoft.com).
Version: 6.0.384 / Virus Database: 216 - Release Date: 8/21/02

4443. Re: What antennas are you using on your FT-817

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-04 10:55:42 UTC
From: Thomas Krull <df1hx@t-online.de>
Message-ID: <al4orf$2dm$1@df1hx.dialin.t-online.de>
Source record: 135334

Hi !

We did a small fieldday operation 08/17 - 08/18, one of tbe participants brougt a Ft-817 with external power supply to achieve 5 Watts output.
He brought 2 portable antennas as well, the "Miracle Whip" and annother one, shaped like the outbacker, using plugs to change bands, on top a telescope whip.
Receiption was fine with both antennas but he could not make any contacts on HF, so he wondered about the ability to send with the radio. However a quick test on our "FD4" showed the radio being fine.
Since i brought my "MP 1" to the fieldday as well, i set it up on the beerhouse table we used for breakfest and hoooked up the "FT-817", we got several contacts on 10m two of them with "59" reports from bulgaria , the other two antennas mentioned above gave no contact at all, our QTH in North Germany (nr.Hamburg).
The "MP 1" fits dissambled in almost any briefcase, it takes up to 150 Watts. It does not need a tuner, since you tune it to the frequency by using a "sliding cap" on the loading coil. Disadvantage ist the rather high price for the antenna.
You can find more information abou the "MP 1" on http://www.superantennas.com (manufacturer) and http://www.eham.net in the "reviews" section.

55 es 73 thomas [DF1HX]
--
Thomas Krull [DF1HX] df1hx@t-online.de
gpg (GnuPG) 1.0.7 0x01EC2546

4444. Re: antenna tuner question

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-04 12:31:16 UTC
From: Pappy@USA.net
Message-ID: <3D75FD14.577CB048@USA.net>
Source record: 135335

It would be more efficient to buy a decent HF vertical.

PDRUNEN wrote:

> Hi Group,
>
> I use a old 5/8 CB ground plane with 20 feet of RG-58 as the line feed. The
> antenna is not very high. I use a MFJ tuner to operate on 20,17,15,12,10.
>
> It works ok but not great. Would there be any advantage to putting the tuner
> at the antenna end? How about if I moved the antenna up to 40 feet and still
> used 58 cable and located the tuner at the antenna?
>
> Does anyone make a remote tuner box which mounts at the antenna end?
>
> Tnx, de KJ4UO

4445. Re: Isotron antennal. Info wanted.

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-04 13:17:55 UTC
From: UnTale <i@i.com>
Message-ID: <7Knd9.148222$lu5.3650840@twister1.libero.it>
Source record: 135337

> Hi group.
> I've been looking on the net, searching for a limited-space antenna
> for 80mtrs. As these small antennas always has low efficiency, I
> would like to use 100W output. If I modify my magloop for higher
> power, I'd need a capacitor good for some 8kV. These thiongs are
> hard to find, and very expensive. The home-brew-capacitors are all
> to small (in capacitace).
> So, I by accident triped on the "Isotron". It is claimed to be
> quite broadband, but yet very small. This in my eyes means not
> low, but VERY,VERY poor efficiency.
> 1) What is this thingamajig anyhow? Is it some magic "EH"-stuff,
> or is it a real antenna?
> 2) What is claimed in terms of dB relative dipole for the isotron
> (magloop claim for 80: -6dB in GOOD cases, approx -10dB according
> to my own experience)
> 3) Is it possible to build one at home, and where can I find the
> neccesary data to build one for myself?
> 73 de N.

Hi
on an italian magazine I've read that a Om have tested the isotron
and he said the isotron was 2 S point down the dipole..
no more info..
ciao
73 de iz7ath, Talino

Homebrew, RF projects and digital tecniques on
http://www.qsl.net/iz7ath
IZ7ATH Talino +39 338 5029196

4446. Re: What am I emitting on 80M?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-04 13:20:19 UTC
From: richardharrison@webtv.net
Message-ID: <2849-3D760893-14@storefull-2393.public.lawson.webtv.net>
Source record: 135338

Arend Harteveld wrote:
"Sea water is a short circuit to horizontally polarized waves---So, it should act as an excellent reflector favoring low angle radiation..."

It does for vertically polarized waves, but the reflection is a killer for low-angle horizontally polarized waves. They experience a phase reversal of 180 degrees upon reflection. The distances traveled by the direct ray and the reflected ray are alnost identical and as they arrive at about the same magnitude and out of phase at the reception point when launched at a low angle, their cancellation is almost complete.

Best regards, Richard Harrison, KB5WZI

4447. Re: What am I emitting on 80M?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-04 14:00:33 UTC
From: richardharrison@webtv.net
Message-ID: <2230-3D762011-16@storefull-2391.public.lawson.webtv.net>
Source record: 135345

Arend Harteveld, PA1ARE wrote:
"So it (sea water) should act as an excellent reflector favouring low angle radiation."

It does only for the vertically polarized signal.

Arend probably doesn`t have the 19th edition of the ARRL Antenna Book readily available there in the Netherlands, but on page 2-17 is Fig 21 showing how the reflection phase reversal makes a 1/4-wave grounded vertical appear as a 1/2-wave vertical. That`s good for low angle radiation.

The story for horizontally polarized waves is presented on page 3-6 in Fig 5 (B). The ARRL Antenna Book says:
"Indeed, at a low enough elevation angle, the phase of the reflected wave will actually change by 180 degrees and its magnitude will then subtract from that of the direct wave. At a zero takeoff angle, it will almost equal in amplitude, but be 180 degrees ouut of phase with the direct wave. Complete cancellation will result in a null inhibiting any radiation or reception at zero degrees."

That means no ground wave and almost no low-angle radiation from a horizontal antenna at low altitudes over highly conductive ground or sea water. Marconi put radios on ships. The Marconi antenna is vertically polarized. The horizoontal wire between masts doesn`t effectively radiate, it only provides capacitive loading for the vertical feedwire which is the only effective radiator.

Best regards, Richard Harrison, KB5WZI

4448. Re: Tunable Balun Idea

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-04 14:12:45 UTC
From: Jake Brodsky <frussle@erols.com>
Message-ID: <t55cnuoeo7tn4natrvllpoeabd2450meld@4ax.com>
Source record: 135339

On Wed, 04 Sep 2002 10:40:36 GMT, "marvin rosen"
<raghead@worldnet.att.net> wrote:

>A 1:1 balun can be made by winding 6-10 turns of
>coax around a 5" diameter form. Would it be feasable
>to insert a 7.5" X .5" ferrite rod in the middle of this
>form to vary the inductance by sliding it back & forth?
> The above would only be used with 100 watts output.

Baluns are broadband devices. What are you trying to tune?

Jake Brodsky, AB3A mailto:frussle@erols.com
"Beware of the massive impossible!"

4449. Re: Is Chip responsive or evasive?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-04 14:42:31 UTC
From: Undulating_Umberto@aol.com
Message-ID: <al564nrvp1@news.netmar.com>
Source record: 135342

Steve said:

"If you are interested in a "public debate", lets discuss the merits of a very simple example. Presume that you have a cylindrical volume: 6 cm in height and a radius of 1.5 cm. We want to design a monopole (no capacitive top loading, no short-circuit folds, only a single piece of wire) that is self-resonant at 350 MHz. The wire diameter is 0.5 mm. Use your Genetic Optimizer to design a fractal antenna that exhibits maximum radiation resistance, maximum bandwidth and maximum efficiency. Geometry and total wire length are your variables. The antenna is to be base fed and mounted over an infinite ground plane. Once you present an optimum fractal design, we will compare it to some classic and arbitrary designs (geometries).

"This simple exercise will highlight the fundamental relationships that exist between the physical properties of the antenna and its electrical properties. Additionally, it will illustrate the fundamental trade-offs that exist in trying to simultaneously maximize these three electrical properties of the antenna.

"My hypothesis is that the antenna geometry and total wire length together establish the effective height and effective volume of the antenna, which, as a function of resonant wavelength, determine the antenna's radiation resistance and bandwidth properties. Maximum radiation resistance will be exhibited by the design with the smallest physical diameter within the volume, while the maximum bandwidth will be exhibited by the design with the greatest physical diameter within the volume. However, occupying the same physical height and physical volume, and being resonant at the same frequency, all of the designs will essentially exhibit the same radiation resistance and bandwidth. There is no special geometry, fractal or otherwise. There is no fractal geometry that exhibits special or unique characteristics. The only real trade-off will be in the antenna efficiency, where the geometry that is self-resonant with the least total wire length will exhibit the highest efficiency.

"Additionally, with a very simple formula, I can predict (approximately) your radiation resistance and bandwidth independent of both geometry and total wire length."

Steve VE9SRB

Then, Chip replies:

In article <20020903221016.06895.00000950@mb-cq.aol.com>, Fractenna <fractenna@aol.com> writes:>

>You publicly posed an interesting benchmark for the Fractal Genetic Optimizer

>which I think sounds like a great idea to try to beat. I have some initial
>thoughts for you as we move towards proceeding:
>
>1) Please write up the figure of merit (cost function) you wish to pursue.
In
>this way, there can be no disagreements that the FOM was chosen a
posteriori,
>and thus bias any result in some way. Merely saying 'best bandwidth; best
>radiation resistance'; and so on begs the issue. It needs to be defined
>mathematically in a way that includes all the criteria and weights them in a
>reasonable way. I will step out of the process entirely so as to not even
>project a hint of bias. A good source on cost functions is: "Practical
Genetic
>Algorithms" by our colleagues Haupt and Haupt, (Wiley, 1997). Our colleague
Ed
>Altshuler is also well known in this context (he and Derek Linden have a
>patent for 3D optimized antennas from conventional GA's) and may be helpful
in
>fine-tuning.I also understand that you are in conference with other well
known
>antenna folks, who should have a good bit of knowledge on this.I strongly
>encourage this.Let's all have some fun!
>
>2) The most scientifically compelling way of demonstrating whether an
antenna
>design is 'better' than the one you want to benchmark is to include it
>directly into the first generation of the genetic optimization. The best
>always stays at the top, so to speak, so if your design is the best it will
>remain so through several generations, and remain the best to the last
>generation. If not, well, we can stop in just a couple of hours of sims!
>
>3) The modeling of such an antenna on infinite ground is problematic. First,
>by forcing mirror symmetry, you constrain other non-mirror symmetries in
the
>design space. Why throw options away? Second, there are NEC problems
modeling
>wires very close, and with a parallel projection to, ground. Third, we need
to
>think about a practically realizable antenna, that others won't bicker about
>being a remnant of the sim. My suggestion is that we dispose of the infinite
>ground and force any ground plane/counterpoise to fit within the form factor
>you specified.Alternatively, turn your monopole into a dipole. Fourth, are
we
>talking about an antenna or an antenna system? Are you allowing for funky
'v'
>shaped excursions that short to ground? Fifth, let's agree that for an
antenna
>with a single current max, the radiation resistance is the resistance at the
>maximum current position.

>
>I hope we can all make some progress on this; I seem to recall extending
you
>such an invitation 3 months ago to present such an interesting design
problem.
>But we are all busy, so the delay is understandable. Here, we just finished
a
>science project on the FRAGO, and it will stay on a series of commercial
>projects until about 15 Oct. Then a short break; a good time to pursue. That
>interregnum from now should give you plenty of time to iron out the above,
>for which I am happy to continue discussions.
>
>I think we will both find this exercise enjoyable, as well as benificial for
>the edification of our antenna comrades.
>
>I am posting this so others may follow our progress.
>
>With Warm Regards,
>
>Chip N1IR

My thought is Chip is just tap-dancing, but what do the others think? Like
all the past "dialogues" with Chip, it will degenerate into meaninglessness.

----- Posted via NewsOne.Net: Free (anonymous) Usenet News via the Web -----
http://newsone.net/ -- Free reading and anonymous posting to 60,000+ groups
NewsOne.Net prohibits users from posting spam. If this or other posts
made through NewsOne.Net violate posting guidelines, email abuse@newsone.net

4450. Re: G5RV Feedline

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-04 14:45:03 UTC
From: Andy Cowley <andy.cowley@uwe.ac.uk>
Message-ID: <3D761F99.AAA65955@uwe.ac.uk>
Source record: 135340

'Doc wrote:
>
> Wes,
> Okay, so tell me what I said that wasn't
> correct?
> 'Doc

Nuthin' at all, Doc. You just forgot to say it
would be better than the G5RV.

vy 73

Andy, M3ABC

4451. Re: Antenna switch question

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-04 14:57:03 UTC
From: xrecho@eminem2000.com
Message-ID: <18d5aac7.0209040657.6f7ad140@posting.google.com>
Source record: 135341

Fred, Marty, Dick, all... Okay I believe I understand. Many thanks to you all. I'm in electronics technology at the local tech school and even my instructor was unsure on this as his field is not in antenna / RF situations. I figured if I posted my question here, there would be enough knowledge and experience represented that I'd get answers. It is good to have rec radio as a resource for those things that nobody can answer on a local level. Many thanks, guys! I appreciate you. Respectfully, Justin

4452. Re: G5RV Feedline

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-04 14:58:46 UTC
From: Andy Cowley <andy.cowley@uwe.ac.uk>
Message-ID: <3D7622CE.3E1C719B@uwe.ac.uk>
Source record: 135343

Wes Stewart wrote:
>
> On Sun, 01 Sep 2002 23:36:32 GMT, 'Doc <w5lz@icok.net> wrote:
>
> |
> |
> |Wes,
> | Okay, so tell me what I said that wasn't
> |correct?
> | 'Doc
>
> Mostly everything.
>
> The original G5RV paper is available several places on the Internet,
> including here:
>
> http://users.triconet.org/wesandlinda/g5rv.pdf
>
> If you will look at it closely (sorry it's a scanned version of a
> Zerox copy) you can read: "Alternatively, open-wire feeder may be
> employed from the centre of the aerial right back to the transmitter
> output or ATU.
>
> Figure 1 shows a "convenient length of open wire feeder" without any
> coax. The text above the figure includes "Here again, results are
> better with a tuned feeder....."
>
> So, Varney (G5RV) in the original paper, seems to recommend a feed
> system *without* any coax. Does this not mean that a dipole fed
> without any coax can still be a "G5RV" or am I missing something?

Yep. You are missing Heinrich Hertz, who invented this antenna
about 50 or 60 years before Louis Varney. The antenna is a centre fed
doublet or dipole. G5RV is correctly applied only to the coax/twin
line combination antenna, although Mr. Varney was very confused
about the exact length of twin line required, and published
various values in different articles. He was, however, quite
clear that an ATU was required. If I was to publish the design
again, could I call it an 'M3ABC' antenna? No, I thought not.
The truth is that Varney didn't invent anything, he was just
President of the RSGB and they humoured the guy. He really
didn't seem to understand that any length of transmission line
will act as an impedance transformer, be it coaxial or twin.
He seemed to believe that coax didn't do any transformation

and could be operated at high SWR without losses.

vy 73

Andy, M3ABC

4453. Re: G5RV Feedline

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-04 15:01:35 UTC
From: Andy Cowley <andy.cowley@uwe.ac.uk>
Message-ID: <3D762379.5A757310@uwe.ac.uk>
Source record: 135344

Wes Stewart wrote:
>
> On Mon, 02 Sep 2002 06:38:47 GMT, 'Doc <w5lz@icok.net> wrote:
>
> |
> |
> |Wes,
> | I think you're missing quite a bit. The horizontal
> |center fed doublet fed with some form of twin lead has
> |been around almost forever, Mr. Varney didn't invent it.
> |The antenna that Mr. Varney is given credit for uses a
> |twin lead 'matching transformer' as part of the antenna
> |system.
> | 'Doc
>
> I don't know how many times I have to say this.
>
> In a thread in Dec 2001 I wrote:
>
> "Since the *only* thing special about Varney's antenna is the "magic"
> 102 foot length, the *only* antenna that can properly be called a
> "G5RV" is a 102 foot long, center-fed dipole.
>
> Besides "G5RV"s there are "YAGI"s, "MARCONI"s, "W8JK"s, "LAPORT"s,
> "ZEPP"s, "WINDOM"s, "BRUCE"s, et cetera.
>
> But henceforth, all other center-fed dipoles, whether fed with coax
> (with or without baluns (choke, current or voltage), ladderline,
> twinlead, or zip cord should be called by their proper name: "N7WS"s""
>
> SK
>
> N7WS

LOL

vy 73
Andy, M3ABC

4454. Re: G5RV Feedline

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-04 15:15:50 UTC
From: Andy Cowley <andy.cowley@uwe.ac.uk>
Message-ID: <3D7626CF.7F5B1D83@uwe.ac.uk>
Source record: 135346

Dick Hughes wrote:
>
> I don't think you understood what I was questioning. What if the
> lines are 20-feet apart? (Exaggerated to make the point.)
>
> Dick - W6CCD
>

Then you would have a radiating section at the base of the line where you achieved the separation (unless you have a _very_ big PA ;-) and some detectable imbalance in the near field, but at any significant distance from the line (more than about 4 times the separation) there would be a very small signal. I recommend you read Feynman's 'QED', remembering that radio and light are the same things at differing frequencies.

vy 73

Andy, M3ABC

4455. Re: G5RV question

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-04 15:27:48 UTC
From: Andy Cowley <andy.cowley@uwe.ac.uk>
Message-ID: <3D76299D.ADF7482@uwe.ac.uk>
Source record: 135347

"vhfradiobuff@yahoo.comspamsux" wrote:
>
> I've been thinking of picking up a G5RV in preparation for upgrading.
> I have a large lot that should allow me to put up a full length G5RV.
> On the back of my property is a wooden fence, about 7 feet high. I
> plan on putting chimney mounts on the fence posts on both corners of
> the fence and one in the center (my property/fence is shaped like a
> rectangle). I plan on putting a 20' pole on each end and a 20' pole in
> the center. With the G5RV only 20' up, completely horizontally strung,
> should this work ok for HF? I'd be putting out up to 100 watts. Any
> recommendations on how to attach the G5RV center and ends to the 10
> poles? They're the kind you buy at Radio Shack for around $10 each.
>
> Also, what would be a good coax to feed this with? The run would might
> be as much as 200'. I don't have a ton of cash to spend on the coax,
> so some comprimise is needed.

Feed it with ladder line. Use a Transmatch/ATU. The losses in coax,
even LDF4/50, would be horrendous, unless you want that QRP effect.
Try to get the poles further apart than the length of the doublet
and use an insulating line to connect to it's ends so that the ends
are as far away from the poles as from the ground. Any length of
doublet will work but longer is better. As you have 200' to play
with you could try 135'. see W4RNL's page
http://www.cebik.com/gup/groundup.html
chapters 5,6,11 and 12. The Whole site is great!!!

vy 73
Andy, M3ABC

4456. Re: G5RV Question

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-04 15:34:07 UTC
From: Andy Cowley <andy.cowley@uwe.ac.uk>
Message-ID: <3D762B18.C3C1F045@uwe.ac.uk>
Source record: 135348

Fulano de Tal wrote:
>
> Brian Kelly wrote:
> >
> > CAM <Cecil.A.Moore@ieee.org> wrote in message news:<3D6CD79D.5AE4849A@ieee.org>...
> > > Brian Kelly wrote:
> > > > Feedline radiation
> > > > is a good thing with g5rv's, it at least partially fills in the deep
> > > > nulls in the patterns found on the higher bands.
> > >
> > > Whether it is a good thing or not depends upon whether maximum gain
> > > or maximum coverage is most important. Me, I'll take maximum gain
> > > any day. My lobes are aimed at my friends in AZ.
> > >
> > >
> > That's a pretty special case, most of us'ns prefer patterns which are
> > as omnidirectional as we can get 'em in most instances. g5rv's are
> > nasty things, I had an 80m version up horizontally around 65-70 ft.
> > for FD this year and the thing had a lot of "negative gain" spots
> > around the compass on 20 & 15. Annoying.
> >
> > w3rv
>
> I have searched and asked here about a website that might give
> 'predicted' patterns for the G5RV on the various bands but I haven't
> seen anything. I too notice what seems to be 'holes' in the pattern and
> would like to get a visual handle on what might be typical.
> Does anybody have a reference site for such data?
> Tnx,
> WX4A

http://www.cebik.com/gup/groundup.html chapters 5,6,11 and 12
plus
http://www.cebik.com/radio.html

Larry Cebik's (W4RNL) site is a goldmine of great stuff.
Chapter 5 is the one with the radiation patterns for 102'
dipoles == 'G5RV'

vy 73

Andy, M3ABC

4457. Re: G5RV Question

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-04 15:51:17 UTC
From: Andy Cowley <andy.cowley@uwe.ac.uk>
Message-ID: <3D762F1E.4DE7F6EB@uwe.ac.uk>
Source record: 135349

CAM wrote:
>
> Richard wrote:
> >
> > CAM <Cecil.A.Moore@ieee.org> wrote:
> > >:This is a half truth. On the bands where the G5RV performs well, i.e.
> > >:80m, 40m, & 20m, the impedance at the coax/twinlead junction is not
> > >:highly reactive and a 1:1 choke will perform its intended function.
> > >:Take a look at the charts on my web page to find out why the above
> > >:statement doesn't apply to 80m, 40m, & 20m (also 12m).
> >
> > Mmmm. . . . Not sure how this squares with my experiences. I put
> > up a G5RV a few weeks back fed by my Acom 2000A. The Acom did not
> > like the load at all! It threw a wobbler and switched itself off, so
> > upset was it by the unusual reactance. This was on 80 M. On 40 it
> > tolerated the antenna, but showed a considerable SWR.
>
> The G5RV is resonant somewhere on 75m-80m but the feedpoint impedance
> at the coax/twinlead junction is around ten ohms. That's not "highly
> reactive" even though the 50 ohm SWR is 5:1. The load doesn't have to
> be "highly reactive" for your Acom 2000A not to like it. Just because
> something shows "a considerable SWR" doesn't mean it is not resonant.
> Please don't confuse SWR with reactance. If your antenna is resonant
> with a one ohm feedpoint resistance, the 50 ohm SWR will be 50:1 at
> resonance.

Indeed, and the point of lowest SWR might well not be the point of
resonance either. I.e SWR is one at 50 ohms impedance, reactive or not.
SWR is a _very_ bad measure of resonance.

Two little known facts about the G5RV

1. It won't work on all bands without an ATU (a real one, not the built in sort).
To quote G5RV himself:
"the use of a suitable antenna tuner is necessary on all the other hf bands
because, on those bands, the antenna plus the matching-section will present
a reactive load to the feeder"
see http://www.qsl.net/aa3px/g5rv.htm

Here are some impedances at the end of the G5RV twin line

MHz Twinlead/Coax Junction Impedance 50 ohm Coax SWR
3.8 14.6 + j2.9 3.44
7.2 27.9 - j54.8 4.3
10.125 31.6 + j274 50
14.2 103 - j49 2.6

18.14 44.3 - j290 40
21.3 24.2 + j80.7 7.8
24.95 79.3 + j41.5 2.2
28.4 3049 + j655 64

see http://www.qsl.net/k2hq/g5rv.htm for more detail

As you can see, the antenna is not resonant on any band. No
figures given for topband although most ATUs will tune it up
without strapping the feed together. Varney chose a good length
for the feedline which got reasonably low reactances on all the
non-WARC bands, but the ATU should be at the junction of the ladder
line and the coax. SGC make just the thing....

For more impedance figures for the 'raw' antenna - 102' dipole see

http://www.cebik.com/gup/gup6.html

2. It is _much_ better if you throw away the coax. It is also then not a G5RV.

Operating coax at SWRs like those shown is a sure way to
dissipate power without radiating it.

vy 73

Andy, M3ABC

4458. Re: Is Chip responsive or evasive?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-04 15:51:20 UTC
From: Bibby <bibby@attbi.com>
Message-ID: <XZpd9.301109$me6.38447@sccrnsc01>
Source record: 135350

Having come across this discussion relatively recently, but knowing the heat that it generates, I would say that Chip is just trying to establish some ground rules that can be used for quantitative evaluations. The better defined the decision rules are, then the better the chance of a definitive outcome.

Malcolm W1/GW3NJY

<Undulating_Umberto@aol.com> wrote in message news:al564nrvp1@news.netmar.com...
> Steve said:
>
> "If you are interested in a "public debate", lets discuss the merits of a
> very simple example. Presume that you have a cylindrical volume: 6 cm in
> height and a radius of 1.5 cm. We want to design a monopole (no capacitive
> top loading, no short-circuit folds, only a single piece of wire) that is
> self-resonant at 350 MHz. The wire diameter is 0.5 mm. Use your Genetic
> Optimizer to design a fractal antenna that exhibits maximum radiation
> resistance, maximum bandwidth and maximum efficiency. Geometry and total
> wire length are your variables. The antenna is to be base fed and mounted
> over an infinite ground plane. Once you present an optimum fractal design,
> we will compare it to some classic and arbitrary designs (geometries).
>
> "This simple exercise will highlight the fundamental relationships that exist
> between the physical properties of the antenna and its electrical
> properties. Additionally, it will illustrate the fundamental trade-offs
> that exist in trying to simultaneously maximize these three electrical
> properties of the antenna.
>
> "My hypothesis is that the antenna geometry and total wire length together
> establish the effective height and effective volume of the antenna, which,
> as a function of resonant wavelength, determine the antenna's radiation
> resistance and bandwidth properties. Maximum radiation resistance will be
> exhibited by the design with the smallest physical diameter within the
> volume, while the maximum bandwidth will be exhibited by the design with the
> greatest physical diameter within the volume. However, occupying the same
> physical height and physical volume, and being resonant at the same
> frequency, all of the designs will essentially exhibit the same radiation
> resistance and bandwidth. There is no special geometry, fractal or
> otherwise. There is no fractal geometry that exhibits special or unique
> characteristics. The only real trade-off will be in the antenna

efficiency,
> where the geometry that is self-resonant with the least total wire length
> will exhibit the highest efficiency.
>
> "Additionally, with a very simple formula, I can predict (approximately)
your
> radiation resistance and bandwidth independent of both geometry and total
> wire length."
>
> Steve VE9SRB
>
> ------
>
> Then, Chip replies:
>
> In article <20020903221016.06895.00000950@mb-cq.aol.com>, Fractenna
> <fractenna@aol.com> writes:>
>
> >You publicly posed an interesting benchmark for the Fractal Genetic
Optimizer
>
> >which I think sounds like a great idea to try to beat. I have some
initial
> >thoughts for you as we move towards proceeding:
> >
> >1) Please write up the figure of merit (cost function) you wish to
pursue.
> In
> >this way, there can be no disagreements that the FOM was chosen a
> posteriori,
> >and thus bias any result in some way. Merely saying 'best bandwidth; best
> >radiation resistance'; and so on begs the issue. It needs to be defined
> >mathematically in a way that includes all the criteria and weights them
in a
> >reasonable way. I will step out of the process entirely so as to not even
> >project a hint of bias. A good source on cost functions is: "Practical
> Genetic
> >Algorithms" by our colleagues Haupt and Haupt, (Wiley, 1997). Our
colleague
> Ed
> >Altshuler is also well known in this context (he and Derek Linden have a
> >patent for 3D optimized antennas from conventional GA's) and may be
helpful
> in
> >fine-tuning.I also understand that you are in conference with other well
> known
> >antenna folks, who should have a good bit of knowledge on this.I strongly
> >encourage this.Let's all have some fun!
> >
> >2) The most scientifically compelling way of demonstrating whether an

> antenna
> >design is 'better' than the one you want to benchmark is to include it
> >directly into the first generation of the genetic optimization. The best
> >always stays at the top, so to speak, so if your design is the best it
will
> >remain so through several generations, and remain the best to the last
> >generation. If not, well, we can stop in just a couple of hours of sims!
> >
> >3) The modeling of such an antenna on infinite ground is problematic.
First,
> >by forcing mirror symmetry, you constrain other non-mirror symmetries in
> the
> >design space. Why throw options away? Second, there are NEC problems
> modeling
> >wires very close, and with a parallel projection to, ground. Third, we
need
> to
> >think about a practically realizable antenna, that others won't bicker
about
> >being a remnant of the sim. My suggestion is that we dispose of the
infinite
> >ground and force any ground plane/counterpoise to fit within the form
factor
> >you specified.Alternatively, turn your monopole into a dipole. Fourth,
are
> we
> >talking about an antenna or an antenna system? Are you allowing for funky
> 'v'
> >shaped excursions that short to ground? Fifth, let's agree that for an
> antenna
> >with a single current max, the radiation resistance is the resistance at
the
> >maximum current position.
> >
> >I hope we can all make some progress on this; I seem to recall extending
> you
> >such an invitation 3 months ago to present such an interesting design
> problem.
> >But we are all busy, so the delay is understandable. Here, we just
finished
> a
> >science project on the FRAGO, and it will stay on a series of commercial
> >projects until about 15 Oct. Then a short break; a good time to pursue.
That
> >interregnum from now should give you plenty of time to iron out the
above,
> >for which I am happy to continue discussions.
> >
> >I think we will both find this exercise enjoyable, as well as benificial
for

> >the edification of our antenna comrades.
> >
> >I am posting this so others may follow our progress.
> >
> >With Warm Regards,
> >
> >Chip N1IR
>
> My thought is Chip is just tap-dancing, but what do the others think?
Like
> all the past "dialogues" with Chip, it will degenerate into
meaninglessness.
>
>
>
>
>
> ----- Posted via NewsOne.Net: Free (anonymous) Usenet News via the
eb -----
> http://newsone.net/ -- Free reading and anonymous posting to 60,000+
groups
> NewsOne.Net prohibits users from posting spam. If this or other posts
> made through NewsOne.Net violate posting guidelines, email
abuse@newsone.net

4459. Re: Good grounding ?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-04 16:07:47 UTC
From: Andy Cowley <andy.cowley@uwe.ac.uk>
Message-ID: <3D7632FB.57E7B53D@uwe.ac.uk>
Source record: 135351

G4VGO wrote:
>
> Andy,
>
> I use both insulated and bare wire in the ground system. No difference, and
> I now have about 2 km of wire at or just under the ground. It is
> electromagnetic coupling and although there is no difference in performance,
> insulated wire lasts longer. I also use chicken wire for the first 15 feet
> or so in all directions bonded to the master earth stake. My 160 metre
> quarter wave inverted L works a treat!
>
> 73 de Bob G4VGO
>
> http://www.qsl.net/g4vgo

Andy,

Chicken wire is a very bad idea. It is galvanised. All the RF flows in the zinc coating and this has a high resistivity. Stick to copper, unless you own a silver mine. Aluminium is a possibility, I suppose, but has no advantages and is a b*gger to solder. Keep all the connections as low resistance as possible. Remember that RF runs in the surface not the bulk material.

vy 73

Andy, M3ABC

4460. Re: Isotron antennal. Info wanted.

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-04 16:20:46 UTC
From: 'Doc <w5lz@icok.net>
Message-ID: <3D7632C2.9326B580@icok.net>
Source record: 135352

Nisse,
The 'Isotron' antenna is basically a tuned circuit
consisting of a coil and a capacitor. The coil is
wound on a form, the capacitor is made up of two or
more plates/surfaces. They are not too 'broadbanded',
as with any tuned circuit, the higher the 'Q', the
narrower the usable bandwidth (as an antenna).
I have no idea of the gain of an 'Isotron', but it's
going to be a -dbd, not as good as an ordinary dipole.
That's true for any 'compromise' antenna, though. Depending
on how 'bad' you need a limited-space or 'stealthy' antenna,
it may be what you're looking for. I've used a 10 meter
'Isotron' and it came out the looser with a 1/4 wave ground
mounted vertical.
'Homebrewing' an 'Isotron' like antenna shouldn't be too
difficult. It also isn't going to be too easy. I wouldn't
like to use an 'Isotron' as my primary antenna, but for
limited spaces, or hiding/disguising an antenna, it's better
than nothing...
'Doc

4461. Re: G5RV Feedline

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-04 16:41:28 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <l2ecnuooja31a05iig7j5vq7bd9o983nvu@4ax.com>
Source record: 135353

On Mon, 02 Sep 2002 21:08:49 -0500, CAM <Cecil.A.Moore@ieee.org>
wrote:

> I did an experiment one time in which I tried varying the
>length of the dipole in order to achieve resonance at different frequencies.
>It was sort of like the Yo-Yo dipole except I had two pulleys at the
>center of the antenna and a pulley at each end with a weight on each
>end. I pulled on the feedline and the dipole shortened. At the same
>time, the dipole "folded into the transmission line", i.e. part of the
>dipole became parallel transmission line. I was sure surprised when that
>antenna system didn't change resonance by very much. In lengthening the
>feedline by the same amount that the antenna is shortened, the resonant
>frequency didn't change by very much, certainly not nearly as much as
>shortening a coax fed dipole.
>--
>cheers, CAM http://www.qsl.net/w5dxp

Hi Cecil,

Did this folding transmission line appear to be open wire? What would
you say its impedance was?

73's
Richard Clark, KB7QHC

4462. Re: Is Chip responsive or evasive?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-04 17:49:39 UTC
From: Fred Hambrecht <w4jle@charter.net>
Message-ID: <unchtmbe0dcbe4@corp.supernews.com>
Source record: 135354

While I go out of my way to upset the Chipster, in this case he is going in the right direction.

For once the rules will be fixed and understood by all before the race begins. Unlike the "Great Fractal $1000 Challenge" that moved the finish line on a daily basis, and finally declared that participating in the race made a contestant ineligible to win. The prize was awarded (choke, choke, cough, cough) to one of his local lackeys.

<Undulating_Umberto@aol.com> wrote in message news:al564nrvp1@news.netmar.com...

>
> My thought is Chip is just tap-dancing, but what do the others think? Like
> all the past "dialogues" with Chip, it will degenerate into meaninglessness.
>
>
>
>
>
> ----- Posted via NewsOne.Net: Free (anonymous) Usenet News via the eb -----
> http://newsone.net/ -- Free reading and anonymous posting to 60,000+ groups
> NewsOne.Net prohibits users from posting spam. If this or other posts
> made through NewsOne.Net violate posting guidelines, email abuse@newsone.net

4463. Re: Is Chip responsive or evasive?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-04 18:35:58 UTC
From: 'Doc <w5lz@icok.net>
Message-ID: <3D765272.AF5CFAC1@icok.net>
Source record: 135355

Undulating_Umberto,
It seems Mr. Best has offered to do this 'public debate'
and Mr. 'Chip' isn't too interested in the simple exercise
Mr. Best offered. I think Mr. 'Chip' should 'put up' or
shut up.
'Doc

4464. Re: Debate Status

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-04 19:11:05 UTC
From: VE9SRB <srbest@att.net>
Message-ID: <dVsd9.10376$jG2.771071@bgtnsc05-news.ops.worldnet.att.net>
Source record: 135356

"Fractenna" <fractenna@aol.com> wrote in message
news:20020903221016.06895.00000950@mb-cq.aol.com...

Hi Chip,

> <snip>

> 1) Please write up the figure of merit (cost function) you wish to pursue.
In
> this way, there can be no disagreements that the FOM was chosen a
posteriori,
> and thus bias any result in some way. Merely saying 'best bandwidth; best
> radiation resistance'; and so on begs the issue. It needs to be defined
> mathematically in a way that includes all the criteria and weights them in
a
> reasonable way. I will step out of the process entirely so as to not even
> project a hint of bias.
> <snip>
>

I'll think about this a bit and come up with some FOM calculation. I really
don't have a problem with this as a comparative tool.

> 2) The most scientifically compelling way of demonstrating whether an
antenna
> design is 'better' than the one you want to benchmark is to include it
directly
> into the first generation of the genetic optimization. The best always
stays at
> the top, so to speak, so if your design is the best it will remain so
through
> several generations, and remain the best to the last generation. If not,
well,
> we can stop in just a couple of hours of sims!
>

In my opinion, we could simply determine the FOM for a straight Euclidean
monopole
[or dipole], self-resonant at our test frequency and use this as a
reference. The "optimized" antenna with the closest FOM to this reference
will be judged 'better'.

How you start the optimization process in the beginning is entirely up to
you.

> 3) The modeling of such an antenna on infinite ground is problematic.
First, by

> forcing mirror symmetry, you constrain other non-mirror symmetries in the
> design space. Why throw options away? Second, there are NEC problems
modeling
> wires very close, and with a parallel projection to, ground. Third, we
need to
> think about a practically realizable antenna, that others won't bicker
about
> being a remnant of the sim. My suggestion is that we dispose of the
infinite
> ground and force any ground plane/counterpoise to fit within the form
factor
> you specified.Alternatively, turn your monopole into a dipole. Fourth,
are we
> talking about an antenna or an antenna system? Are you allowing for funky
'v'
> shaped excursions that short to ground? Fifth, let's agree that for an
antenna
> with a single current max, the radiation resistance is the resistance at
the
> maximum current position.
>

First, I don't have any issue with using a dipole rather than a monopole. I will however, force symmetry about the feed point in terms of both mirror geometry and wire length. This, in my opinion, is a simple and reasonable constraint that should have no relevance in terms of any NEC limitations or the objectives of this study. I have compared NEC results and measurements with tightly coupled (closely spaced) wires and have found extremely good agreement. I do not see this as a limitation. If we have concerns relative to the computational accuracy of any NEC calculation, we can address it as necessary.

Second, for purposes of this study, radiation resistance will be defined as the lossless feed point resistance. This is consistent with widely accepted definitions and should be of no concern since I am forcing symmetry about a centrally located feed point. It's also a convenient point of measurement.

<snip>

Regards,

Steve VE9SRB

4465. Re: What am I emitting on 80M?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-04 20:29:01 UTC
From: Dick Carroll <dixie@townsqr.com>
Message-ID: <3D766CDF.5E5A1B9A@townsqr.com>
Source record: 135357

Ken wrote:

> 80M and 160M dipoles are usually mounted too low, resulting in a
> propagation pattern known as NVIS, which means your signal is more or
> less going straight up. Nevertheless, an appreciable amount of it
> does more than warm up clouds, especially in winter. With an amp, you
> probably have a decent enough rig that is cost effective for casual
> (non-contesting) use.
>
> The alternative -- a homongous vertical or dipole 250 ft up -- is not
> only expensive but impossible for most of us. There are folks here
> who have a couple of acres filled with over $30,000 worth of serious
> antenna hardware who must find we antenna-challenged hams mildly
> amusing.
>
> I believe Richard KB5WZI is correct -- that my signal is reflecting
> off the ionosphere even though it is hitting the layer almost at 90
> degrees -- just like light off a mirror.
>
> However, he does not explain why no one beyond 30 miles seems to hear
> me. If I am bouncing strongly off the ionosphere to 30 miles behind my
> hill, I should be good to around 800 miles.

Ken, there are many facets to this subject that are not readily explainable, what with most hams' lack of sophisticated testing capabilities. I've seen lots of antennas that work in ways that theory suggests they wouldn't. My Novice 40 meter dipole wasn't as high as 10 feet off the ground at any point yet I regularly worked over a thousand miles with it using 25 watts.
I've found the best overall antenna for both short and longer range use (not contesting) to be an 'informal' inverted V with the center as high as you are able to get it, and the drooping ends at whatever angle hung wherever one can find to hang 'em. It will work 'em both far and near. Makes it much easier to arrange than trying to get both ends as high as the middle, too.

Dick W0EX

4466. Re: Debate Status

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-04 20:58:59 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <3D767413.7030705@eznec.com>
Source record: 135358

Modeling a full dipole shouldn't be necessary -- a monopole should suffice. NEC or EZNEC results for a monopole over a perfect ground should be very nearly exactly the same as results for an equivalent dipole in free space (with 3 dB field strength and 2X impedance differences, of course). If anyone is aware of any example where this isn't true, I'd appreciate your sending me an NEC or EZNEC file that illustrates it.

Roy Lewallen, W7EL

4467. Re: Is Chip responsive or evasive?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-04 21:02:46 UTC
From: dan <danlx@execpc.com>
Message-ID: <3d76750a$0$1432$272ea4a1@news.execpc.com>
Source record: 135359

Hi, my opinion? I did not think anyone cared ;<}

As I have pointed out in the past, once a buffoon always a buffoon.
Chip, and what ever else he wants to call himself, has proven, in
every group he has ever been in, that he is a buffoon. I even define
buffoon as all of the posts the twit has ever put out. Put them all
together and judge for yourself!

On 4 Sep 2002 14:42:31 GMT, Undulating_Umberto@aol.com wrote:

>Steve said:
>
>"If you are interested in a "public debate", lets discuss the merits of a
>very simple example. Presume that you have a cylindrical volume: 6 cm in
>height and a radius of 1.5 cm. We want to design a monopole (no capacitive
>top loading, no short-circuit folds, only a single piece of wire) that is
>self-resonant at 350 MHz. The wire diameter is 0.5 mm. Use your Genetic
>Optimizer to design a fractal antenna that exhibits maximum radiation
>resistance, maximum bandwidth and maximum efficiency. Geometry and total
>wire length are your variables. The antenna is to be base fed and mounted
>over an infinite ground plane. Once you present an optimum fractal design,
>we will compare it to some classic and arbitrary designs (geometries).
>
>"This simple exercise will highlight the fundamental relationships that exist
>between the physical properties of the antenna and its electrical
>properties. Additionally, it will illustrate the fundamental trade-offs
>that exist in trying to simultaneously maximize these three electrical
>properties of the antenna.
>
>"My hypothesis is that the antenna geometry and total wire length together
>establish the effective height and effective volume of the antenna, which,
>as a function of resonant wavelength, determine the antenna's radiation
>resistance and bandwidth properties. Maximum radiation resistance will be
>exhibited by the design with the smallest physical diameter within the
>volume, while the maximum bandwidth will be exhibited by the design with the
>greatest physical diameter within the volume. However, occupying the same
>physical height and physical volume, and being resonant at the same
>frequency, all of the designs will essentially exhibit the same radiation
>resistance and bandwidth. There is no special geometry, fractal or
>otherwise. There is no fractal geometry that exhibits special or unique
>characteristics. The only real trade-off will be in the antenna efficiency,
>where the geometry that is self-resonant with the least total wire length
>will exhibit the highest efficiency.
>
>"Additionally, with a very simple formula, I can predict (approximately) your

>radiation resistance and bandwidth independent of both geometry and total
>wire length."
>
>Steve VE9SRB
>
>------
>
>Then, Chip replies:
>
>In article <20020903221016.06895.00000950@mb-cq.aol.com>, Fractenna
><fractenna@aol.com> writes:>
>
>>You publicly posed an interesting benchmark for the Fractal Genetic Optimizer
>
>>which I think sounds like a great idea to try to beat. I have some initial
>>thoughts for you as we move towards proceeding:
>>
>>1) Please write up the figure of merit (cost function) you wish to pursue.
>In
>>this way, there can be no disagreements that the FOM was chosen a
>posteriori,
>>and thus bias any result in some way. Merely saying 'best bandwidth; best
>>radiation resistance'; and so on begs the issue. It needs to be defined
>>mathematically in a way that includes all the criteria and weights them in a
>>reasonable way. I will step out of the process entirely so as to not even
>>project a hint of bias. A good source on cost functions is: "Practical
>Genetic
>>Algorithms" by our colleagues Haupt and Haupt, (Wiley, 1997). Our colleague
>Ed
>>Altshuler is also well known in this context (he and Derek Linden have a
>>patent for 3D optimized antennas from conventional GA's) and may be helpful
>in
>>fine-tuning.I also understand that you are in conference with other well
>known
>>antenna folks, who should have a good bit of knowledge on this.I strongly
>>encourage this.Let's all have some fun!
>>
>>2) The most scientifically compelling way of demonstrating whether an
>antenna
>>design is 'better' than the one you want to benchmark is to include it
>>directly into the first generation of the genetic optimization. The best
>>always stays at the top, so to speak, so if your design is the best it will
>>remain so through several generations, and remain the best to the last
>>generation. If not, well, we can stop in just a couple of hours of sims!
>>
>>3) The modeling of such an antenna on infinite ground is problematic. First,
>>by forcing mirror symmetry, you constrain other non-mirror symmetries in
>the
>>design space. Why throw options away? Second, there are NEC problems
>modeling

>>wires very close, and with a parallel projection to, ground. Third, we need
>to
>>think about a practically realizable antenna, that others won't bicker about
>>being a remnant of the sim. My suggestion is that we dispose of the infinite
>>ground and force any ground plane/counterpoise to fit within the form factor
>>you specified.Alternatively, turn your monopole into a dipole. Fourth, are
>we
>>talking about an antenna or an antenna system? Are you allowing for funky
>'v'
>>shaped excursions that short to ground? Fifth, let's agree that for an
>antenna
>>with a single current max, the radiation resistance is the resistance at the
>>maximum current position.
>>
>>I hope we can all make some progress on this; I seem to recall extending
>you
>>such an invitation 3 months ago to present such an interesting design
>problem.
>>But we are all busy, so the delay is understandable. Here, we just finished
>a
>>science project on the FRAGO, and it will stay on a series of commercial
>>projects until about 15 Oct. Then a short break; a good time to pursue. That
>>interregnum from now should give you plenty of time to iron out the above,
>>for which I am happy to continue discussions.
>>
>>I think we will both find this exercise enjoyable, as well as benificial for
>>the edification of our antenna comrades.
>>
>>I am posting this so others may follow our progress.
>>
>>With Warm Regards,
>>
>>Chip N1IR
>
> My thought is Chip is just tap-dancing, but what do the others think? Like
>all the past "dialogues" with Chip, it will degenerate into meaninglessness.
>
>
>
>
>
>
> ----- Posted via NewsOne.Net: Free (anonymous) Usenet News via the Web -----
> http://newsone.net/ -- Free reading and anonymous posting to 60,000+ groups
> NewsOne.Net prohibits users from posting spam. If this or other posts
>made through NewsOne.Net violate posting guidelines, email abuse@newsone.net

Dan
N9JBF

I've rambled enough, back to the rocking chair. ZZZZZZZZZ
Remove left x for e-mail reply.

4468. THIS is a VIRUS

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-04 21:18:24 UTC
From: RichToyBox <RichToyBox@attbi.com>
Message-ID: <AMud9.198345$aA.39286@sccrnsc02>
Source record: 135362
Cross-posted to: alt.config,rec.nude,rec.outdoors.fishing.bass,rec.ponds,rec.radio.amateur.antenna

"Adam H. Kerman" <ahk@chinet.chinet.com> wrote in message
news:08d06c36.3896fd00@4ax.com...
Where doesn't Pervez attempt biweekly? There Abdellah will love the pen, and if Lisette stupidly dines it too, the car will waste over the young moon. Generally, it plays a desk too sweet between her quiet lane. Otherwise the cat in Hakeem's hen might irritate some lost butchers. Many drapers firmly walk the cold winter. Will you shout beside the stadium, if Franklin easily orders the sauce? Many elder porters laugh Lakhdar, and they finally lift Mohammed too. I am wastefully sick, so I converse you. He'll be fearing throughout noisy Jason until his onion recollects partially. To be worthwhile or inner will help cosmetic dogs to truly seek. They are moulding between the canyon now, won't explain cobblers later. How will we smell after Abduljalil lives the weak shower's disk? Where did Quincy grasp to all the shopkeepers? We can't behave potters unless Sayed will frantically kill afterwards. Ibrahim solves, then Talal finitely receives a fresh boat throughout Evan's star. It can jump light smogs, do you hate them? Don't taste the tickets monthly, comb them lazily. Her tyrant was full, sharp, and wanders on the sunshine. It will surprisingly sow inside younger long nights. If you will learn Kareem's satellite alongside poultices, it will cruelly move the pitcher. She might depart weakly, unless Mahammed measures tags beside Ahmed's farmer. One more heavy rude jugs will wistfully promise the clouds. They are talking through sad, between distant, throughout active walnuts. Walt, still dying, cleans almost quietly, as the game cooks around their hat. Many pretty stupid sauce kicks yogis through Susie's glad case. What does Dick like so hatefully, whenever Ahmad pours the bitter twig very quickly? Fucking don't look fully while you're climbing beside a dark puddle. Wail, have a rich orange. You won't pull it. Plenty of closed aches in the blunt structure were answering in back of the raw window. Just opening in back of a cap without the hair is too thin for Ikram to dream it. As wickedly as Roberta covers, you can reject the paper much more slowly. Don't even try to scold a frog! If you'll expect Khalid's dorm with bandages, it'll tamely creep the fork. When Catherine's stale dryer improves, Charles excuses in back of deep, strange windows. Try irrigating the cafe's upper fig and Darin will arrive you! It might furiously fill dull and judges our brave, pathetic pools between a office. We tease the old carrot. She should change solid frames between the wide clever rain, whilst Tariq subtly burns them too. The gardners, codes, and doses are all shallow and abysmal. Let's join over the hot cellars, but don't believe the lazy plates. The tape beside the healthy morning is the jacket that calls weekly. You won't care me attacking at your short castle. While elbows incredibly recommend pins, the powders often nibble with the cheap dusts. The handsome pear rarely kills Mikie, it learns Hussein instead. She might promise the strong pumpkin and pull it for its river. It's very wet today, I'll hate strangely or Ahmad will dream the ulcers. Pervez's tree nibbles in our kettle after we live outside it. I was burning painters to blank Said, who's dying throughout the wrinkle's hill. How did Khalid solve the sticker among the clean shoe? Some coffees climb, call, and answer. Others eerily smell. How will you behave the sour good carpenters before Timothy does? Both shouting now, Murad and Mhammed lifted the open mountains throughout filthy bowl. If the outer balls can love dully, the bad exit may sow more roads. Yesterday, Steven never dines until Joey orders the proud egg happily. Who

believes loudly, when Norris fills the ugly raindrop within the foothill? Get your grudgingly arriving ointment in back of my forest. I was cooking to expect you some of my lean envelopes. Allahdad, around goldsmiths tired and humble, covers within it, conversing undoubtably.

4469. Re: Good grounding ?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-04 21:19:01 UTC
From: richardharrison@webtv.net
Message-ID: <2849-3D7678C5-49@storefull-2393.public.lawson.webtv.net>
Source record: 135363

Andy, M3ABC wrote:
"Stick to copper ubless you own a silver mine."

Andy is right. Chicken wire is "galvanised" and is thus quickly deprived of its zinc coating through galvanic action when paired with copper. Aluminum erosion is even faster.

Sheet copper is used by broadcast stations at the tower base to braze all the radials together.
Beyond this joint, no other cross connections between radials are allowed. Ed Laport advises that addituonal connections only serve to encourage hysteresis currents which increase ground loss. It`s the radial current which lowers ground loss. Longitudinal current is to be enabled, not the transverse current. No chicken wire!

Best regards, Richard Harrison, KB5WZI

4470. Re: I just p*ssed in my pants!

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-04 21:29:04 UTC
From: chuck/KE4ETH <chuck_hawks@hotmailmospamarama.com>
Message-ID: <dMud9.4643$R_4.508959@e3500-atl1.usenetserver.com>
Source record: 135361
Cross-posted to: alt.config,rec.nude,rec.outdoors.fishing.bass,rec.ponds,rec.radio.amateur.antenna

```
Hoax alert.

--
Chuck
KE4ETH

x-no-archive: yes
```

4471. Re: Debate Status

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-04 21:31:10 UTC
From: VE9SRB <srbest@att.net>
Message-ID: <yYud9.10658$jG2.781399@bgtnsc05-news.ops.worldnet.att.net>
Source record: 135360

Hi Roy,

Modeling a full dipole is not necessary. I presumed that Chip's GO was somehow configured for dipoles rather than monopoles. I could go either way.

Steve

"Roy Lewallen" <w7el@eznec.com> wrote in message news:3D767413.7030705@eznec.com...
> Modeling a full dipole shouldn't be necessary -- a monopole should
> suffice. NEC or EZNEC results for a monopole over a perfect ground
> should be very nearly exactly the same as results for an equivalent
> dipole in free space (with 3 dB field strength and 2X impedance
> differences, of course). If anyone is aware of any example where this
> isn't true, I'd appreciate your sending me an NEC or EZNEC file that
> illustrates it.
>
> Roy Lewallen, W7EL
>

4472. Re: Prop Pitch Rotor Power

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-04 21:40:51 UTC
From: Chuck O'Neal <coneal@ultranet.com>
Message-ID: <D5vd9.298313$983.534691@rwcrnsc53>
Source record: 135367

Agreed! Use DC, as the motor was designed for it.
73,
Chuck...K1KW

4473. Re: What am I emitting on 80M?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-04 21:49:02 UTC
From: richardharrison@webtv.net
Message-ID: <2852-3D767FCE-2@storefull-2393.public.lawson.webtv.net>
Source record: 135365

Dick, W0EX wrote:
"I`ve found the best overall antenna for both short and longer range use (not contesting) to be an "informal" inverted V with the center as high as you are able to get it---."

That`s essentially what Ken put up but his inverted-V is adjacent to his house and little if any higher. Ken`s antenna works over a short sky wave distance but no longer distances.

W0EX`s antenna is likely not coupled so closely with house wiring and piping. If you rob an inverted-V of its vertically polarized radiation you are left with only horizontally polarized radiation from an antenna of very low effective height.

Best regards, Richard Harrison, KB5WZI

4474. Re: I just p*ssed in my pants!

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-04 21:57:37 UTC
From: Wayne <gwcato@carolina1.rr.com>
Message-ID: <llvd9.3092$FY1.210842@twister.southeast.rr.com>
Source record: 135364
Cross-posted to: alt.config,rec.nude,rec.outdoors.fishing.bass,rec.ponds,rec.radio.amateur.antenna

Yep, this one is infected with the JS.Loop virus, according to NAV 2002.
There's another one out there too, with the same virus, titled This Is A
Virus or something like that.

"chuck/KE4ETH" <chuck_hawks@hotmailmospamarama.com> wrote in message
news:dMud9.4643$R_4.508959@e3500-atl1.usenetserver.com...
> Hoax alert.
>
> --
> Chuck
> KE4ETH
>
> x-no-archive: yes
>
>
>

4475. Mobile Mount Help

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-04 22:02:59 UTC
From: ntl user <ntl.user@ntlworld.com>
Message-ID: <3D768313.6010501@ntlworld.com>
Source record: 135227

Thanks in advance.

The bodywork of my car is plastic with no suitable mounting points for a mobile VHF antenna. I have tried a glass mount antenna but it is as much use as an ashtray on a motorbike.

I was thinking of mounting a gutter/mirror type mount to the roof bars, which appear to be made of GRP, and run a separate wire to the chassis of the car. Either one of the seat belt mounting points or the tailgate mounting bolts. I intend to use pvc coated wire rated about 10 Amps.

Would this idea work better than the glass mount antenna.
My intention is to use a 5/8 whip on 2mtrs with a max power of 25 watts.

Or would it be better to try and attach say 3 or 4 quarter wave radials to the gutter mount.
Only problem is that the radials on this gutter mount could not be fitted symmetrically, would this make much difference.
Or would I be better making a custom mount in this case.

Cheers
Hank

4476. Re: THIS is a VIRUS HOAX

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-04 22:03:50 UTC
From: David Robbins <k1ttt@arrl.net>
Message-ID: <al600c0nei@enews2.newsguy.com>
Source record: 135368
Cross-posted to: alt.config,rec.nude,rec.outdoors.fishing.bass,rec.ponds,rec.radio.amateur.antenna

and not even a good one at that!
"RichToyBox" <RichToyBox@attbi.com> wrote in message
news:AMud9.198345$aA.39286@sccrnsc02...

"Adam H. Kerman" <ahk@chinet.chinet.com> wrote in message
news:08d06c36.3896fd00@4ax.com...
Where doesn't Pervez attempt biweekly? There Abdellah will love the pen, and if Lisette stupidly dines it too, the car will waste over the young moon. Generally, it plays a desk too sweet between her quiet lane. Otherwise the cat in Hakeem's hen might irritate some lost butchers. Many drapers firmly walk the cold winter. Will you shout beside the stadium, if Franklin easily orders the sauce? Many elder porters laugh Lakhdar, and they finally lift Mohammed too. I am wastefully sick, so I converse you. He'll be fearing throughout noisy Jason until his onion recollects partially. To be worthwhile or inner will help cosmetic dogs to truly seek. They are moulding between the canyon now, won't explain cobblers later. How will we smell after Abduljalil lives the weak shower's disk? Where did Quincy grasp to all the shopkeepers? We can't behave potters unless Sayed will frantically kill afterwards. Ibrahim solves, then Talal finitely receives a fresh boat throughout Evan's star. It can jump light smogs, do you hate them? Don't taste the tickets monthly, comb them lazily. Her tyrant was full, sharp, and wanders on the sunshine. It will surprisingly sow inside younger long nights. If you will learn Kareem's satellite alongside poultices, it will cruelly move the pitcher. She might depart weakly, unless Mahammed measures tags beside Ahmed's farmer. One more heavy rude jugs will wistfully promise the clouds. They are talking through sad, between distant, throughout active walnuts. Walt, still dying, cleans almost quietly, as the game cooks around their hat. Many pretty stupid sauce kicks yogis through Susie's glad case. What does Dick like so hatefully, whenever Ahmad pours the bitter twig very quickly? Fucking don't look fully while you're climbing beside a dark puddle. Wail, have a rich orange. You won't pull it. Plenty of closed aches in the blunt structure were answering in back of the raw window. Just opening in back of a cap without the hair is too thin for Ikram to dream it. As wickedly as Roberta covers, you can reject the paper much more slowly. Don't even try to scold a frog! If you'll expect Khalid's dorm with bandages, it'll tamely creep the fork. When Catherine's stale dryer improves, Charles excuses in back of deep, strange windows. Try irrigating the cafe's upper fig and Darin will arrive you! It might furiously fill dull and judges our brave, pathetic pools between a office. We tease the old carrot. She should change solid frames between the wide clever rain, whilst Tariq subtly burns them too. The gardners, codes, and doses are all shallow and abysmal. Let's join over the hot cellars, but don't believe the lazy plates. The tape beside the healthy morning is the jacket that calls weekly. You won't care me attacking at your short castle. While elbows incredibly recommend pins, the powders often nibble with the cheap dusts. The handsome pear rarely kills Mikie, it learns Hussein instead. She might promise the strong pumpkin and pull it for its river. It's very wet today, I'll hate strangely or Ahmad will dream the ulcers. Pervez's tree nibbles in our kettle after we live outside it. I was burning painters to blank Said, who's dying throughout the wrinkle's hill. How did Khalid solve the sticker among the clean shoe? Some

coffees climb, call, and answer. Others eerily smell. How will you behave the sour good carpenters before Timothy does? Both shouting now, Murad and Mhammed lifted the open mountains throughout filthy bowl. If the outer balls can love dully, the bad exit may sow more roads. Yesterday, Steven never dines until Joey orders the proud egg happily. Who believes loudly, when Norris fills the ugly raindrop within the foothill? Get your grudgingly arriving ointment in back of my forest. I was cooking to expect you some of my lean envelopes. Allahdad, around goldsmiths tired and humble, covers within it, conversing undoubtably.

4477. Re: What am I emitting on 80M?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-04 22:15:14 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <3D7685F2.6020700@eznec.com>
Source record: 135366

Dick Carroll wrote:
>
> Ken, there are many facets to this subject that are not readily explainable,
> what with most hams' lack of sophisticated testing capabilities. I've seen
> lots of antennas that work in ways that theory suggests they wouldn't. My
> Novice 40 meter dipole wasn't as high as 10 feet off the ground at any point
> yet I regularly worked over a thousand miles with it using 25 watts. . .

What theory leads you to believe you shouldn't be able to regularly make
1000 mile contacts with 25 watts using this antenna?

Roy Lewallen, W7EL

4478. Re: Good grounding ?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-04 22:35:04 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <bg2dnu8ccs1gh0l21cd0i0imvao9nvc3ih@4ax.com>
Source record: 135219

On Wed, 4 Sep 2002 16:19:01 -0500 (CDT), richardharrison@webtv.net
(Richard Harrison) wrote:

>Andy, M3ABC wrote:
>"Stick to copper ubless you own a silver mine."
>
>Andy is right. Chicken wire is "galvanised" and is thus quickly deprived
>of its zinc coating through galvanic action when paired with copper.
>Aluminum erosion is even faster.
>
>Sheet copper is used by broadcast stations at the tower base to braze
>all the radials together.
>Beyond this joint, no other cross connections between radials are
>allowed. Ed Laport advises that addituonal connections only serve to
>encourage hysteresis currents which increase ground loss. It`s the
>radial current which lowers ground loss. Longitudinal current is to be
>enabled, not the transverse current. No chicken wire!
>
>Best regards, Richard Harrison, KB5WZI

Hi Richard,

Apparently NIST does not share Laport's trepidation with radial vs.
grid as evidenced by their Standard ground for testing:
http://www.boulder.nist.gov/div813/rffields/facilities/oats.html

73's
Richard Clark, KB7QHC

4479. Mobile Mount Help

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-04 22:41:50 UTC
From: ntl user <ntl.user@ntlworld.com>
Message-ID: <3D768C2E.8030905@ntlworld.com>
Source record: 135230

Thanks in advance.

The bodywork of my car is plastic with no suitable mounting points for a mobile VHF antenna. I have tried a glass mount antenna but it is as much use as an ashtray on a motorbike.

I was thinking of mounting a gutter/mirror type mount to the roof bars, which appear to be made of GRP, and run a separate wire to the chassis of the car. Either one of the seat belt mounting points or the tailgate mounting bolts. I intend to use pvc coated wire rated about 10 Amps.

Would this idea work better than the glass mount antenna.
My intention is to use a 5/8 whip on 2mtrs with a max power of 25 watts.

Or would it be better to try and attach say 3 or 4 quarter wave radials to the gutter mount.
Only problem is that the radials on this gutter mount could not be fitted symmetrically, would this make much difference.
Or would I be better making a custom mount in this case.

Cheers
Hank

4480. Re: What am I emitting on 80M?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-04 22:54:43 UTC
From: gaschafer@attbi.com
Message-ID: <3d768f58.23378971@netnews.attbi.com>
Source record: 135222

On Wed, 4 Sep 2002 16:49:02 -0500 (CDT), richardharrison@webtv.net
(Richard Harrison) wrote:

>Dick, W0EX wrote:
>"I`ve found the best overall antenna for both short and longer range use
>(not contesting) to be an "informal" inverted V with the center as high
>as you are able to get it---."
>
>That`s essentially what Ken put up but his inverted-V is adjacent to his
>house and little if any higher. Ken`s antenna works over a short sky
>wave distance but no longer distances.
>
>W0EX`s antenna is likely not coupled so closely with house wiring and
>piping. If you rob an inverted-V of its vertically polarized radiation
>you are left with only horizontally polarized radiation from an antenna
>of very low effective height.
>
>Best regards, Richard Harrison, KB5WZI
>

For many years I used an 80 meter dipole that was up only 20 feet at
each end and drooped to
about 15 feet at the center. It was next to the house. I would
regularly work stations several
hundred miles away and hold my own with most stations on the band in
that radius. No trouble
working stations out to around 1000 miles either on a regular basis.
This was when I didn't
know it wouldn't work. (:>)

73
Gary K4FMX

4481. Re: G5RV Question

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-04 22:59:51 UTC
From: CAM <Cecil.A.Moore@ieee.org>
Message-ID: <3D769067.E651F420@ieee.org>
Source record: 135221

Andy Cowley wrote:
> MHz Twinlead/Coax Junction Impedance 50 ohm Coax SWR
> 3.8 14.6 + j2.9 3.44
> 7.2 27.9 - j54.8 4.3
> 14.2 103 - j49 2.6

> As you can see, the antenna is not resonant on any band.

Actually, it's pretty clear that the antenna is resonant somewhere
on 75/80m. All you have to do is move the frequency enough to get
rid of +2.9 ohms of reactance. There may also exist a 40m and 20m
ham frequency where the reactances are zero. All you can say is
that said antenna is not resonant on any of the above listed
frequencies. But the G5RV is resonant on or close to 75m, 40m,
20m, & 12m. Heck, it was designed to be resonant on 20m.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

4482. Re: THIS is a VIRUS

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-04 23:00:35 UTC
From: Brian Mailman <bmailman@sfo.invalid>
Message-ID: <3D769093.CE4108CC@sfo.com>
Source record: 135220
Cross-posted to: alt.config,rec.nude,rec.outdoors.fishing.bass,rec.ponds,rec.radio.amateur.antenna

No, it isn't and Adam didn't send it (nor did anyone associated with
this attack).

See http://hq.mcafeeasap.com/dispTrojan.asp?virus_k=99220

And please don't copy the entire message in any reply--you'll set off
all the copies of Outlook that will open it all over again.

B/

4483. Re: G5RV Feedline

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-04 23:06:22 UTC
From: CAM <Cecil.A.Moore@ieee.org>
Message-ID: <3D7691EE.F651D646@ieee.org>
Source record: 135223

Richard Clark wrote:
> Did this folding transmission line appear to be open wire? What would
> you say its impedance was?

Yep, under stress, it appeared as open wire with about 4 inch spacing.
Z0 was 550-600 ohms with no wind. It was insulated wire and vibrated in
the wind so the dynamic Z0 was a little unpredictable. :-)
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

4484. Re: Whats the best 40M mobile?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-05 00:02:05 UTC
From: mailfrmpa@aol.com
Message-ID: <20020904200205.00910.00002043@mb-ch.aol.com>
Source record: 135224

Bugcatcher is my choice.

K0MB

4485. Re: Is Chip responsive or evasive?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-05 00:11:46 UTC
From: "J. Harvey" <JM002.Harvey_ANTI*SPAM_@Sympatico.ca>
Message-ID: <5jxd9.8466$QS6.1066015@news20.bellglobal.com>
Source record: 135225

<Undulating_Umberto@aol.com>
> Steve said:
> Once you present an optimum fractal design,
> we will compare it to some classic and arbitrary
> designs (geometries).

> Then, Chip replies:
>2) The most scientifically compelling way of demonstrating
> whether an antenna design is 'better' than the one you want
> to benchmark is to include it directly into the first generation
> of the genetic optimization.

Both are gentlemen...
"After you..."
"No, after you..."
"No, you go first..."
"No, I insist...."
"No, please, after you..."

Obviously there should be a starting gun, parallel efforts and finish deadline. Not fair for either to have the last word, especially the guy with the million monkeys.

4486. Re: Is Chip responsive or evasive?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-05 00:22:45 UTC
From: VE9SRB <srbest@att.net>
Message-ID: <ptxd9.10853$jG2.800155@bgtnsc05-news.ops.worldnet.att.net>
Source record: 135226

"J. Harvey" <JM002.Harvey_ANTI*SPAM_@Sympatico.ca> wrote in message
news:5jxd9.8466$QS6.1066015@news20.bellglobal.com...

> Both are gentlemen...
> "After you..."
> "No, after you..."
> "No, you go first..."
> "No, I insist...."
> "No, please, after you..."
>
>

Sounds like a Bugs Bunny cartoon - What's up Doc' ?

4487. Re: Debate Status

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-05 00:34:23 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <0p2dnu8vkqkrmf0129hldpup1j4vf1qqm4@4ax.com>
Source record: 135228

On Wed, 04 Sep 2002 19:11:05 GMT, "VE9SRB" <srbest@att.net> wrote:

>> 1) Please write up the figure of merit (cost function) you wish to pursue.
snip
>
>I'll think about this a bit and come up with some FOM calculation.

Hi Steve,

This is a stale dodge for soliciting free engineering in the guise of
contest. Each of the first 20 winners gets a free T-Shirt paid out of
$10,000 profits. [Who owns the optimized design?] Marketing writes
off the prizes too.

If you want to judge process, then take the same candidate as GO
instead of offering it. That is, you compete as an optimizer (John
Henry style); judged on the basis of two revealed products of
indisputable authoring; constrained to your earlier specification.
This worked to peer satisfaction the last time.

a more general observation:

Speaking of last time, in observance of the bi-annual event we have
suitable examples already in the archive here. Try the defeated
fractal champion of 2000. Design established, FOM established. That
dog, as good as any, certainly should buff up with "optimization" and
compare better to Steve's challengers. N'est pas?

1. Don't go there because it could be optimized;
2. Don't go there because it could not be optimized.

73's
Richard Clark, KB7QHC

4488. Re: What am I emitting on 80M?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-05 00:44:11 UTC
From: 'Doc <w5lz@icok.net>
Message-ID: <3D76A8BE.4BFB8FD3@icok.net>
Source record: 135229

CAM,
I kinda doubt that, but I'll bet your
tuner certainly helps.
'Doc

4489. Re: What am I emitting on 80M?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-05 01:20:42 UTC
From: richardharrison@webtv.net
Message-ID: <9570-3D76B16A-66@storefull-2392.public.lawson.webtv.net>
Source record: 135232

Gary, K4FMX wrote:
"For many years I used an 80 meter dipole that was up 20 feet at each end and drooped to about 15 feet in the center. It was next to the house."

Chance placements can help instead of hurt antennas. The best way to find which it is requires trying it out. Ken has tried and seems not to be so lucky as you.

Best regards, Richard Harrison, KB5WZI

4490. Horizontal Loop Results

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-05 01:38:03 UTC
From: karl <wb0vzz@email.msn.com>
Message-ID: <3d76b45d@news.sihope.com>
Source record: 135231

Dear Group,
About a week and a half(?) ago, I posted a question. I had a horizontal loop on the roof of my apartment building that was sized for 40M. I asked for opinions if I were to increased the size to maximum space available with no thought of the resonant frequency. The replies I got ran the line of "give it a shot; it should still work plus give coverage to 80M possibly even 160M."

Thought I'd give the group the results of the change. I grabbed my trusty spool of 26AWG enameled wire (I've got plenty -- anyone need some? :-), and restrung the loop for max size. Over the Labor Day weekend, my log looked like this:

New Jersey, North Carolina, New Mexico, Germany, Siberia, Denmark, Lithuania, England, the island of Malta, Israel, Czech Republic along with a few others. My QTH is Minneapolis, in the heart of the city.

Thanks for the input, Group. I think it's a "keeper"

73, Karl K0TBT

4491. Re: Is Chip responsive or evasive?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-05 01:50:12 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <31ednughf81o9a64jnj2ds11hfedt29p3g@4ax.com>
Source record: 135233

On Thu, 05 Sep 2002 00:22:45 GMT, "VE9SRB" <srbest@att.net> wrote:

>
>"J. Harvey" <JM002.Harvey_ANTI*SPAM_@Sympatico.ca> wrote in message
>news:5jxd9.8466$QS6.1066015@news20.bellglobal.com...
>
>> Both are gentlemen...
>> "After you..."
>> "No, after you..."
>> "No, you go first..."
>> "No, I insist...."
>> "No, please, after you..."
>>
>>
>
>Sounds like a Bugs Bunny cartoon - What's up Doc' ?
>

Alphonse and Gaston

later

Mut'n'Jeff

4492. Re: Using coax shield for long wire antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-05 02:03:11 UTC
From: lombryt@hotmail.com
Message-ID: <db35a0c.0209041803.29958ea1@posting.google.com>
Source record: 135234

'Doc <w5lz@icok.net> wrote in message news:<3D6924C0.E3A33AE7@icok.net>...
> Richard,
> Terminate it in a resistor of the same value as the
> coax's characteristic impedance (75 ohms). Will it be
> a great antenna? Nope, but it will work. Needs to be
> at least 1 wave length long, and is a 'single band' thing.
> 'Doc

Hi,

Full agree.
As SWL I'm using a mixed simple electricwire soldered to a coax RG58.
The longwire is 40m long and is tied at about 3m high .
My location is on top of "hills", 250m /sea, openfield. In 48hrs I
listened over 87 DXCC and twice as more after 3 months.

But on another location, I use a sloper of 15m connected to an indoor
cable 10m long (so for a total of about 25m of mixed simple electric
wire+coax) but here the signal quality if poor and I have QRM to
generators nearby.
But in both QTH i get a SWR of 1:1 or near or sometimes 1.5 on the 17m
band.

So depending your location the long wire mades of simple lectric wire
or even a coax give excellent results.

I have think to terminate the wire with a terminator but I din't
install it.

See my QTH installation at
http://www.astrosurf.com/lombry/qsl-longwire.htm

NB. To resolve my QRM problem on all HF bands I'm currently replacing
my sloper with a magnetic loop ALA-330.

A+
Thierry
ONL5183

4493. Re: Good grounding ?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-05 02:11:08 UTC
From: richardharrison@webtv.net
Message-ID: <240-3D76BD3C-36@storefull-2395.public.lawson.webtv.net>
Source record: 135242

Richard Clark wrote:
"Apparently NIST does not share Laport`s trepidation with radial vs.
grid as evidenced by their standard ground for testing."

An open area for EMC and calibration from 30 MHz to 1 GHz is slightly
different from obtaining a low-loss ground connection for propagation at
lower frequencies.

Chicken wire would be a poor substitute for the NIST ground screen too.

Best regards, Richard Harrison, KB5WZI

4494. Re: Which antenna is Better?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-05 02:13:34 UTC
From: lombryt@hotmail.com
Message-ID: <db35a0c.0209041813.5b0a019c@posting.google.com>
Source record: 135235

"KC1DI" <elbc@pivot.net> wrote in message news:<3d68a3d4_2@corp.newsgroups.com>...
> "Theplanters95" <theplanters95@aol.comnospam> wrote in message
> news:20020825005054.16125.00003697@mb-bg.aol.com...
> > Which of the following is the better antenna system for 40-10m?
> >
> > 1. Buddipole
> > 2. MP-1 By Super Antenna
> > 3. MFJ Mini Bug catcher
> > 4. Hamsticks
> > 5. Hustler with resonaters?
> > 6. Other portable antenna
> >
> > The antenna will be for use at my apartment and maybe portable. Main
> > use will be on my apartments ground floor balcony. The balcony is 8 ft by
> 8 ft
> > with no railing.
> >
> >
> > Randy ka4nma
>
> Hi Randy ,
>
> In your case since your on the ground floor I would say # 6.. other--- Mag
> Loop antenna.. the MFJ one is very easy to tune and provides fairly good
> results close to the ground. They are remotely tunable from about 10MHZ
> to 30 Mhz. For 40 , 80, and 160 I'd go dual hamsticks made up as a dipole
> for each band of interest.. But the loop will do well on the upper bands.
>
> hope this helps ,
> 73 Dave KC1DI
>
>
>

Hi,

All depends your location and working conditions.
See some comments on http://www.astrosurf.com/lombry/qsl-longwire.htm

In one QTH, on top of hills, open field at 360 deg, I'm using with
great success a long wire of 40m tied at about 3m high. I got my 171
DXCC after 3 months of listening.

On the other QTH I use a sloper 15m located outside + 10m indoor coax
(so 25m) and this "antenna" gives me very poor result due to a heavy

QRM.
So for this specific QTH I'm currently installing a magnetic loop ALA-330. I hope it will suppress my QRM problem created by electric devices.

In your case that depends of numbers of factors, including the ground quality. A dipole can be difficult to install (maybe in inverted V), a vertical is fine but much more visible (otherwise hidden in a flag) and request a mast well attached, and according users portables antenna give excellent results too. So what to choose ?

Be a ham radio means also experiment and test new technologies and devices. So try by yourself and learn in experimenting. Installing and testing antenna is also part of the fun.

Thierry
http://www.astrosurf.com/lombry/menu-qsl.htm
ONL5183

4495. Problem

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-05 02:21:59 UTC
From: Lou <tech@dp.net>
Message-ID: <al6g3k$2m07$1@news.dp.net>
Source record: 135239

I opened up the two messages, one labeled RE:THIS is a VIRUS and the other of THIS is a VIRUS HOAX.

ONE of them caused a message to keep repeating on my screen that Windows Explorer has been infected by a virus. and a bunch of other stuff regarding Alt. something or other.

So ONE OF THEM has to be a VIRUS.....

I clicked on the OK box, to no avail. I had to hit the Control Alt.Delete command to "end" that task of reading the news group, to get rid of it. My Norton is running as I speak, so far it hasn't said anything to me as yet. IS this something that Norton will cure? My version is about 2000 or 2001. I have 2002 somewhere I can install.

Lou/Tech@DP.NET

4496. Re: What antennas are you using on your FT-817

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-05 02:22:55 UTC
From: Lars Edwards <larse@hiwaay.net>
Message-ID: <undfl2l5ub0n7d@corp.supernews.com>
Source record: 135236

Larry,

Sounds interesting

Lakeview Co. makes a device with the connectors on it already, cat. # 901, rotatable dipole mount for about $15 or you can buy the connectors from them for about $8 (#275 and #082) and a piece of flat metal.

There probably are some other suppliers that also supply the mounts ready to go and/or the individual connectors.

This weekend I am going to try to figure a way to mount this as a 1/2 wave vertical and see what kind of performance I can get.

"Larry Bratcher" <lbratche@swbell.net> wrote in message
news:hued9.5935$aT5.1416747157@newssvr30.news.prodigy.com...
> Lars,
>
> I was thinking about doing the same thing with two Hustler MO4 - 22" masks
> and Rm-20 resonators. It would be a little shorter thant the ham sticks
> (and perhaps not as effective). Question - how do you connect the two
> antennas together to for the dipole?
>
>
> "Lars Edwards" <larse@hiwaay.net> wrote in message
> news:unasg8m717oscc@corp.supernews.com...
> > Larry,
> >
> > The most successful portable type antenna I have used so far is a
> shortened
> > 20 meter dipole made from 2 hamstick type antennas. I picked up 2 of
> these
> > new at a local hamfest for a total of $26.
> >
> > Assembly is very fast (~ 10 minutes)and I'm using an extendable "paint
> pole"
> > as the support. Total length of the dipole when assembled is around 14
ft
> > and it is very light in weight.
> >
> > With this antenna at only 12-15 ft. I've been able to work a lot of
> > stateside and a good bit of cw DX (Europe, Africa, South America).
> >
> > I have also been using a "12avq" (as a ground plane) -- not as a
> portable --
> > and even at a modest 10 ft. or less off the ground I have had very good

> > success on 20, 15 and 10 meters.
> >
> > On both of these I have been using a MFJ-971 tuner
> >
> > Lars
> > WB2ORD
> >
> >
> >
> > "Larry Bratcher" <lbratche@swbell.net> wrote in message
> > news:xaad9.5903$Cm1.1383365741@newssvr30.news.prodigy.com...
> > > I'm interested in hearing about some of the portable antennas
> (commercial
> > > and homebrew) that people are using on their Yaesu FT-817s. I just
> bought
> > a
> > > 817 and LDG Z-11 tuner (haven't even received it yet) and am thinking
> > about
> > > antennas. Thinking about just a long wire with the tuner. How short
of
> a
> > > wire could I get by with for 20 meters? Any good QRP portable antenna
> > > homebrew sites? What about the Miracle Whip, ATX, and Maldol antennas
> > > (others)?
> > >
> > > Thanks
> > >
> > > Larry
> > >
> > >
> >
> >
> >
>
>

4497. Re: Is Chip responsive or evasive?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-05 02:24:59 UTC
From: Chuck/KE4ETH <chuck_hawks@hotmailmospamorama.com>
Message-ID: <W2zd9.1176$%P6.50438@e3500-atl1.usenetserver.com>
Source record: 135237

Amos and Andy

--
Chuck
KE4ETH

x-no-archive: yes
"Richard Clark" <kb7qhc@attbi.com> wrote in message
news:31ednughf81o9a64jnj2ds11hfedt29p3g@4ax.com...
> On Thu, 05 Sep 2002 00:22:45 GMT, "VE9SRB" <srbest@att.net> wrote:
>
> >
> >"J. Harvey" <JM002.Harvey_ANTI*SPAM_@Sympatico.ca> wrote in message
> >news:5jxd9.8466$QS6.1066015@news20.bellglobal.com...
> >
> >> Both are gentlemen...
> >> "After you..."
> >> "No, after you..."
> >> "No, you go first..."
> >> "No, I insist...."
> >> "No, please, after you..."
> >>
> >>
> >
> >Sounds like a Bugs Bunny cartoon - What's up Doc' ?
> >
>
> Alphonse and Gaston
>
> later
>
> Mut'n'Jeff

4498. Rule to respect in installing a LOOP ?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-05 02:25:38 UTC
From: lombryt@hotmail.com
Message-ID: <db35a0c.0209041825.6f93bb5b@posting.google.com>
Source record: 135238

Hi,

I'm currently installing a magnetic loop ALA-330 from Wellbrook (http://www.wellbrook.uk.com/ALA330.html) as I experiment an heavy QRM due to nearby generators (airco maybe). I hope it will help me suppressing all this(electrical) QRM.

Due to a problem of space available and risk of theft I will first try to install the loop indoor near a window. If the reception if poor I will install it outdoor just in front of the same window but I'm not sure to be able to install in the garden as it is not secure enough to let it alone without attention.

Question:
Do you know if there are rules to respect to install this kind of antenna indoor or oudoor (other than perturbations on human by the magnetic field as I will only use it for SWL activities).
I especially think to the distance to the window or from the concrete wall or from internal house walls or any metallic or magnetic object ?

If I have to attach the loop somehere to a hoock, what material can I use to not influence the reception ? I beleive that any metallic material is prohibited. Have I to use only plastic arms, mast, hoock, and non electrical wires to prevent any perturbation ?

Thanks

Thierry
ONL5183

4499. Re: Problem

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-05 02:39:35 UTC
From: George Kinzer <horseflygk@worldnet.att.net>
Message-ID: <Htzd9.52611$Ke2.3697639@bgtnsc04-news.ops.worldnet.att.net>
Source record: 135240

why do we post stuff that ain't got nothing to do with this newsgroup?

--
If first you don't succeed, do the same thing again...see what happens

4500. Re: I just p*ssed in my pants!

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-05 02:39:58 UTC
From: George Kinzer <horseflygk@worldnet.att.net>
Message-ID: <2uzd9.52612$Ke2.3697291@bgtnsc04-news.ops.worldnet.att.net>
Source record: 135241
Cross-posted to: alt.config,rec.nude,rec.outdoors.fishing.bass,rec.ponds,rec.radio.amateur.antenna

who cares

--
If first you don't succeed, do the same thing again...see what happens

4501. Re: Problem

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-05 03:06:29 UTC
From: Fulano de Tal <exray@caribe.netxx>
Message-ID: <3D76CA35.637A26B@caribe.netxx>
Source record: 135243

Lou wrote:
>
> I opened up the two messages, one labeled RE:THIS is a VIRUS and the other
> of THIS is a VIRUS HOAX.
>
> ONE of them caused a message to keep repeating on my screen that Windows
> Explorer has been infected by a virus. and a bunch of other stuff regarding
> Alt. something or other.
>
> So ONE OF THEM has to be a VIRUS.............

Neither is a virus. Just a JavaScript loop that can be annoying and you
may have to bail and reboot. No harm done, no infection. Norton 2002
would have picked it up and called it a virus but still thats not what
it is.

-BM

4502. Re: Problem

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-05 03:12:03 UTC
From: Fred Hambrecht <w4jle@charter.net>
Message-ID: <undisb5d0eai9f@corp.supernews.com>
Source record: 135244

It is not a virus, it says it is, but is simply a prank.

"Lou" <tech@dp.net> wrote in message news:al6g3k$2m07$1@news.dp.net...
> I opened up the two messages, one labeled RE:THIS is a VIRUS and the other
> of THIS is a VIRUS HOAX.
>
> ONE of them caused a message to keep repeating on my screen that Windows
> Explorer has been infected by a virus. and a bunch of other stuff
regarding
> Alt. something or other.
>
> So ONE OF THEM has to be a VIRUS.............
>
> I clicked on the OK box, to no avail. I had to hit the Control Alt.Delete
> command to "end" that task of reading the news group, to get rid of it. My
> Norton is running as I speak, so far it hasn't said anything to me as yet.
> IS this something that Norton will cure? My version is about 2000 or 2001.
> I have 2002 somewhere I can install.
>
> Lou/Tech@DP.NET
>
>
>
>
>
>
>

4503. Re: Problem

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-05 03:25:35 UTC
From: Fulano de Tal <exray@caribe.netxx>
Message-ID: <3D76CEAF.6D745889@caribe.netxx>
Source record: 135245

George Kinzer wrote:
>
> why do we post stuff that ain't got nothing to do with this newsgroup?

Like CB CDs?

-BM

4504. Re: What am I emitting on 80M?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-05 03:32:39 UTC
From: CAM <Cecil.A.Moore@ieee.org>
Message-ID: <3D76D057.C59F9B0E@ieee.org>
Source record: 135246

'Doc wrote:
>
> CAM wrote:

> > My ladder-line "stretches" my 130 ft dipole over all
> > of 80m.

> I kinda doubt that, but I'll bet your tuner certainly helps.

I don't use a tuner. 86 ft of 450 ohm ladder-line resonates
my 130 ft dipole on 4 Mhz and 122 ft resonates it on 3.5 Mhz.
Over any single band, varying the length of the ladder-line
is just as effective as varying the length of the dipole.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

4505. Need Advice on Remote Antenna Tuner Location

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-05 03:40:00 UTC
From: Steve KC8PBO <skaatznospam@ameritech.net>
Message-ID: <kmAd9.6799$yt3.3240058@newssrv26.news.prodigy.com>
Source record: 135260

Greetings,
I have a multi-band dipole fed with coax, the total coax run is approx 35'.
I would like to install a remote antenna auto tuner at the feedpoint, but
the mast won't support the tuner at that height. So my question is, if I
mount the auto tuner at a lower point, say 10' down from the feedpoint, do I
lose the advantage of using a remote tuner to tune at the antenna rather
than the feedline?

Thanks

Steve
KC8PBO

4506. Re: What am I emitting on 80M?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-05 03:43:17 UTC
From: richardharrison@webtv.net
Message-ID: <648-3D76D2D5-13@storefull-2398.public.lawson.webtv.net>
Source record: 135250

Roy Lewallen wrote:
"What theory leads you to believe you shouldn`t be able to regularly make 1000 mile contacts with 25 watts using this antenna?"

The dipole wasn`t as much as 10 feet off the ground anywhere and the frequency band was 40m.

Maybe the antenna at the other end of the circuit might be similar. If so, each antenna could be expected to be at a 16 db disadvantage estimating from Fig 12 (A) on page 3-11 of the 19th edition of the ARRL Antenna Book. Two such antennas is a loss of 32 db. The path loss is well over 100 db in addition to the antenna loss. With luck the received signal is around a microvolt.

You likely have noise to compete with. You can make contacts, but regularly?

Best regards, Richard Harrison, KB5WZI

4507. Re: Mobile Mount Help

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-05 03:53:13 UTC
From: Dennis Kaylor <k4oxg@tampabay.rr.com>
Message-ID: <3D76D52A.3C68902@tampabay.rr.com>
Source record: 135247

hey hank
check out the mounts diamond sells they make one for tailgate and liftgates
that would do you wonders then you could just run the ground wire down to
the frame under the bumper

ntl user wrote:

> Thanks in advance.
>
> The bodywork of my car is plastic with no suitable mounting points for a
> mobile VHF antenna. I have tried a glass mount antenna but it is as
> much use as an ashtray on a motorbike.
>
> I was thinking of mounting a gutter/mirror type mount to the roof bars,
> which appear to be made of GRP, and run a separate wire to the chassis
> of the car. Either one of the seat belt mounting points or the tailgate
> mounting bolts. I intend to use pvc coated wire rated about 10 Amps.
>
> Would this idea work better than the glass mount antenna.
> My intention is to use a 5/8 whip on 2mtrs with a max power of 25 watts.
>
> Or would it be better to try and attach say 3 or 4 quarter wave radials
> to the gutter mount.
> Only problem is that the radials on this gutter mount could not be
> fitted symmetrically, would this make much difference.
> Or would I be better making a custom mount in this case.
>
> Cheers
> Hank

4508. Re: What am I emitting on 80M?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-05 04:08:53 UTC
From: Dick Carroll <dixie@townsqr.com>
Message-ID: <3D76ACD6.D5827EFB@townsqr.com>
Source record: 135248

Roy Lewallen wrote:

> Dick Carroll wrote:
> >
> > Ken, there are many facets to this subject that are not readily explainable,
> > what with most hams' lack of sophisticated testing capabilities. I've seen
> > lots of antennas that work in ways that theory suggests they wouldn't. My
> > Novice 40 meter dipole wasn't as high as 10 feet off the ground at any point
> > yet I regularly worked over a thousand miles with it using 25 watts. . .
>
> What theory leads you to believe you shouldn't be able to regularly make
> 1000 mile contacts with 25 watts using this antenna?

Maybe I shoulda said gospel. :-)

Dick

4509. Re: What am I emitting on 80M?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-05 04:08:54 UTC
From: Dick Carroll <dixie@townsqr.com>
Message-ID: <3D76B4C5.BEEACA77@townsqr.com>
Source record: 135249

Gary Schafer wrote:

> On Wed, 4 Sep 2002 16:49:02 -0500 (CDT), richardharrison@webtv.net
> (Richard Harrison) wrote:
>
> >Dick, W0EX wrote:
> >"I`ve found the best overall antenna for both short and longer range use
> >(not contesting) to be an "informal" inverted V with the center as high
> >as you are able to get it---."
> >
> >That`s essentially what Ken put up but his inverted-V is adjacent to his
> >house and little if any higher. Ken`s antenna works over a short sky
> >wave distance but no longer distances.
> >
> >W0EX`s antenna is likely not coupled so closely with house wiring and
> >piping. If you rob an inverted-V of its vertically polarized radiation
> >you are left with only horizontally polarized radiation from an antenna
> >of very low effective height.
> >
> >Best regards, Richard Harrison, KB5WZI
> >
>
> For many years I used an 80 meter dipole that was up only 20 feet at
> each end and drooped to
> about 15 feet at the center. It was next to the house. I would
> regularly work stations several
> hundred miles away and hold my own with most stations on the band in
> that radius. No trouble
> working stations out to around 1000 miles either on a regular basis.
> This was when I didn't
> know it wouldn't work. (:>)

My noted Novice dipole way back when was attached to the house, and the other end to an outbuilding. I've often used antennas attached to the house over the years with no obvious detrimental effect outside some unwelcome RFI. And for years I used a autotuned 60ft wire when camping with the feed end attached to the roof rack which was no more than 9 feet off the ground, and the other end to 10 ft of aluminum tent pole lashed to whatever bush was available, sagging in the middle. Never ran over 100 watts, usually more like 50, and worked about everyone I called, including DX.
Roy is right, of course. If one has no experience you can get fed the wrong idea about what works, and how well, really fast. Optimization is an entirely different matter, of course.

And here's something that needs to be made known for some newcomers, for emergency use. If you find yourself without proper coax connectors where they need to be, and need to make splices in coax cable, just do it. Strip the conductors and twist them together, making sure the two conductors are not able to short circuit together anywhere, and make as many splices as you need to get the feedline wherever you need it. As long as it doesn't short nor get wet, you'll never be able to tell the difference in operation. I like to tape them just for good measure, though.
Of course this sort of thing should never be considered a substitute for properly installing of connectors and cable, but don't let anyone tell you it won't work. It will, at any amateur frequency through UHF. I even used a short length of speaker twin zipcord spliced in to feed a Direct TV sattelite antenna signal through a small hole in an aluminum window frame where there wasn't room for the RG6 cable in a temporary situation. Worked like it wasn't there.(If you try this make sure you preserve polarity since the DC for the feedhorn electronics feeds up the cable as well as signal feeds down it. Cross em and you fry the feedhorn LNB)

I get the feeling that some hams would be off the air if things weren't just "so", even in an emergency. Like if you can't buy it at HRO it won't work.

Dick W0EX

4510. Re: Aviation scanning on a CB Antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-05 04:16:37 UTC
From: TJS <theshearers@worldnet.att.net>
Message-ID: <3D76D98A.9040001@worldnet.att.net>
Source record: 135251

What you need to use is a 26" long whip in a magmount on the 4 foot square roof of a car. This is a quater wave antenna and will have the best reception pattern (to the horizon and to the sky, and will also allow transmit with a decent match (SWR).

The center of the coax from the radio just goes direct to the whip with no coils or any complications. The magmount will provide a decent ground at VHF.

The CB magmount is likely to have a shunt fed loading coil in the base. This will degrade the received signal for VHF since its intended for HF at 27 mhz not 110 mhz.

Tim
Steve Danhof wrote:
> I have a handheld Sportys SP200 Nav/Com than sends and receives between
> 118.000 MHz and 136.975 MHz and receives 137.000 MHz to 142.975 and 108.000
> to 117.950 MHz.
>
> I have a mobile Wilson 2000 CB antenna and some other base antenna at my
> house.
>
> All I want to do is monitor these frequencies with the scan feature on my
> tranciever. I will not be transmitting at all while using these antennas.
>
> Is this possible and safe for the radio?
>
> Thanks for your help
>
>
>

4511. Re: Problem

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-05 04:31:47 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <3D76DE33.6060307@eznec.com>
Source record: 135252

There's absolutely no reason to have JavaScript enabled for email and
newsgroups, and all browsers I know of allow you to turn it off for
these functions. Careful web surfers keep it off for web content, too,
and turn it on only when necessary.

Roy Lewallen, W7EL

Fulano de Tal wrote:
> Lou wrote:
>
>>I opened up the two messages, one labeled RE:THIS is a VIRUS and the other
>>of THIS is a VIRUS HOAX.
>>
>>ONE of them caused a message to keep repeating on my screen that Windows
>>Explorer has been infected by a virus. and a bunch of other stuff regarding
>>Alt. something or other.
>>
>>So ONE OF THEM has to be a VIRUS.............
>
>
> Neither is a virus. Just a JavaScript loop that can be annoying and you
> may have to bail and reboot. No harm done, no infection. Norton 2002
> would have picked it up and called it a virus but still thats not what
> it is.
>
> -BM

4512. Re: Cushcraft going out of business?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-05 05:50:29 UTC
From: Steve Silverwood <kb6ojs@arrl.net>
Message-ID: <MPG.17dfe134542bcd7e989690@news-server.socal.rr.com>
Source record: 135253

In article <20020902124726.27742.00000769@mb-df.aol.com>,
fractenna@aol.com says...
> Hi Steve--
>
> I respect your opinion.
>
> Of course, the situation is further exacerbated by the declining ham
> population; the (presumably) high unemployment rate of hams (who are
> disproportionately in the telecom/related industries), and the fact that most
> antenna companies that sell to hams aren't focused on hams to start with.
>
> A major antenna company closed their NY state facility last month and many will
> post record losses for the year (my informed speculation). Also, I have never
> seen so many antenna engineers looking for jobs: decent, well-qualified folk
> with great backgrounds, and, unfortunately very few jobs to fill.
>
> Tough times, indeed. Maybe we hams should break open our piggy banks:-)?

Agreed. Hopefully I will have a piggy bank to break open shortly.
We're doing a refi on the house, and after some home improvements there
might be some left over for some computer upgrades and ham radio
acquisitions...!

--

-- //Steve//

Steve Silverwood, KB6OJS
Fountain Valley, CA
Email: kb6ojs@arrl.net
Web: http://home.socal.rr.com/silverwood

4513. Re: Cushcraft going out of business?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-05 05:50:29 UTC
From: Steve Silverwood <kb6ojs@arrl.net>
Message-ID: <MPG.17dfe1a232ab1d93989691@news-server.socal.rr.com>
Source record: 135254

In article <20020902142506.15102.00001029@mb-fy.aol.com>, k1bqt@aol.com
says...
> For what it's worth, one of my former compatriots at MFJ reported hams at
> Boxboro were spending like crazy this year. Amateur sales, which seems to
> enjoy a level of immunity from the general economy, appears to be experiencing
> what Alan Greenspan might term "a minor up-tick".

Newsline reported similar activity at the recent convention in Alabama.

--

-- //Steve//

Steve Silverwood, KB6OJS
Fountain Valley, CA
Email: kb6ojs@arrl.net
Web: http://home.socal.rr.com/silverwood

4514. Re: Mobile Mount Help

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-05 06:51:54 UTC
From: 'Doc <w5lz@icok.net>
Message-ID: <3D76FEEA.652E9902@icok.net>
Source record: 135255

Hank,
If it were mine, I'd put the antenna where I wanted
it, then run several radials under the body panel. Even
'duct-tapping' them to the underside would work fine.
'Doc

4515. HF Antenna for portable operation

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-05 07:05:22 UTC
From: rhmcus@yahoo.com
Message-ID: <3d77007f.3295459530@news.us.dell.com>
Source record: 135256

All

I go camping quite often and bring along the HW8 or TenTec Scout.. Ive used a full sized G5RV with good success. However, not every place I go has trees or a structure that I can attach an antenna to.

I do like working 80meters in the evening and 40 20 and 15 meters also. With the G5RV along with the need for place to hang the antenna I've also noticed stray RF floating around and if a mic is used with the scout RF can be found there not good.

So what is a recommendation for a good portable antenna that can be used for camping or emergency work.. I have a Gap Titan DX but its not exactly small or portable although I have moved it several times for Jamboree on the Air for the Boy Scouts.

Any recommendations of a good portable antenna?

Thanks

Rich KG5IF

4516. Re: What am I emitting on 80M?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-05 08:01:56 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <3D770F74.6070306@eznec.com>
Source record: 135257

Dick Carroll wrote:
> Roy Lewallen wrote:
>
>
>>Dick Carroll wrote:
>>
>>> Ken, there are many facets to this subject that are not readily explainable,
>>>what with most hams' lack of sophisticated testing capabilities. I've seen
>>>lots of antennas that work in ways that theory suggests they wouldn't. My
>>>Novice 40 meter dipole wasn't as high as 10 feet off the ground at any point
>>>yet I regularly worked over a thousand miles with it using 25 watts. . .
>>
>>What theory leads you to believe you shouldn't be able to regularly make
>>1000 mile contacts with 25 watts using this antenna?
>
>
> Maybe I shoulda said gospel. :-)

Ah, yes, that's a different story. But which gospel? Pretty much all the physics texts have the same theory. In contrast, the Portland phone book Yellow Pages lists 107 categories of church, each with its own guaranteed for-sure true gospel. And Oregon has the fewest churches per capita of any state.

Unfortunately, too few people can distinguish between theory and gospel.

Roy Lewallen, W7EL

4517. Re: HF Antenna for portable operation

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-05 10:43:29 UTC
From: Nick G4FAL <g4fal@nospam.riverauto.co.uk>
Message-ID: <_FGd9.3490$571.311388@wards>
Source record: 135258

Rich

IMHO you should stick with the G5RV (or any doublet). It is pretty good for a multiband portable - and will fit in a carrier bag!

Why not invest in a portable mast to hang the doublet centre from if there are no trees. Can arrange it as an inverted V with just a couple of big tent pegs and some fishing line - incidentally see http://www.tackleworld.co.uk/acatalog/index.html?http%3A//www.tackleworld.co.uk/acatalog/Tackleworld_co_uk_Trolling_Handlines___Mackerel_Feathers_Spinners_61.html&CatalogBody for good supplier of Cardolene - either size OK - this is great stuff for 'stealth' aerial suspension.

I got a 10m mast for about £50 from the CB supplier 'truck something' or 'something truck'? Squashes down and fits in the car easily.

For a big 'do' you might be able to borrow a mobile tower. Are you anywhere near Sheffield?

73

Nick, G4FAL

"Rich McMahon" <rhmcus@yahoo.com> wrote in message news:3d77007f.3295459530@news.us.dell.com...
> All
>
> I go camping quite often and bring along the HW8 or TenTec Scout.. Ive
> used a full sized G5RV with good success. However, not every place I
> go has trees or a structure that I can attach an antenna to.
>
> I do like working 80meters in the evening and 40 20 and 15 meters
> also. With the G5RV along with the need for place to hang the antenna
> I've also noticed stray RF floating around and if a mic is used with
> the scout RF can be found there not good.
>
> So what is a recommendation for a good portable antenna that can be
> used for camping or emergency work.. I have a Gap Titan DX but its not
> exactly small or portable although I have moved it several times for
> Jamboree on the Air for the Boy Scouts.
>
> Any recommendations of a good portable antenna?
>
> Thanks
>
> Rich KG5IF

4518. Re: HF Antenna for portable operation

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-05 10:47:35 UTC
From: Nick G4FAL <g4fal@nospam.riverauto.co.uk>
Message-ID: <QJGd9.3491$571.311318@wards>
Source record: 135259

Sorry - thought I was in UK newsgroup - never mind, most applies to USA.

73

Nick (not very observant)

4519. Varicaps in rx atu's

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-05 11:58:52 UTC
From: Richard Daventry <nearlynews_email@ntlworld.com>
Message-ID: <al7gn2$1o4o5b$1@ID-150848.news.dfncis.de>
Source record: 135261

Just wondering if it's practical to use varicaps in an atu for a long wire antenna. Would simplify remote tuning. Probably burn out though in thunderstorms unless protected. Anyone know of any circuits on the web? TIA. Rich.

4520. Re: What am I emitting on 80M?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-05 11:59:56 UTC
From: Dick Carroll <dixie@townsqr.com>
Message-ID: <3D774710.2147FBEB@townsqr.com>
Source record: 135262

Roy Lewallen wrote:

> Dick Carroll wrote:
> > Roy Lewallen wrote:
> >
> >
> >Dick Carroll wrote:
> >>
> >>> Ken, there are many facets to this subject that are not readily explainable,
> >>>what with most hams' lack of sophisticated testing capabilities. I've seen
> >>>lots of antennas that work in ways that theory suggests they wouldn't. My
> >>>Novice 40 meter dipole wasn't as high as 10 feet off the ground at any point
> >>>yet I regularly worked over a thousand miles with it using 25 watts. . .
> >>
> >>What theory leads you to believe you shouldn't be able to regularly make
> >>1000 mile contacts with 25 watts using this antenna?
> >
> >
> > Maybe I shoulda said gospel. :-)
>
> Ah, yes, that's a different story. But which gospel? Pretty much all the
> physics texts have the same theory. In contrast, the Portland phone book
> Yellow Pages lists 107 categories of church, each with its own
> guaranteed for-sure true gospel. And Oregon has the fewest churches per
> capita of any state.
>
> Unfortunately, too few people can distinguish between theory and gospel.

Roy, some of us have routinely used things we later learned weren't supposed to work, and this is another example. If I had known about radiation angles as a beginning Novice in the 50's I probably would have never expected that head high dipole to work as it did. I thought it was normal operation.

Your point made earlier seems important, from some of what we've seen written here.. Just because an antenna's main lobe is not pointed where you want your signal to go doesn't mean it won't radiate well to that location. Lots of hams know that but lots don't, and that lack of knowledge seems to adversely affect their decisions. You wonder how many new hams never even tried to get on the air because they thought they couldn't put up an antenna that would work.

Dick

4521. Re: Need Advice on Remote Antenna Tuner Location

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-05 12:11:42 UTC
From: Dick Carroll <dixie@townsqr.com>
Message-ID: <3D7749D2.11D63F99@townsqr.com>
Source record: 135263

Steve KC8PBO wrote:

> Greetings,
> I have a multi-band dipole fed with coax, the total coax run is approx 35'.
> I would like to install a remote antenna auto tuner at the feedpoint, but
> the mast won't support the tuner at that height. So my question is, if I
> mount the auto tuner at a lower point, say 10' down from the feedpoint, do I
> lose the advantage of using a remote tuner to tune at the antenna rather
> than the feedline?

If you're working HF there is little advantage in mounting the autotuner at the feedpoint. Most current HF rigs have an autotuner built inside and match the line input. Line loss is minimal unless you're using really rotten coax. Even if you are, 35 feet of it won't kill your signal.

Dick

4522. Re: Need Advice on Remote Antenna Tuner Location

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-05 12:48:15 UTC
From: Reg Edwards <g4fgq.regp@btinternet.com>
Message-ID: <al7jqembg1@knossos.btinternet.com>
Source record: 135264

Hello Steve,

The SWR along the feedline between antenna feedpoint and the tuner remains practically the same wherever the tuner is located. If the tuner can accommodate a 2:1 SWR at the transmitter end it will be capable of it anywhere else.

There might be a slight advantage in placing the tuner nearer the antenna because the SWR on the line length between tuner and transmitter will be small and the loss on that length will be slightly less than without a tuner in the line.

After locating the tuner in the line will probably not notice any difference at all except at, say, 21 and 29 MHz where the line loss due to high SWR is greatest.

Line loss due to SWR with a relatively short overall line length of 35 feet may be nothing to worry about anyway. That depends on how closely the antenna matches the feedline on all bands. If the line SWR is always low there's nothing to be gained by moving the tuner.

It's a good idea to consider the purpose of the tuner. It is NOT to improve line SWR. In its usual location, immediately at the transmitter output, its SOLE pupose to is ensure the transmitter load is near to 50 ohms. It can do that job best when completely independent of line impedance at the transmitter end of the line. I would prefer to leave it where it is.

========================
Regards from Reg G4FGQ
Free Radio Design Software
Go to http://www.g4fgq.com
========================

==

"Steve KC8PBO" wrote
> Greetings,
> I have a multi-band dipole fed with coax, the total coax run is approx
35'.
> I would like to install a remote antenna auto tuner at the feedpoint, but
> the mast won't support the tuner at that height. So my question is, if I
> mount the auto tuner at a lower point, say 10' down from the feedpoint, do
I
> lose the advantage of using a remote tuner to tune at the antenna rather
> than the feedline?
>

> Thanks
>
> Steve
> KC8PBO
>
>

4523. Re: Tunable Balun Idea

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-05 13:04:20 UTC
From: N4LQ <N4LQ@igLou.com>
Message-ID: <3d7604b3_3@news.iglou.com>
Source record: 135336

A .5" rod in a 5" coil would not do much!

--
Steve Ellington N4LQ.
"marvin rosen" <raghead@worldnet.att.net> wrote in message
news:Eqld9.9726$jG2.734324@bgtnsc05-news.ops.worldnet.att.net...
> A 1:1 balun can be made by winding 6-10 turns of
> coax around a 5" diameter form. Would it be feasable
> to insert a 7.5" X .5" ferrite rod in the middle of this
> form to vary the inductance by sliding it back & forth?
> The above would only be used with 100 watts output.
>
>
> ---
> Outgoing mail is certified Virus Free.
> Checked by AVG anti-virus system (http://www.grisoft.com).
> Version: 6.0.384 / Virus Database: 216 - Release Date: 8/21/02
>
>

4524. Re: Horizontal Loop Results

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-05 13:07:49 UTC
From: Alan <alannc44@{nospam}ix.netcom.com>
Message-ID: <FGId9.3422$FY1.294816@twister.southeast.rr.com>
Source record: 135265

Which band(s) did you work these stations?

Alan
--
Windsurfing Club: http://www.ibscc.org
Homepage: http://pw1.netcom.com/~alannc44/qsl.htm

"karl" <wb0vzz@email.msn.com> wrote in message
news:3d76b45d@news.sihope.com...
> Dear Group,
> About a week and a half(?) ago, I posted a question. I had a horizontal
> loop on the roof of my apartment building that was sized for 40M. I asked
> for opinions if I were to increased the size to maximum space available
with
> no thought of the resonant frequency. The replies I got ran the line of
> "give it a shot; it should still work plus give coverage to 80M possibly
> even 160M."
>
> Thought I'd give the group the results of the change. I grabbed my trusty
> spool of 26AWG enameled wire (I've got plenty -- anyone need some? :-),
and
> restrung the loop for max size. Over the Labor Day weekend, my log looked
> like this:
>
> New Jersey, North Carolina, New Mexico, Germany, Siberia, Denmark,
> Lithuania, England, the island of Malta, Israel, Czech Republic along with
a
> few others. My QTH is Minneapolis, in the heart of the city.
>
> Thanks for the input, Group. I think it's a "keeper"
>
> 73, Karl K0TBT
>
>

4525. Re: What am I emitting on 80M?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-05 13:11:49 UTC
From: CAM <Cecil.A.Moore@ieee.org>
Message-ID: <3D775815.A4042C9C@ieee.org>
Source record: 135266

Dick Carroll wrote:
> Roy, some of us have routinely used things we later learned weren't supposed to
> work, and this is another example. If I had known about radiation angles as a
> beginning Novice in the 50's I probably would have never expected that head high
> dipole to work as it did. I thought it was normal operation.

I, too, had a dipole at ten feet when I first became a Novice and it "worked".
When I raised it to twenty feet it worked a lot better. I pass that experience
on to newcomers.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

4526. Re: Need Advice on Remote Antenna Tuner Location

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-05 13:17:29 UTC
From: CAM <Cecil.A.Moore@ieee.org>
Message-ID: <3D775969.C32FC4E@ieee.org>
Source record: 135267

Steve KC8PBO wrote:
> I have a multi-band dipole fed with coax, the total coax run is approx 35'.

Steve, when you say you have a "multi-band dipole", do you mean a dipole
per band? Or do you mean a single dipole fed with coax? If the former,
an antenna tuner at the antenna won't help much. If the latter, switching
to ladder-line will cut your losses for a lot less than an auto-tuner.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

4527. Re: Tunable Balun Idea

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-05 13:29:56 UTC
From: richardharrison@webtv.net
Message-ID: <649-3D775C54-7@storefull-2398.public.lawson.webtv.net>
Source record: 135268

Marvin Rosen wrote:
"Would it be feasible to insert a 7.5" X 0.5" ferrite rod in the middle of this form to vary the inductance by sliding it back and forth?"

Permeability tuning is possible. Parallel resonance can produce high impedance. But, do you really want another adjustment to make?

Best regards, Richard Harrison, KB5WZI

4528. Re: What If You Could Tune Out Polarization Mis-Match?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-05 13:51:38 UTC
From: "J. McLaughlin" <JCM@Power-Net.Net>
Message-ID: <uneo9jhd6uvr82@corp.supernews.com>
Source record: 135169

The scheme described by W7EL works in a sometimes dramatic way. Many years ago, I worked as a broadcast engineer at a highpower FM broadcast station (earning school money). (This sort of job and its license, essentially, no longer exists.) The station had/has a sister station on the other side of the state. To monitor the sister station, a yagi was placed at near 400 feet (above a very high hill) connected to a receiver, a second yagi was placed at least 100 feet lower and connected to a receiver, and then a simple switching scheme was used to select the strongest signal. A pair of lights indicated which receiver was "on." When an airplane would be in the pattern (at either end) one could see the lights cycle slowly and then rapidly while the audio was perfect. To state the obvious conclusion: This scheme works best when/while the two signals have dramatically different amplitudes (or, with care, SNR). At HF, this includes spacing the antennas far apart. 73 Mac N8TT

--
J. Mc Laughlin - Michigan USA
Home: JCM@Power-Net.Net

"Roy Lewallen" <w7el@eznec.com> wrote in message
> I think the trick is to have a separate receiver for each antenna (the
> receivers having non-coherent local oscillators), and switch between the
> receiver outputs.
>
> Roy Lewallen, W7EL
>

4529. Re: What am I emitting on 80M?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-05 14:10:27 UTC
From: n2ey@aol.com
Message-ID: <9f4bfe89.0209050610.4061947c@posting.google.com>
Source record: 135170

CAM <Cecil.A.Moore@ieee.org> wrote in message news:<3D76D057.C59F9B0E@ieee.org>...
> 'Doc wrote:
> >
> > CAM wrote:
>
> > > My ladder-line "stretches" my 130 ft dipole over all
> > > of 80m.
>
> > I kinda doubt that, but I'll bet your tuner certainly helps.
>
> I don't use a tuner. 86 ft of 450 ohm ladder-line resonates
> my 130 ft dipole on 4 Mhz and 122 ft resonates it on 3.5 Mhz.
> Over any single band, varying the length of the ladder-line
> is just as effective as varying the length of the dipole.

And just as effective as readjusting a tuner.

Another way to describe Cecil's system is that it uses a "linear tuner" made of switchable transmission line elements instead of a lumped-element tuner made of adjustable inductors/capacitors. Same job, done a different way.

73 de Jim, N2EY

4530. Re: TGM Antennas

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-05 14:25:31 UTC
From: Nick G4FAL <g4fal@nospam.riverauto.co.uk>
Message-ID: <FNJd9.4547$J47.349168@stones>
Source record: 135171

"Joe Perge" <jmperge@attglobal.net> wrote in message
news:1833cf4b.0209021233.30323d9@posting.google.com...
> Any comments from users of the TGM hybrid 2 element antennas would be
> appreciated. I read the Eham reviews. Thanks,Joe,WB8HWF

Joe

I have an MQ2 on the roof of my house. It doesn't work as well as a bigger aerial and is probably only marginally better than a dipole. It has disadvantages as any compact, loaded aerial does. I have had plenty of contacts with mine however including all continents on 20m, 17m and 15m.

It has a fairly narrow bandwidth but my autotuner can match the feeder OK across the bands - works best at resonance as you would expect.

If your expectation are slightly above a wire dipole you will be happy. If you expect the thing to function as well as a full sized two element you will be disappointed. The MQ2 is however a LOT smaller than a full sized two element. I also have a Force 12 C-3SS and this is more than two times bigger in length and width than the MQ2 - the Force 12 works great but I couldn't put it on top of my house!! If the MQ2 is the biggest thing you can have then it will probably be fine for you.

Oh and by the way, I worked a fellow in the states (I'm in England) who also had an MQ2 except his was only 12 feet off the ground on a temporary pole and mine at about 45 feet! So they do work.

Good luck

--
Regards
Nick, G4FAL
mailto:g4fal@nospam.riverauto.co.uk

4531. Re: What am I emitting on 80M?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-05 14:31:52 UTC
From: Dick Carroll <dixie@townsqr.com>
Message-ID: <3D776AAB.71B07445@townsqr.com>
Source record: 135172

CAM wrote:

> Dick Carroll wrote:
> > Roy, some of us have routinely used things we later learned weren't supposed to
> > work, and this is another example. If I had known about radiation angles as a
> > beginning Novice in the 50's I probably would have never expected that head high
> > dipole to work as it did. I thought it was normal operation.
>
> I, too, had a dipole at ten feet when I first became a Novice and it "worked".
> When I raised it to twenty feet it worked a lot better

But if you hadn't raised it you wouldn't have known that - until you learned about radiation angles and how some theorists present their effects. Then you might well take from that learning that your Novice antenna couldn't have worked. But it did.

Dick

4532. Fractal Debate

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-05 14:33:37 UTC
From: VE9SRB <srbest@att.net>
Message-ID: <5XJd9.11934$jG2.891748@bgtnsc05-news.ops.worldnet.att.net>
Source record: 135173

"Fractenna" <fractenna@aol.com> wrote in message
news:20020903221016.06895.00000950@mb-cq.aol.com...

> <snip>

> 1) Please write up the figure of merit (cost function) you wish to pursue.
In
> this way, there can be no disagreements that the FOM was chosen a
posteriori,
> and thus bias any result in some way. Merely saying 'best bandwidth; best
> radiation resistance'; and so on begs the issue. It needs to be defined
> mathematically in a way that includes all the criteria and weights them in
a
> reasonable way.

> <snip>

I have some initial reservations on using an FOM calculation to evaluate the designs. In the design of an electrically small self-resonant monopole style antenna, the performance limitations are decreasing radiation resistance, increasing Q (decreasing bandwidth) and decreasing efficiency. [Note that there are other electrically small designs that overcome these limitations but that's a different topic] From that perspective, simultaneously maximizing radiation resistance, bandwidth and efficiency is the ultimate goal in the design of an electrically small antenna. The weighted FOM comparison could result in a situation where two designs have equal FOM but remarkably different performance characteristics, when these are considered separately. Additionally, in attempting to maximize FOM, are we not ultimately trying to maximize radiation resistance, bandwidth and efficiency?

However, I think that we will ultimately discover that the FOM calculation is irrelevant because electrically small monopole style antennas, occupying the same physical volume and being self-resonant at the same frequency will essentially have the same performance characteristics and the same FOM. Any FOM differences will primarily be a function of differences in efficiency.

To satisfy the FOM proponents, lets use the following FOM calculation to evaluate the designs:

FOM = 0.4 * R + 0.4* B + 0.2 * E

where

R = 1 - [(36 - Rr)/36]

B = 1 - [(24 - BW)/24]

E = 1 - [(98.9 - Eff)/98.9]

Rr is the antenna radiation resistance.

BW is the lossless antenna bandwidth determined from the matched SWR 1/2 power points (SWR = 5.282:1). The 1/2 power matched SWR bands are determined with respect to the antenna's resonant frequency and resonant radiation resistance (ZO for the SWR calculation is equal to Rr). BW is expressed in %.

Eff is the antenna efficiency in % determined at the self-resonant frequency from the difference in Rr and total resistance.

For the purposes of this exercise, the antennas must be in a monopole configuration over an infinite ground plane. With the exception of the first base segment (bottom of feed point), no wire section can touch the ground plane. The antenna must be base fed at the closest segment to the ground plane. The antenna must be constructed with a single continuous piece of wire. The antenna wire diameter must be 0.5 mm. Radiation resistance is determined at the antenna feed point. The antenna must fit within a volume of 6 cm height and a cylindrical radius of 1.5 cm. The antenna must be self-resonant at 350 MHz. The self-resonant frequency is determined in the situation where the antenna is lossless.

Geometry and total wire length are the variables. Maximize FOM at 350 MHz.

Steve VE9SRB

4533. Re: Dipole problems

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-05 15:04:37 UTC
From: jonathan.bowes@sepa.org.uk
Message-ID: <6820e6ce.0209050704.7f42fd35@posting.google.com>
Source record: 135174

Just a quick note to say a big thanks to all who replied to my post.
It's funny that someone mentioned the possibility of my mate having
his preamp in. He's got a ft-920 and claimed there was no indication
on the display that it was on. I need to get him to double-check it
though since I have my doubts.

Once again thanks to all, I appreciate the confirmation.

Jonathan
MM0OKG.

4534. Re: Need Advice on Remote Antenna Tuner Location

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-05 15:45:06 UTC
From: Andy Cowley <andy.cowley@uwe.ac.uk>
Message-ID: <3D777F2B.75CE1613@uwe.ac.uk>
Source record: 135175

Steve KC8PBO wrote:
>
> Greetings,
> I have a multi-band dipole fed with coax, the total coax run is approx 35'.
> I would like to install a remote antenna auto tuner at the feedpoint, but
> the mast won't support the tuner at that height. So my question is, if I
> mount the auto tuner at a lower point, say 10' down from the feedpoint, do I
> lose the advantage of using a remote tuner to tune at the antenna rather
> than the feedline?
>
> Thanks
>
> Steve
> KC8PBO

Dear Steve,

Use ladder line or twin, windowed line from the atu/autotuner to the feedpoint. This will dramatically reduce losses at the high SWRs likely if you are tuning a single dipole for all bands. The length of the ladder is not highly critical but some lengths are better than others. Have a look at W4RNLs web pages, particularly 'Antennas from the Ground Up' chapters 5 and 6. He gives impedances at the end of twin lines of various lengths for at least two different length dipoles.

You will need a balun, between the atu and the ladder, or if you decide to float the auto atu and put the balun before it (this is what I use with my SGC 230) you must also choke the control and power lines to the atu to avoid RF in the shack and a radiating feeder.

The scheme I think you are proposing has all the advantages of a remote ATU and the convenience of coax feed into the shack. Before I got my SGC I use a balanced ATU in the shack and fed the antenna with 450 ohm twin to good effect. I'm probably more fussy about losses than you need to be as my licence limits me to 10 W (no typo that is ten). Getting twin feeder into the shack is more difficult than coax to say the least. Twin line, especially 600 ohm ladder has very much less loss at high SWR than any coax, even LDF4/50. The twin line will be operating at high SWR on some bands but your coax will be operating at 1:1 on all bands.

vy 73 and good DX

Andy, M3ABC

4535. Re: HF Antenna for portable operation

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-05 16:48:08 UTC
From: 'Doc <w5lz@icok.net>
Message-ID: <3D778AA7.5AF7707D@icok.net>
Source record: 135176

Rich,
Have you thought about using a mobile antenna?
'Doc

4536. Problem - Part II

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-05 17:23:49 UTC
From: Lou <tech@dp.net>
Message-ID: <al84v9$169$1@news.dp.net>
Source record: 135177

I just want to say, first of all, I was dumb for opening up the two messages as I alluded to in the Post "Problem".

There was in fact a virus in one of them. Having said that, NORMALLY I'm an easy guy to get along with. Easy going and so on..... UNTIL someone screws with me, my belongings or family and friends... Having said that, I'm going to do something I try to refrain from normally when I get pissed off from things on line.

THANK YOU TO THE "PRICK" WHO POSTED THE VIRUS OPENLY.

I HOPE YOU GOT A GOOD LAUGH. I ALSO HOPE AND I KNOW, SOMEDAY, YOU'LL GET YOURS. YOU C-S-ER.

ANYONE who deliberately does something to screw someone else's equipment up or cause damage or injury in my book, is a no good son of a bitch, likened to Osama Bin Laden and a PIECE OF SHIT. YOU NEED TAKEN OUT.
YOU are nothing shy of a TERRORIST yourself.

While I will recover from this once I replace the files I had to delete, I will NOT forget this episode should I meet you.
YOU want to try to sue me for slander or libel, FINE, GO FOR IT. COUNTER CHARGES can be filed too. At least I'll get to know WHO I have to go after........I don't think anyone could or would fault me for being pissed off after a virus attack.

Lou/Tech@DP.NET

4537. Re: What If You Could Tune Out Polarization Mis-Match?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-05 18:46:54 UTC
From: richardharrison@webtv.net
Message-ID: <24352-3D77A69E-170@storefull-2396.public.lawson.webtv.net>
Source record: 135179

J. NcLaughlin, N8TT wrote:
"When an airplane would be in the pattern (at either end) one could see the lights cycle slowly and then rapidly while the audio was perfect."

Thanks to E.H. Armstrong. An underappreciated fact is the constant amplitude characteristic of FM. A receiver well into limiting tends to have a constant demodulated output regardless of r-f amplitude variations. Microwave repeaters are feasible for analog signals because baseband levels don`t change. You can watch limiter currents flail around while a demodulated tone appears glued in place. Your VHF ham repeater also has this advantage. Don`t expect this from AM.

Best regards, Richard Harrison, KB5WZI

4538. Re: Problem - Part II

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-05 19:03:19 UTC
From: Vito <vito@crosslink.net>
Message-ID: <3D77AA77.152DD170@crosslink.net>
Source record: 135178

Lou wrote:
>
> I just want to say,...

Awww, calm down then tell us how you really feel .... ;o)

4539. Question about ladder line and metal mast

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-05 19:35:30 UTC
From: vhfradiobuff@yahoo.com
Message-ID: <1996cb6d.0209051135.341e8c12@posting.google.com>
Source record: 135180

If I string up a dipole fed by ladder line, and support the center of the dipole on top of 2 metal masts, will the ladder line be affected if it's taped to the metal mast? If so, what kind of angle away from the mast should I have the ladder line and which direction should it go in relation to the wire? I plan on having the dipole as an inverted V.

4540. Re: Problem - Part II

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-05 19:52:05 UTC
From: Dan/W4NTI <w4nti@mindspringnospam.com>
Message-ID: <al8cl2$i3e$1@slb2.atl.mindspring.net>
Source record: 135181

Finally a guy that thinks like a real man. When some piece of crap dumps on you....break his damn knee caps.

Dan/W4NTI

"Lou" <tech@dp.net> wrote in message news:al84v9$169$1@news.dp.net...
> I just want to say, first of all, I was dumb for opening up the two messages
> as I alluded to in the Post "Problem".
>
> There was in fact a virus in one of them. Having said that, NORMALLY I'm an
> easy guy to get along with. Easy going and so on..... UNTIL someone screws
> with me, my belongings or family and friends... Having said that, I'm going
> to do something I try to refrain from normally when I get pissed off from
> things on line.
>
> THANK YOU TO THE "PRICK" WHO POSTED THE VIRUS OPENLY.
>
> I HOPE YOU GOT A GOOD LAUGH. I ALSO HOPE AND I KNOW, SOMEDAY, YOU'LL GET
> YOURS. YOU C-S-ER.
>
> ANYONE who deliberately does something to screw someone else's equipment up
> or cause damage or injury in my book, is a no good son of a bitch, likened
> to Osama Bin Laden and a PIECE OF SHIT. YOU NEED TAKEN OUT.
> YOU are nothing shy of a TERRORIST yourself.
>
> While I will recover from this once I replace the files I had to delete, I
> will NOT forget this episode should I meet you.
> YOU want to try to sue me for slander or libel, FINE, GO FOR IT. COUNTER
> CHARGES can be filed too. At least I'll get to know WHO I have to go
> after.....I don't think anyone could or would fault me for being pissed
> off after a virus attack.
>
>
> Lou/Tech@DP.NET
>
>
>
>
>

4541. Re: Question about ladder line and metal mast

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-05 19:54:23 UTC
From: Dan/W4NTI <w4nti@mindspringnospam.com>
Message-ID: <al8cpd$38i$1@slb6.atl.mindspring.net>
Source record: 135183

Yes it will be affected by taping the ladder line to the metal mast. Good rule of thumb is keep it about 6" away from the mast.

Dan/W4NTI

<vhfradiobuff@yahoo.com> wrote in message news:1996cb6d.0209051135.341e8c12@posting.google.com...
> If I string up a dipole fed by ladder line, and support the center of
> the dipole on top of 2 metal masts, will the ladder line be affected
> if it's taped to the metal mast? If so, what kind of angle away from
> the mast should I have the ladder line and which direction should it
> go in relation to the wire? I plan on having the dipole as an inverted
> V.

4542. Re: Horizontal Loop Results

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-05 19:58:16 UTC
From: karl <wb0vzz@email.msn.com>
Message-ID: <3d77b648$1@news.sihope.com>
Source record: 135182

mostly 17M and 15M, Alan

Karl

"Alan" <alannc44@{nospam}ix.netcom.com> wrote in message
news:FGId9.3422$FY1.294816@twister.southeast.rr.com...
> Which band(s) did you work these stations?
>
> Alan
> --
> Windsurfing Club: http://www.ibscc.org
> Homepage: http://pw1.netcom.com/~alannc44/qsl.htm
>
> "karl" <wb0vzz@email.msn.com> wrote in message
> news:3d76b45d@news.sihope.com...
> > Dear Group,
> > About a week and a half(?) ago, I posted a question. I had a horizontal
> > loop on the roof of my apartment building that was sized for 40M. I
asked
> > for opinions if I were to increased the size to maximum space available
> with
> > no thought of the resonant frequency. The replies I got ran the line of
> > "give it a shot; it should still work plus give coverage to 80M possibly
> > even 160M."
> >
> > Thought I'd give the group the results of the change. I grabbed my
trusty
> > spool of 26AWG enameled wire (I've got plenty -- anyone need some? :-),
> and
> > restrung the loop for max size. Over the Labor Day weekend, my log
looked
> > like this:
> >
> > New Jersey, North Carolina, New Mexico, Germany, Siberia, Denmark,
> > Lithuania, England, the island of Malta, Israel, Czech Republic along
with
> a
> > few others. My QTH is Minneapolis, in the heart of the city.
> >
> > Thanks for the input, Group. I think it's a "keeper"
> >
> > 73, Karl K0TBT
> >
> >
>

>

4543. Re: Fractal Debate

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-05 20:52:23 UTC
From: Reg Edwards <g4fgq.regp@btinternet.com>
Message-ID: <al8g65$797$1@venus.btinternet.com>
Source record: 135184

It would be of great help to the bystanders if sombody defined what an FOM
is instead of somebody trying to be clever !

========================
Regards from Reg G4FGQ
Free Radio Design Software
Go to http://www.g4fgq.com
========================

"VE9SRB" <srbest@att.net> wrote in message
news:5XJd9.11934$jG2.891748@bgtnsc05-news.ops.worldnet.att.net...
> "Fractenna" <fractenna@aol.com> wrote in message
> news:20020903221016.06895.00000950@mb-cq.aol.com...
>
> > <snip>
>
> > 1) Please write up the figure of merit (cost function) you wish to
pursue.
> In
> > this way, there can be no disagreements that the FOM was chosen a
> posteriori,
> > and thus bias any result in some way. Merely saying 'best bandwidth;
best
> > radiation resistance'; and so on begs the issue. It needs to be defined
> > mathematically in a way that includes all the criteria and weights them
in
> a
> > reasonable way.
>
> > <snip>
>
> I have some initial reservations on using an FOM calculation to evaluate
the
> designs. In the design of an electrically small self-resonant monopole
> style antenna, the performance limitations are decreasing radiation
> resistance, increasing Q (decreasing bandwidth) and decreasing efficiency.
> [Note that there are other electrically small designs that overcome these
> limitations but that's a different topic] From that perspective,
> simultaneously maximizing radiation resistance, bandwidth and efficiency
is
> the ultimate goal in the design of an electrically small antenna. The
> weighted FOM comparison could result in a situation where two designs have
> equal FOM but remarkably different performance characteristics, when these
> are considered separately. Additionally, in attempting to maximize FOM,

are
> we not ultimately trying to maximize radiation resistance, bandwidth and
> efficiency?
>
> However, I think that we will ultimately discover that the FOM calculation
> is irrelevant because electrically small monopole style antennas,
occupying
> the same physical volume and being self-resonant at the same frequency
will
> essentially have the same performance characteristics and the same FOM.
Any
> FOM differences will primarily be a function of differences in efficiency.
>
> To satisfy the FOM proponents, lets use the following FOM calculation to
> evaluate the designs:
>
> FOM = 0.4 * R + 0.4* B + 0.2 * E
>
> where
>
> R = 1 - [(36 - Rr)/36]
>
> B = 1 - [(24 - BW)/24]
>
> E = 1 - [(98.9 - Eff)/98.9]
>
> Rr is the antenna radiation resistance.
>
> BW is the lossless antenna bandwidth determined from the matched SWR 1/2
> power points (SWR = 5.282:1). The 1/2 power matched SWR bands are
> determined with respect to the antenna's resonant frequency and resonant
> radiation resistance (ZO for the SWR calculation is equal to Rr). BW is
> expressed in %.
>
> Eff is the antenna efficiency in % determined at the self-resonant
frequency
> from the difference in Rr and total resistance.
>
> For the purposes of this exercise, the antennas must be in a monopole
> configuration over an infinite ground plane. With the exception of the
> first base segment (bottom of feed point), no wire section can touch the
> ground plane. The antenna must be base fed at the closest segment to the
> ground plane. The antenna must be constructed with a single continuous
> piece of wire. The antenna wire diameter must be 0.5 mm. Radiation
> resistance is determined at the antenna feed point. The antenna must fit
> within a volume of 6 cm height and a cylindrical radius of 1.5 cm. The
> antenna must be self-resonant at 350 MHz. The self-resonant frequency is
> determined in the situation where the antenna is lossless.
>
> Geometry and total wire length are the variables. Maximize FOM at 350

MHz.
>
> Steve VE9SRB
>
>
>
>

4544. Re: Horizontal Loop Results

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-05 20:53:01 UTC
From: Alan <alannc44@{nospam}ix.netcom.com>
Message-ID: <NuPd9.3488$FY1.336593@twister.southeast.rr.com>
Source record: 135185

Thanks. Have you noticed much difference on 40 yet?

Alan

--
Windsurfing Club: http://www.ibscc.org
Homepage: http://pw1.netcom.com/~alannc44/qsl.htm

"karl" <wb0vzz@email.msn.com> wrote in message
news:3d77b648$1@news.sihope.com...
> mostly 17M and 15M, Alan
>
> Karl
>
> "Alan" <alannc44@{nospam}ix.netcom.com> wrote in message
> news:FGId9.3422$FY1.294816@twister.southeast.rr.com...
> > Which band(s) did you work these stations?
> >
> > Alan
> > --
> > Windsurfing Club: http://www.ibscc.org
> > Homepage: http://pw1.netcom.com/~alannc44/qsl.htm
> >
> > "karl" <wb0vzz@email.msn.com> wrote in message
> > news:3d76b45d@news.sihope.com...
> > > Dear Group,
> > > About a week and a half(?) ago, I posted a question. I had a
horizontal
> > > loop on the roof of my apartment building that was sized for 40M. I
> asked
> > > for opinions if I were to increased the size to maximum space
available
> > with
> > > no thought of the resonant frequency. The replies I got ran the line
of
> > > "give it a shot; it should still work plus give coverage to 80M
possibly
> > > even 160M."
> > >
> > > Thought I'd give the group the results of the change. I grabbed my
> trusty
> > > spool of 26AWG enameled wire (I've got plenty -- anyone need some?
:-),
> > and
> > > restrung the loop for max size. Over the Labor Day weekend, my log

> looked
> > > like this:
> > >
> > > New Jersey, North Carolina, New Mexico, Germany, Siberia, Denmark,
> > > Lithuania, England, the island of Malta, Israel, Czech Republic along
> with
> > a
> > > few others. My QTH is Minneapolis, in the heart of the city.
> > >
> > > Thanks for the input, Group. I think it's a "keeper"
> > >
> > > 73, Karl K0TBT
> > >
> > >
> >
> >
>
>

4545. Re: Horizontal Loop Results

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-05 21:09:41 UTC
From: karl <wb0vzz@email.msn.com>
Message-ID: <3d77c707$1@news.sihope.com>
Source record: 135186

Nope, only been "reading the mail" on 40M. As a receive antenna, it seems pretty good, noise-wise. Have to find a spot some evening and call "CQ" to try that band out. The 20M, 17M, and 15M are my favorite bands, however.

Karl

"Alan" <alannc44@{nospam}ix.netcom.com> wrote in message
news:NuPd9.3488$FY1.336593@twister.southeast.rr.com...
> Thanks. Have you noticed much difference on 40 yet?
>
> Alan
>
> --
> Windsurfing Club: http://www.ibscc.org
> Homepage: http://pw1.netcom.com/~alannc44/qsl.htm
>
> "karl" <wb0vzz@email.msn.com> wrote in message
> news:3d77b648$1@news.sihope.com...
> > mostly 17M and 15M, Alan
> >
> > Karl
> >
> > "Alan" <alannc44@{nospam}ix.netcom.com> wrote in message
> > news:FGId9.3422$FY1.294816@twister.southeast.rr.com...
> > > Which band(s) did you work these stations?
> > >
> > > Alan
> > > --
> > > Windsurfing Club: http://www.ibscc.org
> > > Homepage: http://pw1.netcom.com/~alannc44/qsl.htm
> > >
> > > "karl" <wb0vzz@email.msn.com> wrote in message
> > > news:3d76b45d@news.sihope.com...
> > > > Dear Group,
> > > > About a week and a half(?) ago, I posted a question. I had a
> horizontal
> > > > loop on the roof of my apartment building that was sized for 40M. I
> > asked
> > > > for opinions if I were to increased the size to maximum space
> available
> > > with
> > > > no thought of the resonant frequency. The replies I got ran the
line
> of
> > > > "give it a shot; it should still work plus give coverage to 80M

> possibly
> > > > even 160M."
> > > >
> > > > Thought I'd give the group the results of the change. I grabbed my
> > trusty
> > > > spool of 26AWG enameled wire (I've got plenty -- anyone need some?
> :-),
> > > and
> > > > restrung the loop for max size. Over the Labor Day weekend, my log
> > looked
> > > > like this:
> > > >
> > > > New Jersey, North Carolina, New Mexico, Germany, Siberia, Denmark,
> > > > Lithuania, England, the island of Malta, Israel, Czech Republic
along
> > with
> > > a
> > > > few others. My QTH is Minneapolis, in the heart of the city.
> > > >
> > > > Thanks for the input, Group. I think it's a "keeper"
> > > >
> > > > 73, Karl K0TBT
> > > >
> > > >
> > >
> > >
> > >
> >
> >
>
>

4546. Re: how to deal with limited antenna space?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-05 21:16:12 UTC
From: Serial # 19781010 <frank_nospam@valdor.de>
Message-ID: <vjgfnu4b3jrac6e17sfh8oo78s275p6eob@4ax.com>
Source record: 135187

On Sun, 11 Aug 2002 14:29:59 GMT, Bob Miller <bamiller@texas.net>
wrote:

>"newsguy" <harpoon32@yahoo.com> wrote:
...snip...
>
>>
>
>A vertical is one way to go. You can also do well with a stealthy dipole. A
>dipole for 20 meters is only 33' long, total. And that will talk all over the
>world. Dipoles for the higher bands are even shorter -- a 10 meter dipole is
>only 16'. So it may be tricky to get on 40, 80 or 160 from your lot, but the
>higher bands are well within possibility, especially with the tree you have to
>hold up one leg of a wire antenna.

A vertical is really a good choice for this situation. I'm running a
R-7 (Cushcraft) on the garage for 5 years now and worked 250 DXCC
countries with 100 watts. Be aware however that you will have to stand
in line in pile-up. But that's not important if you're not interested
in DXing...

Frank
DH5JG
KC8RNL

>
>Bob
>k5qwg

4547. Re: Question about F antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-05 21:19:09 UTC
From: David Robbins <k1ttt@arrl.net>
Message-ID: <al8hob0293c@enews2.newsguy.com>
Source record: 135188

yes.

you can take one wire and bend it, or connect together several straight
wires.

"Gilbert Mouget" <nospam@thank.you> wrote in message
news:3d7739ad$0$459$626a54ce@news.free.fr...
>
>
> Is a fractal antenna made of several straight wires or of one bended wire
?
>
>
> --
> That Which Is Static And Repetitive Is Boring.
> That Which Is Dynamic And Random Is Confusing.
> In Between Lies Art.
> --John A. Locke

4548. Re: Fractal Debate

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-05 21:40:07 UTC
From: David Robbins <k1ttt@arrl.net>
Message-ID: <al8ivj02bp1@enews2.newsguy.com>
Source record: 135189

"Reg Edwards" <g4fgq.regp@btinternet.com> wrote in message
news:al8g65$797$1@venus.btinternet.com...
> It would be of great help to the bystanders if sombody defined what an FOM
> is instead of somebody trying to be clever !

a Figure Of Merit (FOM) is nothing more than a formula that combines 2 or more characteristics of an antenna in some fashion to let you compare different designs to each other by looking at a single number. The things being compared are often in different units, like ohms and hz or unitless % efficiency or db's of gain/loss. the formula provides various weights to each characteristic and usually compares them to some maximum or desired target value. There is no set way to assign the weights and target values, those are up to the designer and depend on what the objectives of the comparison are.

contest scoring is a typical example of a FOM use in ham radio. in most contests there are several targets, the total number of contacts, the number of countries worked, and the number of zones worked are typical measures of how well an operator does. Those various measures are combined with a formula that assigns points to different contacts depending on distance, then multiplied by the total number of countries and zones worked. The resulting score is a FOM that can be used to rank the participants.

You must also note that there must be constraints on unmeasured characteristics for comparisons of FOM's to be valid. In the contest score case the number of transmitters, power, number of operators, and location are typically constrained so that only stations in similar locations with similar equipment are compared to each other. In the antenna case you must constrain things like height above ground, size, type of material, and frequency in order to be able to compare a FOM based on measurable characteristics like impedance, efficiency, and bandwidth.

4549. Re: Problem - Part II

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-05 21:44:04 UTC
From: David Robbins <k1ttt@arrl.net>
Message-ID: <al8j7002c6a@enews2.newsguy.com>
Source record: 135190

I wonder if we could get him pissed off against this guy in Iraq that no one seems to like?

"Dan/W4NTI" <w4nti@mindspringnospam.com> wrote in message news:al8cl2$i3e$1@slb2.atl.mindspring.net...
> Finally a guy that thinks like a real man. When some piece of crap dumps on
> you....break his damn knee caps.
>
> Dan/W4NTI
>
>
> "Lou" <tech@dp.net> wrote in message news:al84v9$169$1@news.dp.net...
> > I just want to say, first of all, I was dumb for opening up the two
> messages
> > as I alluded to in the Post "Problem".
> >
> > There was in fact a virus in one of them. Having said that, NORMALLY I'm
> an
> > easy guy to get along with. Easy going and so on..... UNTIL someone
> screws
> > with me, my belongings or family and friends... Having said that, I'm
> going
> > to do something I try to refrain from normally when I get pissed off
from
> > things on line.
> >
> > THANK YOU TO THE "PRICK" WHO POSTED THE VIRUS OPENLY.
> >
> > I HOPE YOU GOT A GOOD LAUGH. I ALSO HOPE AND I KNOW, SOMEDAY, YOU'LL GET
> > YOURS. YOU C-S-ER.
> >
> > ANYONE who deliberately does something to screw someone else's equipment
> up
> > or cause damage or injury in my book, is a no good son of a bitch,
likened
> > to Osama Bin Laden and a PIECE OF SHIT. YOU NEED TAKEN OUT.
> > YOU are nothing shy of a TERRORIST yourself.
> >
> > While I will recover from this once I replace the files I had to delete,
I
> > will NOT forget this episode should I meet you.
> > YOU want to try to sue me for slander or libel, FINE, GO FOR IT. COUNTER
> > CHARGES can be filed too. At least I'll get to know WHO I have to go

> > after.....I don't think anyone could or would fault me for being
pissed
> > off after a virus attack.
> >
> >
> > Lou/Tech@DP.NET
> >
> >
> >
> >
> >
>
>

4550. Re: Problem - Part II

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-05 22:28:45 UTC
From: Dan/W4NTI <w4nti@mindspringnospam.com>
Message-ID: <al8lrr$h9$1@slb4.atl.mindspring.net>
Source record: 135191

IMHO that needs to be done by a LOT of so called Americans.

Dan/W4NTI

"David Robbins" <k1ttt@arrl.net> wrote in message
news:al8j7002c6a@enews2.newsguy.com...
> I wonder if we could get him pissed off against this guy in Iraq that no
one
> seems to like?
>
> "Dan/W4NTI" <w4nti@mindspringnospam.com> wrote in message
> news:al8cl2$i3e$1@slb2.atl.mindspring.net...
> > Finally a guy that thinks like a real man. When some piece of crap
dumps
> on
> > you....break his damn knee caps.
> >
> > Dan/W4NTI
> >
> >
> > "Lou" <tech@dp.net> wrote in message news:al84v9$169$1@news.dp.net...
> > > I just want to say, first of all, I was dumb for opening up the two
> > messages
> > > as I alluded to in the Post "Problem".
> > >
> > > There was in fact a virus in one of them. Having said that, NORMALLY
I'm
> > an
> > > easy guy to get along with. Easy going and so on..... UNTIL someone
> > screws
> > > with me, my belongings or family and friends... Having said that, I'm
> > going
> > > to do something I try to refrain from normally when I get pissed off
> from
> > > things on line.
> > >
> > > THANK YOU TO THE "PRICK" WHO POSTED THE VIRUS OPENLY.
> > >
> > > I HOPE YOU GOT A GOOD LAUGH. I ALSO HOPE AND I KNOW, SOMEDAY, YOU'LL
GET
> > > YOURS. YOU C-S-ER.
> > >
> > > ANYONE who deliberately does something to screw someone else's
equipment
> > up

> > > or cause damage or injury in my book, is a no good son of a bitch,
> likened
> > > to Osama Bin Laden and a PIECE OF SHIT. YOU NEED TAKEN OUT.
> > > YOU are nothing shy of a TERRORIST yourself.
> > >
> > > While I will recover from this once I replace the files I had to
delete,
> I
> > > will NOT forget this episode should I meet you.
> > > YOU want to try to sue me for slander or libel, FINE, GO FOR IT.
COUNTER
> > > CHARGES can be filed too. At least I'll get to know WHO I have to go
> > > after.....I don't think anyone could or would fault me for being
> pissed
> > > off after a virus attack.
> > >
> > >
> > > Lou/Tech@DP.NET
> > >
> > >
> > >
> > >
> > >
> >
> >
>
>

4551. Re: Fractal Debate

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-05 22:36:19 UTC
From: VE9SRB <srbest@att.net>
Message-ID: <D%Qd9.12456$jG2.940096@bgtnsc05-news.ops.worldnet.att.net>
Source record: 135192

"Reg Edwards" <g4fgq.regp@btinternet.com> wrote in message
news:al8g65$797$1@venus.btinternet.com...
> It would be of great help to the bystanders if sombody defined what an FOM
> is instead of somebody trying to be clever !
> ---

It stands for Figure Of Merit. In comparing different antennas, Chip N1IR, prefers to calculate a single number, derived from certain antenna properties, that provides an indication of how well the antenna performs. I would prefer to simply compare the antenna performance characteristics directly.

The performance characteristics that I would like to compare are the antenna's radiation resistance, 1/2 power SWR bandwidth (a direct indication of 2/Q), and the antenna efficiency. Agreeing to provide an FOM calculation for Chip to use, I defined the FOM as follows:

FOM = 0.4 * R + 0.4* B + 0.2 * E

where

R = 1 - [(36 - Rr)/36]

B = 1 - [(24 - BW)/24]

E = 1 - [(98.9 - Eff)/98.9]

Rr is the antenna radiation resistance, BW is the lossless 1/2 power SWR bandwidth and Eff is the antenna efficiency. The calculation of R, B and E are based on comparing the performance of the electrically small monopole to that of a full size, approx. 1/4 wave monopole, self-resonant at the same frequency as the electrically small monopole. The full size monopole has a radiation resistance of approx. 36 ohms, a 1/2 power BW of approx 24%, and efficiency of approx. 98.9%. I weighted the radiation resistance and bandwidth more so than efficiency because they are would less likely to approach those of the full size monopole.

If the small antenna has performance characteristics matching those of the full size monopole (it won't because of its small height), the FOM would equal 1. Performance degradation from the full size monopole will decrease the FOM.

Steve VE9SRB

4552. Re: HF Antenna for portable operation

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-05 22:50:28 UTC
From: David Ornee <daveornee@mindspring.com>
Message-ID: <al8nau$gj8$1@slb3.atl.mindspring.net>
Source record: 135194

MFJ sells a 33' mast that Collapses to 3.8 ft., weighs 3.3 lbs. Just pull
out each section and twist to lock.
Bottom section is 1 3/4 inch diameter.
See the details at URL:
http://www.mfjenterprises.com/products.php?prodid=MFJ-1910
World Radio sells a carbon fiber version, but they are on back order.
You can home brew your own with aluminum, plastic pipe or bamboo.
Tent poles often interlock for a potential idea.
You might also try a surplus camera tripod for the "base support" or some
rope lines and tent stakes.
Have fun, but be safe!
73
KQ9W, David Ornee, Western Springs, IL

"Rich McMahon" <rhmcus@yahoo.com> wrote in message
news:3d77007f.3295459530@news.us.dell.com...
> All
>
> I go camping quite often and bring along the HW8 or TenTec Scout.. Ive
> used a full sized G5RV with good success. However, not every place I
> go has trees or a structure that I can attach an antenna to.
>
> I do like working 80meters in the evening and 40 20 and 15 meters
> also. With the G5RV along with the need for place to hang the antenna
> I've also noticed stray RF floating around and if a mic is used with
> the scout RF can be found there not good.
>
> So what is a recommendation for a good portable antenna that can be
> used for camping or emergency work.. I have a Gap Titan DX but its not
> exactly small or portable although I have moved it several times for
> Jamboree on the Air for the Boy Scouts.
>
> Any recommendations of a good portable antenna?
>
> Thanks
>
> Rich KG5IF

4553. Re: Fractal Debate

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-05 22:50:42 UTC
From: dplatt@radagast.org
Message-ID: <unfnu2bgbk8d8a@corp.supernews.com>
Source record: 135193

In article <al8g65$797$1@venus.btinternet.com>,
Reg Edwards <g4fgq.regp@btinternet.com> wrote:

>It would be of great help to the bystanders if sombody defined what an FOM
>is instead of somebody trying to be clever !

"Figure Of Merit".

It's a formula into which you plug all of the significant numbers about something's characteristics, and come out with a simple, single number which represents "How good is it, really?". The person or group who selects the formula, gets to decide how the various inputs are weighted.

You then plug in the characteristics of all of the candidates (sample antennas, or whatever), and whichever one has the highest FOM "wins".

In an honest evaluation/contest, it's not fair to pick the FOM formula _after_ the various candidates have been submitted for judging, because it's usually quite easy to skew the FOM formula to favor a given candidate (in fact, doing so is just another sort of optimization problem).

Rather, you should pick the FOM formula [1] in advance, and [2] with a clear understanding and agreement as to exactly what the weighting and comparison rules are. It helps reduce arguments, too, if you can [3] get everybody to agree that the weighting rules actually correspond to a fair, 'good' solution of the problem being solved... this helps reduce the risk that someone will claim, after the fact, that the rules were subtly slanted in favor of a given candidate or design approach.

In the case of an antenna competition such as this, I'd imagine that the FOM will have terms which will favor physical smallness, high radiative efficiency, convenient feedpoint impedance, and [perhaps] something to either favor, or discourage certain types of directional gain. Weight, volume, and internal complexity (e.g. number of antenna segments) would likely not be considered as terribly significant.

Vulnerability to feedline radiation (i.e. imbalance) might also be worth factoring in, especially given all the controversy about E/H antennas and whether it's the antenna, or its coax which is actually radiating.

--
Dave Platt <dplatt@radagast.org> AE6EO
Hosting the Jade Warrior home page: http://www.radagast.org/jade-warrior

I do _not_ wish to receive unsolicited commercial email, and I will
boycott any company which has the gall to send me such ads!

4554. RE:Problem

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-06 00:02:00 UTC
From: Lou <tech@dp.net>
Message-ID: <al8sa5dik1@news.dp.net>
Source record: 135195

Being a man, I would like to say something here.....

To those of you who were "innocent" or maybe "accidentally" forwarded the virus, I APOLOGIZE for my barrage of words regarding the Virus I contracted on-line in the Newsgroup.

NONE of that was meant for any of you. I'm sorry YOU - the innocent - had to endure it. I hope you will accept my apology in that regard. I especially apologize to any minors/women/others easily offended who may have been witness to it.

But for the guilty party(ies), my words still stand as spoken. I will NEVER apologize to anyone who intends me or anyone else harm in any respect. Especially when I did nothing to provoke it nor even know them. IF you want to see hell freeze over, try waiting for me to apologize to you, the guilty.

Lou/Tech@DP.NET

4555. Re: Is Chip responsive or evasive?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-06 00:29:46 UTC
From: Rollo <nobody@nowhere.com>
Message-ID: <1107_1031272233@netnews.attbi.com>
Source record: 135196

> My thought is Chip is just tap-dancing, but what do the others think? Like
> all the past "dialogues" with Chip, it will degenerate into meaninglessness.

Like it's not already THERE, your post and all?

4556. Re: TGM Antennas

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-06 00:35:50 UTC
From: K4IA <K4ia@novacoxmail.com>
Message-ID: <GLSd9.44838$Or1.3093288@news2.east.cox.net>
Source record: 135197

I know you read the eham reviews and I am sure you saw mine. I am very pleased with this antenna. 302 countries worked in a little over two years. Within the limitations of its size, I would say it is an excellent choice. If you can go bigger, by all means do it but if you can't, I don't think this one will let you down.
--
Radio K4IA
Craig "Buck"
Fredericksburg, Virginia USA

FISTS 6702 CC 788 Diamond 64
K1# 470 K2# 2460
"Joe Perge" <jmperge@attglobal.net> wrote in message
news:1833cf4b.0209021233.30323d9@posting.google.com...
> Any comments from users of the TGM hybrid 2 element antennas would be
> appreciated. I read the Eham reviews. Thanks,Joe,WB8HWF

4557. Re: RE:Problem

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-06 01:08:03 UTC
From: Chuck/KE4ETH <chuck_hawks@hotmailmospamorama.com>
Message-ID: <6cTd9.13298$2L.1058900@e3500-atl2.usenetserver.com>
Source record: 135198

Lou,

I personally took no offense at your post. My post, was meant to warn
others of the message. When I looked at the source of the message, it was a
java script looper. It is mostly harmless, just a pain to get.

--
Chuck
KE4ETH

x-no-archive: yes
"Lou" <tech@dp.net> wrote in message news:al8sa5dik1@news.dp.net...
> Being a man, I would like to say something here........
>
> To those of you who were "innocent" or maybe "accidentally" forwarded the
> virus, I APOLOGIZE for my barrage of words regarding the Virus I
contracted
> on-line in the Newsgroup.
>
> NONE of that was meant for any of you. I'm sorry YOU - the innocent - had
to
> endure it. I hope you will accept my apology in that regard. I especially
> apologize to any minors/women/others easily offended who may have been
> witness to it.
>
> But for the guilty party(ies), my words still stand as spoken. I will
NEVER
> apologize to anyone who intends me or anyone else harm in any respect.
> Especially when I did nothing to provoke it nor even know them. IF you
want
> to see hell freeze over, try waiting for me to apologize to you, the
guilty.
>
> Lou/Tech@DP.NET
>
>

4558. Re: Fractal Debate

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-06 01:26:21 UTC
From: "Peter O. Brackett" <ab4bc@ix.netcom.com>
Message-ID: <al907qbqi1@slb6.atl.mindspring.net>
Source record: 135199

Steve et al:

[snip]
>Agreeing to provide an FOM calculation
> for Chip to use, I defined the FOM as follows:
>
> FOM = 0.4 * R + 0.4* B + 0.2 * E
[snip]

Let's all be perfectly clear and understand what is going to happen here.

Chip is *NOT* going to use the FOM [Figure Of Merit, a.k.a. Objective Function] himself. Rather a mathematical optimization computer routine which Chip has either purchased or downloaded as share/freeware will use the FOM as the target objective function for optimization.

Chip did not develop the mathematical optimization techniques or routines that he uses. That is not his contribution to this field. Rather these general purpose computer implemented mathematical optimization routines have been developed over many years by various rearchers and developers who participate in the very active science of mathematical optimization, and by those in the mathematical optimization business who develop the computer programs for various and general applications.

[Chip has said that he uses a Genetic Algorithm [GA] optimizer. You can get one of these for yourself. For instance - cfr the WWW site at: http://www-fp.mcs.anl.gov/otc/Guide/OptWeb/ which is a great site outlining most of the known modern methods of mathematical optimization including GA techniques. It also gives the locations from which to acquire either commercial or free/shareware mathematical optimization programs for your own use.]

Mathematical optimization routines must always be "customized" to the desired application by supplying two customization routines to the generic optimizer.

1) An FOM routine:

One has to write and supply a computer routine to the optimizer which incorporates the designer's desired FOM. Chip will provide the agreed upon FOM to the GA as a subroutine and let the mathematical optimization run until it finds an optimum [i.e. a minimum or maximum] of the FOM.

2) A pattern search routine:

During the running of the optimizer the mathematical optimization routines need to be supplied with a computer routine to set forth a "search strategy"

for exploring the space of the design parameters. i.e. after evaluating the FOM [objective function] for a given design in a set of iterations the mathematical optimization program needs a way to arrive at the next iteration in the design space to get the next design for which it needs to evaluate the objective function for comparison to the previous FOM evaluations. This is called the "pattern of searching". In Chip's case the "search routine" supplies a set of fractal iterations of the antenna in question. And so... his GA application will search over many iterations of his chosen fractal until it finds a minimum or maximum value of the FOM among the string of FOM's that it has found.

Note that there is no guarantee that the minimum or maximum of the FOM found by the search is a "global optimum" in fact it will usually be only a "local optimum".

But that's neither here nor there...

And so... again Chip will not use the FOM... rather his store bought or freeware optimizer will use the FOM.

Let the games begin...

Best,

--Peter K1PO
Indialantic By-the-Sea, FL.

4559. Re: Need Advice on Remote Antenna Tuner Location

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-06 01:37:16 UTC
From: Steve Kaatz <skaatz1@yahoo.com>
Message-ID: <gFTd9.6953$yt3.3352770@newssrv26.news.prodigy.com>
Source record: 135203

It's 3 diploes tuned for 40-20-15-10 meters, with a common feedpoint, and I want to use it for other bands as well, so I assumed I would need a fairly wide range tuner, and that the optimum location would be at the feed point.

The tuner I had in mind is the LDG RT-11 which is coax in and out.

Ladder line is not feasible due to wire routing & other constraints...

Thanks
Steve

"CAM" <Cecil.A.Moore@ieee.org> wrote in message news:3D775969.C32FC4E@ieee.org...
> Steve KC8PBO wrote:
> > I have a multi-band dipole fed with coax, the total coax run is approx 35'.
>
> Steve, when you say you have a "multi-band dipole", do you mean a dipole
> per band? Or do you mean a single dipole fed with coax? If the former,
> an antenna tuner at the antenna won't help much. If the latter, switching
> to ladder-line will cut your losses for a lot less than an auto-tuner.
> --
> cheers, CAM http://www.qsl.net/w5dxp
>
>
> -----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
> http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
> -----== Over 80,000 Newsgroups - 16 Different Servers! =-----

4560. Re: Fractal Debate

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-06 01:39:14 UTC
From: "Peter O. Brackett" <ab4bc@ix.netcom.com>
Message-ID: <al911kkeo1@slb4.atl.mindspring.net>
Source record: 135200

Steve et al:

More background on the Genetic Algorithm technique of mathematical optimization may be found at:

http://solon.cma.univie.ac.at/~neum/glopt/techniques.html#genetic

--Peter K1PO
Indialantic By-the-Sea, FL

"Peter O. Brackett" <ab4bc@ix.netcom.com> wrote in message news:al907qbqi1@slb6.atl.mindspring.net...
> Steve et al:
>
> [snip]
> >Agreeing to provide an FOM calculation
> > for Chip to use, I defined the FOM as follows:
> >
> > FOM = 0.4 * R + 0.4* B + 0.2 * E
> [snip]
>
> Let's all be perfectly clear and understand what is going to happen here.
>
> Chip is *NOT* going to use the FOM [Figure Of Merit, a.k.a. Objective
> Function] himself. Rather a mathematical optimization computer routine
> which Chip has either purchased or downloaded as share/freeware will use the
> FOM as the target objective function for optimization.
>
> Chip did not develop the mathematical optimization techniques or routines
> that he uses. That is not his contribution to this field. Rather these
> general purpose computer implemented mathematical optimization routines have
> been developed over many years by various rearchers and developers who
> participate in the very active science of mathematical optimization, and by
> those in the mathematical optimization business who develop the computer
> programs for various and general applications.
>
> [Chip has said that he uses a Genetic Algorithm [GA] optimizer. You can get
> one of these for yourself. For instance - cfr the WWW site at:
> http://www-fp.mcs.anl.gov/otc/Guide/OptWeb/ which is a great site outlining
> most of the known modern methods of mathematical optimization including GA

> techniques. It also gives the locations from which to acquire either
> commercial or free/shareware mathematical optimization programs for your
own
> use.]
>
> Mathematical optimization routines must always be "customized" to the
> desired application by supplying two customization routines to the generic
> optimizer.
>
> 1) An FOM routine:
>
> One has to write and supply a computer routine to the optimizer which
> incorporates the designer's desired FOM. Chip will provide the agreed
upon
> FOM to the GA as a subroutine and let the mathematical optimization run
> until it finds an optimum [i.e. a minimum or maximum] of the FOM.
>
> 2) A pattern search routine:
>
> During the running of the optimizer the mathematical optimization routines
> need to be supplied with a computer routine to set forth a "search
strategy"
> for exploring the space of the design parameters. i.e. after evaluating
the
> FOM [objective function] for a given design in a set of iterations the
> mathematical optimization program needs a way to arrive at the next
> iteration in the design space to get the next design for which it needs to
> evaluate the objective function for comparison to the previous FOM
> evaluations. This is called the "pattern of searching". In Chip's case
> the "search routine" supplies a set of fractal iterations of the antenna
in
> question. And so... his GA application will search over many iterations
of
> his chosen fractal until it finds a minimum or maximum value of the FOM
> among the string of FOM's that it has found.
>
> Note that there is no guarantee that the minimum or maximum of the FOM
found
> by the search is a "global optimum" in fact it will usually be only a
"local
> optimum".
>
> But that's neither here nor there...
>
> And so... again Chip will not use the FOM... rather his store bought or
> freeware optimizer will use the FOM.
>
> Let the games begin...
>
> Best,

>
> --Peter K1PO
> Indialantic By-the-Sea, FL.
>
>
>
>

4561. Re: Fractal Debate

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-06 01:47:40 UTC
From: "Peter O. Brackett" <ab4bc@ix.netcom.com>
Message-ID: <al91fo$e8o$1@slb6.atl.mindspring.net>
Source record: 135201

Steve et al:

Sources for GA codes may be found at...

http://solon.cma.univie.ac.at/~neum/glopt/software_g.html#ga_codes

--Peter K1PO
Indialantic By-the-Sea, FL.

"Peter O. Brackett" <ab4bc@ix.netcom.com> wrote in message
news:al911kkeo1@slb4.atl.mindspring.net...
> Steve et al:
>
> More background on the Genetic Algorithm technique of mathematical
> optimization may be found at:
>
> http://solon.cma.univie.ac.at/~neum/glopt/techniques.html#genetic
>
> --Peter K1PO
> Indialantic By-the-Sea, FL
>
> "Peter O. Brackett" <ab4bc@ix.netcom.com> wrote in message
> news:al907qbqi1@slb6.atl.mindspring.net...
> > Steve et al:
> >
> > [snip]
> > >Agreeing to provide an FOM calculation
> > > for Chip to use, I defined the FOM as follows:
> > >
> > > FOM = 0.4 * R + 0.4* B + 0.2 * E
> > [snip]
> >
> > Let's all be perfectly clear and understand what is going to happen
here.
> >
> > Chip is *NOT* going to use the FOM [Figure Of Merit, a.k.a. Objective
> > Function] himself. Rather a mathematical optimization computer routine
> > which Chip has either purchased or downloaded as share/freeware will use
> the
> > FOM as the target objective function for optimization.
> >
> > Chip did not develop the mathematical optimization techniques or
routines
> > that he uses. That is not his contribution to this field. Rather these
> > general purpose computer implemented mathematical optimization routines

> have
> > been developed over many years by various rearchers and developers who
> > participate in the very active science of mathematical optimization, and
> by
> > those in the mathematical optimization business who develop the computer
> > programs for various and general applications.
> >
> > [Chip has said that he uses a Genetic Algorithm [GA] optimizer. You can
> get
> > one of these for yourself. For instance - cfr the WWW site at:
> > http://www-fp.mcs.anl.gov/otc/Guide/OptWeb/ which is a great site
> outlining
> > most of the known modern methods of mathematical optimization including
GA
> > techniques. It also gives the locations from which to acquire either
> > commercial or free/shareware mathematical optimization programs for your
> own
> > use.]
> >
> > Mathematical optimization routines must always be "customized" to the
> > desired application by supplying two customization routines to the
generic
> > optimizer.
> >
> > 1) An FOM routine:
> >
> > One has to write and supply a computer routine to the optimizer which
> > incorporates the designer's desired FOM. Chip will provide the agreed
> upon
> > FOM to the GA as a subroutine and let the mathematical optimization run
> > until it finds an optimum [i.e. a minimum or maximum] of the FOM.
> >
> > 2) A pattern search routine:
> >
> > During the running of the optimizer the mathematical optimization
routines
> > need to be supplied with a computer routine to set forth a "search
> strategy"
> > for exploring the space of the design parameters. i.e. after evaluating
> the
> > FOM [objective function] for a given design in a set of iterations the
> > mathematical optimization program needs a way to arrive at the next
> > iteration in the design space to get the next design for which it needs
to
> > evaluate the objective function for comparison to the previous FOM
> > evaluations. This is called the "pattern of searching". In Chip's
case
> > the "search routine" supplies a set of fractal iterations of the antenna
> in
> > question. And so... his GA application will search over many iterations

> of
> > his chosen fractal until it finds a minimum or maximum value of the FOM
> > among the string of FOM's that it has found.
> >
> > Note that there is no guarantee that the minimum or maximum of the FOM
> found
> > by the search is a "global optimum" in fact it will usually be only a
> "local
> > optimum".
> >
> > But that's neither here nor there...
> >
> > And so... again Chip will not use the FOM... rather his store bought or
> > freeware optimizer will use the FOM.
> >
> > Let the games begin...
> >
> > Best,
> >
> > --Peter K1PO
> > Indialantic By-the-Sea, FL.
> >
> >
> >
> >
>
>

4562. Re: Fractal Debate

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-06 01:53:11 UTC
From: fractenna@aol.com
Message-ID: <20020905215311.13141.00001316@mb-mf.aol.com>
Source record: 135202

>
>Steve et al:
>
>[snip]
>>Agreeing to provide an FOM calculation
>> for Chip to use, I defined the FOM as follows:
>>
>> FOM = 0.4 * R + 0.4* B + 0.2 * E
>[snip]
>
>Let's all be perfectly clear and understand what is going to happen here.
>
>Chip is *NOT* going to use the FOM [Figure Of Merit, a.k.a. Objective
>Function] himself. Rather a mathematical optimization computer routine
>which Chip has either purchased or downloaded as share/freeware will use the
>FOM as the target objective function for optimization.
>
>Chip did not develop the mathematical optimization techniques or routines
>that he uses. That is not his contribution to this field. Rather these
>general purpose computer implemented mathematical optimization routines have
>been developed over many years by various rearchers and developers who
>participate in the very active science of mathematical optimization, and by
>those in the mathematical optimization business who develop the computer
>programs for various and general applications.
>
>[Chip has said that he uses a Genetic Algorithm [GA] optimizer. You can get
>one of these for yourself. For instance - cfr the WWW site at:
>http://www-fp.mcs.anl.gov/otc/Guide/OptWeb/ which is a great site outlining
>most of the known modern methods of mathematical optimization including GA
>techniques. It also gives the locations from which to acquire either
>commercial or free/shareware mathematical optimization programs for your own
>use.]
>
>Mathematical optimization routines must always be "customized" to the
>desired application by supplying two customization routines to the generic
>optimizer.
>
>1) An FOM routine:
>
>One has to write and supply a computer routine to the optimizer which
>incorporates the designer's desired FOM. Chip will provide the agreed upon
>FOM to the GA as a subroutine and let the mathematical optimization run
>until it finds an optimum [i.e. a minimum or maximum] of the FOM.
>

>2) A pattern search routine:
>
>During the running of the optimizer the mathematical optimization routines
>need to be supplied with a computer routine to set forth a "search strategy"
>for exploring the space of the design parameters. i.e. after evaluating the
>FOM [objective function] for a given design in a set of iterations the
>mathematical optimization program needs a way to arrive at the next
>iteration in the design space to get the next design for which it needs to
>evaluate the objective function for comparison to the previous FOM
>evaluations. This is called the "pattern of searching". In Chip's case
>the "search routine" supplies a set of fractal iterations of the antenna in
>question. And so... his GA application will search over many iterations of
>his chosen fractal until it finds a minimum or maximum value of the FOM
>among the string of FOM's that it has found.
>
>Note that there is no guarantee that the minimum or maximum of the FOM found
>by the search is a "global optimum" in fact it will usually be only a "local
>optimum".
>
>But that's neither here nor there...
>
>And so... again Chip will not use the FOM... rather his store bought or
>freeware optimizer will use the FOM.
>
>Let the games begin...
>
>Best,
>
>--Peter K1PO
> Indialantic By-the-Sea, FL.
>

These statements are not correct. The engine does not work as you describe.

We do not use a conventional genetic algorithm. That would be far, far too slow, and also impossible to use for complex structures, as the genome would be astronomically large.

What we have is not shareware, nor purchased; it is proprietary.

The FOM has to be coded; normally this is an easy task.

How the engine works is not important; what is key is its ability to identify something 'better' than what's out there. It is basically a black box for this exercise. It is the I/O that's of interest.

You may wish to use shareware to run your own exercise, although I suspect that it will be 3 orders of magnitude slower, and possibly more.

Kindly let Steve concentrate on the issue at hand. I believe we will all benefit from the process.

Regards,

NC

4563. Mobile Antennas

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-06 01:59:46 UTC
From: Jerry Oxendine <joxendi@bellsouth.net>
Message-ID: <sPTd9.15106$%P6.6260415@e3500-atl1.usenetserver.com>
Source record: 135205

Over the summer, I hurt my arm and was unable to do much antenna building. I would like to
invite your attention to the Carolina Cyclone brand of screwdriver antennas! There are many
very nice offerings out there, of course, but how would you like to have that quality and save money
at the same time? My Carolina Cyclones are fully warranted and will be repaired or replaced if you
experience a problem (very rare). I take my time, each antenna is hand assembled by me, and I test each one prior to shipping to make certain it is performing up to "snuff"--an old Southern expression. So before you spend $400 for a screwdriver-type antenna, please visit www.qsl.net/k4kwh . I would love to build a high performance HF mobile antenna for YOU!

73

Jerry
K4KWH

4564. Re: Need Advice on Remote Antenna Tuner Location

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-06 02:00:04 UTC
From: k9sqg@aol.com
Message-ID: <20020905220004.20928.00001885@mb-mo.aol.com>
Source record: 135204

Steve,

Well, I usually can't guess the no spam so here goes. You can mount the tuner lower on the mast and it should work out ok. Another alternative is to use open wire line between the tuner (if it can handle it) and the antenna. In fact, running the open wire line into the shack has advantages too but probably wouldn't be practical in your installation.

73s,

Evan

4565. Re: Fractal Debate

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-06 02:14:58 UTC
From: Reg Edwards <g4fgq.regp@btinternet.com>
Message-ID: <al9331si1@knossos.btinternet.com>
Source record: 135206

" I have some initial reservations ..... "

==========

In the present context, a masterpiece of understatement !

Reg

4566. Re: HF Antenna for portable operation

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-06 02:46:48 UTC
From: George Kinzer <horseflygk@worldnet.att.net>
Message-ID: <sGUd9.12805$jG2.970617@bgtnsc05-news.ops.worldnet.att.net>
Source record: 135208

wheres he going to put it? on top his tent?

--
If first you don't succeed, do the same thing again...see what happens

4567. Re: HF Antenna for portable operation

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-06 02:47:58 UTC
From: George Kinzer <horseflygk@worldnet.att.net>
Message-ID: <yHUd9.12811$jG2.969566@bgtnsc05-news.ops.worldnet.att.net>
Source record: 135209

Have you thought about using a mobile antenna? what?
he's camping, not driving through your neighborhood...

--
If first you don't succeed, do the same thing again...see what happens

4568. Re: Fractal Debate

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-06 02:50:39 UTC
From: Reg Edwards <g4fgq.regp@btinternet.com>
Message-ID: <al955u$9na$1@helle.btinternet.com>
Source record: 135210

Thanks Dave, and others, for the explanation.

I saw something about a virus alert and had dumped all previous newsgroup
threads on the machine. I didn't know Chip had set the ball rolling.

Reg.

--
========================
Regards from Reg G4FGQ
Free Radio Design Software
Go to http://www.g4fgq.com
========================
"Dave Platt" <dplatt@radagast.org> wrote in message
news:unfnu2bgbk8d8a@corp.supernews.com...
> In article <al8g65$797$1@venus.btinternet.com>,
> Reg Edwards <g4fgq.regp@btinternet.com> wrote:
>
> >It would be of great help to the bystanders if sombody defined what an
FOM
> >is instead of somebody trying to be clever !
>
> "Figure Of Merit".
>
> It's a formula into which you plug all of the significant numbers
> about something's characteristics, and come out with a simple, single
> number which represents "How good is it, really?". The person or
> group who selects the formula, gets to decide how the various inputs
> are weighted.
>
> You then plug in the characteristics of all of the candidates (sample
> antennas, or whatever), and whichever one has the highest FOM "wins".
>
> In an honest evaluation/contest, it's not fair to pick the FOM formula
> _after_ the various candidates have been submitted for judging,
> because it's usually quite easy to skew the FOM formula to favor a
> given candidate (in fact, doing so is just another sort of
> optimization problem).
>
> Rather, you should pick the FOM formula [1] in advance, and [2] with a
> clear understanding and agreement as to exactly what the weighting and
> comparison rules are. It helps reduce arguments, too, if you can [3]
> get everybody to agree that the weighting rules actually correspond to
> a fair, 'good' solution of the problem being solved... this helps
> reduce the risk that someone will claim, after the fact, that the

> rules were subtly slanted in favor of a given candidate or design
> approach.
>
> In the case of an antenna competition such as this, I'd imagine that
> the FOM will have terms which will favor physical smallness, high
> radiative efficiency, convenient feedpoint impedance, and [perhaps]
> something to either favor, or discourage certain types of directional
> gain. Weight, volume, and internal complexity (e.g. number of antenna
> segments) would likely not be considered as terribly significant.
>
> Vulnerability to feedline radiation (i.e. imbalance) might also be
> worth factoring in, especially given all the controversy about E/H
> antennas and whether it's the antenna, or its coax which is actually
> radiating.
>
> --
> Dave Platt <dplatt@radagast.org> AE6EO
> Hosting the Jade Warrior home page: http://www.radagast.org/jade-warrior
> I do _not_ wish to receive unsolicited commercial email, and I will
> boycott any company which has the gall to send me such ads!

4569. Thanks FS:more,more,more

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-06 02:53:49 UTC
From: George Kinzer <horseflygk@worldnet.att.net>
Message-ID: <1NUd9.12828$jG2.971745@bgtnsc05-news.ops.worldnet.att.net>
Source record: 135211

Thanks for the people who now have "MORE, MORE, MORE"
I have yet to have any complaints concerning its extensive content (some say its TOO much)
or problems with shipping. Enjoy and give me reviews with the email address that was INCLUDED on the inside cover. 73's , Horsefly out

--
If first you don't succeed, do the same thing again...see what happens

4570. Re: Question about ladder line and metal mast

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-06 03:08:35 UTC
From: CAM <Cecil.A.Moore@ieee.org>
Message-ID: <3D781C33.B6ED973A@ieee.org>
Source record: 135212

"vhfradiobuff@yahoo.comspamsux" wrote:
> If I string up a dipole fed by ladder line, and support the center of
> the dipole on top of 2 metal masts, will the ladder line be affected
> if it's taped to the metal mast? If so, what kind of angle away from
> the mast should I have the ladder line and which direction should it
> go in relation to the wire? I plan on having the dipole as an inverted
> V.

Keep the ladder-line 3+ inches away from metal. Electric fence standoffs
work well for me.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

4571. Re: Fractal Debate

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-06 03:15:54 UTC
From: Dick Carroll <dixie@townsqr.com>
Message-ID: <3D781DBF.CBE6B8A9@townsqr.com>
Source record: 135213

Fractenna wrote:

> How the engine works is not important; what is key is its ability to identify
> something 'better' than what's out there. It is basically a black box for this
> exercise

I don't think anyone doubted that was coming.

4572. Re: What If You Could Tune Out Polarization Mis-Match?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-06 03:29:25 UTC
From: "J. McLaughlin" <JCM@Power-Net.Net>
Message-ID: <ung86so53nl27b@corp.supernews.com>
Source record: 135214

Interesting. One night, all the way to daybreak, (long, long ago) I had
a first class library at hand. I took on the task of reading all of
Armstrong's papers. My major conclusion was, and still is, that, as is
the case with many of the inventors I have helped, he did not really
know what FM was. He could describe terminal characteristics, but not
the whys. It took Rice's little, obscure paper to make it all so clear
that one now can not at all understand the difficulty. None of this is
to denigrate the unfortunate Armstrong. Many important contributions
have been made by those who felt the answer. Even C. Shannon, another
Michigan boy who made good, once arrived at an important and correct
conclusion by a logically flawed process. He felt the answer.
When one can keep the CNR (carrier to noise ratio) at least
moderately high, FM is still hard to beat. Antennas help that endeavor.
It is late. 73 Mac N8TT

--
J. Mc Laughlin - Michigan USA
Home: JCM@Power-Net.Net
"Richard Harrison" <richardharrison@webtv.net> wrote in message
news:24352-3D77A69E-170@storefull-2396.public.lawson.webtv.net...
> J. McLaughlin, N8TT wrote:
> "When an airplane would be in the pattern (at either end) one could
see
> the lights cycle slowly and then rapidly while the audio was perfect."
>
> Thanks to E.H. Armstrong. An underappreciated fact is the constant
> amplitude characteristic of FM. A receiver well into limiting tends to
> have a constant demodulated output regardless of r-f amplitude
> variations. Microwave repeaters are feasible for analog signals
because
> baseband levels don`t change. You can watch limiter currents flail
> around while a demodulated tone appears glued in place. Your VHF ham
> repeater also has this advantage. Don`t expect this from AM.
>
> Best regards, Richard Harrison, KB5WZI
>

4573. Re: Aviation scanning on a CB Antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-06 03:50:15 UTC
From: Jim Weir <jim@rst-engr.com>
Message-ID: <l89gnu8k15o2kfj27ngrt8i1407ns2drdv@4ax.com>
Source record: 135215

TJS <theshearers@worldnet.att.net>
shared these priceless pearls of wisdom:

->What you need to use is a 26" long whip in a magmount on the 4 foot
->square roof of a car.

Uh, no, 25", or don't you understand about the 5% foreshortening effect of any reasonable wire size?

This is a quater wave antenna and will have the
->best reception pattern (to the horizon and to the sky, and will also
->allow transmit with a decent match (SWR).

Uh, no. The radio switches to the com band (122.5) to transmit when listening on the nav band, and a small diameter wire whip will have a moderately poor (3:1 or 4:1) at this frequency. You ever done this sort of stuff before?

Jim

Jim Weir, VP Eng. RST Eng. WX6RST
A&P, CFI, and other good alphabet soup

4574. Looking for Dennis in Arvada, CO

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-06 04:04:56 UTC
From: ve3tmt <ve3tmt@yahoo.com>
Message-ID: <aNVd9.9493$QS6.1453351@news20.bellglobal.com>
Source record: 135216

My computer crashed and I lost the e-mail for a fellow in Arvada, CO named Dennis and I can't remember his last name. His e-mail was something like ???@pegasus.net or similar. I bought a Kenwood 4 KHz AM filter from him on eBay, sent the money order, which he received about 2 weeks ago. The last e-mail he told me he was shipping it out but nothing has arrived yet. If anyone happens to know who I mean, please forward any information you may have.

Thanks,

Max

4575. Re: Looking for Dennis in Arvada, CO

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-06 04:06:27 UTC
From: ve3tmt <ve3tmt@yahoo.com>
Message-ID: <BOVd9.9496$QS6.1453602@news20.bellglobal.com>
Source record: 135217

He had mentioned to me at one time he was a pilot.

4576. Re: Question about ladder line and metal mast

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-06 04:45:13 UTC
From: Andy KC2SSB <vhfradiobuff@yahoo.com>
Message-ID: <5mcgnuc54tgh0rliaaec8mjbq2ql1s5841@4ax.com>
Source record: 135218

On Thu, 05 Sep 2002 22:08:35 -0500, CAM <Cecil.A.Moore@ieee.org>
wrote:

>Keep the ladder-line 3+ inches away from metal. Electric fence standoffs
>work well for me.

I suppose this is readily available in most hardware stores?
=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-
73! de Andy KC2SSB (ex: KF4KHC/HL9HCT)
Beachwood, NJ USA Grid FM29vw
http://vhfradiobuff.tripod.com

4577. Re: HF Antenna for portable operation

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-06 05:46:13 UTC
From: rhmcus@yahoo.com
Message-ID: <3d7840d1.81006521@news.us.dell.com>
Source record: 135119

All

Thanks for all the posts the telescoping mast looks like the ticket..
Esp the one from MFJ.. I like the longer antenna due to its increased
effiecnecy but havent allways found a way to put the thing up..

Rich

On Thu, 05 Sep 2002 07:05:22 GMT, rhmcus@yahoo.com (Rich McMahon)
wrote:

>All
>
>I go camping quite often and bring along the HW8 or TenTec Scout.. Ive
>used a full sized G5RV with good success. However, not every place I
>go has trees or a structure that I can attach an antenna to.
>
>I do like working 80meters in the evening and 40 20 and 15 meters
>also. With the G5RV along with the need for place to hang the antenna
>I've also noticed stray RF floating around and if a mic is used with
>the scout RF can be found there not good.
>
>So what is a recommendation for a good portable antenna that can be
>used for camping or emergency work.. I have a Gap Titan DX but its not
>exactly small or portable although I have moved it several times for
>Jamboree on the Air for the Boy Scouts.
>
>Any recommendations of a good portable antenna?
>
>Thanks
>
>Rich KG5IF

4578. Re: Is Chip responsive or evasive?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-06 06:00:56 UTC
From: jmackie1860@my-deja.com
Message-ID: <al9gao$8i6$1@news.netmar.com>
Source record: 135120

In article <1107_1031272233@netnews.attbi.com>, Rollo <nobody@nowhere.com>
writes:

>> My thought is Chip is just tap-dancing, but what do the others think?
>> all the past "dialogues" with Chip, it will degenerate into
meaninglessness.
>
>
>Like it's not already THERE, your post and all?
>
>

Nice try Rollo...but, you are the one who seems to be obsessed ....

For someone who has *killfiled* most of this ng, it sure seems strange that
you
continue to read *us*.

..for someone who uses several
aliases, you haven't a leg to stand on.

----- Posted via NewsOne.Net: Free (anonymous) Usenet News via the Web -----
http://newsone.net/ -- Free reading and anonymous posting to 60,000+ groups
NewsOne.Net prohibits users from posting spam. If this or other posts
made through NewsOne.Net violate posting guidelines, email abuse@newsone.net

4579. Is this Chip's Black Box?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-06 06:42:17 UTC
From: jmackie1860@my-deja.com
Message-ID: <al9io9$998$1@news.netmar.com>
Source record: 135121

"Fractal Element Antenna Genetic Optimization Using a PC Cluster"

http://nunoalves.cjb.net/

It was here:

http://people.bu.edu/nca/aces.pdf

but it's been removed.

"Tell it to the
Marines!"

-http://www.sbirsttr.com/awardlist/abs012/navyabs012.htm

FRACTAL ANTENNA SYSTEMS
300 Commercial St, Suite 27
Malden, MA 02148
Phone:
PI:
Topic#: (617) 381-9595
Dr. Robert Hohlfeld
NAVY 01-110 Awarded: 16NOV01
Title: Non-Intrusive, Window Mounted, Conformal Antennas
Abstract: We propose to undertake a design study on conformal antennas for
USMC Radio Battalions. The Phase I study will identify and optimize wideband
fractal element antennas (FEA) for this application through computer (NEC and
FEM-based) modeling, guided by our firm's genetic optimization using
efficient and proprietary hardware and software. The resultant optimized
fractal elements fall within the firm's existing patents and pending patents,
thus combining a successful design solution with the rights to
implementation. Both the approach and technology access are unique to our
firm in this task. In addition to providing a design solution, the firm will
also undertake proof of concept fabrication of wideband fractal element
candidates on transparent substrates in preparation for Phase II prototype
fabrication and testing. Wideband conformal antennas from fractal designs
provide unique opportunities for application in vehicular, aviation, amateur
radio, consumer electronic markets. Convergence towards multiple frequency
use in wireless and telecom also requires a 'one size fits all' antenna
approach easily met by the technology.

----- Posted via NewsOne.Net: Free (anonymous) Usenet News via the Web -----
http://newsone.net/ -- Free reading and anonymous posting to 60,000+ groups
NewsOne.Net prohibits users from posting spam. If this or other posts
made through NewsOne.Net violate posting guidelines, email abuse@newsone.net

4580. Re: Six meter antenna height...

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-06 07:18:45 UTC
From: Roger Halstead <rdhalste@tm.net>
Message-ID: <pFYd9.1314$Se4.877064@monger.newsread.com>
Source record: 135122
Cross-posted to: alt.ham-radio.vhf-uhf,rec.radio.amateur.antenna

"Dennis Kaylor" <k4oxg@tampabay.rr.com> wrote in message
news:3D7213F8.F744737A@tampabay.rr.com...
> i had a mosley diplomat 5/8 wave vertical at 60 feet and it worked
wonderfully
> it performed nearly as well as my 5 ele yagi 10 feet below it
> i think as long as you dont go crazy high what ever you can put it at will
work
> just use the best feedline you can afford

I have mine at 115 feet. I'm just using LMR 400 which is slightly better
than 9913.
I would prefer LMR 600, but the 400 works fine.
6 meters is not subject to nearly as much loss as 144 and 440.

--
Roger Halstead (K8RI EN73)
www.rogerhalstead.com
N833R World's oldest Debonair? (S# CD-2)
>
> "John S." wrote:
>
> > I have a 5/8 wave vertical for six meters and I am asking what the
proper
> > height this antenna should be installed for best performance.Is it
possible
> > to mount it too high for example on a 55' tower? I heard someone say
mount
> > it 20' to 30' off the ground not much higher.Interesting band six
meters.
>

4581. Re: THIS is a VIRUS HOAX

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-06 07:27:37 UTC
From: Roger Halstead <rdhalste@tm.net>
Message-ID: <JNYd9.1315$Se4.877374@monger.newsread.com>
Source record: 135123
Cross-posted to: alt.config,rec.nude,rec.outdoors.fishing.bass,rec.ponds,rec.radio.amateur.antenna

"David Robbins" <k1ttt@arrl.net> wrote in message
news:al600c0nei@enews2.newsguy.com...
and not even a good one at that!

Norton disagrees with that. They caught it and quranteened it. They do list
it as a virus.

However it's basically a loop and points out the danger of being able to
receive HTML.

--
Roger Halstead (K8RI EN73)
www.rogerhalstead.com
N833R World's oldest Debonair? (S# CD-2)

4582. Re: Six meter antenna height...

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-06 09:11:32 UTC
From: Allan <kd7dsk@cox.net>
Message-ID: <8j_d9.71051$Fb.2955140@news1.west.cox.net>
Source record: 135124
Cross-posted to: alt.ham-radio.vhf-uhf,rec.radio.amateur.antenna

I use a Diamond DPGH62 at about 35' to the feed point, and the antenna itself is 21'. So the total length to the tip is about 56'. Anyway it performs great for local, better than most in my area from what others tell me! When the band opens,,,,,,,,,well look out!

"John S." <jsurace@carolina.rr.com> wrote in message news:T%nc9.66540$iP2.2927560@twister.southeast.rr.com...
> I have a 5/8 wave vertical for six meters and I am asking what the proper
> height this antenna should be installed for best performance.Is it possible
> to mount it too high for example on a 55' tower? I heard someone say mount
> it 20' to 30' off the ground not much higher.Interesting band six meters.
>
>

4583. Re: Center Fed With 300 Ohm Coax

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-06 11:37:09 UTC
From: Andy Cowley <andy.cowley@uwe.ac.uk>
Message-ID: <3D78968E.CFF2A34D@uwe.ac.uk>
Source record: 135125

Richard Harrison wrote:
>
> CAM, W5DXP wrote:
> "Where are you going to get 300 ohm coax?"
>
> The ARRL Antenna Book, page 24-20 in the 19th edition, suggests:
> "Paralleled RG-63 (125 ohm) cable would make a balanced transmission
> line in accord with traditional 300-ohm twin-lead feed line (Zo = 250
> ohms)."
>
> Best regards, Richard Harrison, KB5WZI

125 ohm || 125 ohm = 62.5 Ohm in europe. Must be some
different kind of parallel?

vy 73
Andy, M3ABC

4584. Re: Dipole problems

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-06 12:01:55 UTC
From: Andy Cowley <andy.cowley@uwe.ac.uk>
Message-ID: <3D789C5B.9BF93C01@uwe.ac.uk>
Source record: 135126

Jonathan Bowes wrote:
>
> Just a quick note to say a big thanks to all who replied to my post.
> It's funny that someone mentioned the possibility of my mate having
> his preamp in. He's got a ft-920 and claimed there was no indication
> on the display that it was on. I need to get him to double-check it
> though since I have my doubts.
>
> Once again thanks to all, I appreciate the confirmation.
>
> Jonathan
> MM0OKG.

Your mate is correct. The FT920 has an indicator at bottom left of display that says 'IPO' = "input pre-amp off"? when the pre-amp is switched off. The FT920 is pretty deaf without one of the pre-amps on, so he may never have operated it without. Compare the rigs on the same antenna before drawing any conclusions.

vy 73

Andy, M3ABC

4585. Coil antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-06 12:35:13 UTC
From: mmsya@aol.com
Message-ID: <20020906083513.29667.00001732@mb-mb.aol.com>
Source record: 135127

Hi all,

Please help. I have a transmitter and receiver working in low frequency through a set of coil. I have decided to keep the trnsmitting coil and change the receiving coil in dimension wise. Let's say if the receiving coil is about 20 mH and one inch long and wanted to change to 1/2 inch long with the same inductance, would it work for the same distance that originally was working?

Thanks in advance,
John.

4586. Re: THIS is a VIRUS HOAX

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-06 12:49:02 UTC
From: David Robbins <k1ttt@arrl.net>
Message-ID: <ala87p0or6@enews3.newsguy.com>
Source record: 135129
Cross-posted to: alt.config,rec.nude,rec.outdoors.fishing.bass,rec.ponds,rec.radio.amateur.antenna

norton may catch it, but it hardly qualifies as a virus as it has no way to replicate itself or spread to other machines. it is simply an annoying hoax that someone sends to various newsgroups. the only thing it is good for is pointing out to newbies why they should disable scripts on news readers.

"Roger Halstead" <rdhalste@tm.net> wrote in message
news:JNYd9.1315$Se4.877374@monger.newsread.com...
>
> "David Robbins" <k1ttt@arrl.net> wrote in message
> news:al600c0nei@enews2.newsguy.com...
> and not even a good one at that!
>
> Norton disagrees with that. They caught it and quranteened it. They do
list
> it as a virus.
>
> However it's basically a loop and points out the danger of being able to
> receive HTML.
>
>
> --
> Roger Halstead (K8RI EN73)
> www.rogerhalstead.com
> N833R World's oldest Debonair? (S# CD-2)
>
>

4587. Re: Center Fed With 300 Ohm Coax

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-06 12:50:01 UTC
From: richardharrison@webtv.net
Message-ID: <1225-3D78A479-25@storefull-2311.public.lawson.webtv.net>
Source record: 135128

Andy, M3ABC wrote:
"125 ohm // 125 ohm = 62.5 Ohm in europe. Must be some different kind of parallel?"

Andy is correct. The coax center conductors are NOT paralleled. Coax shields, both cables at both ends, are joined. The center conductors (centre conductors in Europe) become the feeders. As each has 125 ohms Zo between center and common connection, their total is 250 ohms.

Best regards, Richard Harrison, KB5WZI

4588. Re: Question about ladder line and metal mast

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-06 13:22:39 UTC
From: CAM <Cecil.A.Moore@ieee.org>
Message-ID: <3D78AC1F.7257AA37@ieee.org>
Source record: 135130

Andy KC2SSB wrote:
>
> On Thu, 05 Sep 2002 22:08:35 -0500, CAM <Cecil.A.Moore@ieee.org>
> wrote:
>
> >Keep the ladder-line 3+ inches away from metal. Electric fence standoffs
> >work well for me.
>
> I suppose this is readily available in most hardware stores?

It is in cattle country.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
------== Over 80,000 Newsgroups - 16 Different Servers! =-----

4589. Re: Center Fed With 300 Ohm Coax

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-06 13:25:54 UTC
From: CAM <Cecil.A.Moore@ieee.org>
Message-ID: <3D78ACE2.A3765FD5@ieee.org>
Source record: 135131

Andy Cowley wrote:
>
> Richard Harrison wrote:
> >
> > CAM, W5DXP wrote:
> > "Where are you going to get 300 ohm coax?"
> >
> > The ARRL Antenna Book, page 24-20 in the 19th edition, suggests:
> > "Paralleled RG-63 (125 ohm) cable would make a balanced transmission
> > line in accord with traditional 300-ohm twin-lead feed line (Zo = 250
> > ohms)."
>
> 125 ohm || 125 ohm = 62.5 Ohm in europe. Must be some
> different kind of parallel?

Not electrically parallel, Andy, physically parallel in series.
A side-by-side series run of coax doubles the characteristic impedance.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

4590. Re: Center Fed With 300 Ohm Coax

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-06 14:38:11 UTC
From: Dick Carroll <dixie@townsqr.com>
Message-ID: <3D78BDA9.9BD7BBC0@townsqr.com>
Source record: 135132

Andy Cowley wrote:

> Richard Harrison wrote:
> >
> > CAM, W5DXP wrote:
> > "Where are you going to get 300 ohm coax?"
> >
> > The ARRL Antenna Book, page 24-20 in the 19th edition, suggests:
> > "Paralleled RG-63 (125 ohm) cable would make a balanced transmission
> > line in accord with traditional 300-ohm twin-lead feed line (Zo = 250
> > ohms)."
> >
> > Best regards, Richard Harrison, KB5WZI
>
> 125 ohm || 125 ohm = 62.5 Ohm in europe. Must be some
> different kind of parallel?

Yeah, it is. They're laid in parallel but fed in series.

Dick

4591. Re: Coil antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-06 14:48:27 UTC
From: richardharrison@webtv.net
Message-ID: <23331-3D78C03B-4@storefull-2315.public.lawson.webtv.net>
Source record: 135133

Mmsya wrote:
"I have decided to keep the transmitting coil and change the receiving coil dimension wise."

Terman says for multilayer coils, "Good efficiency will be obtained provided proportions do not depart too greatly from the relation:
3t + 2b = D ; where t is the radial thickness of the winding, b is the axial length, and D is the outer diammeter."
There is much more regarding Litz or solid wire and its size, etc. You can add a ferrite core.

It is not simple to change coil parameters.

Best regards, Richard Harrison, KB5WZI

4592. Re: Question about ladder line and metal mast

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-06 15:24:16 UTC
From: Alex Flinsch <alex@localhost.localdomain>
Message-ID: <slrnanhihi.cel.alex@homer.linux1.lan>
Source record: 135134

On <vhfradiobuff@yahoo.com> wrote:
> On Thu, 05 Sep 2002 22:08:35 -0500, CAM <Cecil.A.Moore@ieee.org>
> wrote:
>
>>Keep the ladder-line 3+ inches away from metal. Electric fence standoffs
>>work well for me.
>
> I suppose this is readily available in most hardware stores?

Try your local Agway

4593. Re: THIS is a VIRUS HOAX

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-06 15:28:19 UTC
From: D <ThebigD@ix.netcom.com>
Message-ID: <3D78C993.C42BE071@ix.netcom.com>
Source record: 135135
Cross-posted to: alt.config,rec.nude,rec.outdoors.fishing.bass,rec.ponds,rec.radio.amateur.antenna

Odd... I have Norton and it didn't catch it.

D.

4594. 603 FS 10 meter beam & tower

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-06 16:12:28 UTC
From: Me <j.dauphinais@worldnet.att.net>
Message-ID: <Mt4e9.14324$jG2.1042380@bgtnsc05-news.ops.worldnet.att.net>
Source record: 135136
Cross-posted to: rec.radio.amateur.digital.misc,rec.radio.amateur.antenna,rec.radio.amateur.dx,rec.radio.amateur.homebrew

I have for sale 1 full size "HY-Gain" beam 10 meters. fully assembled for your inspection. 13' Boom and longest element is 22' $75.00 I also have a steel tower totaling 25'. this is in 3 sections 1 10 foot st8 and 1 5foot st8 and 1 10 foot top section. I don't not have a rotator. $50.00. pickup only from Nashua,NewHampshire. I am selling these because they are to big for my new QTH. This beam has spent a large portion of its life in storage. 73's Jeff AA1GR

4595. Re: Fractal Debate

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-06 16:21:46 UTC
From: "Peter O. Brackett" <ab4bc@ix.netcom.com>
Message-ID: <alakosjas1@slb6.atl.mindspring.net>
Source record: 135137

Dear Dr. Cohen:

[snip]
> We do not use a conventional genetic algorithm. That would be far, far too
> slow, and also impossible to use for complex structures, as the genome
would be
> astronomically large.
>
> What we have is not shareware, nor purchased; it is proprietary.
>
> The FOM has to be coded; normally this is an easy task.
>
> How the engine works is not important; what is key is its ability to
identify
> something 'better' than what's out there. It is basically a black box for
this
> exercise. It is the I/O that's of interest.
>
> You may wish to use shareware to run your own exercise, although I suspect
that
> it will be 3 orders of magnitude slower, and possibly more.
>
> Kindly let Steve concentrate on the issue at hand. I believe we will all
> benefit from the process.
>
> Regards,
>
> NC
[snip]

Your experience with [your] GA algorithms being *slow* for such simple
problems is due to your of use of C++.

Hopelessly slow!

I believe that you will find that Fortran [90/95] GA implementations are
much faster... sometimes by an order of
magnitude or more, and so will not require an expensive "cluster" [a.k.a.
black box] of computers to speed things up.
Since you are using a GA implementation coded with C++ that is the reason
you have to go to expensive clusters.
You really should investigate fast Fortran implementations instead.

Heh, heh... It's always the same... Scientists and computers... Why try to
open a walnut with a sledgehammer,
when a nut cracker will do?

"Computer Science is no more about computers than Astronomy is about telescopes." --Edgar Dijkstra [RIP]

--Peter K1PO
Indialantic By-th-Sea, FL.

4596. A-99

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-06 17:02:25 UTC
From: ssapachee@webtv.net
Message-ID: <23248-3D78DFA1-15@storefull-2232.public.lawson.webtv.net>
Source record: 135138

The A-99 will last many years . It wll last more than 3 years. But the I-max 2000 is in deed a much better antenna. Longer distance also hears better to. I have both.

4597. H.A.A.R.P

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-06 19:23:02 UTC
From: Dan/W4NTI <w4nti@mindspringnospam.com>
Message-ID: <alavajgnj1@slb3.atl.mindspring.net>
Source record: 135139

Has anyone else noticed that since the inception of the High Frequency Active Auroral Research Program (HAARP) that HF propagation has been really wierd? Especially during summer months.

I don't remember propagation being so bad, during daylight in particular, as it has been since 98 when HAARP fired up.

Even in this peak sunspot cycle (a two peaker yet) it has been rough as hotel. I realize summertime obsortion is a major factor. Perhaps we could blame it on the ozone layer.

Any comments?

Dan/W4NTI

HAARP link below

http://server5550.itd.nrl.navy.mil/projects/haarp/

4598. Re: H.A.A.R.P

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-06 19:30:49 UTC
From: Chuck/KE4ETH <chuck_hawks@hotmailmospamorama.com>
Message-ID: <ol7e9.23099$2L.1378276@e3500-atl2.usenetserver.com>
Source record: 135140

The burnig of the rain forest. The smoke cuts rado waves.

HI

--
Chuck
KE4ETH

x-no-archive: yes
"Dan/W4NTI" <w4nti@mindspringnospam.com> wrote in message
news:alavajgnj1@slb3.atl.mindspring.net...
> Has anyone else noticed that since the inception of the High Frequency
> Active Auroral Research Program (HAARP) that HF propagation has been
really
> wierd? Especially during summer months.
>
> I don't remember propagation being so bad, during daylight in particular,
as
> it has been since 98 when HAARP fired up.
>
> Even in this peak sunspot cycle (a two peaker yet) it has been rough as
> hotel. I realize summertime obsortion is a major factor. Perhaps we
could
> blame it on the ozone layer.
>
> Any comments?
>
> Dan/W4NTI
>
> HAARP link below
>
> http://server5550.itd.nrl.navy.mil/projects/haarp/
>
>

4599. Skin effect experiment with disk on antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-06 19:43:15 UTC
From: rsparks <rsparks@elltel.net>
Message-ID: <3d790193_2@corp.newsgroups.com>
Source record: 135141

Hi all,

Many amateurs believe that skin effect on the shield of a coaxial cable effectively separates the two sides of the shield into inside and outside circuits. This is expanded to reason that current flowing on the outside of a coaxial cable can not influence currents on the inside (central) conductor.

If this complete separation were to occur, substantial voltages would have to exist between the two sides of the metal shield. The question then becomes "Can metals support voltage differences and can a test be conducted to demonstrate that a voltage difference must exist across the metal?"

I reasoned that a solid metal disk placed near the feed point of dipole antenna would demonstrate skin effect. The solid metal disk should not conduct current through the disk, but should force the current to flow around the edge of the disk. The path around the edge of the disk is longer by twice the radius of the disk so the length of the antenna should be substantially increased. This would result in a lowered resonant frequency for the dipole containing the disk.

The experiment and results are described in a web page found at

http://www.televar.com/~rsparks/public_html/Disk_Experiment.htm

If you don't have time or the ability to look at the web page, I can tell you that the metal disk did not lower the resonant frequency of the antenna.

73, Roger, W7WKB

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

4600. Re: Fractal Debate

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-06 20:07:24 UTC
From: fractenna@aol.com
Message-ID: <20020906160724.25427.00002413@mb-md.aol.com>
Source record: 135142

>Dear Dr. Cohen:
>
>[snip]
>> We do not use a conventional genetic algorithm. That would be far, far too
>> slow, and also impossible to use for complex structures, as the genome
>would be
>> astronomically large.
>>
>> What we have is not shareware, nor purchased; it is proprietary.
>>
>> The FOM has to be coded; normally this is an easy task.
>>
>> How the engine works is not important; what is key is its ability to
>identify
>> something 'better' than what's out there. It is basically a black box for
>this
>> exercise. It is the I/O that's of interest.
>>
>> You may wish to use shareware to run your own exercise, although I suspect
>that
>> it will be 3 orders of magnitude slower, and possibly more.
>>
>> Kindly let Steve concentrate on the issue at hand. I believe we will all
>> benefit from the process.
>>
>> Regards,
>>
>> NC
>[snip]
>
>Your experience with [your] GA algorithms being *slow* for such simple
>problems is due to your of use of C++.
>
>Hopelessly slow!
>
>I believe that you will find that Fortran [90/95] GA implementations are
>much faster... sometimes by an order of
>magnitude or more, and so will not require an expensive "cluster" [a.k.a.
>black box] of computers to speed things up.
>Since you are using a GA implementation coded with C++ that is the reason
>you have to go to expensive clusters.
>You really should investigate fast Fortran implementations instead.
>
>Heh, heh... It's always the same... Scientists and computers... Why try to

>open a walnut with a sledgehammer,
>when a nut cracker will do?
>
>"Computer Science is no more about computers than Astronomy is about
>telescopes." --Edgar Dijkstra [RIP]
>
>--Peter K1PO
> Indialantic By-th-Sea, FL.
>

I.m a WATFIV kinda guy...that makes me a dinosaur:-). Fortunately I no longer do KLOC's"-) Others are better at it than me.

73,
Chip N1IR

4601. Re: Skin effect experiment with disk on antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-06 20:08:27 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <mo2inu42nnsfuonlu8g0j7bsviuhk2b2re@4ax.com>
Source record: 135143

On Fri, 6 Sep 2002 12:43:15 -0700, "rsparks" <rsparks@elltel.net>
wrote:

>The experiment and results are described in a web page found at
>
>http://www.televar.com/~rsparks/public_html/Disk_Experiment.htm
>
>If you don't have time or the ability to look at the web page, I can tell
>you that the metal disk did not lower the resonant frequency of the antenna.
>
>73, Roger, W7WKB

Hi Roger,

Looks like you need to do something different.

73's
Richard Clark, KB7QHC

4602. Re: Varicaps in rx atu's

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-06 20:38:14 UTC
From: Walter <walter@accessus.net>
Message-ID: <Wm8e9.467619$m91.18147644@bin5.nnrp.aus1.giganews.com>
Source record: 135144

Richard, is this going to be a receiving antenna? If so then
there are gobs of URLs to visit.

I use a simular tuning diode system to this one
http://www.carcanada.net/dx/RTL.html
on an 80 meter indoors receiving loop.

Try going to google.com, type in: antenna,diode tuned.

73...Walter, AG5P

"Richard Daventry" <nearlynews_email@ntlworld.com> wrote in message
news:al7gn2$1o4o5b$1@ID-150848.news.dfncis.de...
> Just wondering if it's practical to use varicaps in an atu for a
long wire
> antenna. Would simplify remote tuning. Probably burn out though in
> thunderstorms unless protected. Anyone know of any circuits on the
web? TIA.
> Rich.
>
>
>

4603. Re: H.A.A.R.P

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-06 21:10:16 UTC
From: Fulano de Tal <exray@nosssssspamcaribe.net>
Message-ID: <3D7919B8.426C3DFC@nosssssspamcaribe.net>
Source record: 135145

Dan/W4NTI wrote:
>
> Has anyone else noticed that since the inception of the High Frequency
> Active Auroral Research Program (HAARP) that HF propagation has been really
> wierd? Especially during summer months.
>
> I don't remember propagation being so bad, during daylight in particular, as
> it has been since 98 when HAARP fired up.
>
> Even in this peak sunspot cycle (a two peaker yet) it has been rough as
> hotel. I realize summertime obsortion is a major factor. Perhaps we could
> blame it on the ozone layer.
>
> Any comments?
>
> Dan/W4NTI

I knew a guy who, about an hour before a DX station was to show up,
would go off frequency and shout "ola" for an hour and claimed that he
"ionized the path" for better propogation. Maybe it did work negatively
because we always whipped him in the pileups.

-Bill WX4A

4604. Re: Fractal Debate

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-06 21:19:43 UTC
From: k3bu@aol.com
Message-ID: <20020906171943.02972.00002389@mb-dh.aol.com>
Source record: 135146

>
>I.m a WATFIV kinda guy...that makes me a dinosaur:-). Fortunately I no longer
>do KLOC's"-) Others are better at it than me.
>
>73,
>Chip N1IR

I hope he sues himself for insulting CEO of Freaktenna and calling him
dinosaur.

I just wonder, he don't want to do anything with hams, will not give them
dimensions or advice and voila...
he want to do FOM and see if anybody can come up with with better mouse trap
(so he can claim it, patent pend it and try to sell it to some stupid
commercial customers and milk the government grant for it.)

Let the games flop!

Bada Bum
9 days to Sopranos

4605. Re: Skin effect experiment with disk on antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-06 22:10:12 UTC
From: Bart Rowlett <BHRowlett@raytheon.com>
Message-ID: <3D7927C3.2ACADA71@raytheon.com>
Source record: 135147

Hi Roger,

rsparks wrote:
[stuff deleted for brevity]

> If this complete separation were to occur, substantial voltages would have
> to exist between the two sides of the metal shield.

Why? According to Ohm's law, the voltage difference between the two surfaces is equal to the conduction current density perpendicular to the surface, times the thickness of the plate, times the material resistivity. The cross sectional area is very large and the resistivity of copper is nearly as low as it gets at normal ambient temperatures. Substantial voltage drop would require enormous currents and correspondingly large losses.

> The question then
> becomes "Can metals support voltage differences and can a test be conducted
> to demonstrate that a voltage difference must exist across the metal?"

Ohm's law relates the voltage drop to the conduction current density and material characteristics. What is it about the skin effect explanation that suggests to you that a substantial voltage must be present between the two surfaces of the disk?

> I reasoned that a solid metal disk placed near the feed point of dipole
> antenna would demonstrate skin effect. The solid metal disk should not
> conduct current through the disk, but should force the current to flow
> around the edge of the disk.

> The path around the edge of the disk is
> longer by twice the radius of the disk so the length of the antenna should
> be substantially increased.

Why? Is there any more energy stored in the magnetic field when the disk is inserted? How about the electric field?

I think a better demonstration that the current travels on the surface is performed by altering the electrical properties of the surface and observing a change in the feedpoint resistance. For example, coat the outside region of the disk with a material having a high magnetic permeability and resistivity. This will increase the losses for current flowing along the surface, but have no effect for current traveling beneath the surface. The feedpoint resistance (and bandwidth) will be higher for the coated case than the uncoated one.

bart
wb6hqk

4606. Slightly OT - Speed of Gravity to be tested

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-06 22:10:22 UTC
From: "J. Harvey" <JM002.Harvey_ANTI*SPAM_@Sympatico.ca>
Message-ID: <kJ9e9.11579$YR2.1784039@news20.bellglobal.com>
Source record: 135148

http://news.bbc.co.uk/2/hi/science/nature/2238452.stm

"A ground-breaking experiment to measure the speed of gravity is being carried out. Thanks to a useful planetary alignment, physicists hope to test the general theory of relativity. If we find that the speed of gravity is faster than the speed of light then Einstein's theory of general relativity breaks down. One of the assumptions of Einstein's famous theory is that the speed of gravity is equal to the speed of light. It seems to be true, based on indirect evidence, but has never been proven." <snip>

4607. Re: Looking for Dennis in Arvada, CO

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-06 22:18:50 UTC
From: Allodoxaphobia <QSB@QRM-QRN.net>
Message-ID: <slrnaniae8.ccv.QSB@animas.frontier.net>
Source record: 135149

On Fri, 6 Sep 2002 00:04:56 -0400, ve3tmt scribbled:
> My computer crashed and I lost the e-mail for a fellow in Arvada, CO named
> Dennis and I can't remember his last name. His e-mail was something like
> ???@pegasus.net or similar. I bought a Kenwood 4 KHz AM filter from him on
> eBay, sent the money order, which he received about 2 weeks ago. The last
> e-mail he told me he was shipping it out but nothing has arrived yet. If
> anyone happens to know who I mean, please forward any information you may
> have.

My search shows just 6 Dennis'es in Arvada, Colorado:

AC4LF NARA, DENNIS W 7386 Beech Ct Arvada, CO 80005
K1FSQ RAPISARDI, DENNIS J 10357 W 77TH CIR ARVADA, CO 80005
N0COT MORAVEC, DENNIS J 6474 KENDALL ST ARVADA, CO 80003
N0UQC MYRACLE, DENNIS L 13604 W 67TH WAY ARVADA, CO 80004
W0EPG LAMER, DENNIS J 5889 PIERSON ST ARVADA, CO 80004
W0GD EDINGER, DENNIS L 12155 W 58TH PL 310E ARVADA, CO 80004-4267

Maybe you can x-ref these with some FAA pilot license directory...
Dunno about _that_ database......

gl es HTH
Jonesy
--
| Marvin L Jones | jonz | W3DHJ | OS/2
| Gunnison, Colorado | @ | Jonesy | linux __
| 7,703' -- 2,345m | frontier.net | DM68mn SK

4608. Re: H.A.A.R.P

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-06 22:26:14 UTC
From: k3bu@aol.com
Message-ID: <20020906182614.11691.00003018@mb-fi.aol.com>
Source record: 135150

W4NTI:
>
>Has anyone else noticed that since the inception of the High Frequency
>Active Auroral Research Program (HAARP) that HF propagation has been really
>wierd? Especially during summer months.
>

We are experiencing weird sunspot cycle (I predicted that and was laughed at)
that would affect about 95% of propagation (and climate changes) rest would be
our insignificant "efforts" at poisoning and globally warming the Earth.
If anything I would expect HAARP effects be localized around KL7 and W6, rather
than affecting whole world propagation.

Yuri, K3BU

4609. Re: H.A.A.R.P

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-06 22:54:29 UTC
From: Dan/W4NTI <w4nti@mindspringnospam.com>
Message-ID: <albbn3ngr1@slb7.atl.mindspring.net>
Source record: 135151

It takes more than a ionized path to win a contest...hi.

Seriously tho....have you noticed that when a major DX contest has marginal over the pole propagation that on the second day it is usually much better??? Not counting a solar burp that is.

I say the fact that you got bunches of KWs going off at the same time it may indeed help 'grease the skids' so to speak.

Isnt' that some of what HAARP is supposed to do?

Dan/W4NTI

"Fulano de Tal" <exray@nosssssspamcaribe.net> wrote in message news:3D7919B8.426C3DFC@nosssssspamcaribe.net...
> Dan/W4NTI wrote:
> >
> > Has anyone else noticed that since the inception of the High Frequency
> > Active Auroral Research Program (HAARP) that HF propagation has been really
> > wierd? Especially during summer months.
> >
> > I don't remember propagation being so bad, during daylight in particular, as
> > it has been since 98 when HAARP fired up.
> >
> > Even in this peak sunspot cycle (a two peaker yet) it has been rough as
> > hotel. I realize summertime obsortion is a major factor. Perhaps we could
> > blame it on the ozone layer.
> >
> > Any comments?
> >
> > Dan/W4NTI
>
> I knew a guy who, about an hour before a DX station was to show up,
> would go off frequency and shout "ola" for an hour and claimed that he
> "ionized the path" for better propogation. Maybe it did work negatively
> because we always whipped him in the pileups.
>
> -Bill WX4A

4610. Re: Fractal Debate

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-06 22:56:59 UTC
From: "Peter O. Brackett" <ab4bc@ix.netcom.com>
Message-ID: <albbrnnef1@nntp9.atl.mindspring.net>
Source record: 135152

[snip]
> I.m a WATFIV kinda guy...that makes me a dinosaur:-). Fortunately I no
longer
> do KLOC's"-) Others are better at it than me.
>
> 73,
> Chip N1IR
[snip]

God Bless University of Waterloo.

Lotta water under the bridge with Fortran since WATFIV... Fortran 90/95 has all of the best of FORTRAN without the bad parts. And it's simple, fast, and easy to learn.

Make your coders use Fortran 95!

But ya gotta *make* em do it, cuz they won't do it of their own accord... heh, heh

The mis-direction new graduates get from the army of young academic faculty who have never done *real* stuff is unfortunate and has ruined a whole generation of coders.

Hey didn't you know that the ++ in C++ *really* means that it generates lots more kLOCs. Get rid of the "objects" and the code size and execution speed goes way down. Use Fortran 90/95 and you can actually read the code yourself and see all of the *horrible* mistakes those young coders are making.

As with any job done by others... remember when overseeing programmers/coders the rule is -- "Inspect" don't "Expect!"

"Computer Science is no more about computers than Astronomy is about Telescopes." -- Edgar Dijkstra

Now... about that antenna optimization contest, Steve gave y'all the objective function, now...

Get to it!

--Peter K1PO
Indialantic By-the-Sea, FL

4611. Re: H.A.A.R.P

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-06 23:02:22 UTC
From: HRH <gi4uiv@ntlworld.com>
Message-ID: <3D7933FE.40904@ntlworld.com>
Source record: 135161

Maybe something to do with all this aluminium that is being dispersed
into the atmosphere via the chemtrail spraying.

de
Ade

4612. Re: H.A.A.R.P

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-06 23:15:23 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <0edinuks4t4rbi6dpanf6qtn7024m7qt8f@4ax.com>
Source record: 135153

On Fri, 6 Sep 2002 17:54:29 -0500, "Dan/W4NTI"
<w4nti@mindspringnospam.com> wrote:

>Isnt' that some of what HAARP is supposed to do?
>
>Dan/W4NTI

Hi Dan,

Perhaps, but it was designed to punch a hole in the atmosphere to
allow massive radiation to stream in and upset the natural, global
exposure distribution. The purpose of this was to then compare
"before" and "after" shots of the world's response and then draw out
structural anomalies in the world's structure. During the rein of
George the first, it was proposed that it could "X-ray" Baghdad to
find underground bunkers in a sort of HF Tomography.

73's
Richard Clark, KB7QHC

4613. Re: Skin effect experiment with disk on antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-06 23:52:22 UTC
From: Reg Edwards <g4fgq.regp@btinternet.com>
Message-ID: <albf3ldhb1@knossos.btinternet.com>
Source record: 135154

Metals cannot behave differently from any other materials from which our Universe is composed. The Laws of Science, the Laws of Nature, the Laws of God, or whatever other description is chosen is chosen to name them, are invariable.

The propagation of electromagetic fields in, through and on the surface of any material are governed by two constants associated with that material. These are Permeabilty and Permittivity.

These two values, with Frequency, fix the propagation velocity through and the impedance of any material. For example, in a vaccuum the propagation velocity is 300 metres per microsecond and the impedance is 377 + j0 ohms.

Any predictions which ignore the two fundamental electrical properties of Permeability and Permittivity are doomed to failure.

But no doubt there will be nit-pickers including a few EH and other sorts of wierd antenna inventors/fanatics.

Reg

4614. Re: THIS is a VIRUS HOAX

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-06 23:56:07 UTC
From: Crashman <crashman@nospam.com>
Message-ID: <3D794096.BE21095F@nospam.com>
Source record: 135155
Cross-posted to: alt.config,rec.nude,rec.outdoors.fishing.bass,rec.ponds,rec.radio.amateur.antenna

Roger Halstead wrote:
>
> "David Robbins" <k1ttt@arrl.net> wrote in message
> news:al600c0nei@enews2.newsguy.com...
> and not even a good one at that!
>
> Norton disagrees with that. They caught it and quranteened it. They do list
> it as a virus.
>
> However it's basically a loop and points out the danger of being able to
> receive HTML.

It's not HTML that does it, it's a javascript loop. I use Netscape to view mail, and have it set to not run java or javascript on mail or news. That solved the problem.

~Crashman

4615. Re: THIS is a VIRUS HOAX

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-06 23:59:51 UTC
From: Wayne <gwcato@carolina1.rr.com>
Message-ID: <Xjbe9.5666$FY1.484143@twister.southeast.rr.com>
Source record: 135160
Cross-posted to: alt.config,rec.nude,rec.outdoors.fishing.bass,rec.ponds,rec.radio.amateur.antenna

"Crashman" <crashman@nospam.com> wrote in message
news:3D794096.BE21095F@nospam.com...
> Roger Halstead wrote:
> >
> > "David Robbins" <k1ttt@arrl.net> wrote in message
> > news:al600c0nei@enews2.newsguy.com...
> > and not even a good one at that!
> >
> > Norton disagrees with that. They caught it and quranteened it. They do
list
> > it as a virus.
> >
> > However it's basically a loop and points out the danger of being able to
> > receive HTML.
>
> It's not HTML that does it, it's a javascript loop. I use Netscape to
view
> mail, and have it set to not run java or javascript on mail or news. That
> solved the problem.
>
> ~Crashman

I don't worry about it... I just let NAV 2002 earn it's keep and I've never
had a problem.

4616. 40 m dipole near Beam Mast? A Problem??

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-07 00:01:49 UTC
From: StarGazer <pti@capnet.com>
Message-ID: <3D7941ED.2AE33B5E@capnet.com>
Source record: 135162

My 40 m dipole will run about 3 feet away from my beam
mast. And about 3 feet below a 2 element beam.

This shouldn't be a problem for either antenna should it?

Since there shouldn't be hardly any mutual conductance since
they are perdicular to each other.

4617. Re: Fractal Debate

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-07 00:09:57 UTC
From: dplatt@radagast.org
Message-ID: <unigulqrud1ibc@corp.supernews.com>
Source record: 135157

>Lotta water under the bridge with Fortran since WATFIV... Fortran 90/95 has
>all of the best of FORTRAN without the bad parts. And it's simple, fast,
>and easy to learn.

Bah. *Real* programmers write in FORTRAN IV, and mix their COMMON,
EQUIVALENCE, and DATA statements with panache!

They then run, very quickly, so they're out of blast range when these
three elements finish reacting. I can only think of one more
dangerous construct... the ALTER verb. [Oldtimers will understand the
shameful thing I'm admitting to, with this last sentence... youngsters
won't, but trust me, you're better off that way.]

>Hey didn't you know that the ++ in C++ *really* means that it generates lots
>more kLOCs. Get rid of the "objects" and the code size and execution speed
>goes way down. Use Fortran 90/95 and you can actually read the code
>yourself and see all of the *horrible* mistakes those young coders are
>making.

Been there, done that, during a four-year stint in college... worked
as a batch-job submission/processing and user-assistance guy in the
student computer center.

If I never again see so large a quantity of code, written without any
clear understanding of the problem that the coder was trying to solve,
I'll be greatly relieved. Brrr... the horror, the horror...

However, I did develop the ability to hear the plaintive "I've been
working on this for a week, it does XXX, I've tried everything to
figure out why it does that, I can't find it, and it's due tomorrow",
glance at the printout for about ten seconds, circle three lines of
code and say "Here it is, here's why it's wrong, and here's roughly
what you need to do to correct it." About 90% of the time I'd be asked
"How did you possibly see that so quickly??", and I could always
truthfully answer "Well, I've made the same mistake myself a couple of
times :-("

As in most things, experience (sometimes painful) was the best teacher.

--
Dave Platt <dplatt@radagast.org> AE6EO
Hosting the Jade Warrior home page: http://www.radagast.org/jade-warrior
I do _not_ wish to receive unsolicited commercial email, and I will
boycott any company which has the gall to send me such ads!

4618. Re: G5RV Question

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-07 00:18:32 UTC
From: Wayne Sellin <sellinwg@starpower.net>
Message-ID: <albg4dafs1@bob.news.rcn.net>
Source record: 135156

hello

I just purchased and ICOM 706MKIIG and I am getting lots of help. I wanted to ask you because of your antenna expertise, about running the ladder line. The ladder line is ~33 ft but the wire is only 23 feet off the ground. Short trees. I am bringing the line off the wire at right angles and down to the ground. My plan is to double it back on itself and then the coax into the attic vent and then route the cable through the attic and over to the Shack room. This results in the ladder "lapping" itself. Since the ladder line is part of the transmitter element, will this cause problems? I am using a MFJ Versa Tuner II for the antenna matcher.

My other alternative is to run the ladder line down and then over the ground to the Shack window and into the Shack window.

N1GLC says his G5RV is also 20 feet off the ground and he gets Tokyo.

--
73
Wayne Sellin
KG4FRL
508 539-4882

"Andy Cowley" <andy.cowley@uwe.ac.uk> wrote in message
news:3D762F1E.4DE7F6EB@uwe.ac.uk...
CAM wrote:
>
> Richard wrote:
> >
> > CAM <Cecil.A.Moore@ieee.org> wrote:
> > >:This is a half truth. On the bands where the G5RV performs well, i.e.
> > >:80m, 40m, & 20m, the impedance at the coax/twinlead junction is not
> > >:highly reactive and a 1:1 choke will perform its intended function.
> > >:Take a look at the charts on my web page to find out why the above
> > >:statement doesn't apply to 80m, 40m, & 20m (also 12m).
> >
> > Mmmm. . . . Not sure how this squares with my experiences. I put
> > up a G5RV a few weeks back fed by my Acom 2000A. The Acom did not
> > like the load at all! It threw a wobbler and switched itself off, so
> > upset was it by the unusual reactance. This was on 80 M. On 40 it
> > tolerated the antenna, but showed a considerable SWR.
>
> The G5RV is resonant somewhere on 75m-80m but the feedpoint impedance
> at the coax/twinlead junction is around ten ohms. That's not "highly
> reactive" even though the 50 ohm SWR is 5:1. The load doesn't have to
> be "highly reactive" for your Acom 2000A not to like it. Just because

> something shows "a considerable SWR" doesn't mean it is not resonant.
> Please don't confuse SWR with reactance. If your antenna is resonant
> with a one ohm feedpoint resistance, the 50 ohm SWR will be 50:1 at
> resonance.

Indeed, and the point of lowest SWR might well not be the point of
resonance either. I.e SWR is one at 50 ohms impedance, reactive or not.
SWR is a _very_ bad measure of resonance.

Two little known facts about the G5RV

1. It won't work on all bands without an ATU (a real one, not the built in
sort).
To quote G5RV himself:
"the use of a suitable antenna tuner is necessary on all the other hf
bands
because, on those bands, the antenna plus the matching-section will
present
a reactive load to the feeder"
see http://www.qsl.net/aa3px/g5rv.htm

Here are some impedances at the end of the G5RV twin line

MHz Twinlead/Coax Junction Impedance 50 ohm Coax SWR
3.8 14.6 + j2.9 3.44
7.2 27.9 - j54.8 4.3
10.125 31.6 + j274 50
14.2 103 - j49 2.6
18.14 44.3 - j290 40
21.3 24.2 + j80.7 7.8
24.95 79.3 + j41.5 2.2
28.4 3049 + j655 64

see http://www.qsl.net/k2hq/g5rv.htm for more detail

As you can see, the antenna is not resonant on any band. No
figures given for topband although most ATUs will tune it up
without strapping the feed together. Varney chose a good length
for the feedline which got reasonably low reactances on all the
non-WARC bands, but the ATU should be at the junction of the ladder
line and the coax. SGC make just the thing....

For more impedance figures for the 'raw' antenna - 102' dipole see

http://www.cebik.com/gup/gup6.html

2. It is _much_ better if you throw away the coax. It is also then not a
G5RV.

Operating coax at SWRs like those shown is a sure way to
dissipate power without radiating it.

vy 73

Andy, M3ABC

4619. Re: THIS is a VIRUS HOAX

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-07 00:19:31 UTC
From: Crashman <crashman@nospam.com>
Message-ID: <3D794612.DA6AF92@nospam.com>
Source record: 135158
Cross-posted to: alt.config,rec.nude,rec.outdoors.fishing.bass,rec.ponds,rec.radio.amateur.antenna
Body handling: HTML body converted to readable text

```
Crashman wrote:
>
> Roger Halstead wrote:
> >
> > "David Robbins" wrote in message
> > news:al600c0nei@enews2.newsguy.com...
> > and not even a good one at that!
> >
> > Norton disagrees with that. They caught it and quranteened it. They do list
> > it as a virus.
> >
> > However it's basically a loop and points out the danger of being able to
> > receive HTML.
>
> It's not HTML that does it, it's a javascript loop. I use Netscape to view
> mail, and have it set to not run java or javascript on mail or news. That
> solved the problem.
>
> ~Crashman

In fact, here's the code that the message contained. If you know
HTML/Javascript, you can see that it's clearly not a virus, just a message
box that pops up in a loop. Ignore the //# at the beginning of each line.
I put that in to make sure no tools actually ran the script...

//#

//#

~Crashman
```

4620. Re: THIS is a VIRUS HOAX

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-07 00:24:09 UTC
From: Wayne <gwcato@carolina1.rr.com>
Message-ID: <JGbe9.5712$FY1.488339@twister.southeast.rr.com>
Source record: 135159
Cross-posted to: alt.config,rec.nude,rec.outdoors.fishing.bass,rec.ponds,rec.radio.amateur.antenna
Body handling: HTML body converted to readable text

```
"Crashman" wrote in message
news:3D794612.DA6AF92@nospam.com...
> Crashman wrote:
> >
> > Roger Halstead wrote:
> > >
> > > "David Robbins" wrote in message
> > > news:al600c0nei@enews2.newsguy.com...
> > > and not even a good one at that!
> > >
> > > Norton disagrees with that. They caught it and quranteened it. They
do list
> > > it as a virus.
> > >
> > > However it's basically a loop and points out the danger of being able
to
> > > receive HTML.
> >
> > It's not HTML that does it, it's a javascript loop. I use Netscape to
view
> > mail, and have it set to not run java or javascript on mail or news.
That
> > solved the problem.
> >
> > ~Crashman
>
> In fact, here's the code that the message contained. If you know
> HTML/Javascript, you can see that it's clearly not a virus, just a message
> box that pops up in a loop. Ignore the //# at the beginning of each line.
> I put that in to make sure no tools actually ran the script...
>
>
> //#
>
> //#
>
>
> ~Crashman

If NAV lists it as a virus, then that's good enough for me. It's a VIRUS!
```

4621. Re: THIS is a VIRUS HOAX

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-07 00:46:52 UTC
From: John Rutz <fuerjefe@nospam.com>
Message-ID: <3D794C7C.50201@nospam.com>
Source record: 135164
Cross-posted to: alt.config,rec.nude,rec.outdoors.fishing.bass,rec.ponds,rec.radio.amateur.antenna

David Robbins wrote:

>
>>"David Robbins" <k1ttt@arrl.net> wrote in message
>>news:al600c0nei@enews2.newsguy.com...
>>and not even a good one at that!
>>
>>Norton disagrees with that. They caught it and quranteened it. They do
>>
>list
>
>>it as a virus.
>>
>>However it's basically a loop and points out the danger of being able to
>>receive HTML.
>>
>>
>>--
>>Roger Halstead (K8RI EN73)
>>www.rogerhalstead.com
>>N833R World's oldest Debonair? (S# CD-2)
>>
>>
>it tickled me as I got a message-- windows has detected a virus------
>
> pretty good seeing as I dont have windows in my puter ;-)
>

--
John Rutz

Email fuerjefe@lobo.net

See my pond at:
http://www.fuerjefe.com

rec.ponds Frequently Asked Questions
http://www.geocities.com/justinm090/faq.html

4622. G5RV ladder line

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-07 00:49:07 UTC
From: Wayne Sellin <sellinwg@starpower.net>
Message-ID: <albhto$f7h$1@bob.news.rcn.net>
Source record: 135163

From what I have been reading please help with the following.
I understand that the ladder line is part of the transmission line and the transmission line is not part of radiating antenna. Therefore I should be able to bring it down and into the attic vent, across the attic and down into my shack.. Please see my original message and question below.
This is also saying the there is no special length to the ladder line?
--
73
Wayne Sellin
KG4FRL
508 539-4882
"Wayne Sellin" <sellinwg@erols.com> wrote in message
news:albg4dafs1@bob.news.rcn.net...
hello

I just purchased and ICOM 706MKIIG and I am getting lots of help. I wanted to ask you because of your antenna expertise, about running the ladder line. The ladder line is ~33 ft but the wire is only 23 feet off the ground. Short trees. I am bringing the line off the wire at right angles and down to the ground. My plan is to double it back on itself and then the coax into the attic vent and then route the cable through the attic and over to the Shack room. This results in the ladder "lapping" itself. Since the ladder line is part of the transmitter element, will this cause problems? I am using a MFJ Versa Tuner II for the antenna matcher.

My other alternative is to run the ladder line down and then over the ground to the Shack window and into the Shack window.

N1GLC says his G5RV is also 20 feet off the ground and he gets Tokyo.

--
73
Wayne Sellin
KG4FRL
508 539-4882

"Andy Cowley" <andy.cowley@uwe.ac.uk> wrote in message
news:3D762F1E.4DE7F6EB@uwe.ac.uk...
CAM wrote:
>
> Richard wrote:
> >
> > CAM <Cecil.A.Moore@ieee.org> wrote:
> > >:This is a half truth. On the bands where the G5RV performs well, i.e.
> > >:80m, 40m, & 20m, the impedance at the coax/twinlead junction is not
> > >:highly reactive and a 1:1 choke will perform its intended function.

> > >:Take a look at the charts on my web page to find out why the above
> > >:statement doesn't apply to 80m, 40m, & 20m (also 12m).
> >
> > Mmmm. . . . Not sure how this squares with my experiences. I put
> > up a G5RV a few weeks back fed by my Acom 2000A. The Acom did not
> > like the load at all! It threw a wobbler and switched itself off, so
> > upset was it by the unusual reactance. This was on 80 M. On 40 it
> > tolerated the antenna, but showed a considerable SWR.
>
> The G5RV is resonant somewhere on 75m-80m but the feedpoint impedance
> at the coax/twinlead junction is around ten ohms. That's not "highly
> reactive" even though the 50 ohm SWR is 5:1. The load doesn't have to
> be "highly reactive" for your Acom 2000A not to like it. Just because
> something shows "a considerable SWR" doesn't mean it is not resonant.
> Please don't confuse SWR with reactance. If your antenna is resonant
> with a one ohm feedpoint resistance, the 50 ohm SWR will be 50:1 at
> resonance.

Indeed, and the point of lowest SWR might well not be the point of
resonance either. I.e SWR is one at 50 ohms impedance, reactive or not.
SWR is a _very_ bad measure of resonance.

Two little known facts about the G5RV

1. It won't work on all bands without an ATU (a real one, not the built in
sort).
To quote G5RV himself:
"the use of a suitable antenna tuner is necessary on all the other hf
bands
because, on those bands, the antenna plus the matching-section will
present
a reactive load to the feeder"
see http://www.qsl.net/aa3px/g5rv.htm

Here are some impedances at the end of the G5RV twin line

MHz Twinlead/Coax Junction Impedance 50 ohm Coax SWR
3.8 14.6 + j2.9 3.44
7.2 27.9 - j54.8 4.3
10.125 31.6 + j274 50
14.2 103 - j49 2.6
18.14 44.3 - j290 40
21.3 24.2 + j80.7 7.8
24.95 79.3 + j41.5 2.2
28.4 3049 + j655 64

see http://www.qsl.net/k2hq/g5rv.htm for more detail

As you can see, the antenna is not resonant on any band. No
figures given for topband although most ATUs will tune it up
without strapping the feed together. Varney chose a good length
for the feedline which got reasonably low reactances on all the

non-WARC bands, but the ATU should be at the junction of the ladder line and the coax. SGC make just the thing....

For more impedance figures for the 'raw' antenna - 102' dipole see

http://www.cebik.com/gup/gup6.html

2. It is _much_ better if you throw away the coax. It is also then not a G5RV.

Operating coax at SWRs like those shown is a sure way to dissipate power without radiating it.

vy 73

Andy, M3ABC

4623. Re: Question about F antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-07 01:13:16 UTC
From: N4LQ <N4LQ@igLou.com>
Message-ID: <3d78010a$1_2@news.iglou.com>
Source record: 135207

One bent wire. I made a F Windom today. Results are amazing.

--
Steve Ellington N4LQ.
"Gilbert Mouget" <nospam@thank.you> wrote in message
news:3d7739ad$0$459$626a54ce@news.free.fr...
>
>
> Is a fractal antenna made of several straight wires or of one bended wire
?
>
>
> --
> That Which Is Static And Repetitive Is Boring.
> That Which Is Dynamic And Random Is Confusing.
> In Between Lies Art.
> --John A. Locke

4624. Re: Slightly OT - Speed of Gravity to be tested

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-07 01:35:07 UTC
From: Crazy George <munschNO@attglobal.net.SPAM>
Message-ID: <3d795c06_1@news1.prserv.net>
Source record: 135165

It's about time. I've been asking what the speed of gravity is since 1952. Sure is a good way to stump college Physics professors. I still haven't gotten an answer. I suggested it is infinite, but that really caused a ruckus. 'nother reason it's Crazy George

--
Crazy George
Remove NO and SPAM from return address
J. Harvey <JM002.Harvey_ANTI*SPAM_@Sympatico.ca> wrote in message news:kJ9e9.11579$YR2.1784039@news20.bellglobal.com...
> http://news.bbc.co.uk/2/hi/science/nature/2238452.stm
>
> "A ground-breaking experiment to measure the speed of gravity is being
> carried out. Thanks to a useful planetary alignment, physicists hope to test
> the general theory of relativity. If we find that the speed of gravity is
> faster than the speed of light then Einstein's theory of general relativity
> breaks down. One of the assumptions of Einstein's famous theory is that the
> speed of gravity is equal to the speed of light. It seems to be true, based
> on indirect evidence, but has never been proven." <snip>
>
>
>
>

4625. Re: H.A.A.R.P

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-07 01:49:48 UTC
From: Dan/W4NTI <w4nti@mindspringnospam.com>
Message-ID: <alblvn$4an$1@slb7.atl.mindspring.net>
Source record: 135166

Boy oh boy were we hoodwinked. I NEVER HEARD this before. All I recall on the subject was it was to possible effect propagation. My oh my.

This is seriously scarry. Don't let the inviromentalwacko's get wind of this.

Dan/W4NTI

"Richard Clark" <kb7qhc@attbi.com> wrote in message news:0edinuks4t4rbi6dpanf6qtn7024m7qt8f@4ax.com...
> On Fri, 6 Sep 2002 17:54:29 -0500, "Dan/W4NTI"
> <w4nti@mindspringnospam.com> wrote:
>
> >Isnt' that some of what HAARP is supposed to do?
> >
> >Dan/W4NTI
>
> Hi Dan,
>
> Perhaps, but it was designed to punch a hole in the atmosphere to
> allow massive radiation to stream in and upset the natural, global
> exposure distribution. The purpose of this was to then compare
> "before" and "after" shots of the world's response and then draw out
> structural anomalies in the world's structure. During the rein of
> George the first, it was proposed that it could "X-ray" Baghdad to
> find underground bunkers in a sort of HF Tomography.
>
> 73's
> Richard Clark, KB7QHC

4626. Re: 40 m dipole near Beam Mast? A Problem??

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-07 01:52:20 UTC
From: Dan/W4NTI <w4nti@mindspringnospam.com>
Message-ID: <albm4d$95a$1@slb7.atl.mindspring.net>
Source record: 135167

At one time I had a TA-33sr Tribander up above the rotar. I hung a 3 element 40 meter beam made of wire. Supported by a radio shack mast bolted through the tower.

I was not happy with the 40 meter antenna at all. And the 20m pattern of the tribander didn't act right afterwards. I took the mess down,

I may have had something screwed up somewhere, but I think it did effect each other.

Dan/W4NTI

"StarGazer" <pti@capnet.com> wrote in message news:3D7941ED.2AE33B5E@capnet.com...
> My 40 m dipole will run about 3 feet away from my beam
> mast. And about 3 feet below a 2 element beam.
>
> This shouldn't be a problem for either antenna should it?
>
> Since there shouldn't be hardly any mutual conductance since
> they are perdicular to each other.
>

4627. Re: H.A.A.R.P

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-07 01:55:53 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <o0ninuo745g7f7b4a4u3gp3v4ps2137dm1@4ax.com>
Source record: 135168

On Fri, 6 Sep 2002 20:49:48 -0500, "Dan/W4NTI"
<w4nti@mindspringnospam.com> wrote:

>Boy oh boy were we hoodwinked. I NEVER HEARD this before. All I recall on
>the subject was it was to possible effect propagation. My oh my.
>
>This is seriously scarry. Don't let the inviromentalwacko's get wind of
>this.
>
>Dan/W4NTI

Hi Dan,

It's best to not make enemies of other groups - especially when it was
the hamwhacko's that got wind of it 10 years ago and speculated the
skip layer would be boiled away into outer space.

73's
Richard Clark, KB7QHC

4628. Create Log Periodic - I just got one but...

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-07 02:06:54 UTC
From: hpr_rockets@yahoo.com
Message-ID: <1b7d8b5d.0209061806.a8c375d@posting.google.com>
Source record: 135069

I just got a Create Log Periodic. I got the smaller one which is for 100-1300 MHz. I puzzled by one thing, there is no balum or transformer. Most scanner beams I have bought usually include a 300-75 ohm TV type transformer to match the 300 ohm beam to the 75 (really 50 ohm) scanner input.

Am I missing something or does a Log Periodic have a 50 ohm feedpoint?
Roger

4629. Re: G5RV ladder line

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-07 02:37:06 UTC
From: Bibby <bibby@attbi.com>
Message-ID: <mDde9.222508$aA.39920@sccrnsc02>
Source record: 135070

Doesn't anybody read what has happened in the past - like just 2 days ago?
Read the thread that started on 9/1/02 on this very same subject!

Open your eyes!!

Malcolm

"Wayne Sellin" <sellinwg@starpower.net> wrote in message
news:albhto$f7h$1@bob.news.rcn.net...
> From what I have been reading please help with the following.
> I understand that the ladder line is part of the transmission line and the
> transmission line is not part of radiating antenna. Therefore I should be
> able to bring it down and into the attic vent, across the attic and down
> into my shack.. Please see my original message and question below.
> This is also saying the there is no special length to the ladder line?
> --
> 73
> Wayne Sellin
> KG4FRL
> 508 539-4882
> "Wayne Sellin" <sellinwg@erols.com> wrote in message
> news:albg4dafs1@bob.news.rcn.net...
> hello
>
> I just purchased and ICOM 706MKIIG and I am getting lots of help. I
wanted
> to ask you because of your antenna expertise, about running the ladder
line.
> The ladder line is ~33 ft but the wire is only 23 feet off the ground.
> Short trees. I am bringing the line off the wire at right angles and down
> to the ground. My plan is to double it back on itself and then the coax
> into the attic vent and then route the cable through the attic and over to
> the Shack room. This results in the ladder "lapping" itself. Since the
> ladder line is part of the transmitter element, will this cause problems?
I
> am using a MFJ Versa Tuner II for the antenna matcher.
>
> My other alternative is to run the ladder line down and then over the
> ground to the Shack window and into the Shack window.
>
> N1GLC says his G5RV is also 20 feet off the ground and he gets Tokyo.
>
>
> --
> 73

> Wayne Sellin
> KG4FRL
> 508 539-4882
>
>
> "Andy Cowley" <andy.cowley@uwe.ac.uk> wrote in message
> news:3D762F1E.4DE7F6EB@uwe.ac.uk...
> CAM wrote:
> >
> > Richard wrote:
> > >
> > > CAM <Cecil.A.Moore@ieee.org> wrote:
> > > >:This is a half truth. On the bands where the G5RV performs well,
i.e.
> > > >:80m, 40m, & 20m, the impedance at the coax/twinlead junction is not
> > > >:highly reactive and a 1:1 choke will perform its intended function.
> > > >:Take a look at the charts on my web page to find out why the above
> > > >:statement doesn't apply to 80m, 40m, & 20m (also 12m).
> > >
> > > Mmmm. . . . Not sure how this squares with my experiences. I put
> > > up a G5RV a few weeks back fed by my Acom 2000A. The Acom did not
> > > like the load at all! It threw a wobbler and switched itself off, so
> > > upset was it by the unusual reactance. This was on 80 M. On 40 it
> > > tolerated the antenna, but showed a considerable SWR.
> >
> > The G5RV is resonant somewhere on 75m-80m but the feedpoint impedance
> > at the coax/twinlead junction is around ten ohms. That's not "highly
> > reactive" even though the 50 ohm SWR is 5:1. The load doesn't have to
> > be "highly reactive" for your Acom 2000A not to like it. Just because
> > something shows "a considerable SWR" doesn't mean it is not resonant.
> > Please don't confuse SWR with reactance. If your antenna is resonant
> > with a one ohm feedpoint resistance, the 50 ohm SWR will be 50:1 at
> > resonance.
>
> Indeed, and the point of lowest SWR might well not be the point of
> resonance either. I.e SWR is one at 50 ohms impedance, reactive or not.
> SWR is a _very_ bad measure of resonance.
>
> Two little known facts about the G5RV
>
> 1. It won't work on all bands without an ATU (a real one, not the built in
> sort).
> To quote G5RV himself:
> "the use of a suitable antenna tuner is necessary on all the other hf
> bands
> because, on those bands, the antenna plus the matching-section will
> present
> a reactive load to the feeder"
> see http://www.qsl.net/aa3px/g5rv.htm
>

> Here are some impedances at the end of the G5RV twin line
>
> MHz Twinlead/Coax Junction Impedance 50 ohm Coax SWR
> 3.8 14.6 + j2.9 3.44
> 7.2 27.9 - j54.8 4.3
> 10.125 31.6 + j274 50
> 14.2 103 - j49 2.6
> 18.14 44.3 - j290 40
> 21.3 24.2 + j80.7 7.8
> 24.95 79.3 + j41.5 2.2
> 28.4 3049 + j655 64
>
> see http://www.qsl.net/k2hq/g5rv.htm for more detail
>
> As you can see, the antenna is not resonant on any band. No
> figures given for topband although most ATUs will tune it up
> without strapping the feed together. Varney chose a good length
> for the feedline which got reasonably low reactances on all the
> non-WARC bands, but the ATU should be at the junction of the ladder
> line and the coax. SGC make just the thing....
>
> For more impedance figures for the 'raw' antenna - 102' dipole see
>
> http://www.cebik.com/gup/gup6.html
>
> 2. It is _much_ better if you throw away the coax. It is also then not a
> G5RV.
>
> Operating coax at SWRs like those shown is a sure way to
> dissipate power without radiating it.
>
> vy 73
>
> Andy, M3ABC
>
>
>
>

4630. Re: Fractal Debate

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-07 02:54:16 UTC
From: fractenna@aol.com
Message-ID: <20020906225416.05051.00001894@mb-mk.aol.com>
Source record: 135071

>Now... about that antenna optimization contest, Steve gave y'all the
>objective function, now...
>
>Get to it!
>
>--Peter K1PO
> Indialantic By-the-Sea, FL
>

I think I may have a couple of minor points for Steve for off-line, but I see no reason why a mid/late Oct time scale isn't do-able.(as I mentioned earlier). Should be fun and everyone will learn something.

In the meantime, I appreciate the obvious drop off of un-related comments and hope we can all maintain a cordial 'even strain' as they say.

73,
Chip N1IR

4631. Re: H.A.A.R.P

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-07 03:04:57 UTC
From: Fred Hambrecht <w4jle@charter.net>
Message-ID: <unir71h94ee070@corp.supernews.com>
Source record: 135072

You can imagine why I must hide my identity.
First the real meaning of H.A.A.R.P is Hey Amateurs Are Really Pissed. is classified secret.

The purpose of this nefarious project is to cut the balance of payments with Japan. It was found that the number of hams decreased dramatically as propagation disappeared.

It was found that with the use of a greatly amplified Raser (see note 1), holes could be burned into the atmosphere of sufficient size to allow 92% of the radio waves to escape reflection. Actually the most horrible secret is... Wait there is someone knocking on the door, be back in a secon

"Dan/W4NTI" <w4nti@mindspringnospam.com> wrote in message news:alavajgnj1@slb3.atl.mindspring.net...
> Has anyone else noticed that since the inception of the High Frequency
> Active Auroral Research Program (HAARP) that HF propagation has been really
> wierd? Especially during summer months.
>
> I don't remember propagation being so bad, during daylight in particular, as
> it has been since 98 when HAARP fired up.
>
> Even in this peak sunspot cycle (a two peaker yet) it has been rough as
> hotel. I realize summertime obsortion is a major factor. Perhaps we could
> blame it on the ozone layer.
>
> Any comments?
>
> Dan/W4NTI
>
> HAARP link below
>
> http://server5550.itd.nrl.navy.mil/projects/haarp/
>
>

4632. Cushcraft R8 Bandwidths

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-07 03:10:26 UTC
From: John Shepherd <john@eternalchaos.com>
Message-ID: <q7ee9.9698$zv.1731550@news20.bellglobal.com>
Source record: 135075

Has anyone measured actual VSWR 2:1 bandwidths on the Cushcraft R8 using an MFJ antenna analyzer?
I have just installed an R8 and find that many of the bandwidths are less than advertised.
On 40m, I measure a BW of 107 KHz. at the transmitter end of 62 ft. of RG-213, and calculate a BW at the antenna of only about 83 KHz. The spec is 150 KHz.
On 20m, I measure 270 KHz. at the transmitter and calculate about 223 KHz. at the antenna. The spec is >350 KHz.
The antenna is mounted on a flat roof with the radials 9 feet above the roof. There are, hovever, metal roof flashings about 13 feet away.
Has anyone taken comparable measurements on an R8?
John Shepherd

4633. Re: G5RV Question

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-07 03:12:21 UTC
From: Scott Vanzandt <vzandt@midsouth.rr.com>
Message-ID: <9arinukq956cheu7n4g5u6jbusrhp9hrqj@4ax.com>
Source record: 135073

Might work on some bands, but obviously not the best answer.
I have a G5RV at 14' and the ladder line was run down the fireplace
and back up to the roof to enter the attic. Worked O.K. on many
bands, but could not tune the MARS bands outside 80 Meters. The
antenna is now in the same place, but the ladder line is across the
roof at a right angle to the dipole section. Seems to work better, but
I still cannot tune 40 Meters with the internal tuner and have some RF
splashing in the shack on 40,80 Meters. Works ok up through 20,
though, and it is useable on 80 and on 40 with an external tuner.

On Fri, 6 Sep 2002 20:18:32 -0400, "Wayne Sellin"
<sellinwg@starpower.net> wrote:

>hello
>
>I just purchased and ICOM 706MKIIG and I am getting lots of help. I wanted
>to ask you because of your antenna expertise, about running the ladder line.
>The ladder line is ~33 ft but the wire is only 23 feet off the ground.
>Short trees. I am bringing the line off the wire at right angles and down
>to the ground. My plan is to double it back on itself and then the coax
>into the attic vent and then route the cable through the attic and over to
>the Shack room. This results in the ladder "lapping" itself. Since the
>ladder line is part of the transmitter element, will this cause problems? I
>am using a MFJ Versa Tuner II for the antenna matcher.
>
>My other alternative is to run the ladder line down and then over the
>ground to the Shack window and into the Shack window.
>
>N1GLC says his G5RV is also 20 feet off the ground and he gets Tokyo.

>and for the spam bots:
>president@whitehouse.gov
>vicepresident@whitehouse.gov
>vento@mail.house.gov
>gephardt@mail.house.gov
>senator@feinstein.senate.gov
>senator_mccain@mccain.senate.gov
>senator@wellstone.senate.gov
>senator_byrd@byrd.senate.gov
>classonde@psbgm.qc.ca
>root@localhost
>admin@localhost
>root@mailloop.com
>Chairman Reed Hundt: rhundt@fcc.gov
>Commissioner James Quello: jquello@fcc.gov

>Commissioner Susan Ness: sness@fcc.gov
>Commissioner Rachelle Chong: rchong@fcc.gov
>postmaster@localhost
>admin@localhost
>
>Eat that, spam! PLEASE copy this and paste it to your sig card.

4634. Re: H.A.A.R.P

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-07 03:15:35 UTC
From: J Tabor <denews@taborsoft.com>
Message-ID: <unirqrfo1nig50@corp.supernews.com>
Source record: 135076

Hey that's fairly good info. :-)

Jim - ku5s

4635. Re: G5RV Question

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-07 03:16:45 UTC
From: CAM <Cecil.A.Moore@ieee.org>
Message-ID: <3D796F9D.FC87E85F@ieee.org>
Source record: 135077

Wayne Sellin wrote:
> My plan is to double (the ladder-line) back on itself ...

Keep all ladder-line at least 4+ inches away from other
sections of ladder-line. Do not roll it up like coax.
You can hang it, accordion style, from a string or coil
it in a spiral. But do not "double it back on itself".
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

4636. Re: G5RV ladder line

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-07 03:21:52 UTC
From: CAM <Cecil.A.Moore@ieee.org>
Message-ID: <3D7970D0.D9C2ACE6@ieee.org>
Source record: 135078

Wayne Sellin wrote:
> From what I have been reading please help with the following.
> I understand that the ladder line is part of the transmission line and the
> transmission line is not part of radiating antenna. Therefore I should be
> able to bring it down and into the attic vent, across the attic and down
> into my shack.. Please see my original message and question below.
> This is also saying the there is no special length to the ladder line?

Take a look at my web page to see why the series section on a G5RV is
a special length. It resonates the G5RV on or near 80m, 40m, 20m, and
12m. Keep the ladder-line a few inches away from metal.

If you use ladder-line all the way to the transmitter, you will have
moved the matching function from the coax/ladder-line junction to the
transmitter. You can still have matching problems even with an antenna
tuner.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
------== Over 80,000 Newsgroups - 16 Different Servers! =-----

4637. Re: Create Log Periodic - I just got one but...

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-07 03:27:58 UTC
From: Fred Hambrecht <w4jle@charter.net>
Message-ID: <unisi3gdimr06b@corp.supernews.com>
Source record: 135079

What is a balum, and what does it do?

"HPR Rocket Man" <hpr_rockets@yahoo.com> wrote in message
news:1b7d8b5d.0209061806.a8c375d@posting.google.com...
> I just got a Create Log Periodic. I got the smaller one which is for
> 100-1300 MHz. I puzzled by one thing, there is no balum or
> transformer. Most scanner beams I have bought usually include a
> 300-75 ohm TV type transformer to match the 300 ohm beam to the 75
> (really 50 ohm) scanner input.
>
> Am I missing something or does a Log Periodic have a 50 ohm feedpoint?
> Roger

4638. Re: Water pipe ground?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-07 04:00:12 UTC
From: Owen Duffy <owen@oda.com.au>
Message-ID: <3D7979CC.7D966BFF@oda.com.au>
Source record: 135080

N4LQ wrote:
>
> I cut the main water pipe to install a whole house filter. The filter is
> plastic and came with a jumper wire to complete the electrical bypass. Since
> I use this pipe for my ground, I was curious if it really worked or if
> plastic was used to the street main. So before installing the wire, I

There have been cases of electrocution in this area where plumbers have removed the water meter and so broken the metallic connection. (The electrical supply distribution scheme is MEN.) I suspect that the cases of serious electrocution were probably under fault conditions, but I recall that the documentation from the supply authoritiy suggested that the 'residual' currents measured could be dangerous to people with a weak ticker. In any case, they mandate a procedure of electrically shunting the intended pipe break before opening the pipe connection.

Owen

4639. Re: Skin effect experiment with disk on antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-07 04:12:43 UTC
From: richardharrison@webtv.net
Message-ID: <8010-3D797CBB-76@storefull-2315.public.lawson.webtv.net>
Source record: 135081

Reg, G4FGQ wrote:
"Ihe propagation of electromagnetic fields in, through and on the surface of any material are governed by two constants associated with that material."

Yes, but it`s pointless to restate the skin effect rules when all experience shows that coax bars r-f penetration of the shield. The cable TV company here delivers Channel 2 on Channel 12 without interference from broadcast signals. Broadcast stations many times bury the coax feeding their antennas without any measurable loss to the earth it`s buried in or any effect on the impedances seen at the ends of the coax.

The r-f voltage breakdown in coax is between the center conductir and shield. The r-f potential difference between inside and outside shield surfaces does not break down the inherent isolation provided by skin effect.

Best regards, Richard Harrison, KB5WZI

4640. Re: Fractal Debate

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-07 08:49:39 UTC
From: "Peter O. Brackett" <ab4bc@ix.netcom.com>
Message-ID: <alceqm$i6$1@slb5.atl.mindspring.net>
Source record: 135082

Chip:

[snip]
> In the meantime, I appreciate the obvious drop off of un-related comments
and
> hope we can all maintain a cordial 'even strain' as they say.
>
> 73,
> Chip N1IR
[snip]

"As they say..." Heh, heh... It all depends upon playground etiquite...
playing nice with the other kids seldom results in discord. OTOH...

Get to work and fire up that optimizer!

Cordially,

--Peter K1PO
Indialantic By-the-Sea, FL.

BTW...

For those who might be interested in "monkeys writing Shakespeare", and
other less random approaches to optimization...

Some Genetic Algorithm References:

Fortran 90 GA implementation: http://www.cuaerospace.com/carroll/ga.html

Goldberg, D. E., and Richardson, J., "Genetic Algorithms with Sharing for
Multimodal Function Optimization," Genetic Algorithms and their
Applications: Proceedings of the Second International Conference on Genetic
Algorithms, 1987, pp. 41-49.

Goldberg, D. E., "Genetic Algorithms in Search, Optimization and Machine
Learning," Addison-Wesley, 1989.

Krishnakumar, K., "Micro-Genetic Algorithms for Stationary and
Non-Stationary Function Optimization," SPIE: Intelligent Control and
Adaptive Systems, Vol. 1196, Philadelphia, PA, 1989.

Syswerda, G., "Uniform Crossover in Genetic Algorithms," in: Proceedings of
the Third International Conference on Genetic Algorithms, Schaffer, J.
(Ed.), Morgan Kaufmann Publishers, Los Altos, CA, pp. 2-9, 1989.

Goldberg, D. E., "A Note on Boltzmann Tournament Selection for Genetic Algorithms and Population-Oriented Simulated Annealing," in: Complex Systems, Vol. 4, Complex Systems Publications, Inc., 1990, pp. 445-460.

Goldberg, D. E., "Real-coded Genetic Algorithms, Virtual Alphabets, and Blocking," in: Complex Systems, Vol. 5, Complex Systems Publications, Inc., 1991, pp. 139-167.

Goldberg, D. E., and Deb, K., "A Comparitive Analysis of Selection Schemes Used in Genetic Algorithms," in: Foundations of Genetic Algorithms, ed. by Rawlins, G.J.E., Morgan Kaufmann Publishers, San Mateo, CA, pp. 69-93, 1991.

Goldberg, D. E., Deb, K., and Clark, J. H., "Genetic Algorithms, Noise, and the Sizing of Populations," in: Complex Systems, Vol. 6, Complex Systems Pub., Inc., 1992, pp. 333-362.

4641. Re: Skin effect experiment with disk on antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-07 09:30:48 UTC
From: Reg Edwards <g4fgq.regp@btinternet.com>
Message-ID: <alch07$r4e$1@helle.btinternet.com>
Source record: 135084

Someone took the trouble to remind me I forgot to mention Conductivity of a material which is just as important as Permeability, Permittivity and Frequency.

Makes my statement lose its impact, doesn't it !

Reg.

4642. Re: Skin effect experiment with disk on antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-07 09:30:49 UTC
From: Reg Edwards <g4fgq.regp@btinternet.com>
Message-ID: <alch08$r4e$2@helle.btinternet.com>
Source record: 135083

inherent isolation provided by skin
> effect.
>
> Best regards, Richard Harrison, KB5WZI

==========

How thick does the skin have to be to achieve the insulating effect ?

Reg.

4643. Re: Question about ladder line and metal mast

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-07 10:01:01 UTC
From: Andy KC2SSB <vhfradiobuff@yahoo.com>
Message-ID: <7ijjnu0930a61nhp3rl47nqgffp6uo72k7@4ax.com>
Source record: 135085

On Fri, 06 Sep 2002 15:24:16 GMT, Alex Flinsch
<alex@localhost.localdomain> wrote:

>Try your local Agway

What's an Agway?
=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-
73! de Andy KC2SSB (ex: KF4KHC/HL9HCT)
Beachwood, NJ USA Grid FM29vw
http://vhfradiobuff.tripod.com

4644. Re: Cushcraft R8 Bandwidths

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-07 11:03:20 UTC
From: Bob Miller <bamiller@texas.net>
Message-ID: <Kdx5Pf=sTWLWg5STh+8miO1d9fgj@4ax.com>
Source record: 135086

"John Shepherd" <john@eternalchaos.com> wrote:

Used to have a neighbor with an R7. He was lucky to get 20 or 30 khz bandwidth
on 40. You're doing darned well...

Bob
k5qwg

>Has anyone measured actual VSWR 2:1 bandwidths on the Cushcraft R8 using an
>MFJ antenna analyzer?
>I have just installed an R8 and find that many of the bandwidths are less
>than advertised.
>On 40m, I measure a BW of 107 KHz. at the transmitter end of 62 ft. of
>RG-213, and calculate a BW at the antenna of only about 83 KHz. The spec is
>150 KHz.
>On 20m, I measure 270 KHz. at the transmitter and calculate about 223 KHz.
>at the antenna. The spec is >350 KHz.
>The antenna is mounted on a flat roof with the radials 9 feet above the
>roof. There are, hovever, metal roof flashings about 13 feet away.
>Has anyone taken comparable measurements on an R8?
>John Shepherd
>

4645. Re: Create Log Periodic - I just got one but...

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-07 12:18:54 UTC
From: rhatley <rhatley@zero.net>
Message-ID: <7grjnu06b90ja4i414sd7heg3ibkj41kv6@4ax.com>
Source record: 135087

Log Periodics like those from KMA Antennas, and I assume the Create,
use "dual booms". This method of construction allows the booms to be
the "feed line" between the series of dipoles. The impedance of this
"feed line" is determined by choosing the boom(s) diameter and
center-to-center spacing. Thus you end up with an antenna with an
average impedance of 50 ohms.

rh

On 6 Sep 2002 19:06:54 -0700, hpr_rockets@yahoo.com (HPR Rocket Man)
wrote:

>I just got a Create Log Periodic. I got the smaller one which is for
>100-1300 MHz. I puzzled by one thing, there is no balum or
>transformer. Most scanner beams I have bought usually include a
>300-75 ohm TV type transformer to match the 300 ohm beam to the 75
>(really 50 ohm) scanner input.
>
>Am I missing something or does a Log Periodic have a 50 ohm feedpoint?
>Roger

4646. Re: Create Log Periodic - I just got one but...

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-07 13:20:24 UTC
From: Alice <Alice@Kramden.Moon>
Message-ID: <s2ne9.484202$m91.18863292@bin5.nnrp.aus1.giganews.com>
Source record: 135088

What is it: It is a word constructed from two others: BALanced and
UNbalanced.
What does it do: It causes confusion and near-hysteria amongst hams.

"Fred Hambrecht" <w4jle@charter.net> wrote in message
news:unisi3gdimr06b@corp.supernews.com...
> What is a balum, and what does it do?
>
> "HPR Rocket Man" <hpr_rockets@yahoo.com> wrote in message
> news:1b7d8b5d.0209061806.a8c375d@posting.google.com...
> > I just got a Create Log Periodic. I got the smaller one which is for
> > 100-1300 MHz. I puzzled by one thing, there is no balum or
> > transformer. Most scanner beams I have bought usually include a
> > 300-75 ohm TV type transformer to match the 300 ohm beam to the 75
> > (really 50 ohm) scanner input.
> >
> > Am I missing something or does a Log Periodic have a 50 ohm feedpoint?
> > Roger
>
>

4647. Re: Create Log Periodic - I just got one but...

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-07 13:57:35 UTC
From: Crazy George <munschNO@attglobal.net.SPAM>
Message-ID: <3d7a09da_2@news1.prserv.net>
Source record: 135089

Roger:

The physical construction of this particular antenna produces a 50 ohm unbalanced feedpoint. Best performance, however, is horizontally polarized, with the feedline supported close under the lower boom back to the support mast. I don't know if Create ever fixed it, but the coax to feedpoint connection tends to come loose at the center conductor. Apparently the center conductor of the coax they used back in the mid 90s when we bought a couple dozen of them didn't take solder very well. Since our applications had short feedlines, we replaced the existing coax with a UG-1034/U (non-A) BNC connector and used foam RG-224 type coax. Take a very critical look at the center conductor center solder joint, especially if the antenna is going up high enough to be difficult to get down to repair.

Vertical polarization mounting is a headache as are all LPAs. Keep the mast and feedline away from the elements. Only 2 good ways to do this, rear mounting, or side mount on a 5' mast away from vertical oriented conductors. Neither option is mechanically pleasing.
--
Crazy George
Remove NO and SPAM from return address
HPR Rocket Man <hpr_rockets@yahoo.com> wrote in message
news:1b7d8b5d.0209061806.a8c375d@posting.google.com...
> I just got a Create Log Periodic. I got the smaller one which is for
> 100-1300 MHz. I puzzled by one thing, there is no balum or
> transformer. Most scanner beams I have bought usually include a
> 300-75 ohm TV type transformer to match the 300 ohm beam to the 75
> (really 50 ohm) scanner input.
>
> Am I missing something or does a Log Periodic have a 50 ohm feedpoint?
> Roger

4648. KLM 40-2 Insulators

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-07 14:14:54 UTC
From: Rick and Theresa <n6cy@earthlink.net>
Message-ID: <yRne9.13199$6i4.1070397@newsread1.prod.itd.earthlink.net>
Source record: 135090

I'm refurbishing an older KLM 2-element 40 meter yagi and need the spacing insulators for the linear loaded elements. Factory no longer makes them. Is there any after-market source?

TIA Rick N6CY San Diego CA

4649. Re: Skin effect experiment with disk on antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-07 14:32:15 UTC
From: richardharrison@webtv.net
Message-ID: <13892-3D7A0DEF-2@storefull-2318.public.lawson.webtv.net>
Source record: 135093

Reg, G4FGQ wrote:
"How thick does the skin have to be to achieve the insulating effect?"

Current flow in a conductor produces a magnetic field within the conductor which opposes the magnetic field moving in. Imposed and induced fields tend to cancel. Density at the surface diminishes deeper into the conductor as a result of this opposition.

Current density decreases exponentially with depth below the surface. Skin depth is defined as 1/e, or the depth where current is 36.8% of the surface current. The higher the conductivity, frequency, and magnetic permeability, the less penetration there is of a conductor.

For copper, B. Whitfield Griffith, Jr. tells us:
1 Hz, 2.60 in.
10 Hz, 0.826 in.
100 Hz, 0.260 in.
1,000 Hz, 0.0826 in.
10,000 Hz, 0.0260 in.
100,000 Hz, 0.00826 in.
1,000,000 Hz, 0.00260 Hz.

Best regards, Richard Harrison, KB5WZI

4650. Re: Create Log Periodic - I just got one but...

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-07 14:37:16 UTC
From: Fulano de Tal <exray@nosssssspamcaribe.net>
Message-ID: <3D7A0F1C.CFFAC8EB@nosssssspamcaribe.net>
Source record: 135091

Alice wrote:
>
> What is it: It is a word constructed from two others: BALanced and
> UNbalanced.
> What does it do: It causes confusion and near-hysteria amongst hams.

Dontcha mean UMbalanced?
-Bill

4651. Re: Question about ladder line and metal mast

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-07 14:41:25 UTC
From: Wayne Faris <wfaris@inebraska.com>
Message-ID: <3D7A1015.AAFCD727@inebraska.com>
Source record: 135092

Andy KC2SSB wrote:

> On Fri, 06 Sep 2002 15:24:16 GMT, Alex Flinsch
> <alex@localhost.localdomain> wrote:
>
> >Try your local Agway
>
> What's an Agway?
> =-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-
> 73! de Andy KC2SSB (ex: KF4KHC/HL9HCT)
> Beachwood, NJ USA Grid FM29vw
> http://vhfradiobuff.tripod.com

Agway is a general farm/ranch supply store. Similar stores around the country include Tractor Supply Company (TSC stores), Country General, and Gibsons. A good hardware store can also get the standoffs for you, or at least tell you where to get them.

Wayne L. Faris, KEï¿½BZ

4652. NEC questions.

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-07 14:47:02 UTC
From: wave_spy@yahoo.co.uk
Message-ID: <e72fe60.0209070647.4bcd1949@posting.google.com>
Source record: 135094

Ok guys, I guess somewhere its been asked before but I cannot find
anything on the newsgroups.

I have Nittany NEC the WIN3.1 version 1997 at Uni.

I am having trouble because some blighter has not returned the docs
on the following...

1) Just what are the damn coordinate ? I seem to be failing on the most
basic of parameters.

2) Can I use the helix parameter and connect it to a generated wire
ie does the helix have a central point ?

3) Why does the NEC WIN BASIC spreadsheet thingy not like the GH command ?

4) Has anyone got any .NEC files for HF verticals for the amateur radio
bands helically loaded ?

Any relies much appreciated via this NG or preferebly to the email
address shown along with this NG posting.

not written here, as I know I will just get more spam :-)

Regards - Andy

4653. Re: Water pipe ground?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-07 15:23:38 UTC
From: richardharrison@webtv.net
Message-ID: <25442-3D7A19FA-42@storefull-2317.public.lawson.webtv.net>
Source record: 135095

Lou, N4LQ wrote:
"I measure exactly 20 ma of d-c current and it stays constant."

It could come from your gas distribution company. Gas pipes are nominally insulated from earth and a potential is applied to them to avoid galvanic action which would eat away the gas pipe. A "rectifier" applies this potential between the distribution piping and a ground bed of carbon electrodes.

A gas water heater or other appliance may connect the gas and water systems in your house. If the gas company`s meter insulation is violated, the gas distribution cathodic protection current will leak through your water piping to the earth. The potental at the gas meter is only a fraction of a volt and poses no electrocution danger. An electrical fault could put a dangerous potential on your plumbing were it the only electrical earth connection. The power company here requires a ground rod in addition to the water piping for a meter ground. The power company also grounds the secondary of its distribution transformer and grounds distribution wires at nearly every pole and numerous other grounding opportunities. Chances of appearance of a dangerous potential on a "ground" wire is almost zero, but it`s always wise to assume that the conductor could be dangerous and put a short to ground on it to prevent it from becoming dangeroudly energized while you are handling the conductor.

Best regards, Richard Harrison, KB5WZI

4654. Slingshots foretting the g5rv wre into the trees

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-07 17:07:58 UTC
From: Wayne Sellin <sellinwg@starpower.net>
Message-ID: <aldb8v$q01$1@bob.news.rcn.net>
Source record: 135096

Where I am slingshots are not supposed to be used. But....
Any suggestions or insights or sources?

4655. Re: Create Log Periodic - I just got one but...

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-07 17:12:49 UTC
From: Alice <Alice@Kramden.Moon>
Message-ID: <lsqe9.498263$2p2.19951708@bin4.nnrp.aus1.giganews.com>
Source record: 135097

No, I don't usually nit-pick at inadvertent typos. But, you can see, it is
in fact doing what I claim ;-)

"Fulano de Tal" <exray@nosssssspamcaribe.net> wrote in message
news:3D7A0F1C.CFFAC8EB@nosssssspamcaribe.net...
> Alice wrote:
> >
> > What is it: It is a word constructed from two others: BALanced and
> > UNbalanced.
> > What does it do: It causes confusion and near-hysteria amongst hams.
>
> Dontcha mean UMbalanced?
> -Bill

4656. Re: Slingshots foretting the g5rv wre into the trees

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-07 17:16:34 UTC
From: Alan Beagley <abeagley@optonline.net>
Message-ID: <3D7A3472.6070505@optonline.net>
Source record: 135098

The ARRL _Hints & Kinks_ book (15th ed.) has a piece about using helium-filled balloons for getting wires or lines over/into trees.

-=-
Alan, AB2OS

Wayne Sellin wrote:
> Where I am slingshots are not supposed to be used. But....
> Any suggestions or insights or sources?

4657. need help placing a antenna with no space

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-07 17:20:14 UTC
From: Recordking@Hotmail.com
Message-ID: <e8d89b3f.0209070920.1b125444@posting.google.com>
Source record: 135099

I want to put up a antenna at least 70ft high but their are too many phone lines and power lines running through my back yard. I could put it on the roof of my house tree or next to the grage which is the only building in my back yard that has the most space away from phone or power lines. Which way would be the best to put up a 5/8 wave antenna and how would I do that.

4658. Re: H.A.A.R.P

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-07 17:28:24 UTC
From: Dan/W4NTI <w4nti@mindspringnospam.com>
Message-ID: <aldcvnhof1@slb3.atl.mindspring.net>
Source record: 135100

Oh...you mean just like I have pointed out?

Dan/W4NTI

"Richard Clark" <kb7qhc@attbi.com> wrote in message
news:o0ninuo745g7f7b4a4u3gp3v4ps2137dm1@4ax.com...
> On Fri, 6 Sep 2002 20:49:48 -0500, "Dan/W4NTI"
> <w4nti@mindspringnospam.com> wrote:
>
> >Boy oh boy were we hoodwinked. I NEVER HEARD this before. All I recall
on
> >the subject was it was to possible effect propagation. My oh my.
> >
> >This is seriously scarry. Don't let the inviromentalwacko's get wind of
> >this.
> >
> >Dan/W4NTI
>
>
> Hi Dan,
>
> It's best to not make enemies of other groups - especially when it was
> the hamwhacko's that got wind of it 10 years ago and speculated the
> skip layer would be boiled away into outer space.
>
> 73's
> Richard Clark, KB7QHC

4659. Re: Slingshots foretting the g5rv wre into the trees

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-07 17:29:21 UTC
From: Chuck/KE4ETH <chuck_hawks@hotmailmospamorama.com>
Message-ID: <LDqe9.34418$2L.1879375@e3500-atl2.usenetserver.com>
Source record: 135101

I used to use a bow and arrow. Anyway, just using the slingshot at dusk, once to get the line over the tree, shoudn't, and I repeat, shouldn't be noticed.

--
Chuck
KE4ETH

x-no-archive: yes
"Wayne Sellin" <sellinwg@starpower.net> wrote in message news:aldb8v$q01$1@bob.news.rcn.net...
> Where I am slingshots are not supposed to be used. But....
> Any suggestions or insights or sources?
>
>
>

4660. Re: Varicaps in rx atu's

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-07 17:40:48 UTC
From: Richard Daventry <nearlynews_email@ntlworld.com>
Message-ID: <alddg3$1ol850$1@ID-150848.news.dfncis.de>
Source record: 135102

"Walter" <walter@accessus.net> wrote in message
news:Wm8e9.467619$m91.18147644@bin5.nnrp.aus1.giganews.com...
> Richard, is this going to be a receiving antenna? If so then
> there are gobs of URLs to visit.
>
> I use a simular tuning diode system to this one
> http://www.carcanada.net/dx/RTL.html
> on an 80 meter indoors receiving loop.
>
> Try going to google.com, type in: antenna,diode tuned.
>
> 73...Walter, AG5P

I now joined a loop forum so much I can get there. But actually, in this post I was not thinking about loops, just a long wire with LC tuner, C being varicap diode. Just wondered about that kind of setup.

4661. Re: Skin effect experiment with disk on antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-07 18:32:51 UTC
From: CAM <Cecil.A.Moore@ieee.org>
Message-ID: <3D7A4653.3BBE5795@ieee.org>
Source record: 135104

rsparks wrote:
> If you don't have time or the ability to look at the web page, I can tell
> you that the metal disk did not lower the resonant frequency of the antenna.

Move the metal disks to the ends of the antenna and it will lower the
resonant frequency.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
------== Over 80,000 Newsgroups - 16 Different Servers! =-----

4662. Re: NEC questions.

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-07 18:33:34 UTC
From: Dan Richardson <k6mhe@mendolink.com>
Message-ID: <rjfknusp2cggl3ptjbo7g9sjunpeeft20s@4ax.com>
Source record: 135105

NEC-Win Basic is just what the name implies - it is a basic program and does not contain all the NEC commands. I don't believe that Nittany any longer sells this program having replaced it with NEC-Win Plus+ which is a more advanced entry level NEC program, but it still doesn't offer the full NEC command list which is also is true of standard version of EZNEC. (Commands like GA, GC, GH, GM and others are not available.)

By the way, demo versions of both programs (EZNEC and NEC-Win Plus+) are available on the web.

If you want to use the GH card then you will need to ether build your entire NEC card deck with text editor and then run it using a generic NEC engine and then decipher the output data (bummer) or obtain a more advanced implementation of NEC such as Nitanny's NEC-Win Pro which does contain all whole NEC command set.

As an alternative, for you application, take a look at Nittany's NEC-WinSynth. This is an excellent program for creating wire structures including a helix using only the GW card. With NEC-Win Synth you can save the wire geometry in several formats including a NEC text file which can be used by NEC Win-Plus+ or EZNEC (Synth will also save the geometry in a text in a special file format which can be imported into EZNEC) and other programs which can read a NEC text file. I have found NEC-Win Synth to be an excellent program and real time saver to.

Hope this helps.

73
Danny, K6MHE

On 7 Sep 2002 07:47:02 -0700, wave_spy@yahoo.co.uk (Me) wrote:

>Ok guys, I guess somewhere its been asked before but I cannot find
>anything on the newsgroups.
>
>I have Nittany NEC the WIN3.1 version 1997 at Uni.
>
>I am having trouble because some blighter has not returned the docs
>on the following...
>
>1) Just what are the damn coordinate ? I seem to be failing on the most
> basic of parameters.
>
>2) Can I use the helix parameter and connect it to a generated wire

> ie does the helix have a central point ?
>
>3) Why does the NEC WIN BASIC spreadsheet thingy not like the GH command ?
>
>4) Has anyone got any .NEC files for HF verticals for the amateur radio
> bands helically loaded ?
>
>
>Any relies much appreciated via this NG or preferebly to the email
>address shown along with this NG posting.
>
>not written here, as I know I will just get more spam :-)
>
>
>Regards - Andy

4663. Re: Question about ladder line and metal mast

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-07 18:55:01 UTC
From: richardharrison@webtv.net
Message-ID: <12607-3D7A4B85-1@storefull-2312.public.lawson.webtv.net>
Source record: 135107

Andy, KC2SSB wrote:
"What`s an Agway?"
About 150 lbs. on average.

Best regards, Richard Harrison, KB5WZI

4664. Re: Slingshots foretting the g5rv wre into the trees

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-07 19:08:20 UTC
From: dplatt@radagast.org
Message-ID: <unkjl45v1flj2c@corp.supernews.com>
Source record: 135106

>Where I am slingshots are not supposed to be used. But....
>Any suggestions or insights or sources?

[1] Fishing rod, stout line, and a sinker of suitable weight on the end of the line. Try an overhead cast.

[2] Try making an atlatl (a.k.a. woomera or spearthrower), and use it to throw a line/sinker. [Throwing a dart with an atlatl is probably _not_ a good idea, in this context!]

With any such method, apply all of the cautions you'd use if you were using a slingshot - plan out the shot, and be very aware of where the weight would end up going if your shot/cast goes off in the wrong direction. Cast only nonmetalic lines - don't try to loft a wire directly - if you try lofting a wire and it comes down on a power line by mistake, Very Bad Things can happen.

--
Dave Platt <dplatt@radagast.org> AE6EO
Hosting the Jade Warrior home page: http://www.radagast.org/jade-warrior
I do _not_ wish to receive unsolicited commercial email, and I will boycott any company which has the gall to send me such ads!

4665. Re: Slingshots foretting the g5rv wre into the trees

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-07 19:21:33 UTC
From: 'Doc <w5lz@icok.net>
Message-ID: <3D7A51BC.8222710F@icok.net>
Source record: 135108

Wayne,
I use a 'potato' cannon. Not supposed to use those
here, so I just don't ask.
'Doc

4666. Re: Skin effect experiment with disk on antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-07 19:25:06 UTC
From: rsparks <rsparks@elltel.net>
Message-ID: <3d7a4eb3$1_3@corp.newsgroups.com>
Source record: 135109

"CAM" <Cecil.A.Moore@ieee.org> wrote in message
news:3D7A4653.3BBE5795@ieee.org...
> rsparks wrote:
> > If you don't have time or the ability to look at the web page, I can
tell
> > you that the metal disk did not lower the resonant frequency of the
antenna.
>
> Move the metal disks to the ends of the antenna and it will lower the
> resonant frequency.

Yes, but then it would not demonstrate that skin effect fails to separate
the disk surfaces.

73, Roger, W7WKB

> --
> cheers, CAM http://www.qsl.net/w5dxp
>
>
> -----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
> http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
> -----== Over 80,000 Newsgroups - 16 Different Servers! =-----

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
------== Over 80,000 Newsgroups - 16 Different Servers! =-----

4667. Re: Question about ladder line and metal mast

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-07 19:35:12 UTC
From: 'Doc <w5lz@icok.net>
Message-ID: <3D7A54E7.8907D9C4@icok.net>
Source record: 135110

Andy,
At Texas A&M, an 'Ag' weighs about 175 - 210 pounds.
The females weigh an average 90 pounds more...
'Doc

4668. Re: need help placing a antenna with no space

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-07 19:37:32 UTC
From: 'Doc <w5lz@icok.net>
Message-ID: <3D7A557B.332AE00D@icok.net>
Source record: 135111

DJ,
There are a few tower companies that make a 70 foot
free standing tower. If that isn't an option, then I'd
say mount it on the roof and forget about the 70 feet.
'Doc

4669. Re: Varicaps in rx atu's

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-07 19:37:45 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <vukknu0mpgtabkk0o93mi9r66v5tpl2r9b@4ax.com>
Source record: 135112

On Sat, 7 Sep 2002 18:40:48 +0100, "Richard Daventry"
<nearlynews_email@ntlworld.com> wrote:

>
>"Walter" <walter@accessus.net> wrote in message
>news:Wm8e9.467619$m91.18147644@bin5.nnrp.aus1.giganews.com...
>> Richard, is this going to be a receiving antenna? If so then
>> there are gobs of URLs to visit.
>>
>> I use a simular tuning diode system to this one
>> http://www.carcanada.net/dx/RTL.html
>> on an 80 meter indoors receiving loop.
>>
>> Try going to google.com, type in: antenna,diode tuned.
>>
>> 73...Walter, AG5P
>
>I now joined a loop forum so much I can get there. But actually, in this
>post I was not thinking about loops, just a long wire with LC tuner, C being
>varicap diode. Just wondered about that kind of setup.
>

Hi Richard,

You don't stand a chance for a very simple reason.

Varicaps as you call them, adjust their capacitance through varying a
bias voltage separating two charge regions (or drawing them together)
within the diode. This voltage is roughly tenths of a volt to a volt.
The voltage imparted to a tuner by a transmitter exceeds the tuning
voltage by magnitudes to render them useless for this action. This is
why the other poster, Walter, queried you if this was for reception
(where the RF levels are milli to microvolts).

73's
Richard Clark, KB7QHC

4670. Dumb Question:

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-07 19:47:27 UTC
From: jackinariz@webtv.net
Message-ID: <10422-3D7A57CF-4@storefull-2137.public.lawson.webtv.net>
Source record: 135113

Is there such an antenna,(verticle), that will get 10-11-12 meters with no tuning?? I have the Imax 2000 and it works very well.......Also I seen a groundpland kit for the Imax.....Would it help performance? Thanks..Jack D.

4671. Re: Varicaps in rx atu's

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-07 20:23:30 UTC
From: Richard Daventry <nearlynews_email@ntlworld.com>
Message-ID: <aldn0v$1pqrrq$1@ID-150848.news.dfncis.de>
Source record: 135114

"Richard Clark" <kb7qhc@attbi.com> wrote in message
news:vukknu0mpgtabkk0o93mi9r66v5tpl2r9b@4ax.com...
> Hi Richard,
>
> You don't stand a chance for a very simple reason.
>
> Varicaps as you call them, adjust their capacitance through varying a
> bias voltage separating two charge regions (or drawing them together)
> within the diode. This voltage is roughly tenths of a volt to a volt.
> The voltage imparted to a tuner by a transmitter exceeds the tuning
> voltage by magnitudes to render them useless for this action. This is
> why the other poster, Walter, queried you if this was for reception
> (where the RF levels are milli to microvolts).
>
> 73's
> Richard Clark, KB7QHC

But it would be for receiving purposes only, hence rx in subject header. :c)

4672. Re: NEC questions.

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-07 20:29:36 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <3D7A61B0.7080008@eznec.com>
Source record: 135115

Dan Richardson wrote:
> NEC-Win Basic is just what the name implies - it is a basic program
> and does not contain all the NEC commands. I don't believe that
> Nittany any longer sells this program having replaced it with NEC-Win
> Plus+ which is a more advanced entry level NEC program, but it still
> doesn't offer the full NEC command list which is also is true of
> standard version of EZNEC. (Commands like GA, GC, GH, GM and others
> are not available.)
>. . .

The standard version of EZNEC doesn't read or use NEC format files at all. The professional versions are able to read input files in NEC format (which it then translates to its own format), but as Danny says, only a limited set of "card" types.

Roy Lewallen, W7EL

4673. Re: Varicaps in rx atu's

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-07 21:20:30 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <o2qknuo81hqd6sth9ji19qnfskjplou4vt@4ax.com>
Source record: 135116

On Sat, 7 Sep 2002 21:23:30 +0100, "Richard Daventry"
<nearlynews_email@ntlworld.com> wrote:

>
>"Richard Clark" <kb7qhc@attbi.com> wrote in message
>news:vukknu0mpgtabkk0o93mi9r66v5tpl2r9b@4ax.com...
>> Hi Richard,
>>
>> You don't stand a chance for a very simple reason.
>>
>> Varicaps as you call them, adjust their capacitance through varying a
>> bias voltage separating two charge regions (or drawing them together)
>> within the diode. This voltage is roughly tenths of a volt to a volt.
>> The voltage imparted to a tuner by a transmitter exceeds the tuning
>> voltage by magnitudes to render them useless for this action. This is
>> why the other poster, Walter, queried you if this was for reception
>> (where the RF levels are milli to microvolts).
>>
>> 73's
>> Richard Clark, KB7QHC
>
>
>But it would be for receiving purposes only, hence rx in subject header. :c)

Well... ya got me there!

However, you should note the nature of my objection: volts. If you
are running a longwire, it is absorbing every radiation available
(insofar as it has the ability to put it to a load) which could quite
easily disturb the bias settings for any particular filter setting.

These voltages, induced from nearby transmitters (local AM station for
instance) could offer 10's to 100's of millivolts, which while a
seemingly small potential, can cascade into an enormous bias error.

This is the paradox of the stronger the signal that makes it through
the filter, the more probability that signal will disturb the filter.
As this signal is an AC voltage, it blurs the capacitance with the
diode trying to follow the dV/dT of the signal - effectively lowering
Q (negating the filter).

The answer to this as a direct application would be in buffering and
lowering the maximum level of signal that may be passed through the
filter. This may be accomplished through AGC or manual gain control
(yeah, a filter with a gain control). Research any particular device
you wish to use for your application and find its dC/dV (as derived

from the specs for capacitance range and voltage range). You should be able, at that point, to have a good guess how much impact a signal of certain size would change any setting.

Same problems of voltage levels keep PIN diodes relegated to buffered environments.

73's
Richard Clark, KB7QHC

4674. Re: H.A.A.R.P

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-07 21:47:48 UTC
From: Marty <vk2umj@NOSPAM.yahoo.com.au>
Message-ID: <kmue9.27079$g9.76801@newsfeeds.bigpond.com>
Source record: 135117

It's the fault of them aliens and their UFO's..... Call Mulder, he'll
confirm it!!!! :-)

Sorry, just couldn't resist! hihi

--
Martin, VK2UMJ
vk2umj@NOSPAMyahoo.com.au

Remove NOSPAM from e-mail address to reply

Outgoing mail is certified Virus Free.
Checked by AVG anti-virus system (http://www.grisoft.com).
Version: 6.0.385 / Virus Database: 217 - Release Date: 04/09/2002

4675. Dipoles

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-07 23:09:25 UTC
From: Alan Gault <alan@gault.freeserve.co.uk>
Message-ID: <ale0uv$k26$1@newsg2.svr.pol.co.uk>
Source record: 135118

Hi
Wonder if anyone can answer a query about dipoles for me. I understand that you can use a common feed point for multiband dipoles, but wonder if you were to space 2 dipoles at right angles for the 40m band with the common feed point would this give the required 360 degree coverage. Many thanks in advance for your help.

Alan MI 3 KWB / GI 6 PYP

4676. Re: H.A.A.R.P

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-07 23:22:57 UTC
From: Dan/W4NTI <w4nti@mindspringnospam.com>
Message-ID: <ale1olhfu1@slb6.atl.mindspring.net>
Source record: 135019

I did Mate...but the dang cellphone wouldn't work. Some sort of
interference....hi hi.

Dan/W4NTI

"Marty" <vk2umj@NOSPAM.yahoo.com.au> wrote in message
news:kmue9.27079$g9.76801@newsfeeds.bigpond.com...
> It's the fault of them aliens and their UFO's..... Call Mulder, he'll
> confirm it!!!! :-)
>
>
> Sorry, just couldn't resist! hihi
>
> --
> Martin, VK2UMJ
> vk2umj@NOSPAMyahoo.com.au
>
> **Remove NOSPAM from e-mail address to reply**
>
>
>
> ---
> Outgoing mail is certified Virus Free.
> Checked by AVG anti-virus system (http://www.grisoft.com).
> Version: 6.0.385 / Virus Database: 217 - Release Date: 04/09/2002
>
>

4677. Re: Dipoles

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-07 23:25:48 UTC
From: Dan/W4NTI <w4nti@mindspringnospam.com>
Message-ID: <ale1u4hve1@slb0.atl.mindspring.net>
Source record: 135020

For all practical purposes a simple single dipole element will be omni directional. The ground, surrounding buildings, wires, terrain etc all will 'screw up' the pattern.

You can indeed mount another dipole at right angles. But I see no purpose in it.

A better choice would be a antenna called a Turnstile. Usually used on V/Uhf.

Dan/W4NTI

"Alan Gault" <alan@gault.freeserve.co.uk> wrote in message news:ale0uv$k26$1@newsg2.svr.pol.co.uk...
> Hi
> Wonder if anyone can answer a query about dipoles for me. I understand that
> you can use a common feed point for multiband dipoles, but wonder if you
> were to space 2 dipoles at right angles for the 40m band with the common
> feed point would this give the required 360 degree coverage. Many thanks in
> advance for your help.
>
> Alan MI 3 KWB / GI 6 PYP
>
>

4678. TXing & SWLing MW to 10m w/Attic Ant for Low Noise - HELP!

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-07 23:46:33 UTC
From: thx1138 <look@life.org>
Message-ID: <3d7a9063$0$1428$272ea4a1@news.execpc.com>
Source record: 135021

I have been reading the archives and web sites attempting to weigh the pros and cons of several attic antenna options for my location. To say the least I have been tearing my hair out trying to decide which way to go. Call it information overload. I am posting here in hopes that your comments and experiences will help me sort it all out.

Here is my dilemma: I am building a new home (wood w/vinyl siding) on a typical city lot with deed restrictions on external antennas. So, I am relegated to using an attic wire antenna for my hobby purposes. The lot has a big plus in that it is located on lands which happens to be the highest elevation within the county. A fairly big negative is that there is an electrical substation located approximately 1/2 mile away with high voltage lines passing by about a 1/3 mile away. I have radio surveyed the area in various weather conditions for any serious noise problems emanating from these potential noise producers. But surprisingly have not noticed any noise unless I stand directly under the lines. You may wonder, why not build somewhere else? Unfortunately, that is not an option for personal reasons.

My hobby: I enjoy doing it all from MW and SWLing to a very occasional ragchew on CW. I don't chase DX any longer but I won't rule it out if the opportunity presents itself. (I've worked Antarctica on 80m with a Mor-gain dipole once, what a thrill! But that is the extent of my major DX accomplishments and my antenna experiences.) In fact I have been inactive for many years but have the itch to pound the key again. But txing with a highly efficient radiator is secondary to listening to most anything from MW to SWLing everything from Intl BC to Maritime and Milcom, etc.

Most recently I have been using a simple 50' longwire hooked up to an old Icom 720a. The longwire worked reasonably well for listening but the man-made noise was a pain. And that is the crux of my dilemma, reducing noise: Improving the S/N ratio for listening on MW to 20m without adversely effecting my occasional cw foray on 80m or 60m(?)-10m (incl. warc). With so many modern electrical appliances in a typical home in an urban environment the noise can become a major problem for SWL'ers and DX'ers. My goal is to neutralize this problem the best I can without too much compromise with the antenna space limitation at my location.

Here is what I have to work with. The house is a one story ranch with a maximum linear length in the attic of 54'. The roof has a 12/6 pitch (or is it 6/12?) and the resulting height in the attic at the crown is about 6'. The shack will be in the basement with the transceiver located approximately 22' directly below the antenna's feedpoint. The feed will run through an interior studded wall, from attic to basement, avoiding any house wiring. I can also relocate the shack to one end or the other of the basement if

necessary to accommodate an end fed type antenna. For you antenna modeling types, the ground conductivity in my area (upper Mid-west) is what I would say good. Ideas are welcome!

Considering all of the above I have come up with three possible attic antenna solutions:

1) WB Folded Terminated Dipole (zig-zag?), coax fed (fair tx/rx but low s/n?, wide BW [~5MHz-30Mhz], no tuner)
2) Zig-Zag Doublet fed w/parallel feed (susceptible to noise?, need ATU, potential qrm cause, good tx/rx)
3) W9INN Dipole (zig-zag?) , coax fed (need ATU, have heard good comments, all around compromise?)

In all cases, if possible, I could form the antennas into a "Z" shape in the horizontal plain for a total length of aprox. 74'. The "Z" shape in the Doublet would actually skew the lobes on most ham bands in a direction to my favor, I think. See: http://www.cebik.com/zzdd.html

-Questions:

Would a "Z" shape effect the WBFD or W9INN dipole in a similar manner as the Doublet?
[Just for kicks, could anyone run a antenna model on a "Zig-Zaged" WBFD using my parameters?]

I have never used parallel feedline before. What is the potential in causing qrm in this Doublet installation?
Will using parallel feedline be more susceptible to man-made noise?
Which antenna tuner for the Doublet would you recommend for 100W?

Considering the very limited height (16' from surrounding ground level, 22' from the full sized 1600sq/ft basement floor) above ground of any of these antennas, would any one be a better choice over the other? Will they all be cloud warmers?

Would using a pre-amp/pre-selector such as a Vectronics AT-100 be advisable with the WBFD to possible offset its negative gain (relative to a dipole) as well as possibly reducing band noise using the pre-selector?

-Answers? :-)

I know many of you will have strong feelings for one antenna over another and that is fine. I would simply ask that you keep in mind my desire to fight off the electrical qrm that tends to permeate our urbanized ether. Yet at the same time attempt to choose/build an antenna that performs "fairly well" on both tx as well as receive. Working dx is great, but being able to actually hear them is even better. Theoretical discussion is enjoyable but practical advice from anyone who actual uses any of these antennas types is much appreciated.

Tnx,
Stan

--
"Est autem fides credere quod nondum vides; cuius fidei merces est videre
quod credis."

4679. Re: TXing & SWLing MW to 10m w/Attic Ant for Low Noise - HELP!

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-08 00:01:45 UTC
From: Chuck/KE4ETH <chuck_hawks@hotmailmospamorama.com>
Message-ID: <Enwe9.37794$2L.2078788@e3500-atl2.usenetserver.com>
Source record: 135022

Why not just put a loop around the eaves and paint it to match the wood work, use 300-ohm twinlead (hidden in the corner of the siding, then run to the basement? Hidden from prying eyes.

--
Chuck
KE4ETH

x-no-archive: yes
"thx1138" <look@life.org> wrote in message
news:3d7a9063$0$1428$272ea4a1@news.execpc.com...
> I have been reading the archives and web sites attempting to weigh the pros
> and cons of several attic antenna options for my location. To say the least
> I have been tearing my hair out trying to decide which way to go. Call it
> information overload. I am posting here in hopes that your comments and
> experiences will help me sort it all out.
>
> Here is my dilemma: I am building a new home (wood w/vinyl siding) on a
> typical city lot with deed restrictions on external antennas. So, I am
> relegated to using an attic wire antenna for my hobby purposes. The lot has
> a big plus in that it is located on lands which happens to be the highest
> elevation within the county. A fairly big negative is that there is an
> electrical substation located approximately 1/2 mile away with high voltage
> lines passing by about a 1/3 mile away. I have radio surveyed the area in
> various weather conditions for any serious noise problems emanating from
> these potential noise producers. But surprisingly have not noticed any
> noise unless I stand directly under the lines. You may wonder, why not
> build somewhere else? Unfortunately, that is not an option for personal
> reasons.
>
> My hobby: I enjoy doing it all from MW and SWLing to a very occasional
> ragchew on CW. I don't chase DX any longer but I won't rule it out if the
> opportunity presents itself. (I've worked Antarctica on 80m with a Mor-gain
> dipole once, what a thrill! But that is the extent of my major DX
> accomplishments and my antenna experiences.) In fact I have been inactive
> for many years but have the itch to pound the key again. But txing with a
> highly efficient radiator is secondary to listening to most anything from MW
> to SWLing everything from Intl BC to Maritime and Milcom, etc.
>

> Most recently I have been using a simple 50' longwire hooked up to an old
> Icom 720a. The longwire worked reasonably well for listening but the
> man-made noise was a pain. And that is the crux of my dilemma, reducing
> noise: Improving the S/N ratio for listening on MW to 20m without
adversely
> effecting my occasional cw foray on 80m or 60m(?)-10m (incl. warc). With
so
> many modern electrical appliances in a typical home in an urban
environment
> the noise can become a major problem for SWL'ers and DX'ers. My goal is
to
> neutralize this problem the best I can without too much compromise with
the
> antenna space limitation at my location.
>
> Here is what I have to work with. The house is a one story ranch with a
> maximum linear length in the attic of 54'. The roof has a 12/6 pitch (or
is
> it 6/12?) and the resulting height in the attic at the crown is about 6'.
> The shack will be in the basement with the transceiver located
approximately
> 22' directly below the antenna's feedpoint. The feed will run through an
> interior studded wall, from attic to basement, avoiding any house wiring.
I
> can also relocate the shack to one end or the other of the basement if
> necessary to accommodate an end fed type antenna. For you antenna
modeling
> types, the ground conductivity in my area (upper Mid-west) is what I would
> say good. Ideas are welcome!
>
> Considering all of the above I have come up with three possible attic
> antenna solutions:
>
> 1) WB Folded Terminated Dipole (zig-zag?), coax fed (fair tx/rx but low
> s/n?, wide BW [~5MHz-30Mhz], no tuner)
> 2) Zig-Zag Doublet fed w/parallel feed (susceptible to noise?, need ATU,
> potential qrm cause, good tx/rx)
> 3) W9INN Dipole (zig-zag?) , coax fed (need ATU, have heard good comments,
> all around compromise?)
>
> In all cases, if possible, I could form the antennas into a "Z" shape in
the
> horizontal plain for a total length of aprox. 74'. The "Z" shape in the
> Doublet would actually skew the lobes on most ham bands in a direction to
my
> favor, I think. See: http://www.cebik.com/zzdd.html
>
> -Questions:
>
> Would a "Z" shape effect the WBFD or W9INN dipole in a similar manner as

the
> Doublet?
> [Just for kicks, could anyone run a antenna model on a "Zig-Zaged" WBFD
> using my parameters?]
>
> I have never used parallel feedline before. What is the potential in
> causing qrm in this Doublet installation?
> Will using parallel feedline be more susceptible to man-made noise?
> Which antenna tuner for the Doublet would you recommend for 100W?
>
> Considering the very limited height (16' from surrounding ground level,
22'
> from the full sized 1600sq/ft basement floor) above ground of any of these
> antennas, would any one be a better choice over the other? Will they all
be
> cloud warmers?
>
> Would using a pre-amp/pre-selector such as a Vectronics AT-100 be
advisable
> with the WBFD to possible offset its negative gain (relative to a dipole)
as
> well as possibly reducing band noise using the pre-selector?
>
> -Answers? :-)
>
> I know many of you will have strong feelings for one antenna over another
> and that is fine. I would simply ask that you keep in mind my desire to
> fight off the electrical qrm that tends to permeate our urbanized ether.
> Yet at the same time attempt to choose/build an antenna that performs
> "fairly well" on both tx as well as receive. Working dx is great, but
being
> able to actually hear them is even better. Theoretical discussion is
> enjoyable but practical advice from anyone who actual uses any of these
> antennas types is much appreciated.
>
> Tnx,
> Stan
>
> --
> "Est autem fides credere quod nondum vides; cuius fidei merces est videre
> quod credis."
>
>

4680. Re: Is Chip responsive or evasive?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-08 01:24:00 UTC
From: Rollo <nobody@nowhere.com>
Message-ID: <1107_1031448244@netnews.attbi.com>
Source record: 135023

I vote for Beavis and Butthead.

On Wed, 4 Sep 2002 21:24:59 -0500, "Chuck/KE4ETH" <chuck_hawks@hotmailmospamorama.com>
wrote:
> Amos and Andy
>
>
> > >Sounds like a Bugs Bunny cartoon - What's up Doc' ?
> > >
> >
> > Alphonse and Gaston
> >
> >
> > Mut'n'Jeff
>
>
>

4681. Re: Dumb Question:

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-08 02:01:28 UTC
From: 'Doc <w5lz@icok.net>
Message-ID: <3D7AAF75.B11B3EB3@icok.net>
Source record: 135024

Jack,
It's very unlikely that you will find one antenna that
will cover something close to 4 Mhz without tuning. And
no, the groundplane kit does not help with that antenna.
'Doc

PS - You will hear all kinds of claims for antennas, most
you could spread on a garden with good results.

4682. Re: need help placing a antenna with no space

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-08 02:11:53 UTC
From: Roger Leone <arleoneSPAMBLOCK@inreach.com>
Message-ID: <olye9.741$zT4.201983090@news.inreach.com>
Source record: 135025

And don't put up any antenna structure tall enough to fall over onto the power lines.

Roger K6XQ

4683. Re: Dipoles

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-08 02:12:18 UTC
From: Reg Edwards <g4fgq.regp@btinternet.com>
Message-ID: <alebm1$2m0$1@knossos.btinternet.com>
Source record: 135026

Two dipoles at 90 degrees to each other, simply connected, behave the same
as a single dipole at an in-between angle 45 degrees to both.

If the connection between them is switched then the direction rotates
through another 90 degrees.

360-degree coverage in the horizontal plane is obtained by separately
feeding the two dipoles with a phase difference of 90 degrees.

========================
Regards from Reg G4FGQ
Free Radio Design Software
Go to http://www.g4fgq.com
========================

"Alan Gault" <alan@gault.freeserve.co.uk> wrote in message
news:ale0uv$k26$1@newsg2.svr.pol.co.uk...
> Hi
> Wonder if anyone can answer a query about dipoles for me. I understand
that
> you can use a common feed point for multiband dipoles, but wonder if you
> were to space 2 dipoles at right angles for the 40m band with the common
> feed point would this give the required 360 degree coverage. Many thanks
in
> advance for your help.
>
> Alan MI 3 KWB / GI 6 PYP
>
>

4684. Re: Slingshots foretting the g5rv wre into the trees

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-08 02:20:04 UTC
From: Leland Cox <lcox107@comcast.net>
Message-ID: <3D7AB5BA.1030209@comcast.net>
Source record: 135027

I found a slingshot with a 1 OZ weight and some light mono on a spinning reel worked about optimal. I have my antenna line over a fork about 60 ft up!

Les, AA4F

Wayne Sellin wrote:

> Where I am slingshots are not supposed to be used. But....
> Any suggestions or insights or sources?
>
>
>
>

4685. Re: HF Antenna for portable operation

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-08 02:24:05 UTC
From: 'Doc <w5lz@icok.net>
Message-ID: <3D7AB4C3.A7B5EDB8@icok.net>
Source record: 135028

George,
Sometimes your lack of thought is truly amazing.
'Doc

4686. Re: Dipoles

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-08 02:24:42 UTC
From: Leland Cox <lcox107@comcast.net>
Message-ID: <3D7AB6D0.20104@comcast.net>
Source record: 135029

Try cutting one pair for the high end of the band and the other pair for
the low end. Not sure if it will work on 40 but it does work on 80 Meters.

Les, AA4F

Alan Gault wrote:

> Hi
> Wonder if anyone can answer a query about dipoles for me. I understand that
> you can use a common feed point for multiband dipoles, but wonder if you
> were to space 2 dipoles at right angles for the 40m band with the common
> feed point would this give the required 360 degree coverage. Many thanks in
> advance for your help.
>
> Alan MI 3 KWB / GI 6 PYP
>
>
>

4687. Re: Skin effect experiment with disk on antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-08 02:37:35 UTC
From: richardharrison@webtv.net
Message-ID: <25442-3D7AB7EF-112@storefull-2317.public.lawson.webtv.net>
Source record: 135030

Roger, W7WKB wrote:
"Yes, but then it would not demonstrate that skin effect fails to
separate disk surfaces."

Metal shields have been used to prevent radio frequency travel from one side of the metal to the other from very early times. There were tube shields, coil shields, etc. The metal chassis itself is a shield.

The 19th edition of the ARRL Antenna Book says on page 23-2:
"In good conductors the speed (of r-f wave travel) is so low that the opposing fields set up by the wave front occupy the same space as the wave itself, and thus cancel it out. This is the reason for "skin effect" in conductors at high frequencies, making metal enclosures good shields for electrical circuits working at radio frequencies."

Coax and waveguide don`t allow r-f in or out through their walls. They are inpenetrable. Disks aren`t needed anywhere to prove this. Why can`t you normally pick up cable TV signals without connections to the cable? Shielding!

Best regards, Richard Harrison, KB5WZI

4688. Water pipe ground?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-08 02:42:23 UTC
From: N4LQ <N4LQ@igLou.com>
Message-ID: <3d79676d$1_3@news.iglou.com>
Source record: 135074

I cut the main water pipe to install a whole house filter. The filter is plastic and came with a jumper wire to complete the electrical bypass. Since I use this pipe for my ground, I was curious if it really worked or if plastic was used to the street main. So before installing the wire, I connected an ampmeter across the filter. The meter went nuts until I put a rectifier in series with it. I measure exactly 20ma of dc current and it stays constant.
Has anyone tried this? Why is it DC current and why is it constant? Keying the rig with 1 kw input has no effect on the current. I intend to leave the meter in line for a while and see if it ever changes. Maybe a good rain will make it change?

--
Steve N4LQ.

4689. Re: Whats the best 40M mobile?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-08 03:19:42 UTC
From: Headhamster <headhamster@earthlink.net>
Message-ID: <ilze9.14534$6i4.1169594@newsread1.prod.itd.earthlink.net>
Source record: 135031

I ran almost exclusively 40 meter mobile from my pick up till I sold last year. I had tried a hamstick and was unimpressed. Hamsticks may allow you to "make a contact" from the mobile but they are not serious antennas if you want to hold a QSO from the mobile. I then switched to the GLA bugcatcher with the biggest available coil and a capacity hat. It was like night and day. Not only could I have a QSO, I had many stations that couldn't believe I was in a mobile. The bugcatcher wins hands down for serious HF mobile work.

Rich - W2YQ

4690. Re: Dumb Question:<Doc>

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-08 03:29:47 UTC
From: jackinariz@webtv.net
Message-ID: <27197-3D7AC42B-49@storefull-2136.public.lawson.webtv.net>
Source record: 135033

thanks for your reply Doc I appreciate it.

4691. Re: Dipoles

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-08 03:30:11 UTC
From: CAM <Cecil.A.Moore@ieee.org>
Message-ID: <3D7AC443.F6CA8276@ieee.org>
Source record: 135032

Dan/W4NTI wrote:
> For all practical purposes a simple single dipole element will be omni
> directional.

My 20m rotatable dipole is not omni-directional by about 2 S-units
on 20m and even more on 10m.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
------== Over 80,000 Newsgroups - 16 Different Servers! =-----

4692. Re: Dipoles

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-08 03:52:38 UTC
From: 'Doc <w5lz@icok.net>
Message-ID: <3D7AC984.A3DEE234@icok.net>
Source record: 135034

Alan,
Mount it at less than 40 feet and it'll
be omnidirectional anyway.
'Doc

4693. Re: Create Log Periodic - I just got one but...

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-08 04:21:23 UTC
From: Fred Hambrecht <w4jle@charter.net>
Message-ID: <unlk26nmp20r64@corp.supernews.com>
Source record: 135035

While I thank you for the info on a Balun, of which I am familiar, I still
don't know what a BALUM is. I see it referenced in any number of posts and
e-bay auctions.

"Alice" <Alice@Kramden.Moon> wrote in message
news:s2ne9.484202$m91.18863292@bin5.nnrp.aus1.giganews.com...
> What is it: It is a word constructed from two others: BALanced and
> UNbalanced.
> What does it do: It causes confusion and near-hysteria amongst hams.
>
>
>
> "Fred Hambrecht" <w4jle@charter.net> wrote in message
> news:unisi3gdimr06b@corp.supernews.com...
> > What is a balum, and what does it do?
> >
> > "HPR Rocket Man" <hpr_rockets@yahoo.com> wrote in message
> > news:1b7d8b5d.0209061806.a8c375d@posting.google.com...
> > > I just got a Create Log Periodic. I got the smaller one which is for
> > > 100-1300 MHz. I puzzled by one thing, there is no balum or
> > > transformer. Most scanner beams I have bought usually include a
> > > 300-75 ohm TV type transformer to match the 300 ohm beam to the 75
> > > (really 50 ohm) scanner input.
> > >
> > > Am I missing something or does a Log Periodic have a 50 ohm feedpoint?
> > > Roger
> >
> >
>
>

4694. Re: Dipoles

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-08 04:39:17 UTC
From: Chuck/KE4ETH <chuck_hawks@hotmailmospamorama.com>
Message-ID: <NrAe9.39919$2L.2341933@e3500-atl2.usenetserver.com>
Source record: 135036

Alan,

Are you talking horizontal or vertical dipoles

--
Chuck
KE4ETH

x-no-archive: yes
"Alan Gault" <alan@gault.freeserve.co.uk> wrote in message
news:ale0uv$k26$1@newsg2.svr.pol.co.uk...
> Hi
> Wonder if anyone can answer a query about dipoles for me. I understand
that
> you can use a common feed point for multiband dipoles, but wonder if you
> were to space 2 dipoles at right angles for the 40m band with the common
> feed point would this give the required 360 degree coverage. Many thanks
in
> advance for your help.
>
> Alan MI 3 KWB / GI 6 PYP
>
>

4695. Re: Slingshots foretting the g5rv wre into the trees

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-08 04:54:11 UTC
From: "J. McLaughlin" <JCM@Power-Net.Net>
Message-ID: <unllto3k3vkmac@corp.supernews.com>
Source record: 135037

Oh dear! You must be in NJ or some such a place. ...but then, I should prob. not go on about the stupidity of States attempting to circumvent a major safeguard put into the Constitution here...

What I have done, when not having other means, is to swing a line weighted at its end in a circle having its plane bisecting the target with the direction of travel of the weighted end such that the weighted end is traveling upward when closest to the target. (some people find that the other direction is more easy to control) Letting go of the line as the weighted end comes up will tend to send the weighted end towards the target. One may practice out in the open first to get a feel of when to let go. The remainder of the line needs to be arranged so that it will follow the weighted end without a snag. Be sure to have a long enough line and attach the far end!
As others have said, use string for the line.
Let us know where you are.
73 Mac N8TT

--
J. Mc Laughlin - Michigan USA
Home: JCM@Power-Net.Net
Office: JCM@McLMcL.Com
"Wayne Sellin" <sellinwg@starpower.net> wrote in message
news:aldb8v$q01$1@bob.news.rcn.net...
> Where I am slingshots are not supposed to be used. But....
> Any suggestions or insights or sources?
>

4696. Re: Slingshots foretting the g5rv wre into the trees

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-08 05:48:54 UTC
From: Fulano de Tal <exray@nosspamcaribe.net>
Message-ID: <3D7AE4C6.956C2C7A@nosspamcaribe.net>
Source record: 135038

"J. McLaughlin" wrote:
>
> Oh dear! You must be in NJ or some such a place. ...but then, I should
> prob. not go on about the stupidity of States attempting to circumvent a
> major safeguard put into the Constitution here...
>
> What I have done, when not having other means, is to swing a line
> weighted at its end in a circle having its plane bisecting the target
> with the direction of travel of the weighted end such that the weighted
> end is traveling upward when closest to the target. (some people find
> that the other direction is more easy to control) Letting go of the
> line as the weighted end comes up will tend to send the weighted end
> towards the target. One may practice out in the open first to get a
> feel of when to let go. The remainder of the line needs to be arranged
> so that it will follow the weighted end without a snag. Be sure to have
> a long enough line and attach the far end!
> As others have said, use string for the line.
> Let us know where you are.
> 73 Mac N8TT

You'd be amazed at how handy a 14-year old kid can be for such tasks.
I bought one of those rope chain-saws to trim out some limbs for my
G5RV. Damn thing beat me to death tossing that sandbag hacky-sack up in
the air. Kids thought it was something fun to do.
For the antenna I used some large square nuts (like they use on utility
poles) and fishing line for the tossing process. A good kid can get
this on target 50 feet in the air with no sweat even with an overhand
throw.
-Bill M
-BM

>
> --
> J. Mc Laughlin - Michigan USA
> Home: JCM@Power-Net.Net
> Office: JCM@McLMcL.Com
> "Wayne Sellin" <sellinwg@starpower.net> wrote in message
> news:aldb8v$q01$1@bob.news.rcn.net...
> > Where I am slingshots are not supposed to be used. But....
> > Any suggestions or insights or sources?
> >

4697. is/should natural gas meters be grounded?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-08 08:44:40 UTC
From: "D.J." <dalej2@mac.com.remove.this>
Message-ID: <dalej2-3036EF.03444008092002@hermes-ge0.rdc-kc.rr.com>
Source record: 135039

I know this is not an antenna question but I thought this would be a good place to ask anyway.

A house close by us was damaged badly by a fire caused by a lightning strike to its gas meter, (strange) Should those things be grounded or are they already grounded? I looked at the house and the gas meter is in a low spot to the rear of the house with pine trees close by and a swiming pool near also.

dj

4698. feeding a magnetic loop ?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-08 08:57:05 UTC
From: lombryt@hotmail.com
Message-ID: <db35a0c.0209080057.78d625b6@posting.google.com>
Source record: 135040

Hi,

I ordered a wellbrook ALA-330 magnetic loop antenna (mainly suited for indoor listening purposes in the HF bands). The system comes with a BNC connector.

I'd like to know how to feed such antenna and link it to my RTX equipped with a PL connector ?

(I usually use a G5RV or a longwire 40m long but this new kind of antenna is a complete mystery for me, excepting I hope it will help me to solve my QRM problem generated by electrical devices).

I'd like to use a coaxial RG58 to feed this mag loop but I know that is this kind of cable the current passes through the center wire and the magnetic field moves around it (between the wire and the braid). In order there is current in my RG58 cable there must have a difference of potential that is materialized by the electric field of this cable.
But if I well understood how my mag loop works, it does not use the electric field. So how to proceed ? Do you understand my trouble ?

So there are two simple question :
- How to convert my BNC to PL connector ? (Simply by cutting the BNC and placing in place a male PL ?)
- Can I use a RG58 to feed my aerial ? (as we do most of the time when 50 omhs are required)

Thanks for comments

Thierry
ONL5183
http://www.astrosurf.com/lombry/menu-qsl.htm

4699. Re: is/should natural gas meters be grounded?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-08 09:16:01 UTC
From: "John D. Farr" <jfarr62@comcast.net>
Message-ID: <lzEe9.251041$On.9977250@bin3.nnrp.aus1.giganews.com>
Source record: 135041

dj:
I suspect that this issue is covered in whatever gas code your community uses. I'd look there for an answer to this question. Gas codes are usually vigorously enforced so I suspect that you won't find a problem with your installation.
John

"D.J." <dalej2@mac.com.remove.this> wrote in message news:dalej2-3036EF.03444008092002@hermes-ge0.rdc-kc.rr.com...
>
> I know this is not an antenna question but I thought this would be a
> good place to ask anyway.
>
> A house close by us was damaged badly by a fire caused by a lightning
> strike to its gas meter, (strange) Should those things be grounded or
> are they already grounded? I looked at the house and the gas meter is
> in a low spot to the rear of the house with pine trees close by and a
> swiming pool near also.
>
> dj

4700. Re: feeding a magnetic loop ?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-08 09:29:39 UTC
From: jgboyles@aol.com
Message-ID: <20020908052939.22848.00000048@mb-fb.aol.com>
Source record: 135042

>I ordered a wellbrook ALA-330 magnetic loop antenna (mainly suited for
>indoor listening purposes in the HF bands). The system comes with a
>BNC connector.

Looking in my junkbox I have several varieties of PL to BNC and BNC to PL converters. Not sure where I got them, but they do make them. Sounds like that is what you need. Or, just cut off the wrong connector and connect the right connector.
>- Can I use a RG58 to feed my aerial ? (as we do most of the time when
>50 omhs are required)

Sure. If your antenna impedance is around 50 ohms. Even if its not, for rx it is not critical. In an antenna system you have a transmission line (rg58) and an antenna. The antenna does the receiving and the transmission line does not. You seem to be concerned with interaction beween your mag loop and line. If this is the case, then other types of transmission line will also be effected
73 Gary N4AST

4701. Re: Dumb Question:

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-08 09:46:41 UTC
From: Allan <kd7dsk@cox.net>
Message-ID: <50Fe9.84592$Fb.3567680@news1.west.cox.net>
Source record: 135043

Here is the skinny on the Imax2000 http://www.qsl.net/kg6aoh/imax2000/

4702. G5RV or W3DZZ ?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-08 09:52:09 UTC
From: lombryt@hotmail.com
Message-ID: <db35a0c.0209080152.29492a78@posting.google.com>
Source record: 135044

Hi,

In one of my QTH I have enough place in the garden to install a multiband dipole of about 33m (100') ot twice that length (but the first option is less visible and more pratical for me). I'm on top of hills with an open field 360 deg around.

So I would like to replace with 40m long wire by something more efficient (forget currently the beam and vertical). I have the choice to install a G5RV with a symetric feedline + coax RG58 or a W3DZZ feeded with a simple coax RG58. Knowing these models are very appreciated in the US, I post my question on this forum.

But from your experience, as my first objective is DX with few local activities, what can I install : the G5RV or the W3DZZ ?

Hints : According the theory, the second solution seems better : one type of feedline, easy to use as inverted V in necessary, traps allow to be resonant on L/2 on various bands and even 3/2L on 20m, 5/2 on 15m, etc.
As traps quality if very important in this model of dipole, do you know a good manufacturers of W3DZZ, famous of the quality of its antennas ?

Thanks.

Thierry
ONL5183
http://www.astrosurf.com/lombry/menu-qsl.htm

4703. Re: antenna tuner question

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-08 10:11:38 UTC
From: belgacom <casidan@belgacom.net>
Message-ID: <3d7b225a$0$184$ba620e4c@news.skynet.be>
Source record: 135045

Hi fellows;

I used for more then a year an old GP-antenna for CB on 17 and 12m. I removed the ridiculous coil, on PCB, in the feedpoint.
Then I shortened the antenna to the length of a quarter of a wavelengte for 12m. Made a coax-trap on an Ertalon coilform and put it on the top of the antenna with an adjustable wip for 17m. On the feed i made three quarter-wave radials for eash band sloped 135° from the antenna.
The best is to the antennafoot is isolate of the fiting point. Also use a good current-balun. That can be made by turning the coax just below feedpoint in coil form. A 10 turns (RG58) wil be sufficent. I worked the whole world (max 100W) with that antenna on both bands and it was only fit on an 12 feet aluminium tube in the backyard nearby a tree. I using now a dual band home made rotary dipole for these bands. The signals are beter. If you like to start slowly, a recommend a rotary triband dipole. I worked my firsth 275 DXCC on that antenna, VK0IR include.
To feed an antenna you beter use RG213 or beter. Loss is great on RG58 for long lengths.
For the lowbands i used longtime a 22m long wire. sloping from 8 to 4m and the last 4m vertical. A T-filter (2c and 1 L) at the feedpoint. An earthpin as close as possible to the feedpoint and T-tuner. And some wires over the lane as radials connected to the earthpoint. The use of a good currentbalun is needed. That antenna can be tuned for 40, 80 and 160m. On 80 i made XZ1N straight to a huged pile up after 2 time calling. (100W) and ZL8CI on 40m. I now using a vertical for 30 and 40m and inverted L for 80m. Both home made.
Most commercial baluns are good in the middle of there band wide but the low and high ends are bad. Beleve me, a balun for 1.8 to 30MHz does not exist. A car to drive 300km/h and pull 40 tons in a rally does not exist to. And multiband antennas from 40 (or even 80 or 160) to 10 (or 6m) ar not efficient for all the bands.(An log periodic is an exception). I take the rule of maximum 3 bands per antenna. The more bands on one antenna the less the effecienty on the bands.
To feed an antenna, for single band antennas you have the advantage the use very simple C-L tuning units. In stead of the heavy and noisy baluns.
So greeting from Belgium.
de Dan ON5UE
ON5UE@qsl.net

----- Original Message -----
From: "PDRUNEN" <pdrunen@aol.com>
Newsgroups: rec.radio.amateur.antenna
Sent: Monday, September 02, 2002 2:29 PM
Subject: antenna tuner question

> Hi Group,
>
> I use a old 5/8 CB ground plane with 20 feet of RG-58 as the line feed.
The
> antenna is not very high. I use a MFJ tuner to operate on 20,17,15,12,10.
>
> It works ok but not great. Would there be any advantage to putting the
tuner
> at the antenna end? How about if I moved the antenna up to 40 feet and
still
> used 58 cable and located the tuner at the antenna?
>
> Does anyone make a remote tuner box which mounts at the antenna end?
>
> Tnx, de KJ4UO
>
>

"PDRUNEN" <pdrunen@aol.com> schreef in bericht
news:20020902082937.01022.00000727@mb-ms.aol.com...
> Hi Group,
>
> I use a old 5/8 CB ground plane with 20 feet of RG-58 as the line feed.
The
> antenna is not very high. I use a MFJ tuner to operate on 20,17,15,12,10.
>
> It works ok but not great. Would there be any advantage to putting the
tuner
> at the antenna end? How about if I moved the antenna up to 40 feet and
still
> used 58 cable and located the tuner at the antenna?
>
> Does anyone make a remote tuner box which mounts at the antenna end?
>
> Tnx, de KJ4UO
>
>

4704. Horizontal Loops for HF - anyone using?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-08 10:40:52 UTC
From: Sidevalve <Sabbatai_zvi@hotmail.com>
Message-ID: <o1amnu4b8gdss24842244sh5f5cnhu2g6b@4ax.com>
Source record: 135046

Hi guys - I am getting ready to build a loop.

Planing to feed it with 450 ohm line to an autotuner on the ground
and run all bands 160-10m.

My question is this:

Will 260 feet be an ideal length? It's going to be about 25-35 feet
high supported by trees.

It will probably not be exactly the same hieght all around. It will
definately not be square but some sort of odd shaped and
4 or 5 sided affair.

Does anyone else have experience with such real world loops
that can comment and/or give me any tips before I get started?

Thanks - AF4K

- - -
Commyanism is the woyste thing I evah hoyde - Robin Williams

4705. Re: Horizontal Loops for HF - anyone using?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-08 13:11:30 UTC
From: k9sqg@aol.com
Message-ID: <20020908091130.12908.00002824@mb-mg.aol.com>
Source record: 135047

That loop should work out. General rule of thumb is to make the loop as large as possible for all band operation. For 160, the loop could be a little higher, like 50 ft or so but it will still work at 25 ft. You'll notice that as you go from 160 m toward 10 m, it will lose the overhead high angle pattern and have more low angle lobes which will be better for DX.

It will have less noise pickup than a vertical antenna.

On some bands, you might have a matching problem, it is hard to predict in advance. Adding some more feedline might help or you could build a wider range matching network, such as a double balanced network.

Make the installation such that it is easy to lower, such as using pulleys and ropes. This will allow you to lower it when ice storms threaten. Also, ensure you have a rapid disconnect means so that you can remove feedlines when thunderstorms are in the area.

Best of luck and keep us all informed of your experiences.

73s,

Evan

4706. Re: antenna tuner question

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-08 13:12:40 UTC
From: Bob Miller <bamiller@texas.net>
Message-ID: <oEt7Pf9Y7LPgc62DuvaeNHd1oZb8@4ax.com>
Source record: 135048

pdrunen@aol.com (PDRUNEN) wrote:

>Hi Group,
>
>I use a old 5/8 CB ground plane with 20 feet of RG-58 as the line feed. The
>antenna is not very high. I use a MFJ tuner to operate on 20,17,15,12,10.
>
>It works ok but not great. Would there be any advantage to putting the tuner
>at the antenna end? How about if I moved the antenna up to 40 feet and still
>used 58 cable and located the tuner at the antenna?
>
>Does anyone make a remote tuner box which mounts at the antenna end?
>
>Tnx, de KJ4UO
>

The antenna you're using is resonant at the top of your range. An antenna resonant in the middle of your range, tuned by your current antenna tuner, with twinlead as a feed, would probably do better.

Certainly, higher would be better, too.

Bob
k5qwg

4707. Re: Tired of RS employees pushing Cellphones and DirectTV

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-08 13:38:15 UTC
From: Dave <ws2l@NOSPAMoptonline.net>
Message-ID: <0ple9.36398$rU2.1111347@news4.srv.hcvlny.cv.net>
Source record: 135049
Cross-posted to: alt.radio.scanner,rec.radio.amateur.antenna,rec.radio.scanner,rec.radio.shortwave

Mike,

I totally agree with you about the name & address thing to, it takes to much time & personally I feel like I'm prying into a strangers life. I don't know of any other store that does this but unfortunately it their policy. It's especially annoying when you have 10-15 people in line & you have to ask for N & A, this makes people wait longer. Personally I would like to see it disapear quickly.

Dave
WS2L

"Mike Coslo" <mcoslo@adelphia.net> wrote in message
news:3D729556.3040201@adelphia.net...
> Dave wrote:
>
> > I'm an Asst. Manager for RS & if you frequent your local RS you know who
the
> > people are & who to avoid. As far as pushing cell phones goes we are
under
> > siege by our higher up's to push this stuff. Personally, if I see
someone
> > with a cell phone I don't even bother to ask I just get you what you
need &
> > get you on your way as quickly as possible. I still earn plenty of
> > commission but after working with people directly for over 15 years
> > (Previous Job) you can tell who might be interested & the person who
knows
> > what they want. I agree w/the other RS employee on this one, if you
don't
> > like being jumped on about wireless & satellite then take your business
> > elsewhere. You have the right to tell an RS employee before he/she opens
> > their mouth that you don't want to be offered a great deal & I'm sure
they
> > will back off. As far as product pricing goes, WE DO NOT make up the
prices
> > so don't bitch at us, these prices are set at the main office in Ft
Worth
> > and we have NO control over the cost of products. In fact we have no
control
> > over a lot of things and I myself would appreciate it if customers stop
> > complaining to me & take to Ft.Worth 1-800-843-7422 or 1-800-THE SHACK
if
> > that's easier to remember.

>
>
>
> Let's put it this way. Some years ago, I quit going to Radio Shack
> because Even if I wanted to buy a couple AA batteries, I would have to
> give my name, address, telephone address, and other stuff EVERY single
> time. If I bought something on a corp account, I had to sign something
> like six forms, and the transaction took what seemed like forever.
>
> I started going again because they eliminated that stupid idea.
>
> But I can assure you, if I get prodded to buy a cellular phone every
> time I walk in the store, I'll stop buying anything there again.
>
> The corporate suits who run the show are seriously misinformed about
> the shopping public. They will turn away business for the sales push.
>
> The really interesting thing is that after the big cell phone push,
> which will drive the non-cell seeking public away, which means that the
> store sales will become mostly cellular, the suits will be convinced
> that their idea was right, because nobody will be buying anything else
> by then.
>
> Remember the old "Jump Frog, Jump joke?
>
> - Mike KB3EIA -
>

4708. Re: Tired of RS employees pushing Cellphones and DirectTV

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-08 14:29:48 UTC
From: GeorgeF <av8tor@licensed4fun.com>
Message-ID: <3D7B5EDC.7080604@licensed4fun.com>
Source record: 135050
Cross-posted to: alt.radio.scanner,rec.radio.amateur.antenna,rec.radio.scanner,rec.radio.shortwave

>> The really interesting thing is that after the big cell phone push,
>>which will drive the non-cell seeking public away, which means that the
>>store sales will become mostly cellular, the suits will be convinced
>>that their idea was right, because nobody will be buying anything else
>>by then.
>>
>> Remember the old "Jump Frog, Jump joke?
>>
>>- Mike KB3EIA -
>>

This has already happened in Daytona Beach FL. I use to buy lots of connectors and adapters. Just the other day I went in for two BNC connectors and a few communication speakers (the week before there were five speaks on the shelf). The other day they removed all components, parts and coax connectors (as well as audio connectors). I wanted 3 speakers and they were missing too. I went up to the salesperson to ask about the speakers. She looked at my phone on my belt and before I could get a word out she said "What Cell Phone Service plan do you have?" I said that was personal information but I'm very happy with my plan, where were the speakers that were on that shelf the other day and were are your BNC connectors that were on the wall? Her responce "there is not demand for those items anymore so we don't carry them".

True store, happened at the RadioShack in the Voluisa Mall, Daytona Beach, FL. Looks like I'll be taking a trip to AES in Orlando more often now.....

George
http://www.MilAirComms.com

4709. Re: Varicaps in rx atu's

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-08 14:34:52 UTC
From: Reg Edwards <g4fgq.regp@btinternet.com>
Message-ID: <alfn6bmqk1@paris.btinternet.com>
Source record: 135051

Hello Rich.

I have a home-brew all-solid-state transceiver for 160 metres only. It is about 23 years old.

The receiver front end consists of a two-coil, narrow-band, tunable, bandpass filter, covering the approx range 1.75 - 2.05 MHz. The antenna was usually a 160m, 3/8-wave, inverted-L. There were several high power medium and long-wave stations in the vicinity.

The two tuned circuits are top-capacitance coupled. Each of the tuned circuits is tuned with a varicap. The two varicaps are ganged together, both being contained in the usual small plastic package with three connecting wires. The varicaps are well matched having been designed for ganged operation.

Tuning over the band is done 'remotely' by a single DC potentiometer on the front panel. This occupies far less space than a two-gang variable capacitor. Furthermore, the problems associated with having the receiver tuned circuits at the front of the transceiver with the antenna coming in at the rear to the transmitter are entirely eliminated.

The transmit/receive VFO/RIT also uses a varicap. Hint: don't use a wire-wound pot in this application otherwise the VFO jumps between turns. Use a carbon or loaded-plastic pot.

I still have this transceiver but have not used it for about 10 years except for occasional checks. It has sentimental value.

Barring being struck by lightning, you have an excellent chance of success.

On the other hand there may not be any great advantage in locating a receiving tuner at the top of the mast. But nice to experiment with.

========================
Regards from Reg G4FGQ
Free Radio Design Software
Go to http://www.g4fgq.com
========================

==
"Richard Daventry" wrote
> Just wondering if it's practical to use varicaps in an atu for a long wire
> antenna. Would simplify remote tuning. Probably burn out though in
> thunderstorms unless protected. Anyone know of any circuits on the web?
TIA.
> Rich.

4710. Re: Slingshots foretting the g5rv wre into the trees

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-08 14:37:56 UTC
From: klocko@toad.net
Message-ID: <224d9cd4.0209080637.44cf6c1c@posting.google.com>
Source record: 135052

"Wayne Sellin" <sellinwg@starpower.net> wrote in message
news:<aldb8v$q01$1@bob.news.rcn.net>...
> Where I am slingshots are not supposed to be used. But....
> Any suggestions or insights or sources?

Hi Wayne,
I use a slingshot with a small lead weight and nylon fishing line (get the fluorescent red line if you can, since it's easier to see where it comes down). I wrap the line around a small can (like for baking soda), tap a tent stake into the ground, and put the can on top. A rubber band can keep the line in place until you're ready. I've had success with this cheap system. Look downrange before shooting to make sure the area is clear (don't want to clonk the XYL or the neighbor's cat), and shoot until you get the fishing line in a good spot. If it's not, untie the weight and rewind the line on the can. Once the location in the tree is OK, tie some light nylon cord to the weight end of the fishing line, wrap the knot in tape so the knot won't snag in the tree, and rewind the fishing line onto the can to pull the nylon cord through the tree and back to the original spot. Light nylon cord is used since the fishing line may not be strong enough for the rope or wire. Finally, tie the rope or wire to the nylon cord and pull it through the tree. 73 es GL,
Bill N3WK

4711. Shortwave Antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-08 15:15:43 UTC
From: Stuart <scanning@ecdcrew.com>
Message-ID: <alfpe0$1au$2@nntp2-cm.news.eni.net>
Source record: 135053

Ok, I just want to have the most basic but useable antenna for shortwave broadcast in the 5MHz - 14 MHz range.

Can any of you offer a suggestion?

I have a fence (aluminum fence) that when I hook my radio to it, I get major gain, but plenty "other" noise.... what can help eliminate some of this noise? Or How should I go about making a better antenna?

4712. Re: Tired of RS employees pushing Cellphones and DirectTV

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-08 15:16:20 UTC
From: AbbN <abbnaklie@sympatico.ca>
Message-ID: <UVJe9.168$hK5.57571@news20.bellglobal.com>
Source record: 135055
Cross-posted to: alt.radio.scanner,rec.radio.amateur.antenna,rec.radio.scanner,rec.radio.shortwave

Hi,

Politely tell them to put an "R" as in "Refused" in the First Name field and that's it. If they still insist, give your name as "Mickey Mouse" or Donald Duck". At that point they'll usually stop.

--
Take Care
Abb
VE3003SWL
(SWL CallSign)

"Dave" <ws2l@NOSPAMoptonline.net> wrote in message
news:0pIe9.36398$rU2.1111347@news4.srv.hcvlny.cv.net...
> Mike,
>
> I totally agree with you about the name & address thing to, it takes to
much
> time & personally I feel like I'm prying into a strangers life. I don't
know
> of any other store that does this but unfortunately it their policy. It's
> especially annoying when you have 10-15 people in line & you have to ask
for
> N & A, this makes people wait longer. Personally I would like to see it
> disapear quickly.
>
> Dave
> WS2L
>
>
> "Mike Coslo" <mcoslo@adelphia.net> wrote in message
> news:3D729556.3040201@adelphia.net...
> > Dave wrote:
> >
> > > I'm an Asst. Manager for RS & if you frequent your local RS you know
who
> the
> > > people are & who to avoid. As far as pushing cell phones goes we are
> under
> > > siege by our higher up's to push this stuff. Personally, if I see
> someone
> > > with a cell phone I don't even bother to ask I just get you what you
> need &
> > > get you on your way as quickly as possible. I still earn plenty of

> > > commission but after working with people directly for over 15 years
> > > (Previous Job) you can tell who might be interested & the person who
> knows
> > > what they want. I agree w/the other RS employee on this one, if you
> don't
> > > like being jumped on about wireless & satellite then take your
business
> > > elsewhere. You have the right to tell an RS employee before he/she
opens
> > > their mouth that you don't want to be offered a great deal & I'm sure
> they
> > > will back off. As far as product pricing goes, WE DO NOT make up the
> prices
> > > so don't bitch at us, these prices are set at the main office in Ft
> Worth
> > > and we have NO control over the cost of products. In fact we have no
> control
> > > over a lot of things and I myself would appreciate it if customers
stop
> > > complaining to me & take to Ft.Worth 1-800-843-7422 or 1-800-THE SHACK
> if
> > > that's easier to remember.
> >
> >
> >
> > Let's put it this way. Some years ago, I quit going to Radio Shack
> > because Even if I wanted to buy a couple AA batteries, I would have to
> > give my name, address, telephone address, and other stuff EVERY single
> > time. If I bought something on a corp account, I had to sign something
> > like six forms, and the transaction took what seemed like forever.
> >
> > I started going again because they eliminated that stupid idea.
> >
> > But I can assure you, if I get prodded to buy a cellular phone every
> > time I walk in the store, I'll stop buying anything there again.
> >
> > The corporate suits who run the show are seriously misinformed about
> > the shopping public. They will turn away business for the sales push.
> >
> > The really interesting thing is that after the big cell phone push,
> > which will drive the non-cell seeking public away, which means that the
> > store sales will become mostly cellular, the suits will be convinced
> > that their idea was right, because nobody will be buying anything else
> > by then.
> >
> > Remember the old "Jump Frog, Jump joke?
> >
> > - Mike KB3EIA -
> >
>

>

4713. Re: is/should natural gas meters be grounded?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-08 15:23:28 UTC
From: Roger Leone <arleoneSPAMBLOCK@inreach.com>
Message-ID: <wXJe9.765$Y07.207860828@news.inreach.com>
Source record: 135054

Here in Northern California gas meters/pipes are not considered grounded. This usually is a matter of concern when looking for a ground connection for our ham stations. We don't use gas pipes for grounds but water pipes are OK.

The explanation I have heard (with no direct knowledge to confirm) is that the meter may be connected to the mains via a flexible plastic pipe which is of course a non-conductor. And the mains have a small DC voltage on them for corrosion prevention.

As already mentioned, different areas have different methods. I just guessing, but I would think a direct hit by lightning would cause a problem for a gas meter whether grounded or not.

Roger K6XQ

4714. AZ/EL Antennas with El-Cheapo Rotors

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-08 15:32:37 UTC
From: Jeff Breitner <zed-pappa-tango-romeo@rudn.com>
Message-ID: <unmrla6a577h54@corp.supernews.com>
Source record: 135057
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.space

I'm interested in creating an az/el antenna system with el-cheapo rotors (as opposed to dropping $600 for a Yaesu GX-5000). Researching, I've found hints that this has been done to some degree of success, but no one really goes into much detail about it.

While I'm pretty sure I can figure out how to make it work, I'm curious if anyone in the newsgroup has actually done this and what issues they have discovered. More importantly, do you find that this setup has shortcomings that in short-order would simply result in a dedicated amateur (and cost-conscious) scrapping the whole affair and buy the Yaesu anyway?

Thanks for your input.

To reply via email, remove the hypens and decode the phonetics to produce a four-letter addressee at the domain.

4715. Dipole, Multiple

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-08 15:34:23 UTC
From: bhuson@gte.net
Message-ID: <20020908083519454037@evrtwa1-ar4-4-47-068-007.evrtwa1.dsl-verizon.net>
Source record: 135056

I'm toying with some space saving antenna options. These ideas below just seem to fit my needs very well.

I mounted a pair of Iron Horse 6m mobile antennas as a vertical dipole, side-mounted from my tower and am very pleased with the results. The following three ideas are a result of this simple approach.

Would it be feasible to mount pairs of dipoles, for each band, horizontally on a common boom, in a log periodic looking arrangement, with a common feedline to a remote switch?

Would this arrangement provide beam-like characteristics? What kind of spacing would be required between dipoles?

Or would I be better off mounting them vertically as common rotatable dipoles with remote switching? Again what kind of space would be required vertically between dipole sets.?

The third concept I've had is making a star shaped base to mast mount and mounting vertical dipoles on each point, again remotely switched.

4716. Re: Question about ladder line and metal mast

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-08 15:47:23 UTC
From: Jeff Breitner <zed-pappa-tango-romeo@rudn.com>
Message-ID: <unmsh0rnaak821@corp.supernews.com>
Source record: 135058

I've always found that the best rule of thumb is a minimum of the inside spacing of the ladder line. I've never had any issues when I kept within that.

I've created stand-offs with old discarded Lexan, a blowtorch, a piece of pipe approximately the diameter of the mast and a hack saw.

Make sure the plastic you use is thick enough to do this without breaking under the weight of the feedline.

First, cut the Lexan into 8" strips about 3" wide.

Create a slit in one end of the Lexan that's wide enough for the ladder-line or twin lead to fit into. If you have true ladder-line, you can try to grip one conductor. The idea is that once the ladder line or twinlead is gripped in this slit, you'll use a bit of adheasive (silicone goop) or a tie-wrap to keep it inside the standoff.

On the other end, carefully heat the Lexan on one edge approximately 2-3" from the end. When the Lexan is soft, use your piece of pipe to mold the Lexan around the curvature of the pipe. This is the end that you're going to hose-clamp/tie-wrap/duct tape/whatever to the mast.

With the Lexan still warm and bendy, make a 90 degree bend at the point where the curvature flattens out. The direction doesn't matter, the idea is that this is the right angle away from the plane of the mast.

Let the plastic cool. It should be obvious how this works at this point. You can experiment with the lengths, widths and other assorted dimensions.

As usual, you're on your own if you do this. Be careful with the torch, the plastic, the fumes, your antennas and everything else for which I'm not responsible.

If you have questions, you can email me by decoding the phonetics of the email address, removing the hyphens and sending the the four letter addressee at the domain name.

Good luck.

<vhfradiobuff@yahoo.com> wrote in message
news:1996cb6d.0209051135.341e8c12@posting.google.com...
> If I string up a dipole fed by ladder line, and support the center of
> the dipole on top of 2 metal masts, will the ladder line be affected
> if it's taped to the metal mast? If so, what kind of angle away from
> the mast should I have the ladder line and which direction should it
> go in relation to the wire? I plan on having the dipole as an inverted
> V.

4717. Re: Dipoles

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-08 16:14:28 UTC
From: Tarmo Tammaru <t-tammaru@home.com>
Message-ID: <EHKe9.257385$On.10221598@bin3.nnrp.aus1.giganews.com>
Source record: 135059

Alan,

Like several people have stated, unless the antenna is pretty high, a single dipole will already be non directional. If you go for the two though, each of the dipoles will need to be a slightly different lengths from what a single dipole would be. Also, as somebody mentioned, if you make the two dipoles a different length from each other, you can get more bandwidth. I ran as EZ Neck program on crossed 75/80 meter dipoles, and got SWR less than 2 from 3.5 to 4 MHz. I had a 7MHz, 18 MHz, and 24 MHz antenna fed from a common feedline (@60 feeet), and it worked great. I used a balun. If you do this, you have to trim the lowest frequency antenna first.

Tam/WB2TT

"Alan Gault" <alan@gault.freeserve.co.uk> wrote in message
news:ale0uv$k26$1@newsg2.svr.pol.co.uk...
> Hi
> Wonder if anyone can answer a query about dipoles for me. I understand
that
> you can use a common feed point for multiband dipoles, but wonder if you
> were to space 2 dipoles at right angles for the 40m band with the common
> feed point would this give the required 360 degree coverage. Many thanks
in
> advance for your help.
>
> Alan MI 3 KWB / GI 6 PYP
>
>

4718. Re: Shortwave Antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-08 16:40:54 UTC
From: David Robbins <k1ttt@arrl.net>
Message-ID: <alfuiv0225m@enews3.newsguy.com>
Source record: 135061

take a wire, stick it in the antenna jack. thats about as basic as you can get.

i just use a piece of insulated wire about 25' long stuck in the jack and thrown under my bed, works fine for the big sw broadcasts. if you want more gain then make it longer and higher, but then you have to start worrying about what direction it is aimed. as you add gain in one direction you must lose in some other direction.

"Stuart" <scanning@ecdcrew.com> wrote in message news:alfpe0$1au$2@nntp2-cm.news.eni.net...
> Ok, I just want to have the most basic but useable antenna for shortwave
> broadcast in the 5MHz - 14 MHz range.
>
> Can any of you offer a suggestion?
>
> I have a fence (aluminum fence) that when I hook my radio to it, I get major
> gain, but plenty "other" noise.... what can help eliminate some of this
> noise? Or How should I go about making a better antenna?
>
>
>
>

4719. Re: Slingshots foretting the g5rv wre into the trees

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-08 16:45:21 UTC
From: kelly@dvol.com
Message-ID: <d22b54c3.0209080845.64d2b910@posting.google.com>
Source record: 135060

'Doc <w5lz@icok.net> wrote in message news:<3D7A51BC.8222710F@icok.net>...
> Wayne,
> I use a 'potato' cannon. Not supposed to use those
> here, so I just don't ask.
> 'Doc

Doesn't the bark from a 90mm potato howitzer sorta generate a few . .
umm . . "questions" around the neighborhood . . ?
>
>
I have a beast of a bow & arrow rig which can toss a 70lb test line
over an 80 foot tree with room to spare. Silently. But somehow yer
cannon has some sex appeal, I gotta look into it.

w3rv

4720. Re: KLM 40-2 Insulators

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-08 17:16:22 UTC
From: Major Tom <NonValidAddress@attbi.com>
Message-ID: <GBLe9.350160$me6.39722@sccrnsc01>
Source record: 135062

Hi Rick,

Have you tried M2?
http://www.m2inc.com
They have some upgrade parts for KLM's. Not sure if they have what you need.
If it's not on their website, maybe you can give them a call to find out where
you can get them.

Good Luck
Tom

"Rick and Theresa" <n6cy@earthlink.net> wrote in message
news:yRne9.13199$6i4.1070397@newsread1.prod.itd.earthlink.net...
> I'm refurbishing an older KLM 2-element 40 meter yagi and need the spacing
> insulators for the linear loaded elements. Factory no longer makes them. Is
> there any after-market source?
>
> TIA Rick N6CY San Diego CA
>
>

4721. Re: Slingshots foretting the g5rv wre into the trees

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-08 17:22:08 UTC
From: CW <clinton.magers@attbi.com>
Message-ID: <4HLe9.228532$_91.232575@rwcrnsc51.ops.asp.att.net>
Source record: 135063

Fast propellant in a relatively long barrel. They are not very loud.
"Brian Kelly" <kelly@dvol.com> wrote in message
news:d22b54c3.0209080845.64d2b910@posting.google.com...
> 'Doc <w5lz@icok.net> wrote in message news:<3D7A51BC.8222710F@icok.net>...
> > Wayne,
> > I use a 'potato' cannon. Not supposed to use those
> > here, so I just don't ask.
> > 'Doc
>
>
> Doesn't the bark from a 90mm potato howitzer sorta generate a few . .
> umm . . "questions" around the neighborhood . . ?
> >
> >
> I have a beast of a bow & arrow rig which can toss a 70lb test line
> over an 80 foot tree with room to spare. Silently. But somehow yer
> cannon has some sex appeal, I gotta look into it.
>
> w3rv

4722. Re: Tired of RS employees pushing Cellphones and DirectTV

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-08 17:34:50 UTC
From: w9gb <gregory.beat@attbi.com>
Message-ID: <_SLe9.405557$UU1.63126@sccrnsc03>
Source record: 135064
Cross-posted to: alt.radio.scanner,rec.radio.amateur.antenna,rec.radio.scanner,rec.radio.shortwave

The Radio Shack marketing executive (marketing moron) that was pushing this name and address deal (a few of the stores still ask for it) must have left RS.

I have now found that the Container Store (yes HQ in Texas) is now doing this same thing.
Care to take a bet this is where the Radio Shack executive ended up?

When I worked in the Dallas/Ft. Worth area (1980's) -- large telemarketers in that area were always "acquiring" new lists. I never found out if they legitimately acquired those RS lists.

gb

"Dave" <ws2l@NOSPAMoptonline.net> wrote in message
news:0pIe9.36398$rU2.1111347@news4.srv.hcvlny.cv.net...
> Mike,
>
> I totally agree with you about the name & address thing to, it takes to
much
> time & personally I feel like I'm prying into a strangers life. I don't
know
> of any other store that does this but unfortunately it their policy. It's
> especially annoying when you have 10-15 people in line & you have to ask
for
> N & A, this makes people wait longer. Personally I would like to see it
> disapear quickly.
>
> Dave
> WS2L
>
>
> "Mike Coslo" <mcoslo@adelphia.net> wrote in message
> news:3D729556.3040201@adelphia.net...
> > Dave wrote:
> >
> > > I'm an Asst. Manager for RS & if you frequent your local RS you know
who
> the
> > > people are & who to avoid. As far as pushing cell phones goes we are
> under
> > > siege by our higher up's to push this stuff. Personally, if I see
> someone
> > > with a cell phone I don't even bother to ask I just get you what you

> need &
> > > get you on your way as quickly as possible. I still earn plenty of
> > > commission but after working with people directly for over 15 years
> > > (Previous Job) you can tell who might be interested & the person who
> knows
> > > what they want. I agree w/the other RS employee on this one, if you
> don't
> > > like being jumped on about wireless & satellite then take your
business
> > > elsewhere. You have the right to tell an RS employee before he/she
opens
> > > their mouth that you don't want to be offered a great deal & I'm sure
> they
> > > will back off. As far as product pricing goes, WE DO NOT make up the
> prices
> > > so don't bitch at us, these prices are set at the main office in Ft
> Worth
> > > and we have NO control over the cost of products. In fact we have no
> control
> > > over a lot of things and I myself would appreciate it if customers
stop
> > > complaining to me & take to Ft.Worth 1-800-843-7422 or 1-800-THE SHACK
> if
> > > that's easier to remember.
> >
> >
> >
> > Let's put it this way. Some years ago, I quit going to Radio Shack
> > because Even if I wanted to buy a couple AA batteries, I would have to
> > give my name, address, telephone address, and other stuff EVERY single
> > time. If I bought something on a corp account, I had to sign something
> > like six forms, and the transaction took what seemed like forever.
> >
> > I started going again because they eliminated that stupid idea.
> >
> > But I can assure you, if I get prodded to buy a cellular phone every
> > time I walk in the store, I'll stop buying anything there again.
> >
> > The corporate suits who run the show are seriously misinformed about
> > the shopping public. They will turn away business for the sales push.
> >
> > The really interesting thing is that after the big cell phone push,
> > which will drive the non-cell seeking public away, which means that the
> > store sales will become mostly cellular, the suits will be convinced
> > that their idea was right, because nobody will be buying anything else
> > by then.
> >
> > Remember the old "Jump Frog, Jump joke?
> >
> > - Mike KB3EIA -

> >
>
>

4723. Re: Tired of RS employees pushing Cellphones and DirectTV

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-08 17:35:24 UTC
From: Chuck/KE4ETH <chuck_hawks@hotmailmospamorama.com>
Message-ID: <%jMe9.47689$%P6.15071971@e3500-atl1.usenetserver.com>
Source record: 135068
Cross-posted to: alt.radio.scanner,rec.radio.amateur.antenna,rec.radio.scanner,rec.radio.shortwave

I tell them my name is cash. I usually get, "Your first name, Mr. Cash." depending on how much the total is, I answer with George (Washington), Abe (Lincoln), Thomas (Jefferson), etc.

Gets 'em every time.

--
Chuck
KE4ETH

x-no-archive: yes
"AbbN" <abbnaklie@sympatico.ca> wrote in message
news:UVJe9.168$hK5.57571@news20.bellglobal.com...
> Hi,
>
> Politely tell them to put an "R" as in "Refused" in the First Name field
and
> that's it. If they still insist, give your name as "Mickey Mouse" or
Donald
> Duck". At that point they'll usually stop.
>
> --
> Take Care
> Abb
> VE3003SWL
> (SWL CallSign)
>
>
>
> "Dave" <ws2l@NOSPAMoptonline.net> wrote in message
> news:0pIe9.36398$rU2.1111347@news4.srv.hcvlny.cv.net...
> > Mike,
> >
> > I totally agree with you about the name & address thing to, it takes to
> much
> > time & personally I feel like I'm prying into a strangers life. I don't
> know
> > of any other store that does this but unfortunately it their policy.
It's
> > especially annoying when you have 10-15 people in line & you have to ask
> for
> > N & A, this makes people wait longer. Personally I would like to see it
> > disapear quickly.
> >

> > Dave
> > WS2L
> >
> >
> > "Mike Coslo" <mcoslo@adelphia.net> wrote in message
> > news:3D729556.3040201@adelphia.net...
> > > Dave wrote:
> > >
> > > > I'm an Asst. Manager for RS & if you frequent your local RS you know
> who
> > the
> > > > people are & who to avoid. As far as pushing cell phones goes we are
> > under
> > > > siege by our higher up's to push this stuff. Personally, if I see
> > someone
> > > > with a cell phone I don't even bother to ask I just get you what you
> > need &
> > > > get you on your way as quickly as possible. I still earn plenty of
> > > > commission but after working with people directly for over 15 years
> > > > (Previous Job) you can tell who might be interested & the person who
> > knows
> > > > what they want. I agree w/the other RS employee on this one, if you
> > don't
> > > > like being jumped on about wireless & satellite then take your
> business
> > > > elsewhere. You have the right to tell an RS employee before he/she
> opens
> > > > their mouth that you don't want to be offered a great deal & I'm
sure
> > they
> > > > will back off. As far as product pricing goes, WE DO NOT make up the
> > prices
> > > > so don't bitch at us, these prices are set at the main office in Ft
> > Worth
> > > > and we have NO control over the cost of products. In fact we have no
> > control
> > > > over a lot of things and I myself would appreciate it if customers
> stop
> > > > complaining to me & take to Ft.Worth 1-800-843-7422 or 1-800-THE
SHACK
> > if
> > > > that's easier to remember.
> > >
> > >
> > >
> > > Let's put it this way. Some years ago, I quit going to Radio
Shack
> > > because Even if I wanted to buy a couple AA batteries, I would have to
> > > give my name, address, telephone address, and other stuff EVERY single
> > > time. If I bought something on a corp account, I had to sign something

> > > like six forms, and the transaction took what seemed like forever.
> > >
> > > I started going again because they eliminated that stupid idea.
> > >
> > > But I can assure you, if I get prodded to buy a cellular phone
every
> > > time I walk in the store, I'll stop buying anything there again.
> > >
> > > The corporate suits who run the show are seriously misinformed
about
> > > the shopping public. They will turn away business for the sales push.
> > >
> > > The really interesting thing is that after the big cell phone push,
> > > which will drive the non-cell seeking public away, which means that
the
> > > store sales will become mostly cellular, the suits will be convinced
> > > that their idea was right, because nobody will be buying anything else
> > > by then.
> > >
> > > Remember the old "Jump Frog, Jump joke?
> > >
> > > - Mike KB3EIA -
> > >
> >
> >
>
>

4724. Re: Shortwave Antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-08 17:48:06 UTC
From: 'Doc <w5lz@icok.net>
Message-ID: <3D7B8D50.23BA3C12@icok.net>
Source record: 135065

Stuart,
A simple wire antenna is about as basic as you
can get. Make it as long as possible and as high
as possible. Height is more important than length.
Some of the noise you get with the fence may be
due to 'parts' of the fence moving/rubbing together.
If that's the case, the noise can be reduced by
stopping the movement. Depending on the kind of fence
it is, that may not be very practical, though. No
matter the antenna, you always hear more noise when
you hear more signals you want to hear (to some
extent).
Good luck, have fun...
'Doc

4725. Re: Horizontal Loops for HF - anyone using?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-08 18:03:52 UTC
From: 'Doc <w5lz@icok.net>
Message-ID: <3D7B90FB.BD1F5986@icok.net>
Source record: 135066

AF4K,
It should work okay on all but 160m and maybe
40m. For 160m 260 feet is going to be too short.
It may still be 'usable' but it won't be 'good'
by any means. On 40m it will be the second
harmonic for the antenna and that is almost always
not 'good'. But like on 160m it will be 'usable'.
Since the loop at 260 feet will only be resonant on
80m, you will have a non-resonant antenna on all
the other bands, so if possible, make the loop as
large as possible and forget 'resonance'.
Your autotuner may not be able to handle the
impedances on all bands. Autotuners generally have
a fairly narrow matching range. You can 'play' with
the length of the feed line to make the un-tunable
bands acceptible to your tuner, though.
Low horizontal loops are fairly common and they
do work well. They aren't necessarily 'short distance'
antennas at all, DX signals don't always come in at
'low' angles, you know. Give it a shot, you just might
be pleasently suprized at how well it will work.
'Doc

4726. Re: is/should natural gas meters be grounded?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-08 18:11:33 UTC
From: 'Doc <w5lz@icok.net>
Message-ID: <3D7B92CC.FADA6F8E@icok.net>
Source record: 135067

"D.J.",
That's an odd one, but I would also think that a
gas meter being struck by lightning is also pretty
rare. Call your gas company and ask to speak with
one of their engineers about the 'grounding' issue.
If you think you may have a problem, they will be
more than happy to take a look at it, or explain it
to you. Regulations are different for different
parts of the country, but in general, gas meters and
lines are NEVER a good ground point for other systems.
'Doc

4727. Re: Water pipe ground?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-08 18:20:35 UTC
From: N4LQ <N4LQ@igLou.com>
Message-ID: <3d7a4353_2@news.iglou.com>
Source record: 135103

Shortly after posting this I realized that the reason I measured direct current was due to my rectifier, duh. Obviously, the current is ac and it was necessary to rectify this to read it on a dc ammeter. This morning I checked my meter and it was reading nearly zero. We do not have natural gas, only electricity with geo thermal heat so it will be interesting to discover what is causing the 20ma of current.

--
Steve Ellington N4LQ.
"Richard Harrison" <richardharrison@webtv.net> wrote in message news:25442-3D7A19FA-42@storefull-2317.public.lawson.webtv.net...
> Lou, N4LQ wrote:
> "I measure exactly 20 ma of d-c current and it stays constant."
>
> It could come from your gas distribution company. Gas pipes are
> nominally insulated from earth and a potential is applied to them to
> avoid galvanic action which would eat away the gas pipe. A "rectifier"
> applies this potential between the distribution piping and a ground bed
> of carbon electrodes.
>
> A gas water heater or other appliance may connect the gas and water
> systems in your house. If the gas company`s meter insulation is
> violated, the gas distribution cathodic protection current will leak
> through your water piping to the earth. The potental at the gas meter is
> only a fraction of a volt and poses no electrocution danger. An
> electrical fault could put a dangerous potential on your plumbing were
> it the only electrical earth connection. The power company here requires
> a ground rod in addition to the water piping for a meter ground. The
> power company also grounds the secondary of its distribution transformer
> and grounds distribution wires at nearly every pole and numerous other
> grounding opportunities. Chances of appearance of a dangerous potential
> on a "ground" wire is almost zero, but it`s always wise to assume that
> the conductor could be dangerous and put a short to ground on it to
> prevent it from becoming dangeroudly energized while you are handling
> the conductor.
>
> Best regards, Richard Harrison, KB5WZI
>

4728. Re: Shortwave Antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-08 18:27:45 UTC
From: Chuck/KE4ETH <chuck_hawks@hotmailmospamorama.com>
Message-ID: <srMe9.47729$%P6.15107268@e3500-atl1.usenetserver.com>
Source record: 134969

Knew someone who mounted his receive antenna just above the electic fence wire. He couldn't figure out why the kept hearing the buzz, buzz sounds.

--
Chuck
KE4ETH

x-no-archive: yes
"'Doc" <w5lz@icok.net> wrote in message news:3D7B8D50.23BA3C12@icok.net...
> Stuart,
> A simple wire antenna is about as basic as you
> can get. Make it as long as possible and as high
> as possible. Height is more important than length.
> Some of the noise you get with the fence may be
> due to 'parts' of the fence moving/rubbing together.
> If that's the case, the noise can be reduced by
> stopping the movement. Depending on the kind of fence
> it is, that may not be very practical, though. No
> matter the antenna, you always hear more noise when
> you hear more signals you want to hear (to some
> extent).
> Good luck, have fun...
> 'Doc

4729. 40 m dipole?? How much of leg can I bend??

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-08 18:33:11 UTC
From: StarGazer <pti@capnet.com>
Message-ID: <3D7B97E7.F55480AC@capnet.com>
Source record: 134974

One end of my resonant coax fed 40 m dipole needs to be bent
90 deg straight downward on one end.
Thats about 10 ft or 1/3 of one of the legs.

Will this affect its performance much??

4730. antenna OM ?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-08 18:35:45 UTC
From: equi-radio <equi-radio@wanadoo.fr>
Message-ID: <alg554ogo1@wanadoo.fr>
Source record: 134970

Hello,
What think:
Use a radiant tower (1/4) en AM on 1485Khz for a local radio with 1Kw
adapted by gamma match and connected on the ground (without insulator).
The radians of ground have a length 1/4 waves each one and are 120.
Think that this system will function as well an insulated tower ?
This method is very much used by the radio hams on 1.8Khz but for the
stations of radios the system is good?
Thank you
73
--
CRIS
christophe.torre@wanadoo.fr

4731. Re: TXing & SWLing MW to 10m w/Attic Ant for Low Noise - HELP!

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-08 18:36:21 UTC
From: 'Doc <w5lz@icok.net>
Message-ID: <3D7B989E.27FB97C7@icok.net>
Source record: 134971

Stan,

> -Questions:
>
> Would a "Z" shape effect the WBFD or W9INN dipole in a similar manner as the
> Doublet?
> [Just for kicks, could anyone run a antenna model on a "Zig-Zaged" WBFD
> using my parameters?]
>
---- In general, the radiation pattern for any 'Zig-zag'ed'
antenna
will be distorted to some extent. Probably about the same
pattern as the doublet.

> I have never used parallel feedline before. What is the potential in
> causing qrm in this Doublet installation?
> Will using parallel feedline be more susceptible to man-made noise?
> Which antenna tuner for the Doublet would you recommend for 100W?
>
---- Actually, I think the probability of parallel feed lines
being
susceptible to man-made noise is about the same as for coax,
with
coax having a slight 'edge', maybe. The potential for QRM is
equal,
coax or parallel feed lines. As far as a tuner, I would find
one
that has a wide usable range, that usually means a physically
large
tuner. I use an old Dentron 'MT-3000A', which has tuned
anything
you can reasonably (and unreasonably) expect to work as an
antenna.
But it certainly isn't the only one that works well.

> Considering the very limited height (16' from surrounding ground level, 22'
> from the full sized 1600sq/ft basement floor) above ground of any of these
> antennas, would any one be a better choice over the other? Will they all be
> cloud warmers?
>
---- Any antenna that low to the ground is going to have more high
angle
radiation than low angle radiation. Of course, the higher you
go in
frequency, the lower the radiation angle. And not all DX

'hits' your
antenna at a low radiation angle.

> Would using a pre-amp/pre-selector such as a Vectronics AT-100 be advisable
> with the WBFD to possible offset its negative gain (relative to a dipole) as
> well as possibly reducing band noise using the pre-selector?
>
---- I'm not a fan of preamplifiers. They don't change the S/N
ratio and
usually make the noise just as loud in relation to the signal
as without
they're use. I would tend to say not to bother.

With your limitations there really are no 'good' choices, just
make the
best of the 'bad' choices (as your doing). Having had some
experience with
the other antenna, I would have to 'lean' towards the W9INN
antenna. But,
I've never used one, so take that for what it's worth.
Good luck. I'd be interested in hearing how things turn out
for you...
'Doc

4732. Re: antenna OM ?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-08 18:54:16 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <g37nnus6l45t2f7iig8g2qfddsg1jq3pd1@4ax.com>
Source record: 134972

On Sun, 8 Sep 2002 20:35:45 +0200, "equi-radio"
<equi-radio@wanadoo.fr> wrote:

>Hello,
>What think:
>Use a radiant tower (1/4) en AM on 1485Khz for a local radio with 1Kw
>adapted by gamma match and connected on the ground (without insulator).
>The radians of ground have a length 1/4 waves each one and are 120.
>Think that this system will function as well an insulated tower ?
>This method is very much used by the radio hams on 1.8Khz but for the
>stations of radios the system is good?
>Thank you
>73

Hi Cris,

It will work very well.

73's
Richard Clark, KB7QHC

4733. Re: G5RV or W3DZZ ?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-08 18:56:05 UTC
From: IE <m9191@abc.se>
Message-ID: <9m5nnu0bnnc3jub36fnj470brf9qtu5l5d@4ax.com>
Source record: 134973

Hi,

I can just tell you from my own experience and probably other HAMs had other experiences.

I have a G5RV with 300 flatcable and a W3DZZ mounted at the same height (to low, just 8-9 meter) and with the feeding point close to each other (just one meter). The heigth of the ends has been a bit different to separate them a bit. The coax was RG213 except the last part to antenna (RG58).

The directions has been similar (N-S) even if the W3DZZ was more shaped as a soft horisontal V.

I have had different W3DZZ in about 35 years with just one or two years off. This is the first G5RV I ever have made.

The SWR for the W3DZZ is cut-and-try tuned to very low on all bands. The SWR for the G5RV is a disaster. Mostly around 3:1or higher and never below 2.5:1. An antenna tuner is a must.

I am surprised of the G5RV. On all bands it works better than the W3DZZ except for shorter distances (around 2000 miles or less). There the W3DZZ mostly is better. With better I mean better S-readings and better QSO-reports. On 80 meter I think they are very equal at longer distances.

G5RV works on all bands for me except 160 meter but I have not made the feeder cross yet.

I also have a multiband GP for 10-15-18-20-30-40 (and 80), a beam and some other wire antennas so I can use them as references as well.

The only disadvantage I have seen with the G5RV is all kind of intereferences. Beside that I don't like antennas that insist of an antenna tuner. But as a multiband antenna I am just confused why I never have tried it earlier.

Now I plan to do a halfsize G5RV as well (nice to have for portable use) and compare both of them.

So far I have not tested the G5RV with my linear and I think the real problems start if I do that. On the other hand I never used the linear on the W3DZZ but barefoot gave no interferences.

Make a test yourself. The wires is easy to play with.

On 8 Sep 2002 02:52:09 -0700, lombryt@hotmail.com (Thierry) wrote:

>Hi,
>
>In one of my QTH I have enough place in the garden to install a
>multiband dipole of about 33m (100') ot twice that length (but the
>first option is less visible and more pratical for me). I'm on top of
>hills with an open field 360 deg around.
>
>So I would like to replace with 40m long wire by something more
>efficient (forget currently the beam and vertical). I have the choice
>to install a G5RV with a symetric feedline + coax RG58 or a W3DZZ
>feeded with a simple coax RG58. Knowing these models are very
>appreciated in the US, I post my question on this forum.
>
>But from your experience, as my first objective is DX with few local
>activities, what can I install : the G5RV or the W3DZZ ?
>
>Hints : According the theory, the second solution seems better : one
>type of feedline, easy to use as inverted V in necessary, traps allow
>to be resonant on L/2 on various bands and even 3/2L on 20m, 5/2 on
>15m, etc.
>As traps quality if very important in this model of dipole, do you
>know a good manufacturers of W3DZZ, famous of the quality of its
>antennas ?
>
>Thanks.
>
>Thierry
>ONL5183
>http://www.astrosurf.com/lombry/menu-qsl.htm

4734. Re: Dumb Question:<Allan>

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-08 19:22:15 UTC
From: jackinariz@webtv.net
Message-ID: <6610-3D7BA367-254@storefull-2138.public.lawson.webtv.net>
Source record: 134977

Thank you Allan for a VERY good site to explain the Imax2000.....For only $32.00 I am goiny to get the GPK....Jack D.

4735. Re: feeding a magnetic loop ?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-08 19:37:35 UTC
From: "J. McLaughlin" <JCM@Power-Net.Net>
Message-ID: <unn9m3gnsp4i43@corp.supernews.com>
Source record: 134975

Let the group know how the receiving antenna works. 73 Mac N8TT

--
J. Mc Laughlin - Michigan USA
Home: JCM@Power-Net.Net
Office: JCM@McLMcL.Com
"Thierry" <lombryt@hotmail.com> wrote in message
news:db35a0c.0209080057.78d625b6@posting.google.com...
> Hi,
>
> I ordered a wellbrook ALA-330 magnetic loop antenna (mainly suited for
> indoor listening purposes in the HF bands). The system comes with a
> BNC connector.
>

>
> Thierry
> ONL5183
> http://www.astrosurf.com/lombry/menu-qsl.htm

4736. Re: 40 m dipole?? How much of leg can I bend??

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-08 19:39:14 UTC
From: Crazy George <munschNO@attglobal.net.SPAM>
Message-ID: <3d7babce_1@news1.prserv.net>
Source record: 134976

Probably not enough to measure. One of the people with one of the NEC
programs can confirm/deny that , but I'll bet it is a lot less than 3 dB
reduction in the main "lobe".

--
Crazy George
Remove NO and SPAM from return address
StarGazer <pti@capnet.com> wrote in message
news:3D7B97E7.F55480AC@capnet.com...
> One end of my resonant coax fed 40 m dipole needs to be bent
> 90 deg straight downward on one end.
> Thats about 10 ft or 1/3 of one of the legs.
>
> Will this affect its performance much??
>

4737. Re: AZ/EL Antennas with El-Cheapo Rotors

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-08 19:48:50 UTC
From: Peter Bealo <pbealo@attbi.com>
Message-ID: <CQNe9.46894$Jo.4632@rwcrnsc53>
Source record: 134978
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.space

Jeff,

I've jury-rigged two radio-schlock TV rotors to work az-el moving an 11 el 2 meter and 8 el 440 beam with no problem.

All I did was to use short lengths of black iron pipe and fittings to make an "L". I put the verticle pipe through one rotor, for the AZ motion and secured the other rotor to the horizontal piece as close to the bend-fitting as possible. Then ran a light aluminum tube through the AZ rotor to hold the beams. Did it look great....no!....but it lasted through 3 New Hampshire winters.

Best Regards,
Peter
WB2MJG

4738. Re: Thanks FS:more,more,more

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-08 20:05:42 UTC
From: George Kinzer <horseflygk@worldnet.att.net>
Message-ID: <q4Oe9.18434$jG2.1337372@bgtnsc05-news.ops.worldnet.att.net>
Source record: 134979

like I said the cd for you is free, but YOUR shipping and handling will be
$20.00 US dollars...
as of Fidays mailing 42 have been distrubuted throughout the USA.
--
If first you don't succeed, do the same thing again...see what happens

4739. Re: is/should natural gas meters be grounded?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-08 20:28:12 UTC
From: "D.J." <dalej2@mac.com.remove.this>
Message-ID: <dalej2-3F09C0.15281208092002@hermes-ge0.rdc-kc.rr.com>
Source record: 134980

In article <3D7B92CC.FADA6F8E@icok.net>, 'Doc <w5lz@icok.net> wrote:

> "D.J.",
> That's an odd one, but I would also think that a
> gas meter being struck by lightning is also pretty
> rare. Call your gas company and ask to speak with
> one of their engineers about the 'grounding' issue.
> If you think you may have a problem, they will be
> more than happy to take a look at it, or explain it
> to you. Regulations are different for different
> parts of the country, but in general, gas meters and
> lines are NEVER a good ground point for other systems.
> 'Doc

Thanks Doc,

I was only thinking in terms of lightning protection. You should have seen the damage to this nice house. Lucky the family got out, but the fire was fed with gas from the broken meter I would guess. It's really strange to me at least that lighning would strike a gas meter which is about the lowest object around, almost right on the ground. Something else had to attract the lightning, pine trees maybe or the pool??

dj

4740. Re: Tired of RS employees pushing Cellphones and DirectTV

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-08 20:31:26 UTC
From: AbbN <abbnaklie@sympatico.ca>
Message-ID: <ksOe9.287$Js1.141180@news20.bellglobal.com>
Source record: 134981
Cross-posted to: alt.radio.scanner,rec.radio.amateur.antenna,rec.radio.scanner,rec.radio.shortwave

Hi,

I ran into an ex RS VP (here in Canada) many years ago and I asked him about that and he told me they did NOT....al least at the time. However, these days, I wouldn't be surprised if did - anything goes as far as bringing up their year-end bottom line these days...

--
Take Care
Abb
VE3003SWL
(SWL CallSign)

"w9gb" <gregory.beat@attbi.com> wrote in message news:_SLe9.405557$UU1.63126@sccrnsc03...
> The Radio Shack marketing executive (marketing moron) that was pushing this
> name and address deal (a few of the stores still ask for it) must have left
> RS.
>
> I have now found that the Container Store (yes HQ in Texas) is now doing
> this same thing.
> Care to take a bet this is where the Radio Shack executive ended up?
>
> When I worked in the Dallas/Ft. Worth area (1980's) -- large telemarketers
> in that area were always "acquiring" new lists. I never found out if they
> legitimately acquired those RS lists.
>
> gb
>
> "Dave" <ws2l@NOSPAMoptonline.net> wrote in message
> news:0pIe9.36398$rU2.1111347@news4.srv.hcvlny.cv.net...
> > Mike,
> >
> > I totally agree with you about the name & address thing to, it takes to
> much
> > time & personally I feel like I'm prying into a strangers life. I don't
> know
> > of any other store that does this but unfortunately it their policy.
It's
> > especially annoying when you have 10-15 people in line & you have to ask
> for
> > N & A, this makes people wait longer. Personally I would like to see it

> > disapear quickly.
> >
> > Dave
> > WS2L
> >
> >
> > "Mike Coslo" <mcoslo@adelphia.net> wrote in message
> > news:3D729556.3040201@adelphia.net...
> > > Dave wrote:
> > >
> > > > I'm an Asst. Manager for RS & if you frequent your local RS you know
> who
> > the
> > > > people are & who to avoid. As far as pushing cell phones goes we are
> > under
> > > > siege by our higher up's to push this stuff. Personally, if I see
> > someone
> > > > with a cell phone I don't even bother to ask I just get you what you
> > need &
> > > > get you on your way as quickly as possible. I still earn plenty of
> > > > commission but after working with people directly for over 15 years
> > > > (Previous Job) you can tell who might be interested & the person who
> > knows
> > > > what they want. I agree w/the other RS employee on this one, if you
> > don't
> > > > like being jumped on about wireless & satellite then take your
> business
> > > > elsewhere. You have the right to tell an RS employee before he/she
> opens
> > > > their mouth that you don't want to be offered a great deal & I'm
sure
> > they
> > > > will back off. As far as product pricing goes, WE DO NOT make up the
> > prices
> > > > so don't bitch at us, these prices are set at the main office in Ft
> > Worth
> > > > and we have NO control over the cost of products. In fact we have no
> > control
> > > > over a lot of things and I myself would appreciate it if customers
> stop
> > > > complaining to me & take to Ft.Worth 1-800-843-7422 or 1-800-THE
SHACK
> > if
> > > > that's easier to remember.
> > >
> > >
> > >
> > > Let's put it this way. Some years ago, I quit going to Radio
Shack

> > > because Even if I wanted to buy a couple AA batteries, I would have to
> > > give my name, address, telephone address, and other stuff EVERY single
> > > time. If I bought something on a corp account, I had to sign something
> > > like six forms, and the transaction took what seemed like forever.
> > >
> > > I started going again because they eliminated that stupid idea.
> > >
> > > But I can assure you, if I get prodded to buy a cellular phone
every
> > > time I walk in the store, I'll stop buying anything there again.
> > >
> > > The corporate suits who run the show are seriously misinformed
about
> > > the shopping public. They will turn away business for the sales push.
> > >
> > > The really interesting thing is that after the big cell phone push,
> > > which will drive the non-cell seeking public away, which means that
the
> > > store sales will become mostly cellular, the suits will be convinced
> > > that their idea was right, because nobody will be buying anything else
> > > by then.
> > >
> > > Remember the old "Jump Frog, Jump joke?
> > >
> > > - Mike KB3EIA -
> > >
> >
> >
>
>

4741. Lowpass filters

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-08 20:38:30 UTC
From: paul churchill <paul.churchill1@ntlworld.com>
Message-ID: <6zOe9.1439$YF3.108085@newsfep2-gui>
Source record: 134982

Can anyone tell me what lowpass filters there is on the market that actually do work and not too expensive, I have thought about the MFJ 704 but not sure if it is as effective as mfj quote thankyou

4742. WTB:Winter Projects

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-08 21:36:28 UTC
From: KC0EH <okiemansc@yahoo.com>
Message-ID: <wpPe9.15757$6i4.1294954@newsread1.prod.itd.earthlink.net>
Source record: 134987
Cross-posted to: rec.antiques.radio+phono,rec.radio.amateur.antenna,rec.radio.amateur.boatanchors,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.swap

Due to being pretty much homebound from a neuro-muscular disease I am look
for winter project or parts rigs.
Prefer tube type or transistor due to component size.Anything considered if
the price is right.
Please state condition and price.
Thanks
...KC0EH...OKLA.

4743. Re: Question about ladder line and metal mast

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-08 21:40:29 UTC
From: Paul N3EOP <n3eop@arrl.or.callsign.net>
Message-ID: <Xns928395474EA73n3eophotmailcom@64.164.98.29>
Source record: 134983

vhfradiobuff@yahoo.com (vhfradiobuff@yahoo.comspamsux) wrote:

> If I string up a dipole fed by ladder line, and support the center of
> the dipole on top of 2 metal masts, will the ladder line be affected
> if it's taped to the metal mast?

Yes, rather negatively.

> If so, what kind of angle away from the mast should I have the ladder
> line and which direction should it go in relation to the wire?

You can be parallel to the mast as long as the ladder line distance from the mast is at least a couple times the spacing between conductors. (If your line has 1" between conductors, keep it at least 2-3" away from the mast.) Try to keep the distance from each conductor to the mast about equal (meaning keep the "flat side" toward the mast).

I made something similar to what you're describing. I hung the dipole from an 8" plant hanger bracket from the hardware store, and brought the ladder line down the guy rope until it was right above the back of the shack, and let it hang straight down from there. I had an SGC SG-237 autotuner mounted to the back of the shack, with a coax run to inside. Worked quite well.

4744. Re: Tired of RS employees pushing Cellphones and DirectTV

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-08 21:48:47 UTC
From: Bill Nelson <billn@spock.peak.org>
Message-ID: <alggjukhk4@quark.scn.rain.com>
Source record: 134984
Cross-posted to: alt.radio.scanner,rec.radio.amateur.antenna,rec.radio.scanner,rec.radio.shortwave

> Let's put it this way. Some years ago, I quit going to Radio Shack
> because Even if I wanted to buy a couple AA batteries, I would have to
> give my name, address, telephone address, and other stuff EVERY single
> time. If I bought something on a corp account, I had to sign something
> like six forms, and the transaction took what seemed like forever.

If they ask for you name etc - just say "No." If they say they need a name etc - tell them to use their own. Every RS store that I have frequented has a generic account already set up. They don't like to use it (I suspect that they are scored on percentages of people who give their address etc), but will if you refuse to play their game.

Use cash, as they will harvest your name and address off a credit card or check payment.

--
Bill Nelson (billn@peak.org)

4745. Re: is/should natural gas meters be grounded?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-08 21:53:07 UTC
From: richardharrison@webtv.net
Message-ID: <6093-3D7BC6C3-259@storefull-2314.public.lawson.webtv.net>
Source record: 134986

D.J. wrote:
"Should these things (gas meters) be grounded ur are they already grounded?"

Gas meters are effectively grounded in most cases. If the burnt house had plastic water supply and plastic waste water drains, the gas supply pipe may have been the easiest path to ground for lightning on house wiring and piping.
The electric power service or other grounds need to be very good in a house with plastic pipes.

Best regards, Richard Harrison, KB5WZI

4746. Re: Tired of RS employees pushing Cellphones and DirectTV

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-08 22:01:07 UTC
From: Never anonymous Bud <thekat@san.rxyzr.com>
Message-ID: <g4innusbvi9aieie65e5ajm4bfmb76ab1a@4ax.com>
Source record: 134985
Cross-posted to: alt.radio.scanner,rec.radio.amateur.antenna,rec.radio.scanner,rec.radio.shortwave

Nibbling on leftovers from his Y2K horde, "Chuck/KE4ETH"
<chuck_hawks@hotmailmospamorama.com>
mumbled...

>I tell them my name is cash. I usually get, "Your first name, Mr. Cash."
>depending on how much the total is, I answer with George (Washington), Abe
>(Lincoln), Thomas (Jefferson), etc.
>
>Gets 'em every time.

Why not Johnny. Or even Sue??

;)

To reply by email, remove the XYZ.

Lumber Cartel (tinlc) #2063. Spam this account at your own risk.

It's your SIG, say what you want to say....

4747. Re: is/should natural gas meters be grounded?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-08 22:33:49 UTC
From: Dick Carroll <dixie@townsqr.com>
Message-ID: <3D7BD01E.70846303@townsqr.com>
Source record: 134989

Richard Harrison wrote:

> D.J. wrote:
> "Should these things (gas meters) be grounded ur are they already
> grounded?"
>
> Gas meters are effectively grounded in most cases.

Don't bet on it. All gas residential installations these days seem to be done in plastic. Only the main trunk appears to be steel, all feeders I've seen are plastic.

Dick

4748. Re: Shortwave Antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-08 22:34:28 UTC
From: Stuart <scanning@ecdcrew.com>
Message-ID: <algj4jrtk1@nntp2-cm.news.eni.net>
Source record: 134988

Thanks for the info!

the fence I have does not really move and I thought that because it's near 300ft of aluminum wire chain link fence (passive) it might offer some decent reception... and it does... just overloads too... I was hoping a couple attachments would help.... none the less I will try a wire antenna and mount it as high in a tree near my house and see which works better!

I am new to shortwave and have really caught the bug!

SO: Long wire, High as possible!

"'Doc" <w5lz@icok.net> wrote in message news:3D7B8D50.23BA3C12@icok.net...
> Stuart,
> A simple wire antenna is about as basic as you
> can get. Make it as long as possible and as high
> as possible. Height is more important than length.
> Some of the noise you get with the fence may be
> due to 'parts' of the fence moving/rubbing together.
> If that's the case, the noise can be reduced by
> stopping the movement. Depending on the kind of fence
> it is, that may not be very practical, though. No
> matter the antenna, you always hear more noise when
> you hear more signals you want to hear (to some
> extent).
> Good luck, have fun...
> 'Doc

4749. Re: Tired of RS employees pushing Cellphones and DirectTV

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-08 22:44:45 UTC
From: Chuck/KE4ETH <chuck_hawks@hotmailmospamorama.com>
Message-ID: <IcQe9.49573$%P6.16252471@e3500-atl1.usenetserver.com>
Source record: 134990
Cross-posted to: alt.radio.scanner,rec.radio.amateur.antenna,rec.radio.scanner,rec.radio.shortwave

I just use the name of the president on the bill I am paying with

--
Chuck
KE4ETH

x-no-archive: yes
"Never anonymous Bud" <thekat@san.rxyzr.com> wrote in message
news:g4innusbvi9aieie65e5ajm4bfmb76ab1a@4ax.com...
> Nibbling on leftovers from his Y2K horde, "Chuck/KE4ETH"
<chuck_hawks@hotmailmospamorama.com>
> mumbled...
>
> >I tell them my name is cash. I usually get, "Your first name, Mr. Cash."
> >depending on how much the total is, I answer with George (Washington),
Abe
> >(Lincoln), Thomas (Jefferson), etc.
> >
> >Gets 'em every time.
>
> Why not Johnny. Or even Sue??
>
> ;)
>
>
>
>
>
>
> To reply by email, remove the XYZ.
>
> Lumber Cartel (tinlc) #2063. Spam this account at your own risk.
>
> It's your SIG, say what you want to say....

4750. Re: Slingshots foretting the g5rv wre into the trees

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-08 23:00:57 UTC
From: 'Doc <w5lz@icok.net>
Message-ID: <3D7BD6A2.7DC08FC9@icok.net>
Source record: 134991

Brian Kelly wrote:

>----------
> Doesn't the bark from a 90mm potato howitzer sorta generate a few . .
> umm . . "questions" around the neighborhood . . ?
> >

First, you need to know my neighborhood! The
sound of a 90mm howitzer isn't a big 'thing'...
'Doc
PS - You should see what it does with a 'Super Size'
order of McDonald's fries!

4751. Re: Cushcraft R8 Bandwidths

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-08 23:05:44 UTC
From: 'Doc <w5lz@icok.net>
Message-ID: <3D7BD7C1.4D30C587@icok.net>
Source record: 134992

John,
If you had done your measuring and calculating
from a site that was optimised for the R-8, you
might get closer to Cushcraft's figures. And maybe
not, Cushcraft has been known to exagerate their
claims slightly. Well, maybe 'slightly' isn't the
exact word to describe their claims...
'Doc

4752. Re: AZ/EL Antennas with El-Cheapo Rotors

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-09 00:07:01 UTC
From: Dennis Kaylor <k4oxg@tampabay.rr.com>
Message-ID: <3D7BE610.4CFCBC3D@tampabay.rr.com>
Source record: 134993
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.space

hey jeff i have done this using the old alliance U100 or the U110
these work great cause the mast passes thru the rotor allowing you to mount an antenna on either side
there are issues with waterproofing the rotor cause it isnt designed to lay on its side and there are also issues with antenna balance you need to have both antennas roughly the same boom lenght and weight with out going over the weight and wind loading of the rotor thats your elevation side
then you just pick another rotor of your liking and use it for azm.
keep in mind doing it this way saves a ton on $$$$ but you have to be an octopuss cause you have a hand on each rotor control box and a hand on each radio VFO adjusting for doppler and another to key the mic
i tried this set up back in the days of AO10 and AO13 and found i didnt have enough hands

now even if you spend $600 for the rotor then you would need the interface to the computer so your tracking software can take care of the rotors for you and if your lucky it can tune the radio too then all you need to do is sit back and key the mic
good luck and happy hamming

Jeff Breitner wrote:

> I'm interested in creating an az/el antenna system with el-cheapo rotors (as
> opposed to dropping $600 for a Yaesu GX-5000). Researching, I've found
> hints that this has been done to some degree of success, but no one really
> goes into much detail about it.
>
> While I'm pretty sure I can figure out how to make it work, I'm curious if
> anyone in the newsgroup has actually done this and what issues they have
> discovered. More importantly, do you find that this setup has shortcomings
> that in short-order would simply result in a dedicated amateur (and
> cost-conscious) scrapping the whole affair and buy the Yaesu anyway?
>
> Thanks for your input.
>
> To reply via email, remove the hypens and decode the phonetics to produce a
> four-letter addressee at the domain.

4753. Re: Skin effect experiment with disk on antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-09 00:16:35 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <3D7BE863.2010207@eznec.com>
Source record: 134994

This experiment doesn't test skin effect. The problem is that the current on each surface creates a field. These fields aren't isolated from each other, so the field caused by the current in each side creates a current in the other side. Similarly, the currents in the sides couple via fields to the currents in the wires. The model of currents flowing in isolation on the two surfaces is flawed, so any conclusions drawn from the experiment are also flawed. This should actually come as a relief, because if the simplified concept of currents were correct, I believe you've also shown propagation faster than the speed of light.

To test skin effect, you have to isolate the currents' fields from each other. Of course, if skin effect didn't exist, you wouldn't be able to isolate them (and a couple of centuries of theory would be wrong, and antennas based on it wouldn't work).

I propose the following experiment. Put a battery powered RF source and small antenna into a sealed metal box. It should be completely sealed -- soldered circuit board material should suffice. Then try to detect any sign of the RF outside the box. The antenna will induce current on the inside of the box -- how much of the shield current can you detect from the outside? If skin effect weren't a fact, you'd easily detect the current.

If you don't believe that the antenna would induce current on the inside of the box, do this instead: Get a piece of copper pipe, a rigid wire, and a couple of end caps. To the center of the inside of one of the end caps, solder a 50 ohm or so resistor. To the other end of the resistor, solder the rigid wire, and extend it through the pipe. Solder on the end cap with the resistor. Now what you have looking into the open end of the pipe is an air dielectric coax line terminated at the end with the resistor. Make a small battery powered RF source (one of the little IC-sized crystal oscillator modules would do nicely), and connect it across the coax at the input end, then solder on the other pipe cap, sealing the whole thing up. I think you'll agree that there's current flowing down the center wire from the source, through the resistor, and along the copper pipe back to the source. See if you can detect this current by any means from the outside, or if you can detect any kind of voltage drop along the path of the current.

If you're well acquainted with good feedthrough and bypassing techniques, you could instrument the inside of the pipe (as well as powering the oscillator from outside). Oscillator current could be measured, or you could measure the RF current by connecting a detector diode to the resistor and running the DC out. Armed with this, you could do whatever you want to the outside of the pipe to try and disturb the current on the inside -- bury it, put ferrites along it, whatever, and

see how much success you have. But don't try this unless you really know
how to do a proper feedthrough, because any escaping RF will invalidate
the experiment.

If you do show conclusively that skin effect doesn't exist, be prepared
for fame and fortune!

Roy Lewallen, W7EL

rsparks wrote:
> Hi all,
>
> Many amateurs believe that skin effect on the shield of a coaxial cable
> effectively separates the two sides of the shield into inside and outside
> circuits. This is expanded to reason that current flowing on the outside of
> a coaxial cable can not influence currents on the inside (central)
> conductor.
>
> If this complete separation were to occur, substantial voltages would have
> to exist between the two sides of the metal shield. The question then
> becomes "Can metals support voltage differences and can a test be conducted
> to demonstrate that a voltage difference must exist across the metal?"
>
> I reasoned that a solid metal disk placed near the feed point of dipole
> antenna would demonstrate skin effect. The solid metal disk should not
> conduct current through the disk, but should force the current to flow
> around the edge of the disk. The path around the edge of the disk is
> longer by twice the radius of the disk so the length of the antenna should
> be substantially increased. This would result in a lowered resonant
> frequency for the dipole containing the disk.
>
> The experiment and results are described in a web page found at
>
> http://www.televar.com/~rsparks/public_html/Disk_Experiment.htm
>
> If you don't have time or the ability to look at the web page, I can tell
> you that the metal disk did not lower the resonant frequency of the antenna.
>
> 73, Roger, W7WKB

4754. Re: TXing & SWLing MW to 10m w/Attic Ant for Low Noise - HELP!

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-09 00:23:12 UTC
From: rc12234@aol.com
Message-ID: <20020908202312.25444.00002888@mb-md.aol.com>
Source record: 134995

I have a similar problem with antenna restrictions and very limited attic space.
I have had good success with separate inverted V dipoles on 10, 15, and 17 M with the feed points at the roof apex. Have also used the 17 M dipole for 20 M operation with the aid of a matching network at the transmitter end. Power line qrm is minimal, since the utilities are underground.
Ron

4755. Re: feeding a magnetic loop ?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-09 00:26:33 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <3D7BEAB9.4040506@eznec.com>
Source record: 134996

A "magnetic" loop responds (when receiving) to both magnetic and electric fields, and produces (when transmitting) both magnetic and electric fields. Very close to the loop -- within a fraction of a wavelength, the ratio of electric to magnetic field is higher than for a short dipole, but beyond that, the electric field is actually more dominant than for a short dipole. (That is, the loop's electric/magnetic field ratio is higher.) The relative response (when receiving) to the electric and magnetic fields is essentially the same for any small antenna if the source is more than a wavelength or so away, and the field from all small antennas (when transmitting) has the same ratio of electric to magnetic field beyond about this distance. This ratio is determined by the medium, not the antenna, and for free space or air is about 377 ohms.

In a coaxial cable, there's a circular magnetic field between the conductors, and a radial electric field extending from the center conductor to the shield. If the cable is properly terminated, the ratio of these fields (electric to magnetic, or E/H) equals the characteristic impedance of the cable, 50 or 75 ohms for most common cables.

If the cable isn't properly terminated, the E/H ratio of the forward and reverse travelling waves is each equal to the characteristic impedance, but the fields from the two waves can add to create other ratios at various points along the cable.

Roy Lewallen, W7EL

Thierry wrote:
> Hi,
>
> I ordered a wellbrook ALA-330 magnetic loop antenna (mainly suited for
> indoor listening purposes in the HF bands). The system comes with a
> BNC connector.
>
> I'd like to know how to feed such antenna and link it to my RTX
> equipped with a PL connector ?
>
> (I usually use a G5RV or a longwire 40m long but this new kind of
> antenna is a complete mystery for me, excepting I hope it will help me
> to solve my QRM problem generated by electrical devices).
>
> I'd like to use a coaxial RG58 to feed this mag loop but I know that
> is this kind of cable the current passes through the center wire and
> the magnetic field moves around it (between the wire and the braid).
> In order there is current in my RG58 cable there must have a

> difference of potential that is materialized by the electric field of
> this cable.
> But if I well understood how my mag loop works, it does not use the
> electric field. So how to proceed ? Do you understand my trouble ?
>
> So there are two simple question :
> - How to convert my BNC to PL connector ? (Simply by cutting the BNC
> and placing in place a male PL ?)
> - Can I use a RG58 to feed my aerial ? (as we do most of the time when
> 50 omhs are required)
>
> Thanks for comments
>
> Thierry
> ONL5183
> http://www.astrosurf.com/lombry/menu-qsl.htm

4756. Re: TXing & SWLing MW to 10m w/Attic Ant for Low Noise - HELP!

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-09 00:30:55 UTC
From: thx1138 <look@life.org>
Message-ID: <3d7bf02b$0$1420$272ea4a1@news.execpc.com>
Source record: 135000

> Why not just put a loop around the eaves and paint it to match the wood
> work, use 300-ohm twinlead (hidden in the corner of the siding, then run
> to the basement? Hidden from prying eyes.

It crossed my mind, Chuck. And now that I think more about it, an H-loop is probably a good idea. I simply need to be sure that the gutters and downspouts are made with vinyl instead of aluminum the builder typically uses.

I made a fairly close estimate for the circumference around the eaves and I came up with 243 ft (74M)! That is not too shabby. Looking at W4RNL's data this may be a go: http://www.cebik.com/hl.html

---

1 wl loop (70'/side, side-fed:) #12 copper 35'up over medium earth:
~Freq. TO angle Max Gain Feed Z Pattern notes
MHz degrees dBi R+/-jX
3.5 90 5.09 65 +j 4 oval thru sides
7.1 44 6.73 275 +j130 oval thru sides
10.1 35 6.86 285 -j535 lobes at corners
14.1 27 9.69 265 -j165 4 lobes at corners
18.1 21 11.65 400 +j180 6 lobes, strong=far side
21.1 18 10.61 400 -j120 many lobes, strng=far side
24.95 15 11.08 370 +j 45 many lobes, strng=far side
28.1 11 11.83 250 -j180 many lobes, strng=far side

Although his H-loop is 280ft @ 35', compared to my 243ft @ ~16', I would guess that his model would still be valid for comparison purposes. Although my loop would be slightly rectangular, according to the model it would probably work DX on 40m pretty darn well.

From W4RNL; "For all-band use... The HP loop elevation angles are close to those of a single wire doublet"

And

"let 3/4 wl be about the absolute minimum for the antenna."

This one is not a bad idea Chuck. I initially didn't consider it as viable until you suggested it and after reading W4RNL's url. What is intriguing is that I could go ahead with something else in the attic and also run this loop around the house. I'll have an opportunity to compare the two. Then again, I could mount something for 2m up there instead.

What I do need to know is what effect does the length of the balanced feedline have? In my case the minimum length I could feed this H-loop with would be about 16-20ft. I have no experience with balanced feeders so I

don't know what the significance of its length has on matching the H-loop and the possibility of causing QRM/TVI, etc.

BTW, anyone know how well a Johnson Matchbox would load this configuration? I'm considering purchasing one for this antenna. If I could find one that is in very good shape. Has anyone modified a Johnson for use on 160m? Would I be able to match my H-loop with it on 160m?

Thanks,
Stan

4757. Re: Lowpass filters

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-09 00:39:39 UTC
From: David Ornee <daveornee@mindspring.com>
Message-ID: <algqtktpb1@slb2.atl.mindspring.net>
Source record: 134997

August 2002 QST had a good review of Low-Pass Filter Roundup: Gold Line 1089; Gold Line 1089S; Vectronics LP-30; Vectronics LP-2500; Nye-Viking 020-001; Kenwood LF-30A; MFJ-704; Bencher YA-1.
If you are an ARRL member you can get the article from their web site. If you aren't a member you can read the article in your local library.
73, KQ9W David Ornee, Western Springs, IL
"paul churchill" <paul.churchill1@ntlworld.com> wrote in message news:6zOe9.1439$YF3.108085@newsfep2-gui...
> Can anyone tell me what lowpass filters there is on the market that actually
> do work and not too expensive, I have thought about the MFJ 704 but not sure
> if it is as effective as mfj quote thankyou
>
>

4758. Re: Horizontal Loops for HF - anyone using?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-09 00:40:33 UTC
From: CAM <Cecil.A.Moore@ieee.org>
Message-ID: <3D7BEE01.97222615@ieee.org>
Source record: 134998

'Doc wrote:
> On 40m it will be the second
> harmonic for the antenna and that is almost always
> not 'good'.

There's absolutely nothing wrong with the second harmonic of
a dipole or loop. My 130ft dipole fed with 450 ohm ladder-line
works efficiently on 40m with gain over a 66ft dipole. This
Old Wives' Tale originated because one shouldn't use coax on
a one-wavelength dipole. Ladder-line is a completely different
story. 450 ohm ladder-line gives the same SWR for a 50 ohm
dipole and a 4050 ohm dipole.

The feedpoint impedance for a 2WL loop is a very reasonable
value for ladder-line.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

4759. Re: G5RV or W3DZZ ?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-09 00:45:18 UTC
From: CAM <Cecil.A.Moore@ieee.org>
Message-ID: <3D7BEF1E.7D3BA092@ieee.org>
Source record: 134999

IE wrote:
> The SWR for the G5RV is a disaster. Mostly around 3:1or higher and
> never below 2.5:1. An antenna tuner is a must.

An SWR of 3:1 is not a disaster. The G5RV is a good antenna for 75m,
40m, 20m, & 12m. It is common knowledge that a G5RV requires an
antenna tuner.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

4760. Re: TXing & SWLing MW to 10m w/Attic Ant for Low Noise - HELP!

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-09 00:53:51 UTC
From: Chuck/KE4ETH <chuck_hawks@hotmailmospamorama.com>
Message-ID: <n5Se9.49888$%P6.16857417@e3500-atl1.usenetserver.com>
Source record: 135001

If the gutters are aluminun use them as the antenna. Just kidding.

Have you considered useing A flagpole antenna, just bury the coax under ground.

--
Chuck
KE4ETH

x-no-archive: yes
"thx1138" <look@life.org> wrote in message news:3d7bf02b$0$1420$272ea4a1@news.execpc.com...
> > Why not just put a loop around the eaves and paint it to match the wood
> > work, use 300-ohm twinlead (hidden in the corner of the siding, then run
> > to the basement? Hidden from prying eyes.
>
> It crossed my mind, Chuck. And now that I think more about it, an H-loop is
> probably a good idea. I simply need to be sure that the gutters and
> downspouts are made with vinyl instead of aluminum the builder typically
> uses.
>
> I made a fairly close estimate for the circumference around the eaves and I
> came up with 243 ft (74M)! That is not too shabby. Looking at W4RNL's data
> this may be a go: http://www.cebik.com/hl.html
> ---
> 1 wl loop (70'/side, side-fed:) #12 copper 35'up over medium earth:
> ~Freq. TO angle Max Gain Feed Z Pattern notes
> MHz degrees dBi R+/-jX
> 3.5 90 5.09 65 +j 4 oval thru sides
> 7.1 44 6.73 275 +j130 oval thru sides
> 10.1 35 6.86 285 -j535 lobes at corners
> 14.1 27 9.69 265 -j165 4 lobes at corners
> 18.1 21 11.65 400 +j180 6 lobes, strong=far side
> 21.1 18 10.61 400 -j120 many lobes, strng=far side
> 24.95 15 11.08 370 +j 45 many lobes, strng=far side
> 28.1 11 11.83 250 -j180 many lobes, strng=far side
> ---
> Although his H-loop is 280ft @ 35', compared to my 243ft @ ~16', I would
> guess that his model would still be valid for comparison purposes.

Although
> my loop would be slightly rectangular, according to the model it would
> probably work DX on 40m pretty darn well.
>
> From W4RNL; "For all-band use... The HP loop elevation angles are close to
> those of a single wire doublet"
>
> And
>
> "let 3/4 wl be about the absolute minimum for the antenna."
>
> This one is not a bad idea Chuck. I initially didn't consider it as
viable
> until you suggested it and after reading W4RNL's url. What is intriguing
is
> that I could go ahead with something else in the attic and also run this
> loop around the house. I'll have an opportunity to compare the two. Then
> again, I could mount something for 2m up there instead.
>
> What I do need to know is what effect does the length of the balanced
> feedline have? In my case the minimum length I could feed this H-loop
with
> would be about 16-20ft. I have no experience with balanced feeders so I
> don't know what the significance of its length has on matching the H-loop
> and the possibility of causing QRM/TVI, etc.
>
> BTW, anyone know how well a Johnson Matchbox would load this
configuration?
> I'm considering purchasing one for this antenna. If I could find one that
> is in very good shape. Has anyone modified a Johnson for use on 160m?
> Would I be able to match my H-loop with it on 160m?
>
> Thanks,
> Stan
>
>

4761. Re: is/should natural gas meters be grounded?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-09 01:15:21 UTC
From: Dave Holford <holford@sympatico.ca>
Message-ID: <3D7BF629.CE3CC472@sympatico.ca>
Source record: 135002

Dick Carroll wrote:
>
> Richard Harrison wrote:
>
> > D.J. wrote:
> > "Should these things (gas meters) be grounded ur are they already
> > grounded?"
> >
> > Gas meters are effectively grounded in most cases.
>
> Don't bet on it. All gas residential installations these days seem to be
> done in plastic. Only the main trunk appears to be steel, all feeders I've
> seen are plastic.
>
> Dick

This area was serviced with gas quite recently and all piping was
plastic, including fairly large diameter trunks laid along the highway.

My meter is fed by plastic underground pipe and feeds gas into the
building via a plastic pipe.

I note that there is an insulated wire wrapped around, but not connected
to, the pipe at each meter. I surmise that this is used to inject a
signal to locate the non-conducing pipes. Older installations in this
part of the country do not have this wire, and I assume that is because
the pipes are metallic.

Dave
VE3HLU

4762. Re: Skin effect experiment with disk on antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-09 01:34:38 UTC
From: rsparks <rsparks@elltel.net>
Message-ID: <3d7bf6c6$1_2@corp.newsgroups.com>
Source record: 135003

"Richard Harrison" <richardharrison@webtv.net> wrote in message
news:25442-3D7AB7EF-112@storefull-2317.public.lawson.webtv.net...
> Roger, W7WKB wrote:
> "Yes, but then it would not demonstrate that skin effect fails to
> separate disk surfaces."

Richard Harrison, KB5WZI responded:

>
> Metal shields have been used to prevent radio frequency travel from one
> side of the metal to the other from very early times. There were tube
> shields, coil shields, etc. The metal chassis itself is a shield.
>
> The 19th edition of the ARRL Antenna Book says on page 23-2:
> "In good conductors the speed (of r-f wave travel) is so low that the
> opposing fields set up by the wave front occupy the same space as the
> wave itself, and thus cancel it out. This is the reason for "skin
> effect" in conductors at high frequencies, making metal enclosures good
> shields for electrical circuits working at radio frequencies."

I have trained with the same books as you so I find it equally troubling
when I run an experiment that contradicts the book. But the experiment gave
the results reported and the results clearly indicate that skin effect does
not separate the surfaces.

So how about recognizing that multiple currents yield a single field that
is sum of the original fields? If two currents are 180 degrees apart and
are equal, the fields will cancel completely.

>
> Coax and waveguide don`t allow r-f in or out through their walls. They
> are impenetrable. Disks aren`t needed anywhere to prove this. Why can`t
> you normally pick up cable TV signals without connections to the cable?
> Shielding!

Certainly this disk experiment indicates that the fields can penetrate the
walls. However if the currents were equal and opposite, they could not be
detected. Normally the TV company will keep the currents in the cables
equal and opposite but when they don't, the cables will radiate.

>
> Best regards, Richard Harrison, KB5WZI
>

What the books should add to make the cancellation concept complete is that
the fields will not cancel if the induced current can not flow in an
unrestricted manner. Thus for example, if we want to add additional

shielding to a coaxial cable to correct for the 95% shielding generally provided by manufacturers to make it more like 100%, we can not do so by placing short lengths of additional braid layer over the cable so that skin effect will shield the cable. No, the additional braid must be continuous and connected at the ends.
(Yes, you can use short lengths if they are tuned to the frequency inside the cable).

Shielding equipment is notoriously difficult. Part of this is due to the incorrect idea that skin effect does the shielding so that RF fields can be contained just like light can be shielded and held inside a box. The biggest cause of shielding difficulty is that once a circuit is unbalanced, it is very difficult to bring it back into balance.

The disk antenna experiment should be repeated by others. It clearly challenges the theory that skin effect has shielding properties.

73, Roger, W7WKB

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
------== Over 80,000 Newsgroups - 16 Different Servers! =-----

4763. Re: Tired of RS employees pushing Cellphones and DirectTV

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-09 01:57:10 UTC
From: Steve Silverwood <kb6ojs@arrl.net>
Message-ID: <MPG.17e59498b6851ad5989697@news-server.socal.rr.com>
Source record: 135004
Cross-posted to: alt.radio.scanner,rec.radio.amateur.antenna,rec.radio.scanner,rec.radio.shortwave

In article <3D729556.3040201@adelphia.net>, mcoslo@adelphia.net says...
> Let's put it this way. Some years ago, I quit going to Radio Shack
> because Even if I wanted to buy a couple AA batteries, I would have to
> give my name, address, telephone address, and other stuff EVERY single
> time. If I bought something on a corp account, I had to sign something
> like six forms, and the transaction took what seemed like forever.
>
> I started going again because they eliminated that stupid idea.

Yeah, I used to answer that my name was "Cash Customer."

--

-- //Steve//

Steve Silverwood, KB6OJS
Fountain Valley, CA
Email: kb6ojs@arrl.net
Web: http://home.socal.rr.com/silverwood

4764. Re: Tired of RS employees pushing Cellphones and DirectTV

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-09 01:57:10 UTC
From: Steve Silverwood <kb6ojs@arrl.net>
Message-ID: <MPG.17e593675c60740c989696@news-server.socal.rr.com>
Source record: 135005
Cross-posted to: alt.radio.scanner,rec.radio.amateur.antenna,rec.radio.scanner,rec.radio.shortwave

In article <3D6464D2.DA863088@vgernet.net>, rmsdec8@vgernet.net says...
> RS will be much better off without your trade thanks!!!
> Please take you business elsewhere !!
> oh you don't have anywhere else?, too bad!!
> Bye!!!
> I'm one of the so called Morons that work for RS!!
> Ever thought that it might be RS that gets the Staff to try to sell Cell Phones
> and Sat Dishes? thats where RS makes most profits!
> Like all stock market companies they want the best profits for the stock
> holders!!
> Cell Phones and Sat Dishes pay the best commision to the staff too, Jerk !!!!

Wonderful attitude, friend. I recently had an encounter of a similar nature with the RS store near my office. I came in during lunch to try to find a mobile radio bracket to use with my FT-817 radio. The gentleman behind the counter was very polite (you could take lessons from him), but told me he didn't have any in stock and neither of us could locate them in the catalog. I asked why it wasn't available, and was told that they're rearranging their inventory "to push the good stuff." (He explained that the "good stuff" was exactly what you mentioned -- satellite dishes and cell phones, which provide better margins.)

Now, I can understand a business decision like that. And I was certainly not angry at the salesperson who provided the information. I =am= disappointed that Radio Shack -- up to now my first point of contact when looking for electronic items, ever since I was old enough to handle a soldering iron! -- has chosen to make that decision. The problem is, if you don't provide the other services and products that many of us have come to depend on from Radio Shack, we're not likely to come to you when the time comes for us to consider a cell phone or satellite dish purchase. And attitudes like the one you just demonstrated serve more and more to push potential customers away.

And did you know that your message will live on for many years in the Google archives? Anyone searching the newsgroup archives there for anything to do with Radio Shack will see your message....

Point of record: at one time I worked for Radio Shack, in one of the stores in San Bernardino, CA. I was in the Air Force at the time, and took on a part-time job with RS for some extra spending money.

So yes, I have some issues -- and experience -- with Radio Shack management. And I only wish I knew the store where you work -- no doubt your store manager would love to know the kind of image you're

portraying out here on the 'Net as a so-called RS representative.

You may want to learn some people skills, or at least do some growing up.

(Don't bother with a reply -- you already made my kill file.)

--

-- //Steve//

Steve Silverwood, KB6OJS
Fountain Valley, CA
Email: kb6ojs@arrl.net
Web: http://home.socal.rr.com/silverwood

4765. power line SWR

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-09 02:06:45 UTC
From: Uncle Peter <radioconnectionNO@cox.netSPAM>
Message-ID: <VmTe9.108614$082.4676252@news1.east.cox.net>
Source record: 135006

In case you're having problems matching your rig to the AC power grid...

http://www.kimber.com/powercords.htm

4766. Re: TXing & SWLing MW to 10m w/Attic Ant for Low Noise - HELP!

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-09 02:11:35 UTC
From: thx1138 <look@life.org>
Message-ID: <3d7c03ab$0$1427$272ea4a1@news.execpc.com>
Source record: 135007

> Have you considered useing A flagpole antenna, just bury the coax under
> ground.

They have that one covered to: No flagpoles, no clothes-lines, etc.

Makes you wonder if the developer is a disgruntled former ham :-)

4767. Re: is/should natural gas meters be grounded?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-09 02:23:48 UTC
From: richardharrison@webtv.net
Message-ID: <7570-3D7C0634-107@storefull-2311.public.lawson.webtv.net>
Source record: 135012

Dick Carroll wrote:
"Don`t bet on it (Gas meters are effectively grounded in most cases)."

Considering the average age of gas installations, the statement is true.

Considering the particular incident of lightning setting fire to a gas meter, it`s likely that the meter was in the electrical path of the lightning. One terminal for the discharge was surely the earth.

Pipedope on meter risers only provides a low breakdown voltage dielectric. It`s a flashpoint.

Gas water heaters unite water and gas systens. Gas ranges and heating systems unite electrical and gas systems.

Lightning on one system is likely to spread through the others.

Best regards, Richard Harrison, KB5WZI

4768. Re: TXing & SWLing MW to 10m w/Attic Ant for Low Noise - HELP!

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-09 02:28:25 UTC
From: GeorgeF <av8tor@licensed4fun.com>
Message-ID: <3D7C0749.9030004@licensed4fun.com>
Source record: 135008

thx1138 wrote:

>>Have you considered useing A flagpole antenna, just bury the coax under
>>ground.
>>
>
> They have that one covered to: No flagpoles, no clothes-lines, etc.
>
> Makes you wonder if the developer is a disgruntled former ham :-)
>

I guess my question is why do people spend 100's of thousands of dollars for a house that has so many restrictions. Talk about the "land of the free". If you want to preserve your freedoms then don't buy land with restrictions....

If I pay that kind of money I would make sure I can do with it what I want. As per the FCC deed restrictions can not be applied to TV antennas. Put up a tall TV antenna, run a coax up the TV pole and connect the coax to the two guy wire (correctly insulated of course) and presto you have an inverted Vee.

George
http://www.MilAirComms.com

4769. Re: 40 m dipole?? How much of leg can I bend??

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-09 02:39:48 UTC
From: K4IA <K4ia@novacoxmail.com>
Message-ID: <URTe9.58930$Or1.3835465@news2.east.cox.net>
Source record: 135009

Probably will improve the over all performance in that your pattern will be more omni directional rather than the classic figure 8. You lose gain in two directions but have a better chance of working stations off the ends of the antenna. The half square windom from Antennas and More http://www.antennasmore.com/windomhq.htm uses a 66 foot flat top and two 33 foot tails, the Carolina windoms from Radioworks use tails also. I use a center fed inverted L with one half horizontal and one half vertical. Try it and see what happens.
--
Radio K4IA
Craig "Buck"
Fredericksburg, Virginia USA

FISTS 6702 CC 788 Diamond 64
K1# 470 K2# 2460
"StarGazer" <pti@capnet.com> wrote in message
news:3D7B97E7.F55480AC@capnet.com...
> One end of my resonant coax fed 40 m dipole needs to be bent
> 90 deg straight downward on one end.
> Thats about 10 ft or 1/3 of one of the legs.
>
> Will this affect its performance much??
>

4770. Re: Skin effect experiment with disk on antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-09 02:40:26 UTC
From: gaschafer@attbi.com
Message-ID: <3d7c08d8.9240940@netnews.attbi.com>
Source record: 135010

On Sun, 8 Sep 2002 18:34:38 -0700, "rsparks" <rsparks@elltel.net>
wrote:

>
>Certainly this disk experiment indicates that the fields can penetrate the
>walls. However if the currents were equal and opposite, they could not be
>detected. Normally the TV company will keep the currents in the cables
>equal and opposite but when they don't, the cables will radiate.

>
>

If what you say about skin effect were true, then how do you account
for the fact that a fully
shielded cable like that used for cable tv or any other solid shield
cable does not radiate. But at
the same time a cable that has only 95% shielding will radiate. ? Both
cables can be installed in
the same circuit with the same "balance" as you refer to. Shouldn't
they both radiate if skin
effect does not exist.

Why do you think that large coax cable like 7/8 hard line has a copper
tube for the center
conductor and not solid core wire?
Answer: A solid core would be a waste of copper as rf does not
penetrate very deep into the
conductor. Skin effect.

Regards
Gary K4FMX

4771. Re: TXing & SWLing MW to 10m w/Attic Ant for Low Noise - HELP!

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-09 02:43:27 UTC
From: nm5k@wt.net
Message-ID: <25eb70d7.0209081843.6d1223d0@posting.google.com>
Source record: 135011

"thx1138" <look@life.org> wrote in message news:<3d7a9063$0$1428
>
> 1) WB Folded Terminated Dipole (zig-zag?), coax fed (fair tx/rx but low
> s/n?, wide BW [~5MHz-30Mhz], no tuner)
> 2) Zig-Zag Doublet fed w/parallel feed (susceptible to noise?, need ATU,
> potential qrm cause, good tx/rx)
> 3) W9INN Dipole (zig-zag?) , coax fed (need ATU, have heard good comments,
> all around compromise?)

I'd go for #2 myself for all band use. I have a 40 meter dipole in the attic fed with 300 ohm line with a tuner. It works pretty well I guess for 40-10 use. Lower for receive only. I don't really find ladder line much worse than coax as long as the antenna is center fed. I use a Z dipole on 160m. The pattern is little changed from a normal dipole. If I remember right , like say 1.8 dbi gain compared to 2.1 dbi for a regular dipole. If I were to work only one band, I use coax to the Z dipole. I didn't want to be stuck to one band though. I don't know what a W9INN dipole is. If the overall lengths are about the same, I'd just use the regular doublet made from cheaply available wire. I can see no point in using a "special" dipole, loaded or whatever, if you are going to be using ladder line and a tuner. You could add loading coils to improve low bands, if it's short, but you can make those if needed. MK

4772. Re: Horizontal Loops for HF - anyone using?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-09 02:49:09 UTC
From: nm5k@wt.net
Message-ID: <25eb70d7.0209081849.5a618372@posting.google.com>
Source record: 135013

'Doc <w5lz@icok.net> wrote in message news:<3D7B90FB.BD1F5986@icok.net>...
> AF4K,
> It should work okay on all but 160m and maybe
> 40m. For 160m 260 feet is going to be too short.
> It may still be 'usable' but it won't be 'good'
> by any means.

What I would do in a case like that is have a gap and a jumper at the far side of the loop from the feed. That way you can go out and convert it from a 80 m loop to a 160m dipole. That should give better 160m performance than trying to run the 80m loop on that band with a tuner. MK

4773. Tiltable baseplate

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-09 02:56:57 UTC
From: vswrref@hotmail.com
Message-ID: <3d7c0c2b.7670892@national-news.stargate.net>
Source record: 135015

Hi all!

I'm searching for the manufacturer who made a hinged baseplate, 2 pieces, with 4 spikes on the bottom, roughly 14 to 18 inches long, to push into the earth for the support, and a 4 to 6 inch piece of 1-1/2" pipe on top of the tiltable plate to mount a mast or a vertical. I've been looking through the recent QST's and checking the websites, but to no avail. I've seen it, as well as a couple buddies of mine, they're in the search too. If anybody happens to come across this item, I'd appreciate you letting me know.

Thanks!!

Jeff Y.

4774. Re: is/should natural gas meters be grounded?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-09 02:58:29 UTC
From: Dick Carroll <dixie@townsqr.com>
Message-ID: <3D7C0DF9.F4B218BB@townsqr.com>
Source record: 135014

Dave Holford wrote:

> Dick Carroll wrote:
> >
> > Richard Harrison wrote:
> >
> > > D.J. wrote:
> > > "Should these things (gas meters) be grounded ur are they already
> > > grounded?"
> > >
> > > Gas meters are effectively grounded in most cases.
> >
> > Don't bet on it. All gas residential installations these days seem to be
> > done in plastic. Only the main trunk appears to be steel, all feeders I've
> > seen are plastic.
> >
> > Dick
>
> This area was serviced with gas quite recently and all piping was
> plastic, including fairly large diameter trunks laid along the highway.
>
> My meter is fed by plastic underground pipe and feeds gas into the
> building via a plastic pipe.
>
> I note that there is an insulated wire wrapped around, but not connected
> to, the pipe at each meter. I surmise that this is used to inject a
> signal to locate the non-conducing pipes. Older installations in this
> part of the country do not have this wire, and I assume that is because
> the pipes are metallic.

Pretty well what I saw except for the main supply trunk that brings the gas
from afar was welded steel, presumably because of the much higher pressures
involved. The local supply feeders were plastic also.
Looks like all lines that operate at low enough pressure are going to be plastic
from now on.
I'm rather sure you're right about the wire, it's for locating the line, not
for a ground.

Dick

4775. Re: Whats the best 40M mobile?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-09 03:14:04 UTC
From: nm5k@wt.net
Message-ID: <25eb70d7.0209081914.72ba6c4f@posting.google.com>
Source record: 135016

"Headhamster" <headhamster@earthlink.net> wrote in message
news:<ilze9.14534$6i4.1169594@newsread1.prod.itd.earthlink.net>...
> I ran almost exclusively 40 meter mobile from my pick up till I sold last
> year. I had tried a hamstick and was unimpressed. Hamsticks may allow you to
> "make a contact" from the mobile but they are not serious antennas if you
> want to hold a QSO from the mobile. I then switched to the GLA bugcatcher
> with the biggest available coil and a capacity hat. It was like night and
> day. Not only could I have a QSO, I had many stations that couldn't believe
> I was in a mobile. The bugcatcher wins hands down for serious HF mobile
> work.
>
> Rich - W2YQ

Yes, but this is sort of skewed as most hamsticks are poorly designed
as sold, and use too short of stingers. I've got a appx 10 ft or so
stick for 40m that works very well. About as good as my bugcatcher
style antenna. But my 40m "stick" is really a 6 ft 20m hamstick with a
long 4 ft stinger on it. Works way better than your run of the mill
40m hamstick with too many windings and too short a whip. I've never
had a problem working anyone with that antenna. I get just as good of
reports as the guys running bugcatchers for the most part. I think I
actually beat a few of them that use shorter bugcatchers, and smaller
cars or trucks. A large bugcatcher is hard to beat, but you can make a
"stick" type antenna work very well if you set it up right. "long
whip, and most of the windings at the top of the stick for better
current distribution" I have many people that can't believe it when I
tell them what I'm running. Happens almost every time. Happened the
last time I used it a week ago. I'm LOUD with only a 100w radio. And I
do also have a large coil antenna to compare it with. There is not
that much difference between them on 40m. But I agree, the "usual"
storebought 40m hamstick leaves a lot to be desired. Mine will eat
one of those things for lunch. I use only the large coil antenna on
80m. To make a decent 80m hamstick would make it too tall to be
practical. I could make one 10 ft tall work "ok", but not as good as
the bigger coil. It's way more critical on 80m than 40. MK

4776. Re: TXing & SWLing MW to 10m w/Attic Ant for Low Noise - HELP!

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-09 03:18:37 UTC
From: Chuck/KE4ETH <chuck_hawks@hotmailmospamorama.com>
Message-ID: <emUe9.49116$2L.2762726@e3500-atl2.usenetserver.com>
Source record: 135017

Have you considered a mount that your car tire is holdinf stable. A plate
with a mast and a vertical. take it apart and store it in the garage when
not in use.

--
Chuck
KE4ETH

x-no-archive: yes
"thx1138" <look@life.org> wrote in message
news:3d7a9063$0$1428$272ea4a1@news.execpc.com...
> I have been reading the archives and web sites attempting to weigh the
pros
> and cons of several attic antenna options for my location. To say the
least
> I have been tearing my hair out trying to decide which way to go. Call it
> information overload. I am posting here in hopes that your comments and
> experiences will help me sort it all out.
>
> Here is my dilemma: I am building a new home (wood w/vinyl siding) on a
> typical city lot with deed restrictions on external antennas. So, I am
> relegated to using an attic wire antenna for my hobby purposes. The lot
has
> a big plus in that it is located on lands which happens to be the highest
> elevation within the county. A fairly big negative is that there is an
> electrical substation located approximately 1/2 mile away with high
voltage
> lines passing by about a 1/3 mile away. I have radio surveyed the area in
> various weather conditions for any serious noise problems emanating from
> these potential noise producers. But surprisingly have not noticed any
> noise unless I stand directly under the lines. You may wonder, why not
> build somewhere else? Unfortunately, that is not an option for personal
> reasons.
>
> My hobby: I enjoy doing it all from MW and SWLing to a very occasional
> ragchew on CW. I don't chase DX any longer but I won't rule it out if the
> opportunity presents itself. (I've worked Antarctica on 80m with a
Mor-gain
> dipole once, what a thrill! But that is the extent of my major DX
> accomplishments and my antenna experiences.) In fact I have been inactive
> for many years but have the itch to pound the key again. But txing with a
> highly efficient radiator is secondary to listening to most anything from
MW
> to SWLing everything from Intl BC to Maritime and Milcom, etc.
>

> Most recently I have been using a simple 50' longwire hooked up to an old
> Icom 720a. The longwire worked reasonably well for listening but the
> man-made noise was a pain. And that is the crux of my dilemma, reducing
> noise: Improving the S/N ratio for listening on MW to 20m without
adversely
> effecting my occasional cw foray on 80m or 60m(?)-10m (incl. warc). With
so
> many modern electrical appliances in a typical home in an urban
environment
> the noise can become a major problem for SWL'ers and DX'ers. My goal is
to
> neutralize this problem the best I can without too much compromise with
the
> antenna space limitation at my location.
>
> Here is what I have to work with. The house is a one story ranch with a
> maximum linear length in the attic of 54'. The roof has a 12/6 pitch (or
is
> it 6/12?) and the resulting height in the attic at the crown is about 6'.
> The shack will be in the basement with the transceiver located
approximately
> 22' directly below the antenna's feedpoint. The feed will run through an
> interior studded wall, from attic to basement, avoiding any house wiring.
I
> can also relocate the shack to one end or the other of the basement if
> necessary to accommodate an end fed type antenna. For you antenna
modeling
> types, the ground conductivity in my area (upper Mid-west) is what I would
> say good. Ideas are welcome!
>
> Considering all of the above I have come up with three possible attic
> antenna solutions:
>
> 1) WB Folded Terminated Dipole (zig-zag?), coax fed (fair tx/rx but low
> s/n?, wide BW [~5MHz-30Mhz], no tuner)
> 2) Zig-Zag Doublet fed w/parallel feed (susceptible to noise?, need ATU,
> potential qrm cause, good tx/rx)
> 3) W9INN Dipole (zig-zag?) , coax fed (need ATU, have heard good comments,
> all around compromise?)
>
> In all cases, if possible, I could form the antennas into a "Z" shape in
the
> horizontal plain for a total length of aprox. 74'. The "Z" shape in the
> Doublet would actually skew the lobes on most ham bands in a direction to
my
> favor, I think. See: http://www.cebik.com/zzdd.html
>
> -Questions:
>
> Would a "Z" shape effect the WBFD or W9INN dipole in a similar manner as

the
> Doublet?
> [Just for kicks, could anyone run a antenna model on a "Zig-Zaged" WBFD
> using my parameters?]
>
> I have never used parallel feedline before. What is the potential in
> causing qrm in this Doublet installation?
> Will using parallel feedline be more susceptible to man-made noise?
> Which antenna tuner for the Doublet would you recommend for 100W?
>
> Considering the very limited height (16' from surrounding ground level,
22'
> from the full sized 1600sq/ft basement floor) above ground of any of these
> antennas, would any one be a better choice over the other? Will they all
be
> cloud warmers?
>
> Would using a pre-amp/pre-selector such as a Vectronics AT-100 be
advisable
> with the WBFD to possible offset its negative gain (relative to a dipole)
as
> well as possibly reducing band noise using the pre-selector?
>
> -Answers? :-)
>
> I know many of you will have strong feelings for one antenna over another
> and that is fine. I would simply ask that you keep in mind my desire to
> fight off the electrical qrm that tends to permeate our urbanized ether.
> Yet at the same time attempt to choose/build an antenna that performs
> "fairly well" on both tx as well as receive. Working dx is great, but
being
> able to actually hear them is even better. Theoretical discussion is
> enjoyable but practical advice from anyone who actual uses any of these
> antennas types is much appreciated.
>
> Tnx,
> Stan
>
> --
> "Est autem fides credere quod nondum vides; cuius fidei merces est videre
> quod credis."
>
>

4777. Re: Tiltable baseplate

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-09 03:23:08 UTC
From: Allan <kd7dsk@cox.net>
Message-ID: <wuUe9.92800$Fb.3824228@news1.west.cox.net>
Source record: 135018

Draw up some plans that fit your tower, then find a good welder to build it.
Thats what I did with a person I knew to make his tower a tilt over.

4778. Re: power line SWR

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-09 03:25:05 UTC
From: Bill M <exray@caribe.net>
Message-ID: <3D7C1491.95D1955@caribe.net>
Source record: 134920

Uncle Peter wrote:
>
> In case you're having problems matching your rig to the AC power
> grid...
>
> http://www.kimber.com/powercords.htm

Hmmm, they are embarrassed to put the prices on the website.
-BM

4779. Re: power line SWR

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-09 03:25:54 UTC
From: Ken Jones <KJones@Netrax.net.INVALID>
Message-ID: <ZDUe9.2721$i84.792@fe02>
Source record: 134922

" Uncle Peter" <radioconnectionNO@cox.netSPAM> wrote in message
news:VmTe9.108614$082.4676252@news1.east.cox.net...
> In case you're having problems matching your rig to the AC power
> grid...
>
> http://www.kimber.com/powercords.htm
>
>
Wow. And it's not even April.
Ken

4780. FA: 40 foot aluminum ladder

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-09 03:26:00 UTC
From: Jack Weston <jwestonsand@nospampleas.com>
Message-ID: <alh4citcc1@nntp9.atl.mindspring.net>
Source record: 134919
Cross-posted to: alt.ham-radio.marketplace,alt.home.repair,rec.radio.amateur.antenna,rec.radio.amateur.misc

http://cgi.ebay.com/ws/eBayISAPI.dll?ViewItem&item=1765255471

4781. Re: Create Log Periodic - I just got one but...

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-09 03:34:20 UTC
From: "J. McLaughlin" <JCM@Power-Net.Net>
Message-ID: <uno5k090mlf490@corp.supernews.com>
Source record: 134921

I have found that LPDAs using a boom/transmission-line profit from a
choke where the transmission line bridges the boom to mast transition.
Just wind the same piece of coax that is attached to the front of the
booms into a coil. W7EL has discussed the preferred coil.
Without the choke, the pattern is often distorted by feedline
radiation.
73 Mac N8TT

--
J. Mc Laughlin - Michigan USA
Home: JCM@Power-Net.Net
"rhatley" <rhatley@zero.net> wrote in message
news:7grjnu06b90ja4i414sd7heg3ibkj41kv6@4ax.com...
> Log Periodics like those from KMA Antennas, and I assume the Create,
> use "dual booms". This method of construction allows the booms to be
> the "feed line" between the series of dipoles. The impedance of this
> "feed line" is determined by choosing the boom(s) diameter and
> center-to-center spacing. Thus you end up with an antenna with an
> average impedance of 50 ohms.
>
> rh
>
>

4782. Re: Skin effect experiment with disk on antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-09 03:39:15 UTC
From: richardharrison@webtv.net
Message-ID: <7569-3D7C17E3-326@storefull-2311.public.lawson.webtv.net>
Source record: 134923

Roger, W7WKB wrote:
"Shielding equipment is notoriously difficult. Part of this is due to the incorrect idea that skin effect does the shielding so that RF fields can be contained just like light can be shielded and held inside a box."

A box doesn`t have to be electrically conductive to contain light.

The books are correct. It is skin effect which makes a copper box inpenetrable to r-f.

Evidence is that 2.6 inches of copper thickness is required to prevent 63.2% of the current density at one surface from appearing at the other surface when the frequency is 1 Hz.

Only one 1000th of that thickness is required for the same attenuation at 1 MHz. The skin depth is related to the reciprocal of the square root of the frequency. The square root of a million is a thousand.

A practical example of non-conductance of r-f through a shield exists in a laboratory signal generator. You have a meter to show a healthy signal within the box. Crank in maximum attenuation to the output. Signal is undectectable outside the box using a high gain receiver either connected or disconnected to the generator output.

Best regards, Richard Harrison, KB5WZI

4783. Re: Tiltable baseplate

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-09 04:01:16 UTC
From: K4IA <K4ia@novacoxmail.com>
Message-ID: <g2Ve9.59210$Or1.3853191@news2.east.cox.net>
Source record: 134924

MFJ has something like it. Not sure if it tilts but it is $99.
--
Radio K4IA
Craig "Buck"
Fredericksburg, Virginia USA

FISTS 6702 CC 788 Diamond 64
K1# 470 K2# 2460
"Jeff Y." <vswrref@hotmail.com> wrote in message
news:3d7c0c2b.7670892@national-news.stargate.net...
> Hi all!
>
> I'm searching for the manufacturer who made a hinged baseplate, 2
> pieces, with 4 spikes on the bottom, roughly 14 to 18 inches long, to
> push into the earth for the support, and a 4 to 6 inch piece of 1-1/2"
> pipe on top of the tiltable plate to mount a mast or a vertical. I've
> been looking through the recent QST's and checking the websites, but
> to no avail. I've seen it, as well as a couple buddies of mine,
> they're in the search too. If anybody happens to come across this
> item, I'd appreciate you letting me know.
>
> Thanks!!
>
>
> Jeff Y.
>
>

4784. Re: power line SWR

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-09 04:08:58 UTC
From: richardharrison@webtv.net
Message-ID: <7570-3D7C1EDA-112@storefull-2311.public.lawson.webtv.net>
Source record: 134925

Uncle Peter wrote:
"In case you`re having problems matching your rig to the AC power grid...."

The Federal Trade Commission should prosecute the perpetrators of such blatant BS!

Best regards, Richard Harrison, KB5WZI

4785. Re: TXing & SWLing MW to 10m w/Attic Ant for Low Noise - HELP!

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-09 04:23:01 UTC
From: thx1138 <look@life.org>
Message-ID: <3d7c223c$0$1425$272ea4a1@news.execpc.com>
Source record: 134926

> I guess my question is why do people spend 100's of thousands of dollars
> for a house that has so many restrictions. Talk about the "land of the
> free". If you want to preserve your freedoms then don't buy land with
> restrictions....

I'm with you OM but... my personal circumstances leave me no choice so lets
not go there, thanks.

> If I pay that kind of money I would make sure I can do with it what I
> want. As per the FCC deed restrictions can not be applied to TV
> antennas. Put up a tall TV antenna, run a coax up the TV pole and
> connect the coax to the two guy wire (correctly insulated of course) and
> presto you have an inverted Vee.

I'm not so sure the FCC regs are that cut and dry. I think you have to show
inability to receive a clear reception. But I could be wrong. Heck, I
can't even figure out a dipole and I should make heads or tails out of FCC
regs? Hi

Are local city ordinances that allow for amateur towers superseded by deed
restrictions?

(i) Exempt Facilities.

1. Amateur radio towers installed, erected, maintained and/or operated in
any residential zoning district, by a federally-licensed amateur radio
operator, complying with the provisions contained in Chapter 17 of these
ordinances, so long as all the following conditions are met:

a. The antenna use involved is accessory to the primary use of the property
which is not a telecommunication facility;
b. In a residential zone, no more than one support structure for licensed
amateur radio operator is allowed on the parcel;
c. Sufficient anti-climbing measures have been incorporated into the
facility, as needed, to reduce potential for trespass and injury.

4786. Re: TXing & SWLing MW to 10m w/Attic Ant for Low Noise - HELP!

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-09 04:33:39 UTC
From: thx1138 <look@life.org>
Message-ID: <3d7c24aa$0$1426$272ea4a1@news.execpc.com>
Source record: 134927

> just use the regular doublet made from cheaply available wire. I can
> see no point in using a "special" dipole, loaded or whatever, if you
> are going to be using ladder line and a tuner. You could add loading
> coils to improve low bands, if it's short, but you can make those if
> needed. MK

I had read in the archive somewhere about placing chicken wire near the ends of the dipole as some kind of capacitive hat?
His situation was exactly as mine. On the inside of the far ends of the attic walls he attached chicken wire using cardboard between the wall and the chicken wire. He didn't describe the dimensions but said to make each hat equal in size. It effectively increases the length of the doublet. I wonder how the chicken wire would effect the ends of a "Z"-doublet?
Another good experiment.

4787. Re: AZ/EL Antennas with El-Cheapo Rotors

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-09 05:29:47 UTC
From: Paul N3EOP <n3eop@arrl.or.callsign.net>
Message-ID: <Xns9283E4D88772Bn3eophotmailcom@64.164.98.6>
Source record: 134928
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.space

"Jeff Breitner" <zed-pappa-tango-romeo@rudn.com> wrote in
news:unmrla6a577h54@corp.supernews.com:

> I'm interested in creating an az/el antenna system with el-cheapo
> rotors (as opposed to dropping $600 for a Yaesu GX-5000).

I've done az/el with a pair of old Alliance U-110 rotors; the ones where the mast goes completely through the rotor.

The main trick is to make up a plate to allow mounting the elevation rotor in the horizontal direction, which is what I did. I've also known people to use two short pieces of pipe with an elbow making an inverted-L shape. (You need to pin or weld the pipes to the elbow.)

One caveat: You *must* take steps to rainproof the elevation rotor. (You don't have to make it waterproof, though.) I used a piece of aluminum flashing in a big "C" shape and mounted it to the plate, and bent the sides in to protect the sides. Others have taken a plastic garbage pail, punched holes in it for the crossboom, and just used that. Ugly as hell, but it works.

U-100s and U-110s used to be plentiful at hamfests, but I haven't seen many recently. (Alliance is out of the rotor business.) Norm's Rotor Service (http://rotorservice.com/) bought out Alliance's inventory, and has new ones for sale. Not cheap, but they *are* new and carry a 1 year warranty.

4788. Re: G5RV ladder line

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-09 05:38:17 UTC
From: rhmcus@yahoo.com
Message-ID: <3d813387.339750585@news.us.dell.com>
Source record: 134929

Cam

Niice site.. I checked it out .. Do you have any information on the
half size G5RV. I use the full size at home and have had very good
luck with it.. Looking at the half size for portable operation.

Rich

On Fri, 06 Sep 2002 22:21:52 -0500, CAM <Cecil.A.Moore@ieee.org>
wrote:

>Wayne Sellin wrote:
>> From what I have been reading please help with the following.
>> I understand that the ladder line is part of the transmission line and the
>> transmission line is not part of radiating antenna. Therefore I should be
>> able to bring it down and into the attic vent, across the attic and down
>> into my shack.. Please see my original message and question below.
>> This is also saying the there is no special length to the ladder line?
>
>Take a look at my web page to see why the series section on a G5RV is
>a special length. It resonates the G5RV on or near 80m, 40m, 20m, and
>12m. Keep the ladder-line a few inches away from metal.
>
>If you use ladder-line all the way to the transmitter, you will have
>moved the matching function from the coax/ladder-line junction to the
>transmitter. You can still have matching problems even with an antenna
>tuner.

4789. Re: Tiltable baseplate

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-09 05:53:45 UTC
From: vswrref@hotmail.com
Message-ID: <3d7c366d.18490239@national-news.stargate.net>
Source record: 134930

Thanks on the replies. I thought MFJ had one andt he price of $100 is
a bit steep for an item like that and I'm still trying to confirm it.

As for the plans and getting a welder, I've already decided that if
this can't be found and at a reasonable price, this would be the road
to go.

Jeff

On Mon, 09 Sep 2002 02:56:57 GMT, vswrref@hotmail.com (Jeff Y.) wrote:

>Hi all!
>
>I'm searching for the manufacturer who made a hinged baseplate, 2
>pieces, with 4 spikes on the bottom, roughly 14 to 18 inches long, to
>push into the earth for the support, and a 4 to 6 inch piece of 1-1/2"
>pipe on top of the tiltable plate to mount a mast or a vertical. I've
>been looking through the recent QST's and checking the websites, but
>to no avail. I've seen it, as well as a couple buddies of mine,
>they're in the search too. If anybody happens to come across this
>item, I'd appreciate you letting me know.
>
>Thanks!!
>
>
>Jeff Y.
>
>

4790. Re: G5RV or W3DZZ ?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-09 06:21:49 UTC
From: IE <m9191@abc.se>
Message-ID: <n6fonushao9fuktd10t6702ii8c5jtu5sc@4ax.com>
Source record: 134931

Thank you for your comment. Yes, I know the fact but for a person looking for "self running antennas" it looks awful..... but it works fine.

I have one question around this. How good are the automatic antenna tuners in times of "mean time between failure"? I have a TS870 and it has to work a lot when I switch between DZZ and G5RV. To hear it work remainds me of all that can go wrong in mechanical things. Just a thought but does anyone know?

On Sun, 08 Sep 2002 19:45:18 -0500, CAM <Cecil.A.Moore@ieee.org> wrote:

>IE wrote:
>> The SWR for the G5RV is a disaster. Mostly around 3:1or higher and
>> never below 2.5:1. An antenna tuner is a must.
>
>An SWR of 3:1 is not a disaster. The G5RV is a good antenna for 75m,
>40m, 20m, & 12m. It is common knowledge that a G5RV requires an
>antenna tuner.

4791. Re: Skin effect experiment with disk on antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-09 06:52:52 UTC
From: "Ian White, G3SEK" <G3SEK@ifwtech.co.uk>
Message-ID: <kObTMxDEVEf9EAg9@ifwtech.co.uk>
Source record: 134932

rsparks wrote:
> But the experiment gave the results reported and the results clearly
>indicate that skin effect does not separate the surfaces.

No, they didn't. What you reported here on the newsgroup was misleading compared with the more complete report on the web page.

In the newsgroup, you said: "If you don't have time or the ability to look at the web page, I can tell you that the metal disk did not lower the resonant frequency of the antenna."

But the web page says: "The addition of the disk RAISED the resonant frequency of the antenna about 0.5 Mhz."

This is completely to be expected. The disks were 12in diameter, placed 5in each side of the feedpoint, so they were acting as the plates of a capacitor. Your definition of "resonance" is where the feedpoint reactance crosses through zero, and adding a capacitor almost directly across the feedpoint will indeed raise the frequency.

In other words, what you wanted to look for was swamped by another large effect that you chose to ignore because it didn't fit your theory. That's bad science.

--
73 from Ian G3SEK 'In Practice' columnist for RadCom (RSGB)
Editor, 'The VHF/UHF DX Book'
http://www.ifwtech.co.uk/g3sek

4792. Re: 40 m dipole?? How much of leg can I bend??

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-09 08:45:51 UTC
From: 'Doc <w5lz@icok.net>
Message-ID: <3D7C5FB8.87DD520D@icok.net>
Source record: 134933

StarGazer,
Won't hurt it's performance at all.
'Doc

4793. Re: feeding a magnetic loop ?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-09 11:21:12 UTC
From: lombryt@hotmail.com
Message-ID: <db35a0c.0209090321.73bc3876@posting.google.com>
Source record: 134934

"J. McLaughlin" <JCM@Power-Net.Net> wrote in message
news:<unn9m3gnsp4i43@corp.supernews.com>...
> Let the group know how the receiving antenna works. 73 Mac N8TT
>

I will do !

For the BNC-PL conversion I found the solution thanks to a msg posted
directly by F1... here is the manufacturer :
http://www.amabilidade2002.com/tvsat39.htm

Thierry

4794. Re: Horizontal Loops for HF - anyone using?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-09 11:52:12 UTC
From: KC1DI <elbc@pivot.net>
Message-ID: <3d7c8770_1@corp.newsgroups.com>
Source record: 134935

260 feet should work well mine is 525 feet , if you want to use your's on
160 it should be as big a possilbe.. the 260 feet will work very well for dx
on 40 meters and above. on 20 and above you may want another antenna like a
vertical or dipole to fill in the pattern nulls ..
I worked qrp dx cc with mine mostly on 40 and 30 meters. at the 4 watt
level. mine is at an average hight of 30-35 ft.

Give yours a try.. and give it some time. at first you may think it's not
that great but over time it will prove it's self.
73 /72 Dave KC1DI // always qrp

Outgoing mail is certified Virus Free.
Checked by AVG anti-virus system (http://www.grisoft.com).
Version: 6.0.385 / Virus Database: 217 - Release Date: 9/4/02

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
------== Over 80,000 Newsgroups - 16 Different Servers! =-----

4795. Re: Horizontal Loops for HF - anyone using?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-09 11:54:56 UTC
From: KC1DI <elbc@pivot.net>
Message-ID: <3d7c8822_1@corp.newsgroups.com>
Source record: 134936

O I forgot to mention Cebik has a good paper on Large horizontal loop at
http://www.cebik.com/atl1.html

73 dave

Outgoing mail is certified Virus Free.
Checked by AVG anti-virus system (http://www.grisoft.com).
Version: 6.0.385 / Virus Database: 217 - Release Date: 9/4/02

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

4796. Re: Slingshots foretting the g5rv wre into the trees

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-09 12:02:04 UTC
From: ve2vfd@remove.hotmail.nospam.com.now
Message-ID: <3d7c8ac8.1387606@news.aei.ca>
Source record: 134937

On Sat, 7 Sep 2002 13:07:58 -0400, "Wayne Sellin"
<sellinwg@starpower.net> wrote:

>Where I am slingshots are not supposed to be used. But....
>Any suggestions or insights or sources?

Well, I use a sling shot to set up my 6m dipole and also my "roll up"
2m jpole when backpacking. Alternatively I also use it to set up my
bear line to keep my food safe.

I've hiked in many placed where a sling shot is not permitted, but
there is little mistaking mine for a weapon.

Its a simple sling shot with a cheapo $10 wallymart fishing reel
bolted to the bottom. Reel is loaded with 12lbs bright yellow fishing
line and has a massive lead sinker at the end of the line.

I've been accosted by Rangers and Wardens in the Adirondacks and in
federal parks here in Canada when they saw my slingshot and once I had
demonstrated how I used it to set up a bear line on a nice high branch
they were amazed and thought it was the best thing since sliced bread.
Most Rangers may not care much about our amateur antennas, but for
things like lines for keeping food safe from wildlife it's another
story :)

I guess a little demonstration can go a long way in changing their
perspective.

Pat
ve2vfd

4797. Re: G5RV or W3DZZ ?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-09 12:09:12 UTC
From: n2ey@aol.com
Message-ID: <20020909080912.02651.00000205@mb-cc.aol.com>
Source record: 134938

In article <db35a0c.0209080152.29492a78@posting.google.com>,
lombryt@hotmail.com (Thierry) writes:

>In one of my QTH I have enough place in the garden to install a
>multiband dipole of about 33m (100') ot twice that length (but the
>first option is less visible and more pratical for me). I'm on top of
>hills with an open field 360 deg around.
>
>So I would like to replace with 40m long wire by something more
>efficient (forget currently the beam and vertical). I have the choice
>to install a G5RV with a symetric feedline + coax RG58 or a W3DZZ
>feeded with a simple coax RG58. Knowing these models are very
>appreciated in the US, I post my question on this forum.
>
>But from your experience, as my first objective is DX with few local
>activities, what can I install : the G5RV or the W3DZZ ?

In my experience, the W3DZZ-type antenna is slightly better for your
application than the G5RV. By "W3DZZ-type", I'm referring to a dipole of about
110 feet with two identical traps resonant on 40 meters. Dipoles with more than
two traps are another story.
>
>Hints : According the theory, the second solution seems better : one
>type of feedline, easy to use as inverted V in necessary, traps allow
>to be resonant on L/2 on various bands and even 3/2L on 20m, 5/2 on
>15m, etc.

The W3DZZ design has at least three basic variables:

- Length of the inner dipole sections
- Length of the outer dipole sections
- L to C ratio of the traps.

By careful adjustment, the W3DZZ antenna can be tuned to resonance on at least
three bands (typically 80/40/20) and the 15/10 meter bands will be pretty
close.

>As traps quality if very important in this model of dipole, do you
>know a good manufacturers of W3DZZ, famous of the quality of its
>antennas ?
>
The main concern of trap quality is low loss, which equals high Q. Best way to
get that is to build the traps yourself, using air-wound coils and
transmitting-type capacitors.

The main downside of the W3DZZ design is that unless you are very lucky, it will need adjustment. You need at least a dip meter and SWR bridge for adjustment.

Unless the feed line is very short and/or you are only considering bands below 10 MHz, please consider using lower-loss coax than RG-58 type. RG-8X type costs about the same money, is only slightly bigger and has less loss.

73 de Jim, N2EY

4798. Re: power line SWR

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-09 13:10:53 UTC
From: Ralph Mowery <rmowery@ctc.net>
Message-ID: <x51f9.413825$Aw4.17303161@bin2.nnrp.aus1.giganews.com>
Source record: 134939

The audio people will buy about anything that is gold plated and sells for a high price. Saw some power cords similar to those in an audio magazine at about $ 100 for a 6 to 8 foot cord.The people jsut don't think about the 20 to 100 feet of wire from the plug to the fuse box or back to the power pole.

If they only know that you could cut the cord to 1/2 wavelength it would work beter :-). I might have to look it up but I only calculate about 1400 miles not counting the velocity factor :-)

> In case you're having problems matching your rig to the AC power
> grid...
>
> http://www.kimber.com/powercords.htm
>
>

4799. Re: NEC questions.

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-09 13:18:06 UTC
From: wave_spy@yahoo.co.uk
Message-ID: <e72fe60.0209090518.c6802bb@posting.google.com>
Source record: 134940

Thanks all.

I come to the conclusion that NEC and its windows (shells) are
complete crap. Thats not to say NEC engine is crap, just the pathetic shells
sold around it are.

I've now decided to go with the MMANA software by the japanese guy.

F A R superior to any commercial package I've seen in years and FREE !

The guy is worthy of the Nobel Peace Prize, cos it sure stops me shouting loudly
at my PC :-)

@ndy

4800. Re: G5RV or W3DZZ ?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-09 13:26:15 UTC
From: Andy Cowley <andy.cowley@uwe.ac.uk>
Message-ID: <3D7CA49F.8A308F3A@uwe.ac.uk>
Source record: 134941

N2EY wrote:
>

> >
> The main concern of trap quality is low loss, which equals high Q. Best way to
> get that is to build the traps yourself, using air-wound coils and
> transmitting-type capacitors.
>

Surely there is a major trade-off here between high Q traps with narrow bandwidth and low Q traps with wider bandwidth? If, as you suggest, high Q components are used, the bandwidth will be insufficient to cover a whole band, even on our restricted 40 in the U.K. I would suggest that going for the highest possible Q is not the main concern, but rather to find the best compromise between bandwidth and efficiency.

I think the high Q solution is to have an untuned antenna a la G5RV and use variable high Q components in the matching unit (and low loss open wire feeder).

vy 73

Andy, M3ABC

4801. Re: Skin effect experiment with disk on antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-09 13:53:50 UTC
From: rsparks <rsparks@elltel.net>
Message-ID: <3d7ca3fd_1@corp.newsgroups.com>
Source record: 134942

"Roy Lewallen" <w7el@eznec.com> wrote in message
news:3D7BE863.2010207@eznec.com...
> This experiment doesn't test skin effect. The problem is that the
> current on each surface creates a field. These fields aren't isolated
> from each other, so the field caused by the current in each side creates
> a current in the other side. Similarly, the currents in the sides couple
> via fields to the currents in the wires. The model of currents flowing
> in isolation on the two surfaces is flawed, so any conclusions drawn
> from the experiment are also flawed. This should actually come as a
> relief, because if the simplified concept of currents were correct, I
> believe you've also shown propagation faster than the speed of light.

Richard Harrison in an earlier post conveniently provided a quote:

"The 19th edition of the ARRL Antenna Book says on page 23-2:
"In good conductors the speed (of r-f wave travel) is so low that the
opposing fields set up by the wave front occupy the same space as the
wave itself, and thus cancel it out. This is the reason for "skin
effect" in conductors at high frequencies, making metal enclosures good
shields for electrical circuits working at radio frequencies.""

The disk in the experiment is made of solid 0.062 inch thick copper plate
with no holes in it. This is about 10 times thicker that the diameter of
the
wires which make the shield of RG-58 coaxial cable.

It seems to me that the disk meets the definition presented in the Antenna
Book much better than does coaxial cable, so we should see the shielding
provided by skin effect in the disk if it were really present in coaxial
cable.

Yes, if the current went around the disk (not through it) and the resonant
frequency
stayed the same, then the travel around the disk would have to be
instantaneous.
I don't think that is happening. I think the current is going through the
disk despite
the words from the Antenna Handbook that say it can not due to skin effect.

>
> To test skin effect, you have to isolate the currents' fields from each
> other. Of course, if skin effect didn't exist, you wouldn't be able to
> isolate them (and a couple of centuries of theory would be wrong, and
> antennas based on it wouldn't work).
>
> I propose the following experiment. Put a battery powered RF source and

> small antenna into a sealed metal box. It should be completely sealed --
> soldered circuit board material should suffice. Then try to detect any
> sign of the RF outside the box. The antenna will induce current on the
> inside of the box -- how much of the shield current can you detect from
> the outside? If skin effect weren't a fact, you'd easily detect the
current.
>
> If you don't believe that the antenna would induce current on the inside
> of the box, do this instead: Get a piece of copper pipe, a rigid wire,
> and a couple of end caps. To the center of the inside of one of the end
> caps, solder a 50 ohm or so resistor. To the other end of the resistor,
> solder the rigid wire, and extend it through the pipe. Solder on the end
> cap with the resistor. Now what you have looking into the open end of
> the pipe is an air dielectric coax line terminated at the end with the
> resistor. Make a small battery powered RF source (one of the little
> IC-sized crystal oscillator modules would do nicely), and connect it
> across the coax at the input end, then solder on the other pipe cap,
> sealing the whole thing up. I think you'll agree that there's current
> flowing down the center wire from the source, through the resistor, and
> along the copper pipe back to the source. See if you can detect this
> current by any means from the outside, or if you can detect any kind of
> voltage drop along the path of the current.
>
> If you're well acquainted with good feedthrough and bypassing
> techniques, you could instrument the inside of the pipe (as well as
> powering the oscillator from outside). Oscillator current could be
> measured, or you could measure the RF current by connecting a detector
> diode to the resistor and running the DC out. Armed with this, you could
> do whatever you want to the outside of the pipe to try and disturb the
> current on the inside -- bury it, put ferrites along it, whatever, and
> see how much success you have. But don't try this unless you really know
> how to do a proper feedthrough, because any escaping RF will invalidate
> the experiment.

I am surprised that you do not give credit to the effect of the opposing
currents
that would be created in the surrounding metal. The fields of the induced
currents would be opposite the center fields so would cancel the field from
the
center, just like they do when we model antennas. There is no need to call
upon skin effect as a shielding mechanism when opposing fields can do the
same job.

I notice that you did not specify a frequency for the test, nor a thickness
for
the shield metal. Of course there is no need to because the results will be
the same for all frequency and metal thickness choices.

>
> If you do show conclusively that skin effect doesn't exist, be prepared
> for fame and fortune!

Skin effect is real so far as currents parallel to the surface are
concerned.
The claim that a shield is created by skin effect is under attack by the
results
of this experiment.

>
> Roy Lewallen, W7EL
>

73, Roger, W7WKB

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

4802. Re: G5RV ladder line

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-09 14:08:57 UTC
From: CAM <Cecil.A.Moore@ieee.org>
Message-ID: <3D7CAB79.3E1B2252@ieee.org>
Source record: 134944

Rich McMahon wrote:
> Niice site.. I checked it out .. Do you have any information on the
> half size G5RV. I use the full size at home and have had very good
> luck with it.. Looking at the half size for portable operation.

Antennas are scalable. A full-size G5RV has a design frequency
on 20m and works well on 80m, 40m, 20m, & 12m. A half-size G5RV
has a design frequency on 10m and works well on 40m, 20m, 10m,
& 6m. Anyone can verify such with the free demo version of EZNEC
available at http://www.eznec.com
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

4803. Re: NEC questions.

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-09 14:11:02 UTC
From: Bibby <bibby@attbi.com>
Message-ID: <WZ1f9.363757$me6.41874@sccrnsc01>
Source record: 134943

"Me" what site do you use to download the MMANA software?

Thanks,

Malcolm

"Me" <wave_spy@yahoo.co.uk> wrote in message
news:e72fe60.0209090518.c6802bb@posting.google.com...
> Thanks all.
>
> I come to the conclusion that NEC and its windows (shells) are
> complete crap. Thats not to say NEC engine is crap, just the pathetic
shells
> sold around it are.
>
> I've now decided to go with the MMANA software by the japanese guy.
>
>
> F A R superior to any commercial package I've seen in years and FREE !
>
> The guy is worthy of the Nobel Peace Prize, cos it sure stops me shouting
loudly
> at my PC :-)
>
> @ndy

4804. FYI: Homebrew & Stealth Antenna Roundup

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-09 14:24:49 UTC
From: AC6V <ac6v@amsat.org>
Message-ID: <Ra2f9.67820$Ic7.5064795@news2.west.cox.net>
Source record: 134945

Hundreds -- New and Updated at URL:
http://www.ac6v.com/antprojects.htm

--
I Doubt, Therefore I Might Be
73 From AC6V, Rod In Oceanside, CA
http://ac6v.com

4805. Cushcraft R7/R7000 - R6/R6000 Antiparasitari RFC Choke " H "

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-09 15:10:30 UTC
From: "Luis M. Madrona" <LMADRONA@teleline.es>
Message-ID: <GR2f9.330760$6K3.2886238@telenews.teleline.es>
Source record: 134946

Hallow, any body Know the inductance of the RFC " H " Antiparasitari Choke,
or external diameter of the form and longitude, wire number and wire turn ?

Thansk from Luis EA7QW 73's

4806. Re: Skin effect experiment with disk on antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-09 15:12:29 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <cccpnu049jvv17229h10e0p4pqn9obqmrm@4ax.com>
Source record: 134947

On Mon, 9 Sep 2002 06:53:50 -0700, "rsparks" <rsparks@elltel.net>
wrote:

snip
>
>It seems to me that the disk meets the definition presented in the Antenna
>Book much better than does coaxial cable, so we should see the shielding
>provided by skin effect in the disk if it were really present in coaxial
>cable.

Yes it should, but your set-up was far too error-prone to reveal it.
Further, even casual observation of the photos reveals you had a world
of problems with almost everything under the sun (including yourself)
between those two capacitor plates you added.

>
>Yes, if the current went around the disk (not through it) and the resonant
>frequency
>stayed the same, then the travel around the disk would have to be
>instantaneous.
>I don't think that is happening.

And yet your own results are unaccountable to your theory. This again
was the red flag of the hodge-podge of assorted non-antenna extra
physical features filling the space between the plates that skewed the
data.

>I notice that you did not specify a frequency for the test, nor a thickness
>for
>the shield metal. Of course there is no need to because the results will be
>the same for all frequency and metal thickness choices.
>

This, of course is speculation, and as it is required to support your
theory, it demands proof (more tests - better ones too) not just
wishing and hopes.

>>
>> If you do show conclusively that skin effect doesn't exist, be prepared
>> for fame and fortune!
>
>Skin effect is real so far as currents parallel to the surface are
>concerned.
> The claim that a shield is created by skin effect is under attack by the
>results
>of this experiment.

>

Hi Roger,

Well, in fact it has easily survived the attack and remains intact and proves fame is nimble in avoiding usurpers. It has already gotten you to allow it exists for one example (although you do not appear to have that down either), cabling, where you now argue that there is a special case, disks, where it does not. As physics is not a pliable argument that stretches to cover poor data, the flaws in your position are irreconcilable.

One test does not constitute science. If your theory is valid, it is valid everywhere, not just in isolated instances. If it is valid everywhere, it is demonstrable everywhere. You lack showing the everywhere, much less the anywhere. As Ian pointed out (and you have yet to respond to), the errors are glaring. The only response to this is to make more tests moving these plates out and away from the center.

This should conform to the logic you have offered. If the plates did not lengthen the electrical length of the dipole at one position, they should not for any number of positions along the length of the dipole. You clearly lack that data to support your theory - and you will be hard pressed to find it. This simple confirmation (either way) is obviously within your ability to perform - judging by those same photos.

Like I said earlier, looks like you need to do something different. Barring that confirmatory data, what you've offered obviously doesn't do the job.

73's
Richard Clark, KB7QHC

4807. Re: Lowpass filters

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-09 15:27:22 UTC
From: Tarmo Tammaru <t-tammaru@home.com>
Message-ID: <u53f9.274844$On.11284477@bin3.nnrp.aus1.giganews.com>
Source record: 134948

Paul,

According to the Aug QST article, the MFJ looks reasonable. If you care about the top end of 10m, you might want to consider the Nye-Viking. If you are getting TVI on ch-2, the Bencher YA-1 is good, has slightly more loss at 29.7 MHz.than the Viking, but much better at 29.7 then some of the others. I have the Bencher. Like the other response suggests, read the article. Look for SWR, loss, and and Channel-2 response.

Tam/WB2TT

"paul churchill" <paul.churchill1@ntlworld.com> wrote in message news:6zOe9.1439$YF3.108085@newsfep2-gui...
> Can anyone tell me what lowpass filters there is on the market that actually
> do work and not too expensive, I have thought about the MFJ 704 but not sure
> if it is as effective as mfj quote thankyou
>
>

4808. Re: G5RV ladder line

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-09 15:48:44 UTC
From: richardharrison@webtv.net
Message-ID: <25442-3D7CC2DC-341@storefull-2317.public.lawson.webtv.net>
Source record: 134950

CAM, W5DXP wrote:
"A full-size G5RV has a design frequency on 20m and works well on 80m, 40m, & 12m."

True. The G5RV according to Fig 8 on page 7-5 of the ARRL Antenna Book (19th edition) is a 102-ft dipole. As such, its first resonance, as a 1/2-wave, is at 4.82 MHz.

Patterns for a 100-ft dipole are given in the same book on page 2-12. Fig 13 is the pattern at 4.8 MHz (first resonance). This would be applicable at 9.6 MHz for a 50-ft dipole.

Likewise, Fig 14 would apply at 19.1 MHz for a 50-ft dipole.

Patterns for a full-size or half-size G5RV would be practically the same as similar dipoles, similarly placed, which were only a foot or two shorter.

A 1/2-sized G5RV is less directional on the lower frequencies than a full-sized G5RV. But, on the higher frequencies, it has less pattern splitting.

Best regards, Richard Harrison, KB5WZI

4809. Re: NEC questions.

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-09 16:00:51 UTC
From: me@nowwhere.com
Message-ID: <3D7CC5B3.CD6CE742@swbell.net>
Source record: 134949

Bibby wrote:

> "Me" what site do you use to download the MMANA software?
>
> Thanks,
>
> Malcolm
>
> "Me" <wave_spy@yahoo.co.uk> wrote in message
> news:e72fe60.0209090518.c6802bb@posting.google.com...
> > Thanks all.
> >
> > I come to the conclusion that NEC and its windows (shells) are
> > complete crap. Thats not to say NEC engine is crap, just the pathetic
> shells
> > sold around it are.
> >
> > I've now decided to go with the MMANA software by the japanese guy.
> >
> >
> > F A R superior to any commercial package I've seen in years and FREE !
> >
> > The guy is worthy of the Nobel Peace Prize, cos it sure stops me shouting
> loudly
> > at my PC :-)
> >
> > @ndy

try:

http://www.qsl.net/mmhamsoft/

4810. Re: Slingshots foretting the g5rv wre into the trees

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-09 16:34:20 UTC
From: kelly@dvol.com
Message-ID: <d22b54c3.0209090834.69c641c3@posting.google.com>
Source record: 134951

'Doc <w5lz@icok.net> wrote in message news:<3D7BD6A2.7DC08FC9@icok.net>...
> Brian Kelly wrote:
>
> >-----------
> > Doesn't the bark from a 90mm potato howitzer sorta generate a few . .
> > umm . . "questions" around the neighborhood . . ?
> > >
> ------------
>
> First, you need to know my neighborhood!
>
>
. . Is that good or bad . . ?
>
>
I surfed around Google for "potato guns", good Lord, they're a cult. I
get the drift, easy enough to build. What do you use for the
propellant? Looks like a can of ether engine starter oughta do it.
>
>
>
The
> sound of a 90mm howitzer isn't a big 'thing'...
> 'Doc
> PS - You should see what it does with a 'Super Size'
> order of McDonald's fries!
>
>
Now I understand the neighborhood.

w3rv

4811. Re: G5RV ladder line

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-09 16:44:32 UTC
From: kelly@dvol.com
Message-ID: <d22b54c3.0209090844.488eed25@posting.google.com>
Source record: 134952

rhmcus@yahoo.com (Rich McMahon) wrote in message
news:<3d813387.339750585@news.us.dell.com>...
> Cam
>
> Niice site.. I checked it out .. Do you have any information on the
> half size G5RV. I use the full size at home and have had very good
> luck with it.. Looking at the half size for portable operation.
>
>
> Rich
>
I had one up on FD last year. Worked fine. Swept it with a 259B,
Decent swr's on 40, 20 & 17m, gets a bit high on 15 but it's still
within the range of the ATU, I forget what the swrs were on 12 & 10m.

w3rv

4812. Re: Tired of RS employees pushing Cellphones and DirectTV

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-09 16:55:18 UTC
From: Dave <ws2l@NOSPAMoptonline.net>
Message-ID: <Hn4f9.55579$rU2.1764409@news4.srv.hcvlny.cv.net>
Source record: 134953
Cross-posted to: alt.radio.scanner,rec.radio.amateur.antenna,rec.radio.scanner,rec.radio.shortwave

As far as I'm aware, RS does not sell their list's to anyone. I think one of the dozen signs at the register state's the fact that they don't sell N&A, I may be wrong but I think there is.

"AbbN" <abbnaklie@sympatico.ca> wrote in message
news:ksOe9.287$Js1.141180@news20.bellglobal.com...
> Hi,
>
> I ran into an ex RS VP (here in Canada) many years ago and I asked him
> about that and he told me they did NOT....al least at the time. However,
> these days, I wouldn't be surprised if did - anything goes as far as
> bringing up their year-end bottom line these days...
>
> --
> Take Care
> Abb
> VE3003SWL
> (SWL CallSign)
>
>
>
> "w9gb" <gregory.beat@attbi.com> wrote in message
> news:_SLe9.405557$UU1.63126@sccrnsc03...
> > The Radio Shack marketing executive (marketing moron) that was pushing
> this
> > name and address deal (a few of the stores still ask for it) must have
> left
> > RS.
> >
> > I have now found that the Container Store (yes HQ in Texas) is now doing
> > this same thing.
> > Care to take a bet this is where the Radio Shack executive ended up?
> >
> > When I worked in the Dallas/Ft. Worth area (1980's) -- large
telemarketers
> > in that area were always "acquiring" new lists. I never found out if
they
> > legitimately acquired those RS lists.
> >
> > gb
> >
> > "Dave" <ws2l@NOSPAMoptonline.net> wrote in message
> > news:0pIe9.36398$rU2.1111347@news4.srv.hcvlny.cv.net...

> > > Mike,
> > >
> > > I totally agree with you about the name & address thing to, it takes
to
> > much
> > > time & personally I feel like I'm prying into a strangers life. I
don't
> > know
> > > of any other store that does this but unfortunately it their policy.
> It's
> > > especially annoying when you have 10-15 people in line & you have to
ask
> > for
> > > N & A, this makes people wait longer. Personally I would like to see
it
> > > disapear quickly.
> > >
> > > Dave
> > > WS2L
> > >
> > >
> > > "Mike Coslo" <mcoslo@adelphia.net> wrote in message
> > > news:3D729556.3040201@adelphia.net...
> > > > Dave wrote:
> > > >
> > > > > I'm an Asst. Manager for RS & if you frequent your local RS you
know
> > who
> > > the
> > > > > people are & who to avoid. As far as pushing cell phones goes we
are
> > > under
> > > > > siege by our higher up's to push this stuff. Personally, if I see
> > > someone
> > > > > with a cell phone I don't even bother to ask I just get you what
you
>
> > > need &
> > > > > get you on your way as quickly as possible. I still earn plenty of
> > > > > commission but after working with people directly for over 15
years
> > > > > (Previous Job) you can tell who might be interested & the person
who
> > > knows
> > > > > what they want. I agree w/the other RS employee on this one, if
you
> > > don't
> > > > > like being jumped on about wireless & satellite then take your
> > business
> > > > > elsewhere. You have the right to tell an RS employee before he/she

> > opens
> > > > > their mouth that you don't want to be offered a great deal & I'm
> sure
> > > they
> > > > > will back off. As far as product pricing goes, WE DO NOT make up
the
> > > prices
> > > > > so don't bitch at us, these prices are set at the main office in
Ft
> > > Worth
> > > > > and we have NO control over the cost of products. In fact we have
no
> > > control
> > > > > over a lot of things and I myself would appreciate it if customers
> > stop
> > > > > complaining to me & take to Ft.Worth 1-800-843-7422 or 1-800-THE
> SHACK
> > > if
> > > > > that's easier to remember.
> > > >
> > > >
> > > >
> > > > Let's put it this way. Some years ago, I quit going to Radio
> Shack
> > > > because Even if I wanted to buy a couple AA batteries, I would have
to
> > > > give my name, address, telephone address, and other stuff EVERY
single
> > > > time. If I bought something on a corp account, I had to sign
something
> > > > like six forms, and the transaction took what seemed like forever.
> > > >
> > > > I started going again because they eliminated that stupid idea.
> > > >
> > > > But I can assure you, if I get prodded to buy a cellular phone
> every
> > > > time I walk in the store, I'll stop buying anything there again.
> > > >
> > > > The corporate suits who run the show are seriously misinformed
> about
> > > > the shopping public. They will turn away business for the sales
push.
> > > >
> > > > The really interesting thing is that after the big cell phone
push,
> > > > which will drive the non-cell seeking public away, which means that
> the
> > > > store sales will become mostly cellular, the suits will be convinced
> > > > that their idea was right, because nobody will be buying anything
else

> > > > by then.
> > > >
> > > > Remember the old "Jump Frog, Jump joke?
> > > >
> > > > - Mike KB3EIA -
> > > >
> > >
> > >
> >
> >
>
>

4813. Re: Tired of RS employees pushing Cellphones and DirectTV

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-09 16:58:17 UTC
From: Dave <ws2l@NOSPAMoptonline.net>
Message-ID: <uq4f9.55588$rU2.1765178@news4.srv.hcvlny.cv.net>
Source record: 134954
Cross-posted to: alt.radio.scanner,rec.radio.amateur.antenna,rec.radio.scanner,rec.radio.shortwave

The best thing to say is that I want to pay cash & I don't want my name on ANY mailing lists, if they continue to badger you I would leave the items on the counter & leave the store. Don't forget to take a manager's card & complain to them about it, they will probably give you a song & dance but the bottom line is that you are NOT required to give N&A.

"Bill Nelson" <billn@spock.peak.org> wrote in message news:alggjukhk4@quark.scn.rain.com...
> > Let's put it this way. Some years ago, I quit going to Radio Shack
> > because Even if I wanted to buy a couple AA batteries, I would have to
> > give my name, address, telephone address, and other stuff EVERY single
> > time. If I bought something on a corp account, I had to sign something
> > like six forms, and the transaction took what seemed like forever.
>
> If they ask for you name etc - just say "No." If they say they need a
> name etc - tell them to use their own. Every RS store that I have
> frequented has a generic account already set up. They don't like to use
> it (I suspect that they are scored on percentages of people who give
> their address etc), but will if you refuse to play their game.
>
> Use cash, as they will harvest your name and address off a credit card
> or check payment.
>
> --
> Bill Nelson (billn@peak.org)
>

4814. Need RELIABLE source for ferrite snap-on cores

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-09 17:27:40 UTC
From: Floyd Sense <sentek@sprintmail.com>
Message-ID: <gS4f9.17019$6i4.1428854@newsread1.prod.itd.earthlink.net>
Source record: 134955

If you've recently purchased and received split ferrite cores with plastic snap-on case for cables of approximately 3/8" (or 3.9 - 4.0 mm), please let me know where you got them. Please don't tell me to do a Google search and that there are lots of places selling them. What I've found so far is that there's lots of places selling 1/4" cores and advertising them as 3/8" cores. If you know for certain of a source, I'd be eternally grateful. Thanks in advance.

--
K8AC
Floyd Sense in Angier, NC

4815. Re: Slingshots foretting the g5rv wre into the trees

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-09 17:52:44 UTC
From: Bill M <exray@no>
Message-ID: <unpnrq45ub8c53@corp.supernews.com>
Source record: 134956

Brian Kelly wrote:
>

> I surfed around Google for "potato guns", good Lord, they're a cult. I
> get the drift, easy enough to build. What do you use for the
> propellant? Looks like a can of ether engine starter oughta do it.

Most anything in a spray can will work. WD-40 is a favorite.

-Bill

4816. Re: G5RV or W3DZZ ?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-09 18:22:54 UTC
From: "Ian White, G3SEK" <G3SEK@ifwtech.co.uk>
Message-ID: <rIlgm2H+bOf9EAC2@ifwtech.co.uk>
Source record: 134961

Andy Cowley wrote:
>N2EY wrote:
>>
>
>> >
>> The main concern of trap quality is low loss, which equals high Q.
>>Best way to
>> get that is to build the traps yourself, using air-wound coils and
>> transmitting-type capacitors.
>>
>
>
>Surely there is a major trade-off here between high Q traps with
>narrow bandwidth and low Q traps with wider bandwidth? If, as you
>suggest, high Q components are used, the bandwidth will be
>insufficient to cover a whole band, even on our restricted 40 in
>the U.K.

The system bandwidth is determined by the loaded Q, which is a function of the L/C ratio in the traps.

The losses - which were what N2EY was talking about - are determined by the ratio of the loaded Q to the individual (unloaded) Qs of the components. In other words, N2EY was simply advocating low-loss inductors and capacitors.

--
73 from Ian G3SEK 'In Practice' columnist for RadCom (RSGB)
Editor, 'The VHF/UHF DX Book'
http://www.ifwtech.co.uk/g3sek

4817. Re: TXing & SWLing MW to 10m w/Attic Ant for Low Noise - HELP!

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-09 18:30:45 UTC
From: nm5k@wt.net
Message-ID: <25eb70d7.0209091030.4f4327cd@posting.google.com>
Source record: 134957

"thx1138" <look@life.org> wrote in message
news:<3d7c24aa$0$1426$272ea4a1@news.execpc.com>...
> > just use the regular doublet made from cheaply available wire. I can
> > see no point in using a "special" dipole, loaded or whatever, if you
> > are going to be using ladder line and a tuner. You could add loading
> > coils to improve low bands, if it's short, but you can make those if
> > needed. MK
>
> I had read in the archive somewhere about placing chicken wire near the ends
> of the dipole as some kind of capacitive hat?
> His situation was exactly as mine. On the inside of the far ends of the
> attic walls he attached chicken wire using cardboard between the wall and
> the chicken wire. He didn't describe the dimensions but said to make each
> hat equal in size. It effectively increases the length of the doublet. I
> wonder how the chicken wire would effect the ends of a "Z"-doublet?
> Another good experiment.

I'm guessing he attached a jumper to the "chicken hat" at each end.
The effect would be the same as if using a straight dipole. I would
prefer capacitive loading over inductive if I had to choose. But the
hats could just be spokes of wire. I'm not sure if I would want to use
chicken wire. I'm sure it will work though. MK

4818. Re: Tired of RS employees pushing Cellphones and DirectTV

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-09 19:22:14 UTC
From: Drew Hamilton <awh@awh.org>
Message-ID: <6dsila.pt4.ln@urd>
Source record: 134960
Cross-posted to: alt.radio.scanner,rec.radio.amateur.antenna,rec.radio.scanner,rec.radio.shortwave

GeorgeF <av8tor@licensed4fun.com> wrote:
>plan, where were the speakers that were on that shelf the other day and
>were are your BNC connectors that were on the wall? Her responce
>"there is not demand for those items anymore so we don't carry them".

Yep, it's sad. It used to be that you could go into Rat Shack and
at least get some of the "basics" -- LEDs, resistors, caps, some
common ICs (555 timers, 78-series, etc.), connectors, etc. Their
prices were never great on that stuff, but there is always a Radio
Shack closeby, and they have good hours. But now most of the
Radio Shacks in Toronto have eliminated their "electronics
hobbyist" stuff and is instead concentrating on cel phones,
satellite service, 2nd-rate toys, and 3rd-rate computers.

And to buy even basic parts, I have to drive out to the boonies to
go to the electronics hobbyist stores.

--
- awh
http://www.awh.org/

4819. Re: WTB:Winter Projects

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-09 19:27:48 UTC
From: l.levy@worldnet.att.net
Message-ID: <1f08bc6f.0209091127.16952e96@posting.google.com>
Source record: 134958
Cross-posted to: rec.antiques.radio+phono,rec.radio.amateur.antenna,rec.radio.amateur.boatanchors,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.swap

"KC0EH" <okiemansc@yahoo.com> wrote in message
news:<wpPe9.15757$6i4.1294954@newsread1.prod.itd.earthlink.net>...
> Due to being pretty much homebound from a neuro-muscular disease I am look
> for winter project or parts rigs.
> Prefer tube type or transistor due to component size.Anything considered if
> the price is right.
> Please state condition and price.
> Thanks
> ...KC0EH...OKLA.

I have the Following Transistor radios; G,E, P745, 3-G.E. P807
series, Crown TR610,Zenith Royal 20.
I am asking $120.00 Plus shipping for all 6.
The radios are complete including correct knobs.
I have a lot so if you need anything let me know.
Regards
Louis

4820. Re: Skin effect experiment with disk on antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-09 19:33:51 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <3D7CF79F.10302@eznec.com>
Source record: 134959

rsparks wrote:
> "Roy Lewallen" <w7el@eznec.com> wrote in message
> news:3D7BE863.2010207@eznec.com...
>
>>This experiment doesn't test skin effect. The problem is that the
>>current on each surface creates a field. These fields aren't isolated
>>from each other, so the field caused by the current in each side creates
>>a current in the other side. Similarly, the currents in the sides couple
>>via fields to the currents in the wires. The model of currents flowing
>>in isolation on the two surfaces is flawed, so any conclusions drawn
>>from the experiment are also flawed. This should actually come as a
>>relief, because if the simplified concept of currents were correct, I
>>believe you've also shown propagation faster than the speed of light.
>
>
> Richard Harrison in an earlier post conveniently provided a quote:
>
> "The 19th edition of the ARRL Antenna Book says on page 23-2:
> "In good conductors the speed (of r-f wave travel) is so low that the
> opposing fields set up by the wave front occupy the same space as the
> wave itself, and thus cancel it out. This is the reason for "skin
> effect" in conductors at high frequencies, making metal enclosures good
> shields for electrical circuits working at radio frequencies.""
>
> The disk in the experiment is made of solid 0.062 inch thick copper plate
> with no holes in it. This is about 10 times thicker that the diameter of
> the
> wires which make the shield of RG-58 coaxial cable.
>
> It seems to me that the disk meets the definition presented in the Antenna
> Book much better than does coaxial cable, so we should see the shielding
> provided by skin effect in the disk if it were really present in coaxial
> cable.
>
> Yes, if the current went around the disk (not through it) and the resonant
> frequency
> stayed the same, then the travel around the disk would have to be
> instantaneous.
> I don't think that is happening. I think the current is going through the
> disk despite
> the words from the Antenna Handbook that say it can not due to skin effect.

Definitions and interpretations of Antenna Book wording aside, this
response doesn't address the obvious problem of coupled fields, which is

the fundamental flaw of the experiement.

>>To test skin effect, you have to isolate the currents' fields from each
>>other. Of course, if skin effect didn't exist, you wouldn't be able to
>>isolate them (and a couple of centuries of theory would be wrong, and
>>antennas based on it wouldn't work).
>>
>>I propose the following experiment. Put a battery powered RF source and
>>small antenna into a sealed metal box. It should be completely sealed --
>>soldered circuit board material should suffice. Then try to detect any
>>sign of the RF outside the box. The antenna will induce current on the
>>inside of the box -- how much of the shield current can you detect from
>>the outside? If skin effect weren't a fact, you'd easily detect the
>
> current.
>
>>If you don't believe that the antenna would induce current on the inside
>>of the box, do this instead: Get a piece of copper pipe, a rigid wire,
>>and a couple of end caps. To the center of the inside of one of the end
>>caps, solder a 50 ohm or so resistor. To the other end of the resistor,
>>solder the rigid wire, and extend it through the pipe. Solder on the end
>>cap with the resistor. Now what you have looking into the open end of
>>the pipe is an air dielectric coax line terminated at the end with the
>>resistor. Make a small battery powered RF source (one of the little
>>IC-sized crystal oscillator modules would do nicely), and connect it
>>across the coax at the input end, then solder on the other pipe cap,
>>sealing the whole thing up. I think you'll agree that there's current
>>flowing down the center wire from the source, through the resistor, and
>>along the copper pipe back to the source. See if you can detect this
>>current by any means from the outside, or if you can detect any kind of
>>voltage drop along the path of the current.
>>
>>If you're well acquainted with good feedthrough and bypassing
>>techniques, you could instrument the inside of the pipe (as well as
>>powering the oscillator from outside). Oscillator current could be
>>measured, or you could measure the RF current by connecting a detector
>>diode to the resistor and running the DC out. Armed with this, you could
>>do whatever you want to the outside of the pipe to try and disturb the
>>current on the inside -- bury it, put ferrites along it, whatever, and
>>see how much success you have. But don't try this unless you really know
>>how to do a proper feedthrough, because any escaping RF will invalidate
>>the experiment.
>
>
> I am surprised that you do not give credit to the effect of the opposing
> currents
> that would be created in the surrounding metal. The fields of the induced
> currents would be opposite the center fields so would cancel the field from
> the
> center, just like they do when we model antennas.

In a coaxial cable, the fields cancel at any point from within the
shield to outward. This is because of skin effect: the field from the
inner conductor penetrates the field, and no field from the outer
conductor penetrates the shield. (By "none", I mean no significant
amount for a good conductor many skin depths thick. It would be
precisely zero only for a perfect conductor.) But if skin effect didn't
work, you would be able to detect the current on the outside conductor
by using a sensing device that's smaller than the pipe and putting it
close to the pipe. This is because the field from the shield comes from
current distributed around the shield -- it's the total of this field
that equals the field from the center conductor. Something like a core
that surrounds the entire pipe wouldn't detect a field, since the whole
current is going through the pipe. However, half a ferrite toroid with
several turns of wire placed against the pipe would detect a net field
or current. This effect will get more and more pronounced as the
distance from the center conductor to the shield gets greater. If your
theory were correct, you would be able to measure significant currents
on the outside wall of a shielded room (with a source inside), and a
significant net field close to the outside wall. You would also be able
to detect a voltage drop across the outside of the cable if your theory
were correct.

There is no need to call
> upon skin effect as a shielding mechanism when opposing fields can do the
> same job.
>
> I notice that you did not specify a frequency for the test, nor a thickness
> for
> the shield metal. Of course there is no need to because the results will be
> the same for all frequency and metal thickness choices.

Sorry, I thought this would be obvious. The frequency and thickness
should be such that the shield is at least several skin depths thick.
You can find the formula for skin depth in any electromagnetics text, or
in previous postings I've made on this newsgroup. If you want to be able
to measure the voltage drop along the outside of the shield that your
theory requires, you'll need to do the test at a reasonably high
frequency unless you want to build a really long cable.

>>If you do show conclusively that skin effect doesn't exist, be prepared
>>for fame and fortune!
>
>
> Skin effect is real so far as currents parallel to the surface are
> concerned.
> The claim that a shield is created by skin effect is under attack by the
> results
> of this experiment.

So far the attack doesn't seem very threatening. A valid experiment will
have to confine or account for coupled fields at the very least.

Roy Lewallen, W7EL

4821. Re: Skin effect experiment with disk on antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-09 19:58:16 UTC
From: rsparks <rsparks@elltel.net>
Message-ID: <3d7cfb7e$1_3@corp.newsgroups.com>
Source record: 134962

"Ian White, G3SEK" <G3SEK@ifwtech.co.uk> wrote in message
news:kObTMxDEVEf9EAg9@ifwtech.co.uk...
> rsparks wrote:
> > But the experiment gave the results reported and the results clearly
> >indicate that skin effect does not separate the surfaces.
>
> No, they didn't. What you reported here on the newsgroup was misleading
> compared with the more complete report on the web page.
>
> In the newsgroup, you said: "If you don't have time or the ability to
> look at the web page, I can tell you that the metal disk did not lower
> the resonant frequency of the antenna."
>
> But the web page says: "The addition of the disk RAISED the resonant
> frequency of the antenna about 0.5 Mhz."
>
> This is completely to be expected. The disks were 12in diameter, placed
> 5in each side of the feedpoint, so they were acting as the plates of a
> capacitor. Your definition of "resonance" is where the feedpoint
> reactance crosses through zero, and adding a capacitor almost directly
> across the feedpoint will indeed raise the frequency.
>
> In other words, what you wanted to look for was swamped by another large
> effect that you chose to ignore because it didn't fit your theory.
> That's bad science.
>
> --
> 73 from Ian G3SEK 'In Practice' columnist for RadCom (RSGB)
> Editor, 'The VHF/UHF DX Book'
> http://www.ifwtech.co.uk/g3sek

Good science is the goal.

I was surprised when the disk raised the resonant frequency. I fully expected them to lower the frequency but not by much. If skin effect were a shield, the lowering of resonant frequency should be a large number.

The capacity added by the disk is in parallel and is not much. I entered the calculated amount into Eznec and the resonant frequency was hardly affected. I did not expect the added capacity to space to have much effect as it is also very small.

Frankly, I can not explain the large capacity effect. I speculate that it may be due to the slower rate of charge velocity through the plate compared to

the velocity on the surface of the wire. If this were correct, it would be result in charge accumulation at the disk similar to the way cars bunch up when encountering a restriction in the road.

I am hoping that others will duplicate this experiment to verify my results. I ran it three times in three different locations. The results were not identical
each time, but were consistent in that the resonant frequency was never lowered like you would expect if skin effect were a shield.

I was further surprised at the broad resonant curve. Further experimenting could be done to see if an antenna could be broadbanded with a large wire capacity structure placed near the feed point like in this experiment. The use of a large metal plate like I used would be impractical for a large antenna due to the weight.

Good science is the goal.

73, Roger, W7WKB

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

4822. Re: Skin effect experiment with disk on antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-09 20:47:43 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <f62qnu83m302fkj055543doha3gmlfrjfi@4ax.com>
Source record: 134965

On Mon, 9 Sep 2002 12:58:16 -0700, "rsparks" <rsparks@elltel.net>
wrote:

>Frankly, I can not explain the large capacity effect.

Hi Roger,

Look what's between the plates.

73's
Richard Clark, KB7QHC

4823. Re: Tired of RS employees pushing Cellphones and DirectTV

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-09 20:55:46 UTC
From: "Arthur R. Howard" <whtmtnman@citlink.net>
Message-ID: <3D7D0AD2.318A1E0E@citlink.net>
Source record: 134963
Cross-posted to: alt.radio.scanner,rec.radio.amateur.antenna,rec.radio.scanner,rec.radio.shortwave

Gee you guys talk about all the stuff you cant get...what about an old buzzard like me that thought it was bad when the Lafayette and Allied stores went down.....IC's..Led's what are those? LOL

Drew Hamilton wrote:

> GeorgeF <av8tor@licensed4fun.com> wrote:
> >plan, where were the speakers that were on that shelf the other day and
> >were are your BNC connectors that were on the wall? Her responce
> >"there is not demand for those items anymore so we don't carry them".
>
> Yep, it's sad. It used to be that you could go into Rat Shack and
> at least get some of the "basics" -- LEDs, resistors, caps, some
> common ICs (555 timers, 78-series, etc.), connectors, etc. Their
> prices were never great on that stuff, but there is always a Radio
> Shack closeby, and they have good hours. But now most of the
> Radio Shacks in Toronto have eliminated their "electronics
> hobbyist" stuff and is instead concentrating on cel phones,
> satellite service, 2nd-rate toys, and 3rd-rate computers.
>
> And to buy even basic parts, I have to drive out to the boonies to
> go to the electronics hobbyist stores.
>
> --
> - awh
> http://www.awh.org/

4824. Re: Tired of RS employees pushing Cellphones and DirectTV

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-09 21:03:36 UTC
From: "Arthur R. Howard" <whtmtnman@citlink.net>
Message-ID: <3D7D0CA8.9EA88345@citlink.net>
Source record: 134964
Cross-posted to: alt.radio.scanner,rec.radio.amateur.antenna,rec.radio.scanner,rec.radio.shortwave

I agree with all but lets face it.It does no good to complain...RS will survive
and survive well by catering to the eletronic appliance Toys R Us crowd.
Just have to be like an old buzzard like me and stockpile junk for
parts....Just be thankful you arent dealing with tubes the size of 1/2 gallon
milk jugs and transformers that weigh 100 lbs plus.......If I brought a 4-1000
tube into a RS the first thing the guy would say is "we dont carry light bulbs"

Todd wrote:

> I used to work for RS. They make $15 per cell phone, plus $2 for one
> additional accessory, $5 for two, & $10 for 3. They get min. wage if
> they're lucky. Some get comm only. A % for things like cables costing over
> $10-20. The only way they can make any money is to push cell phones - etc.
> At a District meeting a vp was telling the employees, "Who cares what the
> customer thinks, we're here to make money, RIGHT!?". They keep track of
> everything you sell, how many names you do and don't get, etc. If you pay
> with a credit card, its illegal to ask for an address, etc. They write
> visa, MC, discover, AE, etc for the address. I quit that job (a holiday
> extra money thing) & they're still harassing me asking me to come back. I
> won't step foot in a RS. They used to be my first point of contact for
> anything electronic. You can't even buy coax at most of them anymore. RS
> is being destroyed from the top down. What's even worse is the fact that
> for years customers have been telling RS what they want & RS isn't
> listening.
>
> "Chuck/KE4ETH" <chuck_hawks@hotmailmospamorama.com> wrote in message
> news:%jMe9.47689$%P6.15071971@e3500-atl1.usenetserver.com...
> > I tell them my name is cash. I usually get, "Your first name, Mr. Cash."
> > depending on how much the total is, I answer with George (Washington), Abe
> > (Lincoln), Thomas (Jefferson), etc.
> >
> > Gets 'em every time.
> >
> > --
> > Chuck
> > KE4ETH
> >
> > x-no-archive: yes
> > "AbbN" <abbnaklie@sympatico.ca> wrote in message
> > news:UVJe9.168$hK5.57571@news20.bellglobal.com...
> > > Hi,
> > >
> > > Politely tell them to put an "R" as in "Refused" in the First Name field
> > and

> > > that's it. If they still insist, give your name as "Mickey Mouse" or
> > Donald
> > > Duck". At that point they'll usually stop.
> > >
> > > --
> > > Take Care
> > > Abb
> > > VE3003SWL
> > > (SWL CallSign)
> > >
> > >
> > >
> > > "Dave" <ws2l@NOSPAMoptonline.net> wrote in message
> > > news:0pIe9.36398$rU2.1111347@news4.srv.hcvlny.cv.net...
> > > > Mike,
> > > >
> > > > I totally agree with you about the name & address thing to, it takes
> to
> > > much
> > > > time & personally I feel like I'm prying into a strangers life. I
> don't
> > > know
> > > > of any other store that does this but unfortunately it their policy.
> > It's
> > > > especially annoying when you have 10-15 people in line & you have to
> ask
> > > for
> > > > N & A, this makes people wait longer. Personally I would like to see
> it
> > > > disapear quickly.
> > > >
> > > > Dave
> > > > WS2L
> > > >
> > > >
> > > > "Mike Coslo" <mcoslo@adelphia.net> wrote in message
> > > > news:3D729556.3040201@adelphia.net...
> > > > > Dave wrote:
> > > > >
> > > > > > I'm an Asst. Manager for RS & if you frequent your local RS you
> know
> > > who
> > > > the
> > > > > > people are & who to avoid. As far as pushing cell phones goes we
> are
> > > > under
> > > > > > siege by our higher up's to push this stuff. Personally, if I see
> > > someone
> > > > > > with a cell phone I don't even bother to ask I just get you what
> you

> > > > need &
> > > > > > get you on your way as quickly as possible. I still earn plenty of
> > > > > > commission but after working with people directly for over 15
> years
> > > > > > (Previous Job) you can tell who might be interested & the person
> who
> > > > knows
> > > > > > what they want. I agree w/the other RS employee on this one, if
> you
> > > > don't
> > > > > > like being jumped on about wireless & satellite then take your
> > > business
> > > > > > elsewhere. You have the right to tell an RS employee before he/she
> > > opens
> > > > > > their mouth that you don't want to be offered a great deal & I'm
> > sure
> > > > they
> > > > > > will back off. As far as product pricing goes, WE DO NOT make up
> the
> > > > prices
> > > > > > so don't bitch at us, these prices are set at the main office in
> Ft
> > > > Worth
> > > > > > and we have NO control over the cost of products. In fact we have
> no
> > > > control
> > > > > > over a lot of things and I myself would appreciate it if customers
> > > stop
> > > > > > complaining to me & take to Ft.Worth 1-800-843-7422 or 1-800-THE
> > SHACK
> > > > if
> > > > > > that's easier to remember.
> > > > > >
> > > > > >
> > > > > >
> > > > > > Let's put it this way. Some years ago, I quit going to Radio
> > Shack
> > > > > > because Even if I wanted to buy a couple AA batteries, I would have
> to
> > > > > > give my name, address, telephone address, and other stuff EVERY
> single
> > > > > > time. If I bought something on a corp account, I had to sign
> something
> > > > > > like six forms, and the transaction took what seemed like forever.
> > > > > >
> > > > > > I started going again because they eliminated that stupid idea.
> > > > > >
> > > > > > But I can assure you, if I get prodded to buy a cellular phone
> > every
> > > > > > time I walk in the store, I'll stop buying anything there again.

> > > > >
> > > > > The corporate suits who run the show are seriously misinformed
> > about
> > > > > > the shopping public. They will turn away business for the sales
> push.
> > > > > >
> > > > > > The really interesting thing is that after the big cell phone
> push,
> > > > > > which will drive the non-cell seeking public away, which means that
> > the
> > > > > > store sales will become mostly cellular, the suits will be convinced
> > > > > > that their idea was right, because nobody will be buying anything
> else
> > > > > > by then.
> > > > > >
> > > > > > Remember the old "Jump Frog, Jump joke?
> > > > > >
> > > > > > - Mike KB3EIA -
> > > > > >
> > > > >
> > > > >
> > > >
> > > >
> > >
> > >
> >

4825. Question for AM antenna.....

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-09 21:20:03 UTC
From: Peach <peacZZAAh@pulsLLPP124enet.com>
Message-ID: <3d7d1083_3@athena.netset.com>
Source record: 134966

Hello All,

If I am posting this question in the wrong group, please direct me to another.

I live about 30 miles South from an AM station I really enjoy (1320 AM) I am somewhat in a valley and recently a local station has upped their wattage or changed their coverage as to make a bad hum/noise on my GE Supertuner.

I have limited room for an antenna, any comments?

I will run coax to a "car Antenna" or whatever to shield that other station from interfering.

Thanks,

Joe

4826. GPS Horizontal Loop Antenna Design???

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-09 21:30:12 UTC
From: Jim Weir <jim@rst-engr.com>
Message-ID: <qh4qnu0c9i39e02c9dm0fatsd23bqe6bu8@4ax.com>
Source record: 134967

I'm diddling around (pardon me, I'm heuristically engineering) a whole potful of GPS antennas -- patch, spike, and the like.

What I'd like to try is a horizontal loop above an infinite ground plane but don't really have a good place to start. Can anybody point me to a good starting practical reference to "large" loops (i.e. quarter wave to full wave) at an arbitrary height above a ground plane?

Thanks,

Jim

Jim Weir, VP Eng. RST Eng. WX6RST
A&P, CFI, and other good alphabet soup

4827. Re: Skin effect experiment with disk on antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-09 21:36:05 UTC
From: richardharrison@webtv.net
Message-ID: <22790-3D7D1445-18@storefull-2316.public.lawson.webtv.net>
Source record: 134968

Roger, W7WKB wrote:
"Good science is the goal."

Terman explains skin effect by saying a round wire has magnetic flux in concentric circles caused by current through the wire. Some of these concentric circles are within the wire. Therefore, the deeper within the wire you sample, the more total flux circles there are within and without the wire. This means the closer to the center of the wire you get, the more inductance you encounter. The wire could be square or have any cross-section and the result would be the same.

If a conductor has increasing inductance at greater depth, it also has greater opposition to a-c.

Terman writes:
"When skin effect is present, the current is always redistributed by the conductor in such a way as to make most of the current flow where it is encircled by the smallest number of flux lines (page 22, 1955 edition)."

Best regards, Richard Harrison, KB5WZI

4828. Re: GPS Horizontal Loop Antenna Design???

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-09 21:47:35 UTC
From: VE9SRB <srbest@att.net>
Message-ID: <XF8f9.5601$1C2.510583@bgtnsc04-news.ops.worldnet.att.net>
Source record: 134869

"Jim Weir" <jim@rst-engr.com> wrote in message
news:qh4qnu0c9i39e02c9dm0fatsd23bqe6bu8@4ax.com...
> I'm diddling around (pardon me, I'm heuristically engineering) a whole
potful of
> GPS antennas -- patch, spike, and the like.
>
> What I'd like to try is a horizontal loop above an infinite ground plane
but
> don't really have a good place to start. Can anybody point me to a good
> starting practical reference to "large" loops (i.e. quarter wave to full
wave)
> at an arbitrary height above a ground plane?
>
> Thanks,
>
> Jim
>
> Jim Weir, VP Eng. RST Eng. WX6RST
> A&P, CFI, and other good alphabet soup

Jim,

What are you trying to accomplish?

Steve VE9SRB

4829. Re: Tired of RS employees pushing Cellphones and DirectTV

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-09 21:48:37 UTC
From: AbbN <abbnaklie@sympatico.ca>
Message-ID: <sG8f9.2352$I65.452075@news20.bellglobal.com>
Source record: 134870
Cross-posted to: alt.radio.scanner,rec.radio.amateur.antenna,rec.radio.scanner,rec.radio.shortwave

Hi,

> Gee you guys talk about all the stuff you cant get...what about an old
> buzzard like me that thought it was bad when the Lafayette and Allied
stores
> went down.....IC's..Led's what are those? LOL

When I was young there was a Lafayette store in downtown Detroit. I could get on the Tunnel Bus (I live across the river in Windsor) and easily go there. I bought a Signal Tracer/Generator kit from them once. Lafayette and Allied catalogues were a great source of info. I especially liked the Lafayette catalogues.....

> > And to buy even basic parts, I have to drive out to the boonies to
> > go to the electronics hobbyist stores.

Be glad in Toronto you have these - these type of stores have never survived here in Windsor.

--
Take Care
Abb
VE3003SWL
(SWL CallSign)

4830. Re: Question for AM antenna.....

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-09 22:23:05 UTC
From: Bill M <exray@no>
Message-ID: <unq7mtqv8pjn39@corp.supernews.com>
Source record: 134871

Peach wrote:
>
> Hello All,
>
> If I am posting this question in the wrong group, please direct me to
> another.
>
> I live about 30 miles South from an AM station I really enjoy (1320 AM) I am
> somewhat in a valley and recently a local station has upped their wattage or
> changed their coverage as to make a bad hum/noise on my GE Supertuner.
>
> I have limited room for an antenna, any comments?
>
> I will run coax to a "car Antenna" or whatever to shield that other station
> from interfering.
>
> Thanks,
>
> Joe

It sounds like the local station may be overloading your radio and more
antenna may be worse. You could try an indoor loop antenna. It has two
advantages...one, you can null the offending station by rotating it, and
secondly you can peak the tuning for the desired station at the expense
of the offending station if it is several 'channels' away.
This page gives plenty of details.
http://www.mindspring.com/~brucec/amloop.htm

-Bill

4831. Re: Question for AM antenna.....

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-09 22:52:29 UTC
From: Peach <peacZZAAh@pulsLLPP124enet.com>
Message-ID: <3d7d262c_1@athena.netset.com>
Source record: 134872

Bill,

I thank you!

I like nostalgic music from the late 40's to about 1965.....

Anyone know of a good station near Pittsburgh, PA that plays this kind of music (don't get me wrong, I listen to Pop, Jazz, Country....well almost everything, yes Polkas too...LOL)?...I listen to WJAS..1320, but lately they have got a little away from those classics...(Nat King Cole, Frank Sinatra, Dean Martin.....The wonderful Bobby Darin.....& soooo many more!

Thanks a bunch,

Joe

"Bill M" <"exray"@no spam-caribe.net> wrote in message news:unq7mtqv8pjn39@corp.supernews.com...
> Peach wrote:
> >
> > Hello All,
> >
> > If I am posting this question in the wrong group, please direct me to
> > another.
> >
> > I live about 30 miles South from an AM station I really enjoy (1320 AM) I am
> > somewhat in a valley and recently a local station has upped their wattage or
> > changed their coverage as to make a bad hum/noise on my GE Supertuner.
> >
> > I have limited room for an antenna, any comments?
> >
> > I will run coax to a "car Antenna" or whatever to shield that other station
> > from interfering.
> >
> > Thanks,
> >
> > Joe
>
> It sounds like the local station may be overloading your radio and more
> antenna may be worse. You could try an indoor loop antenna. It has two
> advantages...one, you can null the offending station by rotating it, and
> secondly you can peak the tuning for the desired station at the expense
> of the offending station if it is several 'channels' away.

> This page gives plenty of details.
> http://www.mindspring.com/~brucec/amloop.htm
>
> -Bill

4832. 3 MHz to 500 MHz antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-09 23:14:26 UTC
From: Boogie <j.boogert@hccnet.nl>
Message-ID: <aljaaniti1@news.hccnet.nl>
Source record: 134876

Hi,

What's the best solution for a mobile (car) antenna for the stated freq. range?

I was thinking of a widerange antenna with a magnetic foot, has anyone got some experience with such a device, and what are your findings?

regards Jeroen

4833. Re: G5RV or W3DZZ ?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-09 23:15:05 UTC
From: 'Doc <w5lz@icok.net>
Message-ID: <3D7D2B69.262F1212@icok.net>
Source record: 134873

Andy,
What am I missing? The 'Q' of a trap has nothing
to do with the an antenna being broadbanded or not.
'Doc

4834. Re: Tired of RS employees pushing Cellphones and DirectTV

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-09 23:17:12 UTC
From: Phil Wheeler <w7ox@earthlink.net>
Message-ID: <3D7D2BFA.7040902@earthlink.net>
Source record: 134874

Yeah .. I guess to be popular here they should be pushing those
excellent Radio Shack antennas :-)

Well .. if they could find one.

Phil

4835. Re: Tired of RS employees pushing Cellphones and DirectTV

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-09 23:18:52 UTC
From: w9gb <gregory.beat@attbi.com>
Message-ID: <s%9f9.263484$aA.45102@sccrnsc02>
Source record: 134875
Cross-posted to: alt.radio.scanner,rec.radio.amateur.antenna,rec.radio.scanner,rec.radio.shortwave

"Dave" <ws2l@NOSPAMoptonline.net> wrote in message
news:uq4f9.55588$rU2.1765178@news4.srv.hcvlny.cv.net...
> The best thing to say is that I want to pay cash & I don't want my name on
> ANY mailing lists, if they continue to badger you I would leave the items
on
> the counter & leave the store. Don't forget to take a manager's card &
> complain to them about it, they will probably give you a song & dance but
> the bottom line is that you are NOT required to give N&A.
>
Dave -

Actually did that once - when on the road -- manager came out said if I did not like the N&A "policy" to shop somewhere else. Now you know why I don't shop there anymore.

4836. Re: Cushcraft R7/R7000 - R6/R6000 Antiparasitari RFC Choke " H "

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-09 23:34:07 UTC
From: w9gb <gregory.beat@attbi.com>
Message-ID: <Pdaf9.263624$aA.45653@sccrnsc02>
Source record: 134877

John Tait, EI7BA has a very nice web site that should help with your R7
antenna
http://www.iol.ie/~bravo/r7_vertical.htm

You can e-mail him for specific questions at:
http://www.iol.ie/~bravo/#contactinfo
bravo@iol.ie

Cheers.

73 de w9gb

"Luis M. Madrona" <LMADRONA@teleline.es> wrote in message
news:GR2f9.330760$6K3.2886238@telenews.teleline.es...
> Hallow, any body Know the inductance of the RFC " H " Antiparasitari
Choke,
> or external diameter of the form and longitude, wire number and wire turn
?
>
> Thansk from Luis EA7QW 73's
>
>

4837. Re: Cushcraft R7/R7000 - R6/R6000 Antiparasitari RFC Choke " H "

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-09 23:47:28 UTC
From: w9gb <gregory.beat@attbi.com>
Message-ID: <kqaf9.263740$aA.45358@sccrnsc02>
Source record: 134878

Here is the photo at the Cushcraft web site
http://www.cushcraft.com/amateur/index80.htm

w9gb

"Luis M. Madrona" <LMADRONA@teleline.es> wrote in message
news:GR2f9.330760$6K3.2886238@telenews.teleline.es...
> Hallow, any body Know the inductance of the RFC " H " Antiparasitari
Choke,
> or external diameter of the form and longitude, wire number and wire turn
?
>
> Thansk from Luis EA7QW 73's
>
>

4838. Re: 3 MHz to 500 MHz antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-10 00:36:57 UTC
From: Rollo <nobody@nowhere.com>
Message-ID: <1103_1031618222@netnews.attbi.com>
Source record: 134879

On Tue, 10 Sep 2002 01:14:26 +0200, "Boogie" <j.boogert@hccnet.nl> wrote:
> Hi,
>
> What's the best solution for a mobile (car) antenna for the stated freq.
> range?
>
> I was thinking of a widerange antenna with a magnetic foot, has anyone got
> some experience with such a device, and what are your findings?

I think if you were to try to span the stated 7 octaves, you would have a "Jack of all trades and master of none"

The tradeoffs you'd have to make would render the antenna borderline unusable on any specific band.

Of course, I've been wrong before...

4839. Re: H.A.A.R.P

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-10 00:43:02 UTC
From: Steve & Jenny Carson <sccarson@erols.com>
Message-ID: <aljf6t$lo2$1@bob.news.rcn.net>
Source record: 134880

HAARP has a very limited transmit schedule.
If you want to pin down any effects from HAARP,
you will have to figure out if they were on at the time.
(Last I heard, it was only a couple of weeks a year)

If you read the environmental impact statement, HAARP
is powered by diesel generators, and the operations of the
facility are limited by the total number of particulates dumped
into the air by the generators.

So much for aliens, weather control, and other black bag theories -
these guys had their butts kick by the EPA.

Steve KB3BXI

"Dan/W4NTI" <w4nti@mindspringnospam.com> wrote in message
news:alavajgnj1@slb3.atl.mindspring.net...
> Has anyone else noticed that since the inception of the High Frequency
> Active Auroral Research Program (HAARP) that HF propagation has been
really
> wierd? Especially during summer months.
>
> I don't remember propagation being so bad, during daylight in particular,
as
> it has been since 98 when HAARP fired up.
>
> Even in this peak sunspot cycle (a two peaker yet) it has been rough as
> hotel. I realize summertime obsortion is a major factor. Perhaps we
could
> blame it on the ozone layer.
>
> Any comments?
>
> Dan/W4NTI
>
> HAARP link below
>
> http://server5550.itd.nrl.navy.mil/projects/haarp/
>
>

4840. Re: Slingshots foretting the g5rv wre into the trees

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-10 01:04:29 UTC
From: ricknj10@hotmail.com
Message-ID: <3d7d44ef.30263079@news.optonline.net>
Source record: 134881

>What do you use for the
>propellant? Looks like a can of ether engine starter oughta do it.
>>

Hair spray.

4841. Re: G5RV or W3DZZ ?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-10 01:10:58 UTC
From: n2ey@aol.com
Message-ID: <20020909211058.15779.00000609@mb-fm.aol.com>
Source record: 134882

In article <rllgm2H+bOf9EAC2@ifwtech.co.uk>, "Ian White, G3SEK"
<G3SEK@ifwtech.co.uk> writes:

>Subject: Re: G5RV or W3DZZ ?
>From: "Ian White, G3SEK" <G3SEK@ifwtech.co.uk>
>Date: Mon, 9 Sep 2002 19:22:54 +0100

>Andy Cowley wrote:
>>N2EY wrote:

>>> The main concern of trap quality is low loss, which equals high Q.
>>>Best way to
>>> get that is to build the traps yourself, using air-wound coils and
>>> transmitting-type capacitors.

>>Surely there is a major trade-off here between high Q traps with
>>narrow bandwidth and low Q traps with wider bandwidth? If, as you
>>suggest, high Q components are used, the bandwidth will be
>>insufficient to cover a whole band, even on our restricted 40 in
>>the U.K.

>The system bandwidth is determined by the loaded Q, which is a function
>of the L/C ratio in the traps.

>The losses - which were what N2EY was talking about - are determined by
>the ratio of the loaded Q to the individual (unloaded) Qs of the
>components. In other words, N2EY was simply advocating low-loss
>inductors and capacitors.

>--
>73 from Ian G3SEK

Thanks, Ian - you said it much clearer than I could!

I went back to the original 1955 article by W3DZZ himself. He was able to get a
2:1 SWR bandwidth of over 200 kHz using traps of approxiamtely 62 pf/8.2 uH
and fairly low loss construction. If it worked for him, it can work for you.

Also consider the "half size" W3DZZ for work on 40, 20 and 10 meters. This
antenna uses 20 meter traps consisting of a 27 pF capacitor and 4.7 uH
inductor. If a ceramic "egg" insulator is used for the trap strain insulator
and a 25 pF transmitting cap, the combination will have 27 pF.

--

Almost all simple multiband amateur HF antennas are a compromise of some sort.
Practically all of them need a tuner of some kind to work over the entire 80
and possibly the Region 2 40 meter bands.

In some circles trap antennas have gooten a bad name. See how often an antenna manufacturer will brag that their design has "no lossy traps" or some such. Yet well constructed traps can have insignificant losses, and do an excellent job.

Where traps can be a problem is when many of them are used. It is possible to build a multiband dipole that has traps for every band except the lowest, and get a nice low SWR on each band. Such an antenna will also be quite a bit smaller than a fullsize dipole for the lowest band. But the losses of all those traps can amount to a surprising figure!

73 de Jim, N2EY

4842. Re: 40 m dipole?? How much of leg can I bend??

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-10 01:16:22 UTC
From: Tarmo Tammaru <t-tammaru@home.com>
Message-ID: <GJbf9.283591$On.11695925@bin3.nnrp.aus1.giganews.com>
Source record: 134883

You need to experiment. My guess is that if you are using a balun, go 5 feet on each end, instead of 10 all on one side. If you are not using a balun, put the 10 feet on the side that connects to the shield of the coax. You may need to trim the length.

Tam/WB2TT

"StarGazer" <pti@capnet.com> wrote in message news:3D7B97E7.F55480AC@capnet.com...
> One end of my resonant coax fed 40 m dipole needs to be bent
> 90 deg straight downward on one end.
> Thats about 10 ft or 1/3 of one of the legs.
>
> Will this affect its performance much??
>

4843. Re: GPS Horizontal Loop Antenna Design???

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-10 01:46:03 UTC
From: richardharrison@webtv.net
Message-ID: <22790-3D7D4EDB-38@storefull-2316.public.lawson.webtv.net>
Source record: 134884

Jim Weir wrote:
"---what I`d like to try is a horizontal loop above an infinite ground plane---."

In another thread KC1D1 wrote:
"---Cebik has a good paper on Large horizontal loops at---
http://www.cebik.com/atl1.html

This scales to any frequency. A 2-wl perimeter loop is nearly omnidirectional and when mounted less than 1/2-wl over a reflecting plane, radiates mostly straight up. Cebik gives the drivepoint impedances for various horizontal loops.

Best regards, Richard Harrison, KB5WZI

4844. Re: Slingshots foretting the g5rv wre into the trees

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-10 02:59:31 UTC
From: n2ey@aol.com
Message-ID: <20020909225931.02651.00000216@mb-cc.aol.com>
Source record: 134886

In article <d22b54c3.0209080845.64d2b910@posting.google.com>, kelly@dvol.com (Brian Kelly) writes:

>'Doc <w5lz@icok.net> wrote in message news:<3D7A51BC.8222710F@icok.net>...
>> Wayne,
>> I use a 'potato' cannon. Not supposed to use those
>> here, so I just don't ask.
>> 'Doc
>
>
>Doesn't the bark from a 90mm potato howitzer sorta generate a few . .
>umm . . "questions" around the neighborhood . . ?
>>
>>
>I have a beast of a bow & arrow rig which can toss a 70lb test line
>over an 80 foot tree with room to spare. Silently. But somehow yer
>cannon has some sex appeal, I gotta look into it.
>
They are also known as "spud guns". Usually made of PVC pipe.

--

For true madness in this vain, check out the various sites on "punkin chunkin" (tossing pumpkins great distances). Personal favorite of mine is the Aludium Q36 Pumpkin Modulator, an air cannon which has tossed the standard 8-10 pound fruit over 4000 feet.

73 de Jim, N2EY

4845. Re: Need RELIABLE source for ferrite snap-on cores

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-10 02:59:37 UTC
From: Ralph Wallace <ralph@rwallace.com>
Message-ID: <3D4E8CDC.7050705@rwallace.com>
Source record: 134885

Floyd Sense wrote:
> If you've recently purchased and received split ferrite cores with plastic
> snap-on case for cables of approximately 3/8" (or 3.9 - 4.0 mm), please let
> me know where you got them. Please don't tell me to do a Google search and
> that there are lots of places selling them. What I've found so far is that
> there's lots of places selling 1/4" cores and advertising them as 3/8"
> cores. If you know for certain of a source, I'd be eternally grateful.
> Thanks in advance.
>
> --
> K8AC
> Floyd Sense in Angier, NC
>
>

Darn, I just measured my Radio Shack beads and they are 5/15".
Cheers,
Ralph
KB9KKR

4846. 9:1 Balun/Inductance Question

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-10 03:54:02 UTC
From: marvin rosen <raghead@worldnet.att.net>
Message-ID: <u1ef9.6129$1C2.546733@bgtnsc04-news.ops.worldnet.att.net>
Source record: 134887

A 9:1 balun has a 3 to1 winding ratio.Would the
inductance of the primary/secondary coils also be
3 to 1?

Outgoing mail is certified Virus Free.
Checked by AVG anti-virus system (http://www.grisoft.com).
Version: 6.0.385 / Virus Database: 217 - Release Date: 9/4/02

4847. Re: 9:1 Balun/Inductance Question

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-10 03:56:38 UTC
From: Chuck/KE4ETH <chuck_hawks@hotmailmospamorama.com>
Message-ID: <CSdf9.65882$%P6.25553201@e3500-atl1.usenetserver.com>
Source record: 134888

Shouldn't that be 3:.333 or 9:1 ?

--
Chuck
KE4ETH

"marvin rosen" <raghead@worldnet.att.net> wrote in message
news:u1ef9.6129$1C2.546733@bgtnsc04-news.ops.worldnet.att.net...
> A 9:1 balun has a 3 to1 winding ratio.Would the
> inductance of the primary/secondary coils also be
> 3 to 1?
>
>
> ---
> Outgoing mail is certified Virus Free.
> Checked by AVG anti-virus system (http://www.grisoft.com).
> Version: 6.0.385 / Virus Database: 217 - Release Date: 9/4/02
>
>

4848. Re: G5RV or W3DZZ ?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-10 05:29:41 UTC
From: "Ian White, G3SEK" <G3SEK@ifwtech.co.uk>
Message-ID: <DCraPNAFNYf9EAlJ@ifwtech.co.uk>
Source record: 134821

N2EY wrote:
>
>I went back to the original 1955 article by W3DZZ himself. He was able
>to get a 2:1 SWR bandwidth of over 200 kHz using traps of approxiamtely
>62 pf/8.2 uH and fairly low loss construction. If it worked for him, it
>can work for you.
>
It might not work quite so well for me and Andy in Europe, since our bands are only 3.5-3.8MHz and 7.0-7.1MHz. For optimum performance, the trap resonance needs to be moved down to 7.05MHz, and the L/C ratio changed, together with the two wire lengths. Apart from that, our trap dipoles are exactly the same as yours :-)

--
73 from Ian G3SEK 'In Practice' columnist for RadCom (RSGB)
Editor, 'The VHF/UHF DX Book'
http://www.ifwtech.co.uk/g3sek

4849. Re: 9:1 Balun/Inductance Question

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-10 06:04:03 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <3D7D8B53.7090106@eznec.com>
Source record: 134889

Nope, 9:1. The inductance or impedance is approximately proportional to
the square of the number of turns.

Roy Lewallen, W7EL

marvin rosen wrote:
> A 9:1 balun has a 3 to1 winding ratio.Would the
> inductance of the primary/secondary coils also be
> 3 to 1?
>
>
> ---
> Outgoing mail is certified Virus Free.
> Checked by AVG anti-virus system (http://www.grisoft.com).
> Version: 6.0.385 / Virus Database: 217 - Release Date: 9/4/02
>
>

4850. Re: Cushcraft R7/R7000 - R6/R6000 Antiparasitari RFC Choke " H "

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-10 07:02:09 UTC
From: PA3HGT <pa3hgt@zeelandnet.nl>
Message-ID: <3d7d98e7$0$8641$fb624cd1@news1.zeelandnet.nl>
Source record: 134890

Is there's such a page for the R6000 and the AV620 of Hygain (not from Hygain or Cushcraft)?

73 , Hans

"w9gb" <gregory.beat@attbi.com> schreef in bericht news:Pdaf9.263624$aA.45653@sccrnsc02...
> John Tait, EI7BA has a very nice web site that should help with your R7
> antenna
> http://www.iol.ie/~bravo/r7_vertical.htm
>
> You can e-mail him for specific questions at:
> http://www.iol.ie/~bravo/#contactinfo
> bravo@iol.ie
>
> Cheers.
>
> 73 de w9gb
>
> "Luis M. Madrona" <LMADRONA@teleline.es> wrote in message
> news:GR2f9.330760$6K3.2886238@telenews.teleline.es...
> > Hallow, any body Know the inductance of the RFC " H " Antiparasitari
> Choke,
> > or external diameter of the form and longitude, wire number and wire
turn
> ?
> >
> > Thansk from Luis EA7QW 73's
> >
> >
>
>

4851. Re: Need RELIABLE source for ferrite snap-on cores

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-10 09:05:46 UTC
From: Reg Edwards <g4fgq.regp@btinternet.com>
Message-ID: <alkcla$2jg$1@helle.btinternet.com>
Source record: 134891

"Floyd Sense" wrote
> If you've recently purchased and received split ferrite cores with plastic
> snap-on case for cables of approximately 3/8" (or 3.9 - 4.0 mm), please
let
> me know where you got them. Please don't tell me to do a Google search
and
> that there are lots of places selling them. What I've found so far is
that
> there's lots of places selling 1/4" cores and advertising them as 3/8"
> cores. If you know for certain of a source, I'd be eternally grateful.
> Thanks in advance.
==========
Hi Floyd,

The first thing you ought to do is decide whether or not you need ferrite
cores and for exactly what purpose.

Have you already been conned by the old-wives, the so-called Gurus, the
periodicals and the handbooks ?

The last things you should concern yourself with are the core dimensions and
material permeability.

Good luck with your search.

Reg.

> --
> K8AC
> Floyd Sense in Angier, NC
>
>

4852. Re: G5RV or W3DZZ ?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-10 09:38:52 UTC
From: Reg Edwards <g4fgq.regp@btinternet.com>
Message-ID: <alkejbma1@knossos.btinternet.com>
Source record: 134892

"Ian White, G3SEK wrote -

> The system bandwidth is determined by the loaded Q, which is a function
> of the L/C ratio in the traps.
>
==========

There's an obligatory resistance associated with every Q.

It is usual to define Q as Omega*L/R.

In the present context, what is R.

Reg, G4FGQ

4853. Re: Tired of RS employees pushing Cellphones and DirectTV

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-10 09:39:56 UTC
From: Peter Maus <DPeterMaus@worldnet.att.net>
Message-ID: <3D7DBDC2.921FFD8B@worldnet.att.net>
Source record: 134893
Cross-posted to: alt.radio.scanner,rec.radio.amateur.antenna,rec.radio.scanner,rec.radio.shortwave

Bill Nelson wrote:
>
> > Let's put it this way. Some years ago, I quit going to Radio Shack
> > because Even if I wanted to buy a couple AA batteries, I would have to
> > give my name, address, telephone address, and other stuff EVERY single
> > time. If I bought something on a corp account, I had to sign something
> > like six forms, and the transaction took what seemed like forever.
>
> If they ask for you name etc - just say "No." If they say they need a
> name etc - tell them to use their own. Every RS store that I have
> frequented has a generic account already set up. They don't like to use
> it (I suspect that they are scored on percentages of people who give
> their address etc), but will if you refuse to play their game.
>
> Use cash, as they will harvest your name and address off a credit card
> or check payment.

RS employees have a quota for names and addresses captured. At one of my favorite RS stores, there was a sales person on the floor who really 'got it.' Left me alone to buy my stuff, and after a quick brush with a steady stare, and a malevolent pause followed by a quiet 'no', never asked for my name and number again. She was terminated. Her Store Mangler told me that she failed to meet some required numbers. I ran into her at a real electronics store in the area a few months later and she told me she was let go for two reasons. One was not capturing her quota of names and addresses. The other was not aggressively pushing cell phones. This despite the fact that she had been the highest grossing sales person on the floor, commission only and making a rather substantial income.

The problem with RS, however is not the clerks on the sales floor. Or, in most cases, the Store Mangler. The problem with RS, like most businesses, is in the corner office. It's there that the culture is formed that's passed down through the corporation. It's there that the hiring policies are formed, and the requirements of performance established.

I rarely go into an RS store anymore. Better stuff is available elsewhere, with much less intrusion on the sales floor. The mangler at my local RS, who wised up pretty fast the first time I walked in there still says hello when I see him out in the community. But he doesn't ask why I haven't been in the store lately. He fully understands why...and although he doesn't dare say it out loud in public, privately admits he agrees with my decisions not to return.

RS is, for most people there, a job. There are few who consider it a career anymore. And of those, none that I've met who are into electronics.

I had a maddeningly hysterical encounter at one of the stores in Rockford a couple of years ago with a sales goof who had never heard of a shortwave radio. After bringing out several scanners, with escalating frustration because I was looking for something with HF coverage and he didn't understand that there was a difference, the mangler of the store came out. I recognized him as the owner of a hobbycraft store in South Holland I'd done spots for a few years earlier. He quickly dismissed the sales goof, and brought out a number of SW sets himself. We had a nice chat about the job, his future with the company, and how he went from owning Scale Models, to mangling a RS in Rockford.

His answer was pretty simple...RS is a sales company. He's a salesman. It was a perfect fit. I asked him if he had any background in electronics...he said "no...that's what I have YOU for."

Mike has since moved on. He was frustrated with all the tedious requirements that upper manglement had saddled him with that really had nothing to do with sales or electronics, or anything else in the real world. Which seems to be the way with most RS manglers these days.

He

>
> --
> Bill Nelson (billn@peak.org)

4854. Re: 3 MHz to 500 MHz antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-10 09:41:04 UTC
From: Boogie <j.boogert@hccnet.nl>
Message-ID: <alkf1medf1@news.hccnet.nl>
Source record: 134894

Hi Rollo,

Thanks for answering my question in a clear and unmistakable way.

Do you by any chance know a site with the different antenna theories in praktice please?

See ya Jeroen

4855. Re: Need RELIABLE source for ferrite snap-on cores

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-10 10:43:47 UTC
From: k1bqt@aol.com
Message-ID: <20020910064347.22732.00002080@mb-cb.aol.com>
Source record: 134895

>The last things you should concern yourself with are the core dimensions and material permeability.<

Permeability isn't important? You've been smoking woo-woo weed again, Reg! What wives tales are you referring to---size doesn't matter?

Rick K1BQT

4856. Re: Need RELIABLE source for ferrite snap-on cores

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-10 11:35:22 UTC
From: Floyd Sense <sentek@sprintmail.com>
Message-ID: <_Nkf9.208$gr6.16216@newsread1.prod.itd.earthlink.net>
Source record: 134896

Gee Reg, I thought it was common knowledge that the split cores had to fit around the conductor so that the two halves touch properly. If the "hole" is too small, that won't happen. The number of useful answers provided by this group grows less by the day.

--
K8AC
Floyd Sense in Angier, NC
> Hi Floyd,
>
> The first thing you ought to do is decide whether or not you need ferrite
> cores and for exactly what purpose.
>
> Have you already been conned by the old-wives, the so-called Gurus, the
> periodicals and the handbooks ?
>
> The last things you should concern yourself with are the core dimensions
and
> material permeability.
>
> Good luck with your search.
> ---
> Reg.

4857. Re: Skin effect experiment with disk on antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-10 12:46:45 UTC
From: rsparks <rsparks@elltel.net>
Message-ID: <3d7de5cd_4@corp.newsgroups.com>
Source record: 134897

"Richard Clark" <kb7qhc@attbi.com> wrote in message
news:cccpnu049jvv17229h10e0p4pqn9obqmrm@4ax.com...

Snip some for brevity.

> Yes it should, but your set-up was far too error-prone to reveal it.
> Further, even casual observation of the photos reveals you had a world
> of problems with almost everything under the sun (including yourself)
> between those two capacitor plates you added.
>

Snip some more for brevity.

You must think that the supports are metal. They are not.
They are PVC and dry wood. Yes they would have some dielectric effect
but it would be very little compared to the skin effect shielding that we
should
see with this design. I indicated on the web page that skin effect
shielding
should add about 2 feet to the length of the antenna, and would lower the
resonant frequency by about 2.8 MHz.

The presence of the test meter between the plates would act to increase the
capacity between the plates but again by very little. The meter is 2 1/2
inches
wide and is about 6 square inches in cross section as seen between the disk
plates. If the meter were a metal box, then the effective spacing between
the
disk would be reduced by the width of the meter (2 1/2 inches) so the
spacing
for that area would be 7 1/2 inches. Because we are using a 12 inch
diameter
disk, the presence of the meter does not introduce a large change in the
final
capacity between the disk.

The calculated capacity between the disk without the presence of dielectrics
or meter is 2.54 pF. This would have a reactance of about 2280 ohms at 27.5
MHz.
By using Eznec, it was easy to see that a reactance much lower than 2279
ohms
placed in parallel with the feed line had little effect on the resonant
frequency.
Those who have good skills in using Eznec should try placing a variety of
capacity
sizes in parallel with the feed line to see how the antenna impedance and

resistance change.

I completely agree that the physics must apply equally everywhere. That is why
I picked a thick disk (relative to coax braid). That is why the disk is 12 inches in
diameter, large enough to have a very measurable effect on the resonant length
of the antenna if the skin effect shield is real.

The disk antenna experiment has two radically different expectations between skin effect shielding
and widely accepted electromagnetic theory. Clearly the results of the experiment do not support
skin effect shielding which is troubling for all of us trained on the ARRL Antenna Handbook.

73, Roger, W7WKB

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
------== Over 80,000 Newsgroups - 16 Different Servers! =-----

4858. Re: Need RELIABLE source for ferrite snap-on cores

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-10 12:57:52 UTC
From: Reg Edwards <g4fgq.regp@btinternet.com>
Message-ID: <alkq8g$e2g$1@knossos.btinternet.com>
Source record: 134898

You two guys have completely missed the point.

I did NOT say dimensions and and permeabilty are unimportant.

I said it was more important to decide FIRST whether any cores were needed
at all.

Which I'm sure you will agree with. Or are your shacks and antennas
festooned with ferrite rods, rings and clamp-ons about which you know
nothing except their dimensions ?

In any case an exact fit is unnecessary.

Yours, Reg.

========================

"Floyd Sense" <sentek@sprintmail.com> wrote in message
news:_Nkf9.208$gr6.16216@newsread1.prod.itd.earthlink.net...
> Gee Reg, I thought it was common knowledge that the split cores had to fit
> around the conductor so that the two halves touch properly. If the "hole"
> is too small, that won't happen. The number of useful answers provided by
> this group grows less by the day.
>
> --
> K8AC
> Floyd Sense in Angier, NC
> > Hi Floyd,
> >
> > The first thing you ought to do is decide whether or not you need
ferrite
> > cores and for exactly what purpose.
> >
> > Have you already been conned by the old-wives, the so-called Gurus, the
> > periodicals and the handbooks ?
> >
> > The last things you should concern yourself with are the core dimensions
> and
> > material permeability.
> >
> > Good luck with your search.
> > ---
> > Reg.
>
>
>

4859. Re: 3 MHz to 500 MHz antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-10 13:17:00 UTC
From: John Passaneau <jxp16@psu.edu>
Message-ID: <alkrc9$stu@r02n01.cac.psu.edu>
Source record: 134899

Hi:

There is no antenna with any reasonable or unreasonable combination of coils/traps or whatever that will work over that range. There is one antenna that might do the job for you. It's called an active antenna. Its a short whip, about 4' long, with an amplifier right at the base. The amplifier converts the VERY high Z of the antenna to match coax to the radio. It works by using the whip as a "capacitive probe" to the electric (radio waves) fields around the whip. They can be quite effective. The disadvantages are they can't be used for transmitting. Active antennas are quite propone to over load by strong local signals. And they pick up local noise like computer hash, ignition noise and power line noise very well.
But its the only antenna that will come close to doing what you want.

--
John Passaneau
Penn State University, State College Pa.
W3JXP
w3jxp@arrl.net

"Boogie" <j.boogert@hccnet.nl> wrote in message
news:aljaaniti1@news.hccnet.nl...
> Hi,
>
> What's the best solution for a mobile (car) antenna for the stated freq.
> range?
>
> I was thinking of a widerange antenna with a magnetic foot, has anyone got
> some experience with such a device, and what are your findings?
>
> regards Jeroen
>
>

4860. Re: Skin effect experiment with disk on antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-10 13:32:17 UTC
From: rsparks <rsparks@elltel.net>
Message-ID: <3d7df078_1@corp.newsgroups.com>
Source record: 134900

"Roy Lewallen" <w7el@eznec.com> wrote in message
news:3D7CF79F.10302@eznec.com...
>
> Definitions and interpretations of Antenna Book wording aside, this
> response doesn't address the obvious problem of coupled fields, which is
> the fundamental flaw of the experiement.
>
> >>To test skin effect, you have to isolate the currents' fields from each
> >>other. Of course, if skin effect didn't exist, you wouldn't be able to
> >>isolate them (and a couple of centuries of theory would be wrong, and
> >>antennas based on it wouldn't work).
> >>

The words of the book are of great importance. Either the two sides of the
disk are coupled together or they are not. Your last post says they are
coupled but the book says they can not be. Hmmm. Where do we go from here?

> >>I propose the following experiment. Put a battery powered RF source and
> >>small antenna into a sealed metal box. It should be completely sealed --
> >>soldered circuit board material should suffice. Then try to detect any
> >>sign of the RF outside the box. The antenna will induce current on the
> >>inside of the box -- how much of the shield current can you detect from
> >>the outside? If skin effect weren't a fact, you'd easily detect the
> >
> > current.
> >
> >>If you don't believe that the antenna would induce current on the inside
> >>of the box, do this instead: Get a piece of copper pipe, a rigid wire,
> >>and a couple of end caps. To the center of the inside of one of the end
> >>caps, solder a 50 ohm or so resistor. To the other end of the resistor,
> >>solder the rigid wire, and extend it through the pipe. Solder on the end
> >>cap with the resistor. Now what you have looking into the open end of
> >>the pipe is an air dielectric coax line terminated at the end with the
> >>resistor. Make a small battery powered RF source (one of the little
> >>IC-sized crystal oscillator modules would do nicely), and connect it
> >>across the coax at the input end, then solder on the other pipe cap,
> >>sealing the whole thing up. I think you'll agree that there's current
> >>flowing down the center wire from the source, through the resistor, and
> >>along the copper pipe back to the source. See if you can detect this
> >>current by any means from the outside, or if you can detect any kind of
> >>voltage drop along the path of the current.
> >>
> >>If you're well acquainted with good feedthrough and bypassing
> >>techniques, you could instrument the inside of the pipe (as well as
> >>powering the oscillator from outside). Oscillator current could be

> >>measured, or you could measure the RF current by connecting a detector
> >>diode to the resistor and running the DC out. Armed with this, you could
> >>do whatever you want to the outside of the pipe to try and disturb the
> >>current on the inside -- bury it, put ferrites along it, whatever, and
> >>see how much success you have. But don't try this unless you really know
> >>how to do a proper feedthrough, because any escaping RF will invalidate
> >>the experiment.
> >
> >
> > I am surprised that you do not give credit to the effect of the opposing
> > currents
> > that would be created in the surrounding metal. The fields of the
induced
> > currents would be opposite the center fields so would cancel the field
from
> > the
> > center, just like they do when we model antennas.
>
> In a coaxial cable, the fields cancel at any point from within the
> shield to outward. This is because of skin effect: the field from the
> inner conductor penetrates the field, and no field from the outer
> conductor penetrates the shield. (By "none", I mean no significant
> amount for a good conductor many skin depths thick. It would be
> precisely zero only for a perfect conductor.) But if skin effect didn't
> work, you would be able to detect the current on the outside conductor
> by using a sensing device that's smaller than the pipe and putting it
> close to the pipe. This is because the field from the shield comes from
> current distributed around the shield -- it's the total of this field
> that equals the field from the center conductor. Something like a core
> that surrounds the entire pipe wouldn't detect a field, since the whole
> current is going through the pipe. However, half a ferrite toroid with
> several turns of wire placed against the pipe would detect a net field
> or current. This effect will get more and more pronounced as the
> distance from the center conductor to the shield gets greater. If your
> theory were correct, you would be able to measure significant currents
> on the outside wall of a shielded room (with a source inside), and a
> significant net field close to the outside wall. You would also be able
> to detect a voltage drop across the outside of the cable if your theory
> were correct.
>
> There is no need to call
> > upon skin effect as a shielding mechanism when opposing fields can do
the
> > same job.
> >
> > I notice that you did not specify a frequency for the test, nor a
thickness
> > for
> > the shield metal. Of course there is no need to because the results
will be

> > the same for all frequency and metal thickness choices.
>
> Sorry, I thought this would be obvious. The frequency and thickness
> should be such that the shield is at least several skin depths thick.
> You can find the formula for skin depth in any electromagnetics text, or
> in previous postings I've made on this newsgroup. If you want to be able
> to measure the voltage drop along the outside of the shield that your
> theory requires, you'll need to do the test at a reasonably high
> frequency unless you want to build a really long cable.

My first reaction to this proposal was that detection would be impossible under any circumstance. I was thinking of a torroid detector which surrounded the test device.

After further reflection on the proposal, I think that direct coupling to the test box or capacity coupling could detect current inside the apparatus. This would be true because there would always be resistive caused voltage drop across the conductor.

But the test would only be convincing if it were conducted by two people, one who would be the builder and supporter of skin effect shielding, one who would be the observer and detractor of skin effect shielding. If the detractor built and performed the experiment, the supporter could always say negative things such as the power level was too high, the shield was too thin to be effective at the frequency used or the seal of the box was not complete. If the supporter built the apparatus, the detractor would use every means possible to detect the current inside including amplification and direct attachment to the apparatus. It would be a real challenge to prevent any detection by the detractor unless the power level inside was zero. Of course there would always be a lower detection limit due to noise but the limit could always be overcome by increasing the power level inside the apparatus.

How do you think the results of the disk antenna experiment should vary when we first assume skin effect shielding occurs, and then assume that the fields act without skin effect shielding. I concluded that the resonant frequency should be about 2.8 MHz lower that what was observed. What would you predict?

73, Roger, W7WKB

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

4861. Re: H.A.A.R.P

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-10 13:45:47 UTC
From: Dan/W4NTI <w4nti@mindspringnospam.com>
Message-ID: <alktap$f7c$1@nntp9.atl.mindspring.net>
Source record: 134902

You mean the EPA actually did something of benifit? Last I heard they were killing spray cans because of the sun causing holes in the ozone area...he he.

Dan/W4NTI

"Steve & Jenny Carson" <sccarson@erols.com> wrote in message news:aljf6t$lo2$1@bob.news.rcn.net...
> HAARP has a very limited transmit schedule.
> If you want to pin down any effects from HAARP,
> you will have to figure out if they were on at the time.
> (Last I heard, it was only a couple of weeks a year)
>
> If you read the environmental impact statement, HAARP
> is powered by diesel generators, and the operations of the
> facility are limited by the total number of particulates dumped
> into the air by the generators.
>
> So much for aliens, weather control, and other black bag theories -
> these guys had their butts kick by the EPA.
>
> Steve KB3BXI
>
> "Dan/W4NTI" <w4nti@mindspringnospam.com> wrote in message
> news:alavajgnj1@slb3.atl.mindspring.net...
> > Has anyone else noticed that since the inception of the High Frequency
> > Active Auroral Research Program (HAARP) that HF propagation has been
> really
> > wierd? Especially during summer months.
> >
> > I don't remember propagation being so bad, during daylight in
particular,
> as
> > it has been since 98 when HAARP fired up.
> >
> > Even in this peak sunspot cycle (a two peaker yet) it has been rough as
> > hotel. I realize summertime obsortion is a major factor. Perhaps we
> could
> > blame it on the ozone layer.
> >
> > Any comments?
> >
> > Dan/W4NTI
> >
> > HAARP link below

> >
> > http://server5550.itd.nrl.navy.mil/projects/haarp/
> >
> >
>
>

4862. Re: GPS Horizontal Loop Antenna Design???

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-10 13:49:03 UTC
From: VE9SRB <srbest@att.net>
Message-ID: <jLmf9.6591$1C2.583119@bgtnsc04-news.ops.worldnet.att.net>
Source record: 134901

"Richard Harrison" <richardharrison@webtv.net> wrote in message
news:22790-3D7D4EDB-38@storefull-2316.public.lawson.webtv.net...
> Jim Weir wrote:
> "---what I`d like to try is a horizontal loop above an infinite ground
> plane---."
>
> In another thread KC1D1 wrote:
> "---Cebik has a good paper on Large horizontal loops at---
> http://www.cebik.com/atl1.html
>
> This scales to any frequency. A 2-wl perimeter loop is nearly
> omnidirectional and when mounted less than 1/2-wl over a reflecting
> plane, radiates mostly straight up. Cebik gives the drivepoint
> impedances for various horizontal loops.
>
> Best regards, Richard Harrison, KB5WZI
>

Hi Richard,

At 1/2 WL spacing above ground there will be a null directly overhead and a beam peak near 35 degs. At lower heights it will radiate straight up but coverage at low elevation angles will be very poor. I was just wondering what perceived advantage there is supposed to be using a horizontal loop versus a patch or crossed dipoles for GPS applications.

Steve VE9SRB

4863. Re: Need RELIABLE source for ferrite snap-on cores

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-10 13:57:09 UTC
From: Bibby <bibby@attbi.com>
Message-ID: <VSmf9.379438$me6.42849@sccrnsc01>
Source record: 134903

It would be nice if people would read the question. What Floyd asked for
was "does anyone know where he can buy the 3/8 types". That's all he
asked. Now, half a dozen messages later, no-one has answered his question.
Floyd, I don't know. I was hoping someone would, as I am interested also.
Good luck.

Malcolm

"Reg Edwards" <g4fgq.regp@btinternet.com> wrote in message
news:alkq8g$e2g$1@knossos.btinternet.com...
> You two guys have completely missed the point.
>
> I did NOT say dimensions and and permeabilty are unimportant.
>
> I said it was more important to decide FIRST whether any cores were needed
> at all.
>
> Which I'm sure you will agree with. Or are your shacks and antennas
> festooned with ferrite rods, rings and clamp-ons about which you know
> nothing except their dimensions ?
>
> In any case an exact fit is unnecessary.
> ---
> Yours, Reg.
>
> ========================
>
> "Floyd Sense" <sentek@sprintmail.com> wrote in message
> news:_Nkf9.208$gr6.16216@newsread1.prod.itd.earthlink.net...
> > Gee Reg, I thought it was common knowledge that the split cores had to
fit
> > around the conductor so that the two halves touch properly. If the
"hole"
> > is too small, that won't happen. The number of useful answers provided
by
> > this group grows less by the day.
> >
> > --
> > K8AC
> > Floyd Sense in Angier, NC
> > > Hi Floyd,
> > >
> > > The first thing you ought to do is decide whether or not you need
> ferrite
> > > cores and for exactly what purpose.

> > >
> > > Have you already been conned by the old-wives, the so-called Gurus,
the
> > > periodicals and the handbooks ?
> > >
> > > The last things you should concern yourself with are the core
dimensions
> > and
> > > material permeability.
> > >
> > > Good luck with your search.
> > > ---
> > > Reg.
> >
> >
> >
>
>

4864. Re: Skin effect experiment with disk on antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-10 14:01:52 UTC
From: richardharrison@webtv.net
Message-ID: <16623-3D7DFB50-59@storefull-2318.public.lawson.webtv.net>
Source record: 134904

Roger Sparks, W7WKB wrote:
"I indicated on the web page that skin effect shielding should add about 2 feet to the antenna, and would lower the resonant frequency by about 2.8 MHz."

If your results are unexpected, "skin effect" is not the fault.

Skin effect is proven everywhere by shields that work.

Skin effect is proven everywhere by metal sheets inpenetrable to r-f.

Skin effect is proven everywhere by predictable r-f resistance which increases with the square roots of the resistivity of the metal, the permeability of the metal, and the frequency of the operation.

Indictment of skin effect for failure of an experiment is a "bum rap".

Best regards, Richard Harrison, KB5WZI

4865. Re: NEC questions.

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-10 14:17:17 UTC
From: mobileman234@yahoo.co.uk
Message-ID: <93258905.0209100617.276b5b9@posting.google.com>
Source record: 134905

The other "ME" wrote...

> try:
>
> http://www.qsl.net/mmhamsoft/

yep thats the one. Makes my old NEC WIN PRO look complete crap by comparison.

I've run a few tests on it and it seem fine.

Far more intuitive interface than anything I've seen.

I've had experience of IE3D,NEC various versions,and FEKO but for typical use for those of us that want to get the job done at home this MMANA one look like just the ticket.

@ndy

4866. Re: H.A.A.R.P

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-10 14:18:50 UTC
From: mobileman234@yahoo.co.uk
Message-ID: <93258905.0209100618.20e2179b@posting.google.com>
Source record: 134906

Are you sure its not Saddams chemical weapons clouds affecting the
refractive index of the F layer ??

:-)

4867. Re: Skin effect experiment with disk on antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-10 15:06:56 UTC
From: rsparks <rsparks@elltel.net>
Message-ID: <3d7e069f$1_3@corp.newsgroups.com>
Source record: 134907

"Richard Harrison" <richardharrison@webtv.net> wrote in message
news:16623-3D7DFB50-59@storefull-2318.public.lawson.webtv.net...
> Roger Sparks, W7WKB wrote:
> "I indicated on the web page that skin effect shielding should add about
> 2 feet to the antenna, and would lower the resonant frequency by about
> 2.8 MHz."
>
> If your results are unexpected, "skin effect" is not the fault.
>
> Skin effect is proven everywhere by shields that work.
>
> Skin effect is proven everywhere by metal sheets inpenetrable to r-f.
>
> Skin effect is proven everywhere by predictable r-f resistance which
> increases with the square roots of the resistivity of the metal, the
> permeability of the metal, and the frequency of the operation.
>
> Indictment of skin effect for failure of an experiment is a "bum rap".
>
> Best regards, Richard Harrison, KB5WZI
>

And when a magnetic field indicating current on a coaxial line is found, a
return current must be flowing on the outside of the braid (separate from
the current on the inside of the braid) for how else would a field
penetrate the skin effect shield.

So why does a short piece of metal not connected at the ends fail to contain
electrical or magnetic fields?

73, Roger, W7WKB

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
------== Over 80,000 Newsgroups - 16 Different Servers! =-----

4868. Re: GPS Horizontal Loop Antenna Design???

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-10 15:21:45 UTC
From: richardharrison@webtv.net
Message-ID: <11942-3D7E0E09-91@storefull-2312.public.lawson.webtv.net>
Source record: 134909

Steve, VE9SRB wrote:
"---what perceived advantage is there to using a horizontal loop versus a patch or crossed dipoles for GPS applications?"

I have no experience with satellite antennas. The ARRL Antenna Book suggests an assortment of antennas to select the best for reception of the satellite at the moment. It includes a turnstile, rotary dipole, and a horizontal loop. It is shown on page 19-8 of the 19th edition.

I agree that the horizontal loop should likely be less than 1/2-wl above its reflecting surface to avoid a null overhead.

The crossed dipoles with a 90-degree phase delay between them produce circular polarization and are an omnidirectional array.

The loop ia an omni, but is horizontally polarized as specified.

The dipole best receives signals which are perpendicular to the wire.

The antenna has more information and references.

Best regards, Richard Harrison, KB5WZI

4869. Re: 3 MHz to 500 MHz antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-10 15:43:53 UTC
From: 'Doc <w5lz@icok.net>
Message-ID: <3D7E132B.56EBBEDE@icok.net>
Source record: 134908

Jereon,
As you've already seen from the other replies, a
single antenna for the range of frequencies you wish
to cover is a bit unrealistic. That is, if you want
an antenna that works well over that whole range. If
you are willing to use an antenna that does NOT work
well over that whole range of frequencies, then that's
a different story! In that case, any antenna, as long
as possible, should work (not well, but it will work).
The type of mount for that antenna would depend on how
large the antenna is, some are too large for a magnetic
mount, which depends on the size/strength of the magnet.
Good luck, and I would be interested in what you do
use as an antenna...
'Doc

4870. Re: Skin effect experiment with disk on antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-10 15:52:16 UTC
From: richardharrison@webtv.net
Message-ID: <20224-3D7E1530-136@storefull-2313.public.lawson.webtv.net>
Source record: 134910

Roger, W7WKB wrote:
"So why does a short piece of metal not connected at the ends fail to contain electrical or magnetic fields?"

An effective shield must block both fields. A Faraday screen blocks the electric field but is a sieve which allows the magnetic field through. It (the magnetic field) instantly regenerates an electric field and the perocess is practically lossless.

A capacitance can pass an electric field while blocking the magnetic field.

A shield may be too small or it may be ineffectively earthed.

Best regards, Richard Harrison, KB5WZI

4871. Re: GPS Horizontal Loop Antenna Design???

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-10 15:58:46 UTC
From: richardharrison@webtv.net
Message-ID: <20225-3D7E16B6-61@storefull-2313.public.lawson.webtv.net>
Source record: 134911

I wrote:
"The antenna (book) has more information and references." Something ate
the word "book".

Best regards, Richard Harrison, KB5WZI

4872. Re: NEC questions.

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-10 16:15:39 UTC
From: Dan Richardson <k6mhe@mendolink.com>
Message-ID: <i66snu0ea6nv4l7sr24832n450ki5te9ap@4ax.com>
Source record: 134913

On 10 Sep 2002 07:17:17 -0700, mobileman234@yahoo.co.uk (packet_eater)
wrote:

>
>yep thats the one. Makes my old NEC WIN PRO look complete crap by comparison.
>
>I've run a few tests on it and it seem fine.
>
>Far more intuitive interface than anything I've seen.
>
>I've had experience of IE3D,NEC various versions,and FEKO but for typical
>use for those of us that want to get the job done at home this MMANA one
>look like just the ticket.
>

Oh really? MMANA is better than an NEC2 based interface? Man, you've
got to be smoking wacky tabacy.

Tell you what why don't you model the K8CU LDPA in the current issue
of QST magazine and show me where MMANA's results come any where near
those published in the article? Don't be concerned that the author
mentions that MININEC will not model the antenna properly because
there are current versions that will - such as Antenna Model but, of
course, Antenna is not a free program. Maybe you get what you pay for?

Danny

4873. Re: GPS Horizontal Loop Antenna Design???

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-10 16:31:32 UTC
From: Jim Weir <jim@rst-engr.com>
Message-ID: <bb7snukpb229cbvn52deghkksu862g98o1@4ax.com>
Source record: 134912

"VE9SRB" <srbest@att.net>
shared these priceless pearls of wisdom:

I was just wondering
->what perceived advantage there is supposed to be using a horizontal loop
->versus a patch or crossed dipoles for GPS applications.

Aerodynamic advantage in that the radome may be made a bit smaller than a turnstile (crossed dipoles) which requires a quarter-wave matching section out in the breeze. Construction advantage for the patch in that trying to tell Harry Hamhand out in East Undershirt with nothing more than a kerosene powered soldering burner how to make a patch is a nontrivial problem. Loops out of #18 wire with noncritical spacing to the ground plane looked like a decent solution.

However, if you've got something that you would like to have me try, I'm certainly open to suggestions. The application is an external GPS antenna for light aircraft, a magazine article describing the construction of them, and a few measurements with very crude equipment as to how well each of them is perceived to do the job relative to a commercial standard.

Jim

Jim Weir, VP Eng. RST Eng. WX6RST
A&P, CFI, and other good alphabet soup

4874. Re: Skin effect experiment with disk on antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-10 17:01:50 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <k82snug02h17ffheuhu7qfc7voua7ali7s@4ax.com>
Source record: 134914

On Tue, 10 Sep 2002 05:46:45 -0700, "rsparks" <rsparks@elltel.net>
wrote:

>
>"Richard Clark" <kb7qhc@attbi.com> wrote in message
>news:cccpnu049jvv17229h10e0p4pqn9obqmrm@4ax.com...
>
>> Yes it should, but your set-up was far too error-prone to reveal it.
>> Further, even casual observation of the photos reveals you had a world
>> of problems with almost everything under the sun (including yourself)
>> between those two capacitor plates you added.
>>
>
>You must think that the supports are metal.

I would have stated as much. Inviting more speculation does not make
a case.
> They are not.
>They are PVC and dry wood. Yes they would have some dielectric effect
>but it would be very little compared to the skin effect shielding that we
>should
>see with this design.

Again, this is speculation and wishing in the place of measurement.

>
>The presence of the test meter between the plates would act to increase the
>capacity between the plates but again by very little.

Again, this is speculation and wishing in the place of measurement.
The computation that follows belies the statement "by very little."

>The meter is 2 1/2
>inches
>wide and is about 6 square inches in cross section as seen between the disk
>plates. If the meter were a metal box, then the effective spacing between
>the
>disk would be reduced by the width of the meter (2 1/2 inches) so the
>spacing
>for that area would be 7 1/2 inches. Because we are using a 12 inch
>diameter
>disk, the presence of the meter does not introduce a large change in the
>final
>capacity between the disk.
>
a = 10

A = pi * rï¿½ = 113
C = (0.225 * A)/(a * 10ï¿½ï¿½)
= 2.54 pF

a = 7.5
A = pi * rï¿½ = 113
C = (0.225 * A)/(a * 10ï¿½ï¿½)
= 3.39 pF

The difference being +33.5% error of course, negating the false
illusion of accuracy.

>
>Those who have good skills in using Eznec should try placing a variety of
>capacity
>sizes in parallel with the feed line to see how the antenna impedance and
>resistance change.

This belies EZNEC documentation which clearly states:
"There is no direct way to place a load in parallel with a source,
transmission line, or another load."
... to presume otherwise is another source of considerable error.

>
>I completely agree that the physics must apply equally everywhere. That is
>why
>I picked a thick disk (relative to coax braid). That is why the disk is 12
>inches in
>diameter, large enough to have a very measurable effect on the resonant
>length
>of the antenna if the skin effect shield is real.

All of which has nothing to do with applying physics equally
everywhere. As such the statement above adds nothing and ignores this
requirement. To conform to the demand of this universal application
requires you to repeat your tests by moving the disks out and away
from the drive point while at the same time exhibiting identical
results. This is wholly lacking in your work and no amount of
rhetoric will replace it.

If you do in fact perform this task, by degrees (that is, displacing
the disks by increments of, say, 12 inches) until the disks are found
at the remote ends; you will undoubtedly find the conventional
expectation of the dipole becoming electrically longer is satisfied.
If you still observe otherwise, we can tackle that in earnest to shake
out those errors.

>
>Clearly the results of the
>experiment do not support
>skin effect shielding which is troubling for all of us trained on the ARRL
>Antenna Handbook.
>

>73, Roger, W7WKB

Hi Roger,

Clearly the results, measurements, and revisionist ideas are entirely out of whack. Your results don't even offer the appearance of tracking your own theory. Statements of differences being negligible have been shown to be off the mark by considerable (and quite obvious) margins.

The most troubling aspect is the inappropriate use of a software model and the corresponding blind-side of not simply attaching a 2.54 pF OR 3.39 pF cap across the standard dipole's drive point connection for measurement to test the assertions made. This step cannot be argued to be prohibitive in the face of adding two significant structures that would take far more effort (and which effort has obviously been expended).

The conventional teachings of skin effect remain standing quite securely.

Looks like you need to do something different. I have offered two compelling things to do.

73's
Richard Clark, KB7QHC

4875. Re: GPS Horizontal Loop Antenna Design???

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-10 17:16:27 UTC
From: VE9SRB <srbest@att.net>
Message-ID: <LNpf9.6881$1C2.595974@bgtnsc04-news.ops.worldnet.att.net>
Source record: 134915

"Jim Weir" <jim@rst-engr.com> wrote in message
news:bb7snukpb229cbvn52deghkksu862g98o1@4ax.com...

> "VE9SRB" <srbest@att.net>
> shared these priceless pearls of wisdom:
>

Sorry to bother you with the question. My mind reading skills haven't been working lately. You said nothing about your application or requirements, so I thought I'd ask why you wanted to use a loop.

> Aerodynamic advantage in that the radome may be made a bit smaller than a
> turnstile (crossed dipoles) which requires a quarter-wave matching section
out
> in the breeze.

or a 90 degree hybrid enclosed within the radome.

>Construction advantage for the patch in that trying to tell
> Harry Hamhand out in East Undershirt with nothing more than a kerosene
powered
> soldering burner how to make a patch is a nontrivial problem. Loops out
of #18
> wire with noncritical spacing to the ground plane looked like a decent
solution.
>

A small piece of brass sheet suspended over a ground plane and fed (and matched) with a single connector may not be as big a problem for Harry as you think. Feeding and matching a patch is probably easier than feeding and matching the loop.

> However, if you've got something that you would like to have me try, I'm
> certainly open to suggestions. The application is an external GPS antenna
for
> light aircraft, a magazine article describing the construction of them,
and a
> few measurements with very crude equipment as to how well each of them is
> perceived to do the job relative to a commercial standard.
>

Steve VE9SRB

4876. Re: GPS Horizontal Loop Antenna Design???

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-10 17:18:38 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <n4asnu86qsp6505pe0d9vkv7pjabqrk9jd@4ax.com>
Source record: 134916

On Tue, 10 Sep 2002 09:31:32 -0700, Jim Weir <jim@rst-engr.com> wrote:

>"VE9SRB" <srbest@att.net>
>shared these priceless pearls of wisdom:
>
> I was just wondering
>->what perceived advantage there is supposed to be using a horizontal loop
>->versus a patch or crossed dipoles for GPS applications.
>
>Aerodynamic advantage in that the radome may be made a bit smaller than a
>turnstile (crossed dipoles) which requires a quarter-wave matching section out
>in the breeze. Construction advantage for the patch in that trying to tell
>Harry Hamhand out in East Undershirt with nothing more than a kerosene powered
>soldering burner how to make a patch is a nontrivial problem. Loops out of #18
>wire with noncritical spacing to the ground plane looked like a decent solution.
>
>However, if you've got something that you would like to have me try, I'm
>certainly open to suggestions. The application is an external GPS antenna for
>light aircraft, a magazine article describing the construction of them, and a
>few measurements with very crude equipment as to how well each of them is
>perceived to do the job relative to a commercial standard.
>
>Jim
>

Hi Jim,

Try an inverted F. It offers a semi-isotropic coverage. Limited
discussion may be found at:
http://www.qsl.net/kb7qhc/antenna/Inverted%20F/index.htm

73's
Richard Clark, KB7QHC

4877. Re: GPS Horizontal Loop Antenna Design???

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-10 17:36:00 UTC
From: Jim Weir <jim@rst-engr.com>
Message-ID: <bbbsnu4ja8qea5d7rifrd7kuqob2r7ffe2@4ax.com>
Source record: 134819

A bookworm?

{;-)

Jim

richardharrison@webtv.net (Richard Harrison)
shared these priceless pearls of wisdom:

->I wrote:
->"The antenna (book) has more information and references." Something ate
->the word "book".
->
->Best regards, Richard Harrison, KB5WZI

Jim Weir, VP Eng. RST Eng. WX6RST
A&P, CFI, and other good alphabet soup

4878. NEW HAM RADIO ORTAL ONLINE!

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-10 17:37:17 UTC
From: AV <avaupel@web.de>
Message-ID: <h5qf9.43350$kJ2.610243@news.easynews.com>
Source record: 134918
Cross-posted to: rec.ham-radio,rec.ham-radio.swap,rec.radio.amateur,rec.radio.amateur.antenna

There is a new Ham Radio Portal online at

http://www.hamradio-portal.com

This Portal contains news, Information and

special topics like Echolink software and many more.

It has a Weblink and download database.

A new Webboard to discuss topics is also there.

You can also submit news and topics what

comes available on the top of the page!

It should not to be in compete with other Portals.

Just a new one with a new look and nice features.

We hope to see you there!

Andre

4879. safety ground and antenna ground - tie together and connect to A/C ground?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-10 17:39:28 UTC
From: Andreas Hofmann <andreash23@hotmail.com>
Message-ID: <3d7e2e50$1@news.microsoft.com>
Source record: 134917

Hi,

I have a dipole and once it enters the house, it is routed through a lightning surge protected coax switch. This allows me to ground the dipole (and all other antennas) if I dont use the station. Let assume I do not need a RF ground.

1. The coax switch's case needs to be tied to the house's ground. Is it enough to just connect it to the neutral wire in the nearest power receptacle?

2. All the equipment's grounds should be tied together and connected to the house's ground as well. Can I just connect them to the coax switch's ground (if answer for 1 is yes)?

Thanks

Andreas, KU7T

4880. Re: Need RELIABLE source for ferrite snap-on cores

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-10 17:45:49 UTC
From: Vito <vito@crosslink.net>
Message-ID: <3D7E2FCD.2E42E96@crosslink.net>
Source record: 134820

Bibby wrote:
>
> It would be nice if people would read the question. What Floyd asked for
> was "does anyone know where he can buy the 3/8 types". That's all he
> asked. Now, half a dozen messages later, no-one has answered his question.
> Floyd, I don't know. I was hoping someone would, as I am interested also.
> Good luck.
>

Mouser <www.mouser.com> or (800)346-6873. #623-0443167251 is .870" wide
& 1.27 long with a .4' hole. They were $2.29@ or $2.08@ for 10-50 or
$1.89 over 50.

Also:
<http://search.dogpile.com/texis/search?q=%22Fair-Rite%22+%2B%22EMI+suppression%22&geo=no&fs=web>
or the horses mouth at <http://www.fair-rite.com/>

Hurry!
73, K3DWW

4881. Re: Need RELIABLE source for ferrite snap-on cores

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-10 18:16:13 UTC
From: tdonaly@aol.com
Message-ID: <20020910141613.03330.00002772@mb-cs.aol.com>
Source record: 134822

Vito wrote,
>
>Bibby wrote:
>>
>> It would be nice if people would read the question. What Floyd asked for
>> was "does anyone know where he can buy the 3/8 types". That's all he
>> asked. Now, half a dozen messages later, no-one has answered his
>question.
>> Floyd, I don't know. I was hoping someone would, as I am interested also.
>> Good luck.
>>
>
>Mouser <www.mouser.com> or (800)346-6873. #623-0443167251 is .870" wide
>& 1.27 long with a .4' hole. They were $2.29@ or $2.08@ for 10-50 or
>$1.89 over 50.
>
>Also:
>
><http://search.dogpile.com/texis/search?q=%22Fair-Rite%22+%2B%22EMI+suppr
ession%22&geo=no&fs=web>
>or the horses mouth at <http://www.fair-rite.com/>
>
>Hurry!
>73, K3DWW
>

Also, anyone interested could get in touch with Amidon or Bytemark and see if
they still sell
"Round Cable Suppression Cores" which are split cores for cables with diameters
of from .1 inch to
.59 inch. Nylon housing sold separately.

73

Tom Donaly, KA6RUH

4882. Comet HF Antenna Tuning questions

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-10 19:05:40 UTC
From: kbozek@yahoo.com
Message-ID: <506a3e3b.0209101105.3870227e@posting.google.com>
Source record: 134823

I purchased a used CA-UHV and I am using an MFJ 259B to "tune" the antenna. I found an issue on 2 meters and was looking for some feedback.

1) The lowest SWR seems to be down around 141 MHZ. As I approach 146 MHZ, the SWR reaches 3:1. It seems like the whip was trimmed too short. Am I correct in this thinking or is it too long?

2) If the wip is too short, does anyone know what might be a good replacement material for the whip if I wanted to replace it with a longer whip to bring the antenna back up to 146 Mhz?

3) I wanted to build a few stinger antennas for the coils, the ones with the small ball at the end. Carrying on from question two, where might I get the material for this a stinger? I have also heard that some solder can be used to form the ball at the end of the whip.

73's

4883. Satellite Radio Antennas XM and SIRIUS

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-10 19:08:42 UTC
From: "lyman nospam"@naval.com
Message-ID: <_qrf9.863$R7.21914@twister.tampabay.rr.com>
Source record: 134824

Looking for some information on antennas and LNA's
Anyone working on these systems and willing to share info
Please contact me.

73. ly

4884. Re: Comet HF Antenna Tuning questions

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-10 19:28:33 UTC
From: Bob Miller <bamiller@texas.net>
Message-ID: <HEZ+PRNWERmO9axZKPz6UP5ajrR4@4ax.com>
Source record: 134825

kbozek@yahoo.com (Keith Bozek) wrote:

>I purchased a used CA-UHV and I am using an MFJ 259B to "tune" the
>antenna. I found an issue on 2 meters and was looking for some
>feedback.
>
>1) The lowest SWR seems to be down around 141 MHZ. As I approach 146
>MHZ, the SWR reaches 3:1. It seems like the whip was trimmed too
>short. Am I correct in this thinking or is it too long?

You've got it reversed. The antenna is too long. Make it shorter, and the point
of resonance will move to a higher frequency.

Bob
k5qwg
>
>2) If the wip is too short, does anyone know what might be a good
>replacement material for the whip if I wanted to replace it with a
>longer whip to bring the antenna back up to 146 Mhz?
>
>3) I wanted to build a few stinger antennas for the coils, the ones
>with the small ball at the end. Carrying on from question two, where
>might I get the material for this a stinger? I have also heard that
>some solder can be used to form the ball at the end of the whip.
>
>73's

4885. 2M Coax antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-10 19:29:56 UTC
From: Josh Hillman <use@news.grp>
Message-ID: <ZKrf9.1$IK5.215@news.sjc.globix.net>
Source record: 134826

Hi,

Some time back I encountered an article on making a 2m antenna using a coaxial cable. It involved in stripping the outer insulation and pulling back the braid till 19". I don't remember where I saw the article. Does anyone know about it.

Thanks.

Josh

4886. Re: Skin effect experiment with disk on antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-10 19:33:48 UTC
From: "Ian White, G3SEK" <G3SEK@ifwtech.co.uk>
Message-ID: <xuNWkgBckkf9EAAI@ifwtech.co.uk>
Source record: 134827

Richard Harrison wrote:
>
>Skin effect is proven everywhere by shields that work.
>
>Skin effect is proven everywhere by metal sheets inpenetrable to r-f.
>
>Skin effect is proven everywhere by predictable r-f resistance which
>increases with the square roots of the resistivity of the metal, the
>permeability of the metal, and the frequency of the operation.
>
And skin effect can be proved to occur on *any* conducting surface that has RF current flowing on it, for *any* reason. It is not limited to any particular shape of conductor, or to any particular circuit configuration that makes the RF current flow. The proof is reproduced at:
http://www.ifwtech.co.uk/g3sek/misc/skin.htm

The math and physics are pretty high-flown but they do prove the skin depth equations for the general case, which I haven't seen proved anywhere else.

That means that wherever you postulate RF current, you also need to postulate that it flows only (or nearly) on the surface. Whatever else you say about the system under consideration, it has to be consistent with the existence of skin currents... and this is a very powerful way of determining how a wide range of RF circuits behave.

--
73 from Ian G3SEK 'In Practice' columnist for RadCom (RSGB)
Editor, 'The VHF/UHF DX Book'

4887. Re: G5RV or W3DZZ ?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-10 20:00:19 UTC
From: "Ian White, G3SEK" <G3SEK@ifwtech.co.uk>
Message-ID: <IeeYYgDT9kf9EAkC@ifwtech.co.uk>
Source record: 134828

Reg Edwards wrote:
>"Ian White, G3SEK wrote -
>
>> The system bandwidth is determined by the loaded Q, which is a function
>> of the L/C ratio in the traps.
>>
>==============================
>
>There's an obligatory resistance associated with every Q.
>
>It is usual to define Q as Omega*L/R.
>
>In the present context, what is R.

The R that effectively appears across the trap tuned circuit is radiation resistance, which represents the loss of energy from the antenna by radiation (with a small correction for loss of energy in the components themselves, represented by their unloaded Qu's).

Note (but not for Reg, who already knows) that the effective radiation resistance as seen across the trap is not the value you measure at the feedpoint. It is transformed to higher values as you move along the antenna element towards the open ends.

I don't think the "loaded Q" concept should be pushed too far, but it does give a way of understanding the relationship between the Qu's of the individual trap components and the energy loss in the traps when they are operating.

--
73 from Ian G3SEK 'In Practice' columnist for RadCom (RSGB)
Editor, 'The VHF/UHF DX Book'
http://www.ifwtech.co.uk/g3sek

4888. FA: 10-520 Mc RF sig Gen

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-10 20:11:48 UTC
From: Dave <jeronamo@REMOVE.aol.com>
Message-ID: <8msf9.165$4O4.7209084@newssvr14.news.prodigy.com>
Source record: 134829

http://cgi.ebay.com/ws/eBayISAPI.dll?ViewItem&item=1380141940

4889. Re: safety ground and antenna ground - tie together and connect to A/C ground?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-10 20:33:13 UTC
From: John Passaneau <jxp16@psu.edu>
Message-ID: <allkuf$ndk@r02n01.cac.psu.edu>
Source record: 134830

H Andreas:

You should put in a separate ground rod for the station as close to the station as you can get. Then connect the coax switch to that rod and then a separate wire should also connect from that rod to the ground at your electrical service panel (the heavy copper wire that comes in from the ground rod to the box). The wire should be at least #t6 bare copper wire. In my area this is what is required by code. If you use the receptacle ground,and your hit by lighting, at best the wire to the shack from the electrical panel and all the radio's etc. hooked to that circuit will be destroyed, at worst your house will burn down.
This no place to play around and look for the easy way out.

--
John Passaneau, W3JXP
Physics Dept. Electronics Shop
Penn State University
104 Davey Lab, University Park , Pa. 16802
814.863.4297, jxp16@psu.edu

as
"Andreas Hofmann" <andreash23@hotmail.com> wrote in message
news:3d7e2e50$1@news.microsoft.com...
> Hi,
>
> I have a dipole and once it enters the house, it is routed through a
> lightning surge protected coax switch. This allows me to ground the
dipole
> (and all other antennas) if I dont use the station. Let assume I do not
> need a RF ground.
>
> 1. The coax switch's case needs to be tied to the house's ground. Is it
> enough to just connect it to the neutral wire in the nearest power
> receptacle?
>
> 2. All the equipment's grounds should be tied together and connected to
the
> house's ground as well. Can I just connect them to the coax switch's
ground
> (if answer for 1 is yes)?
>
>
> Thanks
>

> Andreas, KU7T
>
>

4890. help interpreting toroid schematic

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-10 21:21:54 UTC
From: Bill Johnson <electricguy30nospam@hotmail.com>
Message-ID: <allnug$9n2$1@nntp9.atl.mindspring.net>
Source record: 134831
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc,sci.electronics.design

I am attempting to build a project that uses a quadfilar wound FT50-43 toroid. I am having trouble interpreting the schematic and I'm not sure if the actual wiring of the toroid is correct. Can someone confirm whether or not my wiring scheme is correct? The toroid schematic and my wiring interpretation are at http://www.mindspring.com/~elecman/helpschematic.jpg

Thanks in advance for responses.

Bill

4891. Re: GPS Horizontal Loop Antenna Design???

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-10 21:36:10 UTC
From: Jim Weir <jim@rst-engr.com>
Message-ID: <lapsnu877gtu3jbpuvikumqa7p5vjjfmed@4ax.com>
Source record: 134832

Now THERE'S a concept I hadn't considered. In aviation, we call those a "sled" and use them a lot for 75 MHz. marker beacon reception. There is a hell of a null forward, but I think perhaps with a bit of skewing or using fat elements we could eliminate that null.

Jim

Richard Clark <kb7qhc@attbi.com>
shared these priceless pearls of wisdom:

->Hi Jim,
->
->Try an inverted F. It offers a semi-isotropic coverage. Limited
->discussion may be found at:
->http://www.qsl.net/kb7qhc/antenna/Inverted%20F/index.htm
->
->73's
->Richard Clark, KB7QHC

Jim Weir, VP Eng. RST Eng. WX6RST
A&P, CFI, and other good alphabet soup

4892. Re: Comet HF Antenna Tuning questions

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-10 21:46:39 UTC
From: JC <jacques.culot@skynet.be>
Message-ID: <3d7e6848$0$196$ba620e4c@news.skynet.be>
Source record: 134833

The wave length on 141 MHz is longer than on 146. Thus your whip is too long.

73 de Jacques ON5MJ.

4893. Re: help interpreting toroid schematic

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-10 21:58:49 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <8tpsnu8d3ojirbie2ltg9fv4ofkbilhgau@4ax.com>
Source record: 134834
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc,sci.electronics.design

On Tue, 10 Sep 2002 17:21:54 -0400, "Bill Johnson"
<electricguy30nospam@hotmail.com> wrote:

>I am attempting to build a project that uses a quadfilar wound FT50-43
>toroid. I am having trouble interpreting the schematic and I'm not sure if
>the actual wiring of the toroid is correct. Can someone confirm whether or
>not my wiring scheme is correct? The toroid schematic and my wiring
>interpretation are at http://www.mindspring.com/~elecman/helpschematic.jpg
>
>Thanks in advance for responses.
>
>Bill
>

Hi Bill,

Quadfilar means that four (4) wires are wound together, in parallel.
Your drawing needs color for each winding to clearly answer your
question, also, it needs phase dots on the schematic to correlate
correct connections. 1 & 3 appear to be backwards, as do 5 & 7; but
without the individual windings visible, or phase information, it is
difficult to say.

What you have in your mind, and what you have posted may well work,
but without these details, I for one, could not respond in the
affirmative. Reasons for my saying 1 & 3 appear to be backwards is
due to all windings starting at the same end (presumably 1,4,5,8)
would not find 1 & 3 in proximity with 2 & 4 connected unless there is
a phase inversion not shown. [Same goes for 5,7 and 6,8.]

73's
Richard Clark, KB7QHC

4894. Re: help interpreting toroid schematic

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-10 22:26:40 UTC
From: Bill Johnson <electricguy30nospam@hotmail.com>
Message-ID: <allrku$164$1@slb4.atl.mindspring.net>
Source record: 134835
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc,sci.electronics.design

Hi Richard,

Thanks for the quick response. Perhaps I posted this a bit too soon and maybe should have contacted the designer of the circuit first, which I have now done. Thanks for your input and sorry for the inconvenience.

Bill

> Hi Bill,
>
> Quadfilar means that four (4) wires are wound together, in parallel.
> Your drawing needs color for each winding to clearly answer your
> question, also, it needs phase dots on the schematic to correlate
> correct connections. 1 & 3 appear to be backwards, as do 5 & 7; but
> without the individual windings visible, or phase information, it is
> difficult to say.
>
> What you have in your mind, and what you have posted may well work,
> but without these details, I for one, could not respond in the
> affirmative. Reasons for my saying 1 & 3 appear to be backwards is
> due to all windings starting at the same end (presumably 1,4,5,8)
> would not find 1 & 3 in proximity with 2 & 4 connected unless there is
> a phase inversion not shown. [Same goes for 5,7 and 6,8.]
>
> 73's
> Richard Clark, KB7QHC

4895. Re: Skin effect experiment with disk on antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-10 22:47:24 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <3D7E767C.9070804@eznec.com>
Source record: 134836

rsparks wrote:
> "Roy Lewallen" <w7el@eznec.com> wrote in message
>>
>>>>To test skin effect, you have to isolate the currents' fields from each
>>>>other. Of course, if skin effect didn't exist, you wouldn't be able to
>>>>isolate them (and a couple of centuries of theory would be wrong, and
>>>>antennas based on it wouldn't work).
>>>>
>>>
>
> The words of the book are of great importance. Either the two sides of the
> disk are coupled together or they are not. Your last post says they are
> coupled but the book says they can not be. Hmmm. Where do we go from here?
>
Is the quote you're referring to the one Richard posted recently:

The 19th edition of the ARRL Antenna Book says on page 23-2:
"In good conductors the speed (of r-f wave travel) is so low that the
opposing fields set up by the wave front occupy the same space as the
wave itself, and thus cancel it out. This is the reason for "skin
effect" in conductors at high frequencies, making metal enclosures good
shields for electrical circuits working at radio frequencies."

If so, that's not at all what it says. It doesn't address the issue of currents on opposite sides of an open plate at all.

If you're truly interested in what respected authors have to say about skin effect, here are some quotes I originally posted in this group on August 30, 1996. The topic was "Re: BALUN necessary for a dipole", and anyone interested in the current thread might be interested in that discussion also. More than 300 postings were made. Anyway, here are the relevant quotes:

Introduction to Electromagnetic Fields and Waves, Charles A. Holt, Dept. of Electrical Engineering, Virginia Polytechnic Institute, p. 187:

The electric field inside a perfect conductor is zero, for otherwise there would be the absurdity of an infinite drift current. We know from Maxwell's equations that time-varying electric and magnetic fields always accompany one another and, consequently, a time-varying magnetic field cannot exist in a perfect conductor. An electric field always has a magnetic field

according to the Maxwell-Ampere law. As time-varying magnetic fields cannot exist in perfect conductors, neither can time-varying electric currents. However, we know that good conductors readily carry alternating currents. Clearly, the time-varying current of a perfect conductor must reside on the surface, in a layer of zero thickness.

Engineering Electromagnetic Fields and Waves, Carl T.A.Johnk, Professor of Electrical Engineering, University of Colorado, Boulder, p. 130:

Case B. One region is a perfect dielectric; the other is a perfect conductor. Electric currents are limited to finite densities in the physical world. Thus from (3-7) J = <sigma>E, the assumption of a perfect conductor in region 2 of Figure 3-4 (<sigma> -> <infinity>), implies that E2 in that region must be zero if the current densities are to have, at most, finite values. Moreover, with electromagnetic fields satisfying (2-108), <del> cross [complex]E = -j<omega>[complex]B, one can see that if E2 is zero in region 2, then [complex]B2 must be zero there also. Thus for time-varying fields, <sigma> -> <infinity> implies E = B = 0 in a perfect conductor.

Electromagnetic Energy Transmission and Radiation, Richard B. Adler, Professor of Electrical Engineering; Lan Jen Chu, Professor of Electrical Engineering, and Robert M. Fano, Professor of Electrical Communications, all of the Department of Electrical Engineering, Massachusetts Institute of Technology, p. 11:

[All vector quantities] . . .inside medium 1 we must put E1 <identically equal to> 0, for the specific reason discussed above. Therefore, D1 = 0 (Eq. 1.20a) and <rho>1 = 0(Eq. 1.15a) Also, <the partial derivative of B1 with respect to t> = 0, by Eq. 1.15b, and of course <the partial derivative of D1 with respect to t> = 0. . .

We are forced to conclude that all time-varying fields inside a perfect conductor are certainly zero, and that even a static electric field cannot exist in it.
> . . .
>
> My first reaction to this proposal was that detection would be impossible
> under any circumstance. I was thinking of a torroid detector which
> surrounded the test device.
>
> After further reflection on the proposal, I think that direct coupling to
> the test box or capacity coupling could detect current inside the apparatus.
> This would be true because there would always be resistive caused voltage
> drop across the conductor.

The voltage drop would be more from reactance than resistance. It would exist even for a perfect conductor.

> But the test would only be convincing if it were conducted by two people,
> one who would be the builder and supporter of skin effect shielding, one who
> would be the observer and detractor of skin effect shielding. If the
> detractor built and performed the experiment, the supporter could always say
> negative things such as the power level was too high, the shield was too
> thin to be effective at the frequency used or the seal of the box was not
> complete. If the supporter built the apparatus, the detractor would use
> every means possible to detect the current inside including amplification
> and direct attachment to the apparatus. It would be a real challenge to
> prevent any detection by the detractor unless the power level inside was
> zero. Of course there would always be a lower detection limit due to noise
> but the limit could always be overcome by increasing the power level inside
> the apparatus.

I'm personally satisfied by the fact that the knowledge about skin effect is completely consistent with all carefully done experiments, and is based on principles used daily to design and use a very diverse group of devices which work as predicted. Considering this base of accepted knowledge, it's silly to ask for further "proof". Sorry, the burden of proof is strictly on the person who makes claims contradicting a couple of centuries of successful theoretical and engineering work.

I remember my days as a technician, where every now and then measurements would seemingly show that the sum of currents flowing into or out of a junction didn't add to zero. Quite a large number of fellow technicians didn't have a sufficient theoretical or educational background to trust the validity of Kirchoff's current law, and each time were convinced they had "proof" that it was invalid. The same happened from time to time with Ohm's law. I ended up spending a good deal of time finding the flaws in their measurement techniques, which is what they should have done.

When your experiment contradicts a couple of centuries of self-consistent and successfully applied knowledge, you shouldn't waste your time or ours asking for additional "proof" that the existing theory is invalid -- you should spend it finding out what assumptions you made were wrong, or what measurements were invalid. And you'll find that, gee whiz, all those guys maybe really do know what they're talking about and maybe a back yard experiment isn't really rigorous science. And you'll learn from it.

> How do you think the results of the disk antenna experiment should vary when
> we first assume skin effect shielding occurs, and then assume that the
> fields act without skin effect shielding. I concluded that the resonant
> frequency should be about 2.8 MHz lower that what was observed. What would
> you predict?

I don't know. With all the interacting fields, it's too complex a problem for me. You might try modeling it with EZNEC or the program of your choice, using radial wires to represent the disk -- the model radial wires wouldn't exhibit skin effect. Or you can re-run your experiment with the disks replaced by a reasonably sparse structure of radial wires. But I wouldn't even try to draw any conclusions from this

experiment because of its complexity -- I'd do something like the shielded box or coax experiment (if I needed additional convincing about skin effect -- which I certainly don't).

Roy Lewallen, W7EL

4896. Re: Skin effect experiment with disk on antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-10 22:50:50 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <3D7E774A.30007@eznec.com>
Source record: 134837

rsparks wrote:
> . . .
> So why does a short piece of metal not connected at the ends fail to contain
> electrical or magnetic fields?

The quotes I just posted address that question. To understand it at a deeper level, you'll have to learn more about electromagnetic fields.

Roy Lewallen, W7EL

4897. Re: 2M Coax antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-10 23:14:11 UTC
From: 'Doc <w5lz@icok.net>
Message-ID: <3D7E7CB5.3FA99CC5@icok.net>
Source record: 134838

Josh,
You've about got it. It's a dipole with the feed
line going through on 'leg'. They're usually mounted
vertically. Adjust the lengths of the 'legs' like
you would any dipole.
'Doc

4898. Re: help interpreting toroid schematic

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-10 23:35:06 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <qtvsnuk2b8r7le6qumjgfqjq08jiohq96b@4ax.com>
Source record: 134839
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc,sci.electronics.design

On Tue, 10 Sep 2002 18:26:40 -0400, "Bill Johnson"
<electricguy30nospam@hotmail.com> wrote:

>Hi Richard,
>
>Thanks for the quick response. Perhaps I posted this a bit too soon and
>maybe should have contacted the designer of the circuit first, which I have
>now done. Thanks for your input and sorry for the inconvenience.
>
>Bill

Hi Bill,

No inconvenience at all, you came more prepared than most who have
grand designs of naming an antenna after themselves. You might also
include what you are going to use this for - it could be significant
to consider in light of that application. And you never know, someone
else might chime right in with a less equivocal (and still correct)
answer than mine.

73's
Richard Clark, KB7QHC

4899. Re: help interpreting toroid schematic

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-11 01:21:31 UTC
From: Steve Ratzlaff <sratzlaf@flash.net>
Message-ID: <3D7E9A69.F0BD7D78@flash.net>
Source record: 134840
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc,sci.electronics.design

I get a "404 error/page not found" when I try to access the .jpg.
Steve

Bill Johnson wrote:
>
> I am attempting to build a project that uses a quadfilar wound FT50-43
> toroid. I am having trouble interpreting the schematic and I'm not sure if
> the actual wiring of the toroid is correct. Can someone confirm whether or
> not my wiring scheme is correct? The toroid schematic and my wiring
> interpretation are at http://www.mindspring.com/~elecman/helpschematic.jpg
>
> Thanks in advance for responses.
>
> Bill

4900. Re: safety ground and antenna ground - tie together and connect to A/C ground?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-11 01:29:59 UTC
From: ricknj10@hotmail.com
Message-ID: <3d7e9bff.2371237@news.optonline.net>
Source record: 134841

Andreas,

Get QST. A series was run for 3 months (June, July, Aug ?) on this topic. It is worth it's weight in gold. Written by Ron Block, a ham, and a Polyphasor employee who really knows his stuff. You have a lot to consider.

Rick K2XT

4901. Re: G5RV or W3DZZ ?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-11 01:47:17 UTC
From: n2ey@aol.com
Message-ID: <20020910214717.15779.00000661@mb-fm.aol.com>
Source record: 134842

In article <DCraPNAFNYf9EAlJ@ifwtech.co.uk>, "Ian White, G3SEK"
<G3SEK@ifwtech.co.uk> writes:

>N2EY wrote:
>>
>>I went back to the original 1955 article by W3DZZ himself. He was able
>>to get a 2:1 SWR bandwidth of over 200 kHz using traps of approxiamtely
>>62 pf/8.2 uH and fairly low loss construction. If it worked for him, it
>>can work for you.
>>
>It might not work quite so well for me and Andy in Europe, since our
>bands are only 3.5-3.8MHz and 7.0-7.1MHz.

Actually, the Region 1 situation is "easier" for the W3DZZ because the bands
are narrower ;-)

> For optimum performance, the
>trap resonance needs to be moved down to 7.05MHz, and the L/C ratio
>changed, together with the two wire lengths. Apart from that, our trap
>dipoles are exactly the same as yours :-)

Hmm - let's take a look at that...

Use the resonance formula LC = 25,330/f^2, where F is in MHz, L is in uH and C
is p.

Rewrite the formula as:

f = sqrt (25,330/LC)

For 62 pF and 8.2 uH,
LC = 508.4
(25,330/508.4) = 49.823
f = sqrt(49.823) = 7.0585 MHz

So the W3DZZ design is almost on 7.05 as-is. W3DZZ seems to have tried to
optimize the antenna for the middle of the US amateur bands as they were in
1955.

In a later article, a version optimized for the US phone bands used more C and
less L (approximately 100 pF C). It seems logical that a "Region 1 W3DZZ" would
use maybe 50 or 56 pF capacitors and suitable inductors for resonance on 7.05
MHz.

Of course with the advent of modeling software like EZNEC, we have it much
easier today than W3DZZ ever did.

73 de Jim, N2EY

In a follow-on

4902. Re: help interpreting toroid schematic

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-11 02:02:43 UTC
From: "r.crowley" <rcrowley7@xprt.net>
Message-ID: <unt9234bu39978@corp.supernews.com>
Source record: 134843
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc,sci.electronics.design

> Bill Johnson wrote:
> > The toroid schematic and my wiring
> > interpretation are at
http://www.mindspring.com/~elecman/helpschematic.jpg

"Steve Ratzlaff" wrote ...
> I get a "404 error/page not found" when I try to access the .jpg.

The "~elecman" account/directory isn't even present.

4903. Re: safety ground and antenna ground - tie together and connect to A/C ground?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-11 02:23:25 UTC
From: Bob Miller <bamiller@texas.net>
Message-ID: <Qqh+PewsBaeehKXnpyRemyu=j3+w@4ax.com>
Source record: 134844

ricknj10@hotmail.com (Rick) wrote:

>
>
>Andreas,
>
>Get QST. A series was run for 3 months (June, July, Aug ?) on this
>topic. It is worth it's weight in gold. Written by Ron Block, a ham,
>and a Polyphasor employee who really knows his stuff. You have a lot
>to consider.
>
>Rick K2XT

There are also a lot of ham-oriented tech papers on grounding at the Polyphaser site that can be downloaded for free.

Bob
k5qwg

4904. Re: help interpreting toroid schematic

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-11 03:21:00 UTC
From: Bill Johnson <electricguy30nospam@hotmail.com>
Message-ID: <almcsl$pc7$1@slb7.atl.mindspring.net>
Source record: 134845
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc,sci.electronics.design

Thanks for looking guys. Perhaps I will repost it sometime over the next couple of days (I removed the URL until I hear from the designer).

Thanks again,
Bill

"r.crowley" <rcrowley7@xprt.net> wrote in message news:unt9234bu39978@corp.supernews.com...
> > Bill Johnson wrote:
> > > The toroid schematic and my wiring
> > > interpretation are at
> http://www.mindspring.com/~elecman/helpschematic.jpg
>
>
> "Steve Ratzlaff" wrote ...
> > I get a "404 error/page not found" when I try to access the .jpg.
>
> The "~elecman" account/directory isn't even present.
>
>

4905. Elnec Model Long Wire

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-11 04:53:02 UTC
From: Ken N4VSD <REMOVECAPSn4vsd@yahoo.com>
Message-ID: <O_zf9.16182$VQ2.1687758@twister.midsouth.rr.com>
Source record: 134846

Hello all,

I'm getting some strange (13dBi gain at 15 degree azimuth plot) results when modeling a longwire four wavelengths long at 7 MHz... The antenna is 280' feet long at a height of 5'. Make it any higher and the gain decreases. I'm assuming the software (Elnec 3.07 for DOS) cannot model wires close to the ground? Any suggestions?

Thank you,

Ken N4VSD

```
-------------- WIRES --------------

Wire Conn. --- End 1 (x,y,z : ft) Conn. --- End 2 (x,y,z : ft) Dia(in)
Seg

1 G 0.000, 0.000, 0.000 W2E1 0.000, 0.000, 5.000 4.22E-01
7
2 W1E2 0.000, 0.000, 5.000 280.000, 0.000, 5.000 4.22E-01
63
Tot segs:
70

-------------- SOURCES --------------

Source Pulse Wire #/Pct From End 1 Ampl.(V, A) Phase(Deg.) Type
Actual (Specified)

1 1 1 / 0.00 ( 1 / 0.00) 1.000 0.000 I
```

4906. Re: Need RELIABLE source for ferrite snap-on cores

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-11 05:13:03 UTC
From: CW <clinton.magers@attbi.com>
Message-ID: <zhAf9.226537$kp.820895@rwcrnsc52.ops.asp.att.net>
Source record: 134847

.4 foot hole. A little large, isn't it? :)
"Vito" <vito@crosslink.net> wrote in message
news:3D7E2FCD.2E42E96@crosslink.net...

> Mouser <www.mouser.com> or (800)346-6873. #623-0443167251 is .870" wide
> & 1.27 long with a .4' hole. They were $2.29@ or $2.08@ for 10-50 or
> $1.89 over 50.
>
>

4907. Re: Cushcraft R7/R7000 - R6/R6000 Antiparasitari RFC Choke " H "

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-11 05:17:37 UTC
From: w9gb <gregory.beat@attbi.com>
Message-ID: <RlAf9.70155$Jo.16867@rwcrnsc53>
Source record: 134848

R6000
http://www.radioworld.co.uk/cushcraft_r6000.htm

http://www.durhamradio.com/cushcraft-r6000.htm

http://www.qsl.net/w3ha/illuminator/archive/2000-06/
The Latest in Multi-Band Vertical Antennas

by John, K3CT

Cushcraft and Hy-Gain have recently released new multi-band vertical antennas with improved efficiency and operation on all amateur bands from 6 meters to 40 meters. The model numbers are Cushcraft R8 and Hy-Gain AV640. Hy-Gain also sells the AV620 without the 30m and 40m bands. These antennas all share a similar design which solves many problems that plagued the older generations of multi-band vertical antennas.

Prior to the WARC bands multi-band vertical antennas covered 40m, 20m, 15m, and 10m usually with a multi-trapped ½ wave element. Users seldom installed these antennas in the clear or with the proper ground radials. These factors contributed to these antennas earning a reputation of being poor performers with narrow bandwidth. When the WARC bands became available, the manufacturers simply added more traps without thinking much about the performance. Both the bandwidth and the efficiency suffered due to the added traps.

The next generation of multi-band verticals, I believe pioneered by Cushcraft, addressed the radial issue by end feeding a ½ wave element. In this design, the ½ wave radiator was shortened with inductors in the traps to make the length manageable. This antenna contained the same number of traps so the overall efficiency improvement may have been small.

Around the same time GAP antennas made a big splash in the market when they released their line of antennas without traps or radials. I know very little about their antennas except that they don't have a good reputation for being a rugged antenna.

This brings us to the latest design in multi-band verticals. After moving to a new QTH, I wanted to get back on the low bands quickly. I tried dipoles but I wasn't able to install them high enough to be effective for DX. My interest turned to verticals for their low takeoff angles and the R8 and AV640 caught my attention. After some research, I decided on the cheaper AV640 but it was out of stock. The R8 was in stock so it was purchased instead. After using this antenna for several months, I decided to reverse engineer the design. I started with a table of the element lengths and mounting positions.

The R8 and AV640 use similar designs to improve both efficiency and bandwidth when compared to the older generation of multi-band verticals. The number of traps was reduced by grafting four (trapless) elements onto the main vertical support for each of the bands 6m, 10m, 12m, and 15m. In these designs, the major vertical element is used for operation on only 17m, 20m, 30m, and 40m.

The efficiency was improved with multiple techniques. The radial requirements were greatly reduced by raising the feedpoint impedance. This allows an efficient antenna to be constructed with seven four-foot radials. The feedpoint point impedance was raised by end feeding 3/8 wave elements. Being slightly longer than a wave, these longer elements also have more gain than a shorter wave element of the earlier designs. The drawbacks of this design are twofold. First, a matching transformer is required to match the 50 ohm feedline to the approximate 1200 ohm feedpoint impedance of the 3/8 wave elements (the box at the bottom of the antenna) and second, the length of the radiators on the lower frequency bands grows beyond reasonable mechanical limits of a freestanding vertical element. For instance, a 3/8 wave 40m radiator electrically must be nearly 50 feet high! A vertical antenna this tall without guy ropes would be very difficult to install and maintain. Vertical antennas can be physically shortened with coils or capacitance hats. The latter is more efficient (no resistive coil losses) and both techniques are used in the design of these antennas.

The Cushcraft antenna length is 28.5 feet tall weighing 23 lbs and the Hy-Gain is slightly shorter and lighter at 25.5 feet / 17.5lbs. If you look at photographs of each of these antennas, you will notice that they differ near the top. The Cuchcraft R8 contains two traps, one shared on 17m & 20m, and two capacitance hats. The Hy-Gain AV640 being shorter has been designed with additional capacitance hats and/or additional inductance (series coils) to physically shorten the antenna by an additional three feet.

In less than two pages, I ve attempted to explain a brief history of multi-band vertical antennas and the basic design of the latest generation. Before considering the purchase of either antenna, please review the operating bandwidth of each. If you want to work DX and can t install a horizontal antenna high enough for low angle of radiation, consider a vertical!

73 de w9gb

"PA3HGT" <pa3hgt(remove)@zeelandnet.nl> wrote in message
news:3d7d98e7$0$8641$fb624cd1@news1.zeelandnet.nl...
> Is there's such a page for the R6000 and the AV620 of Hygain (not from
> Hygain or Cushcraft)?
>
> 73 , Hans
>
>
>
>
> "w9gb" <gregory.beat@attbi.com> schreef in bericht

> news:Pdaf9.263624$aA.45653@sccrnsc02...
> > John Tait, EI7BA has a very nice web site that should help with your R7
> > antenna
> > http://www.iol.ie/~bravo/r7_vertical.htm
> >
> > You can e-mail him for specific questions at:
> > http://www.iol.ie/~bravo/#contactinfo
> > bravo@iol.ie
> >
> > Cheers.
> >
> > 73 de w9gb
> >
> > "Luis M. Madrona" <LMADRONA@teleline.es> wrote in message
> > news:GR2f9.330760$6K3.2886238@telenews.teleline.es...
> > > Hallow, any body Know the inductance of the RFC " H " Antiparasitari
> > Choke,
> > > or external diameter of the form and longitude, wire number and wire
> turn
> > ?
> > >
> > > Thansk from Luis EA7QW 73's
> > >
> > >
> >
> >
>
>

4908. Re: 40 m dipole?? How much of leg can I bend??

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-11 06:41:42 UTC
From: 'Doc <w5lz@icok.net>
Message-ID: <3D7EE594.B7416DC3@icok.net>
Source record: 134849

Tarmo,
What difference would that make? RF is an
alternating current, at some point, each leg
becomes "+" and "-". So where's the benefit of
the 'bent' leg being on the braid?
'Doc

4909. Re: Elnec Model Long Wire

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-11 07:55:34 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <3D7EF6F6.3030005@eznec.com>
Source record: 134850

ELNEC and other MININEC based programs can't be used to model antennas
with horizontal wires closer than about 0.2 wavelength from the ground.
If you try it, you get results like you reported. Please read the
"Modeling Ground" section in your ELNEC manual.

The only solution I know of is to use an NEC-2 based program like EZNEC.

Roy Lewallen, W7EL

Ken N4VSD wrote:
> Hello all,
>
>
> I'm getting some strange (13dBi gain at 15 degree azimuth plot) results when
> modeling a longwire four wavelengths long at 7 MHz... The antenna is 280'
> feet long at a height of 5'. Make it any higher and the gain decreases.
> I'm assuming the software (Elnec 3.07 for DOS) cannot model wires close to
> the ground? Any suggestions?
>
> Thank you,
>
> Ken N4VSD

4910. Trap L/C Ratio and Bandwidth

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-11 08:43:58 UTC
From: Reg Edwards <g4fgq.regp@btinternet.com>
Message-ID: <almvodolh1@venus.btinternet.com>
Source record: 134851

ONE MORE VERY POPULARLY PLAGIARISED MISCONCEPTION.

Re-write the 'Bibles' !

It is not true antenna operating Q and hence bandwidth are dependent on trap L/C ratio.

The Q of any resonant system is always a ratio of reactance to resistance. In the present context, the resistance concerned is the radiation resistance seen looking back from the trap into the end of the dipole wire. RadRes depends on length and diameter of the antenna wire and the frequency.

Trap L and C are *predermined* by the overall length of the antenna, the length of antenna beyond the trap, and the two (sometimes three) frequencies at which the antenna is required to be resonant. Their ratio is nowhere involved, only their product.

At the trap frequency Q = (Radiation resistance)/(Reactance of L) approximately

and the bandwidth for which SWR = 1.5 is 0.41 * MHz /Q.

This bandwidth has to be accepted - for given antenna dimensions there's nothing which can be done about it.

Intrinsic coil Q is so high it can be neglected. Its only use is in estimating power lost in the coil.

So although the L/C ratio exists in a trapped antenna it is of no practical value. Nothing else can be calculated with it. It is not possible to work backwards from it. It is like the human appendix for which nobody has yet found a use. It does help to fill space between advertisements in the periodicals and add to the SPAM on the already overloaded Internet. ;o)

On the other hand, SWR vs frequency presented to the transmitter (which is what really matters) may depend more on the characteristics of the transmission line plus tuner than on the much criticised antenna. Which is why I have not included antenna bandwidth in program TRAPDIP. It could be misleading.

Program DIPOLE3 models the whole system (no traps) from antenna to transmitter via twin-line + balun + coax + tuner. Unfortunately the SWR as seen by the transmitter is always 1:1 because as frequency is varied the tuner L and C components are re-calculated and reset to ensure SWR actually is 1:1. Bandwidth at the transmitter cannot be displayed..

========================
Regards from Reg G4FGQ

Free Radio Design Software
Go to http://www.g4fgq.com
==========

4911. Re: safety ground and antenna ground - tie together and connect to A/C ground?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-11 09:06:02 UTC
From: Fred Hambrecht <w4jle@charter.net>
Message-ID: <unu1rs9enhua27@corp.supernews.com>
Source record: 134852

From a practical standpoint, the ground should be as short as possible. I normally use a piece of heavy braid to a ground stake just outside the shack.

When you have lighting induced voltage, the current will follow the path of least resistance. If grounded to the ground pin of your wall socket it must travel the length of the wire back to the house ground. The wire is rarely a straight run. Lighting is not real happy making right angle turns and usually leaps out at some point causing damage.

The short braid to ground makes the electrons happy and protects your equipment. If you take a direct hit, under some conditions nothing in the world will save the equipment. The more practical case is induced voltage from nearby strikes, these are easily taken care of by the braid.

If you want to get a feel for what you are dealing with, disconnect the coax and let it lay on a table when a storm is at least 20 miles away. Note the neat arcs between the center pin and the shell...

My last direct strike totally melted half of my 75 meter dipole and the coax, jumped out of the coax rolled on the floor burning a hole in the rug, proceeded to the electrical wiring, then up to the attic to the far end of the house where it decided to exit, it blew off a piece of plastic siding and down a wooden post to ground.

The best lighting protection against direct hits is full replacement coverage insurance. While it is relatively easy to protect tower mounted beams, a dipole hung between two trees is very difficult to protect with absolute confidence. The only really safe method is to disconnect all the antennas and lay the coax connectors on the ground in the yard. Not very practical when your as lazy as I am.

"Andreas Hofmann" <andreash23@hotmail.com> wrote in message
news:3d7e2e50$1@news.microsoft.com...
> Hi,
>
> I have a dipole and once it enters the house, it is routed through a
> lightning surge protected coax switch. This allows me to ground the
dipole
> (and all other antennas) if I dont use the station. Let assume I do not
> need a RF ground.
>
> 1. The coax switch's case needs to be tied to the house's ground. Is it
> enough to just connect it to the neutral wire in the nearest power
> receptacle?

>
> 2. All the equipment's grounds should be tied together and connected to
the
> house's ground as well. Can I just connect them to the coax switch's
ground
> (if answer for 1 is yes)?
>
>
> Thanks
>
> Andreas, KU7T
>
>

4912. Re: Comet HF Antenna Tuning questions

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-11 09:09:51 UTC
From: Fred Hambrecht <w4jle@charter.net>
Message-ID: <unu230qk1k0j8e@corp.supernews.com>
Source record: 134853

You need to shorten the antenna to raise the resonant freq.

"Keith Bozek" <kbozek@yahoo.com> wrote in message
news:506a3e3b.0209101105.3870227e@posting.google.com...
> I purchased a used CA-UHV and I am using an MFJ 259B to "tune" the
> antenna. I found an issue on 2 meters and was looking for some
> feedback.
>
> 1) The lowest SWR seems to be down around 141 MHZ. As I approach 146
> MHZ, the SWR reaches 3:1. It seems like the whip was trimmed too
> short. Am I correct in this thinking or is it too long?
>
> 2) If the wip is too short, does anyone know what might be a good
> replacement material for the whip if I wanted to replace it with a
> longer whip to bring the antenna back up to 146 Mhz?
>
> 3) I wanted to build a few stinger antennas for the coils, the ones
> with the small ball at the end. Carrying on from question two, where
> might I get the material for this a stinger? I have also heard that
> some solder can be used to form the ball at the end of the whip.
>
> 73's

4913. Re: help interpreting toroid schematic

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-11 09:34:28 UTC
From: JC <jacques.culot@skynet.be>
Message-ID: <3d7f0e25$0$213$ba620e4c@news.skynet.be>
Source record: 134854
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc,sci.electronics.design

I got it yesterday but today no more.

73 de ON5MJ

4914. Re: safety ground and antenna ground - tie together and connect to A/C ground?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-11 09:41:36 UTC
From: JC <jacques.culot@skynet.be>
Message-ID: <3d7f0fd1$0$223$ba620e4c@news.skynet.be>
Source record: 134855

I have installed my dipole with two pulleys and nylon ropes in order to put it down for maintenance and lightning protection as I am lazy too.

73 de ON5MJ - Jacques.

4915. Re: Trap L/C Ratio and Bandwidth

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-11 10:11:15 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <3D7F16C3.6060904@eznec.com>
Source record: 134856

Reg Edwards wrote:
> ONE MORE VERY POPULARLY PLAGIARISED MISCONCEPTION.
>
> Re-write the 'Bibles' !
>
> It is not true antenna operating Q and hence bandwidth are dependent on trap
> L/C ratio.
>
> The Q of any resonant system is always a ratio of reactance to resistance.
> In the present context, the resistance concerned is the radiation resistance
> seen looking back from the trap into the end of the dipole wire. RadRes
> depends on length and diameter of the antenna wire and the frequency.
>
> Trap L and C are *predermined* by the overall length of the antenna, the
> length of antenna beyond the trap, and the two (sometimes three) frequencies
> at which the antenna is required to be resonant. Their ratio is nowhere
> involved, only their product.
> . . .

Before we rush out and rewrite the Bibles. . .

The overall length of the antenna is *predetermined* by the trap L and C. This is just as valid a statement as the reverse, and probably better represents the way most amateurs go about trap antenna design. And the Q of the system is a function of the length of the antenna. So, once you choose the L/C, you've determined the bandwidth -- as well as the antenna length.

Just another old wife,

Roy Lewallen, W7EL

4916. Re: Cushcraft R7/R7000 - R6/R6000 Antiparasitari RFC Choke " H "

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-11 10:19:42 UTC
From: "Luis M. Madrona" <LMADRONA@teleline.es>
Message-ID: <2NEf9.29473$Ki4.223369@telenews.teleline.es>
Source record: 134857

Thank you to answer, certainly I have contacted with jhon, EI7BA and he has cleared up all that the quria to know. Thank you again

"w9gb" <gregory.beat@attbi.com> escribi&#65533; en el mensaje news:RlAf9.70155$Jo.16867@rwcrnsc53...
> R6000
> http://www.radioworld.co.uk/cushcraft_r6000.htm
>
> http://www.durhamradio.com/cushcraft-r6000.htm
>
> http://www.qsl.net/w3ha/illuminator/archive/2000-06/
> The Latest in Multi-Band Vertical Antennas
>
> by John, K3CT
>
> Cushcraft and Hy-Gain have recently released new multi-band vertical
> antennas with improved efficiency and operation on all amateur bands from 6
> meters to 40 meters. The model numbers are Cushcraft R8 and Hy-Gain AV640.
> Hy-Gain also sells the AV620 without the 30m and 40m bands. These antennas
> all share a similar design which solves many problems that plagued the older
> generations of multi-band vertical antennas.
>
> Prior to the WARC bands multi-band vertical antennas covered 40m, 20m, 15m,
> and 10m usually with a multi-trapped &#65533; wave element. Users seldom installed
> these antennas in the clear or with the proper ground radials. These factors
> contributed to these antennas earning a reputation of being poor performers
> with narrow bandwidth. When the WARC bands became available, the
> manufacturers simply added more traps without thinking much about the
> performance. Both the bandwidth and the efficiency suffered due to the added
> traps.
>
> The next generation of multi-band verticals, I believe pioneered by
> Cushcraft, addressed the radial issue by end feeding a &#65533; wave element. In
> this design, the &#65533; wave radiator was shortened with inductors in the traps
> to make the length manageable. This antenna contained the same number of
> traps so the overall efficiency improvement may have been small.

>
> Around the same time GAP antennas made a big splash in the market when
they
> released their line of antennas without traps or radials. I know very
> little about their antennas except that they don't have a good reputation
> for being a rugged antenna.
>
> This brings us to the latest design in multi-band verticals. After moving
> to a new QTH, I wanted to get back on the low bands quickly. I tried
dipoles
> but I wasn't able to install them high enough to be effective for DX. My
> interest turned to verticals for their low takeoff angles and the R8 and
> AV640 caught my attention. After some research, I decided on the cheaper
> AV640 but it was out of stock. The R8 was in stock so it was purchased
> instead. After using this antenna for several months, I decided to reverse
> engineer the design. I started with a table of the element lengths and
> mounting positions.
>
> The R8 and AV640 use similar designs to improve both efficiency and
> bandwidth when compared to the older generation of multi-band verticals.
The
> number of traps was reduced by grafting four (trapless) elements onto the
> main vertical support for each of the bands 6m, 10m, 12m, and 15m. In
these
> designs, the major vertical element is used for operation on only 17m,
20m,
> 30m, and 40m.
>
> The efficiency was improved with multiple techniques. The radial
> requirements were greatly reduced by raising the feedpoint impedance. This
> allows an efficient antenna to be constructed with seven four-foot
radials.
> The feedpoint point impedance was raised by end feeding 3/8 wave elements.
> Being slightly longer than a wave, these longer elements also have more
> gain than a shorter wave element of the earlier designs. The drawbacks
of
> this design are twofold. First, a matching transformer is required to
match
> the 50 ohm feedline to the approximate 1200 ohm feedpoint impedance of the
> 3/8 wave elements (the box at the bottom of the antenna) and second, the
> length of the radiators on the lower frequency bands grows beyond
reasonable
> mechanical limits of a freestanding vertical element. For instance, a 3/8
> wave 40m radiator electrically must be nearly 50 feet high! A vertical
> antenna this tall without guy ropes would be very difficult to install and
> maintain. Vertical antennas can be physically shortened with coils or
> capacitance hats. The latter is more efficient (no resistive coil losses)
> and both techniques are used in the design of these antennas.
>

> The Cushcraft antenna length is 28.5 feet tall weighing 23 lbs and the
> Hy-Gain is slightly shorter and lighter at 25.5 feet / 17.5lbs. If you
look
> at photographs of each of these antennas, you will notice that they differ
> near the top. The Cuchcraft R8 contains two traps, one shared on 17m &
20m,
> and two capacitance hats. The Hy-Gain AV640 being shorter has been
designed
> with additional capacitance hats and/or additional inductance (series
coils)
> to physically shorten the antenna by an additional three feet.
>
> In less than two pages, I've attempted to explain a brief history of
> multi-band vertical antennas and the basic design of the latest
generation.
> Before considering the purchase of either antenna, please review the
> operating bandwidth of each. If you want to work DX and can't install a
> horizontal antenna high enough for low angle of radiation, consider a
> vertical!
>
>
>
> 73 de w9gb
>
>
> "PA3HGT" <pa3hgt(remove)@zeelandnet.nl> wrote in message
> news:3d7d98e7$0$8641$fb624cd1@news1.zeelandnet.nl...
> > Is there's such a page for the R6000 and the AV620 of Hygain (not from
> > Hygain or Cushcraft)?
> >
> > 73 , Hans
> >
> >
> >
> >
> > "w9gb" <gregory.beat@attbi.com> schreef in bericht
> > news:Pdaf9.263624$aA.45653@sccrnsc02...
> > > John Tait, EI7BA has a very nice web site that should help with your
R7
> > > antenna
> > > http://www.iol.ie/~bravo/r7_vertical.htm
> > >
> > > You can e-mail him for specific questions at:
> > > http://www.iol.ie/~bravo/#contactinfo
> > > bravo@iol.ie
> > >
> > > Cheers.
> > >
> > > 73 de w9gb

> > >
> > > "Luis M. Madrona" <LMADRONA@teleline.es> wrote in message
> > > news:GR2f9.330760$6K3.2886238@telenews.teleline.es...
> > > > Hallow, any body Know the inductance of the RFC " H " Antiparasitari
> > > Choke,
> > > > or external diameter of the form and longitude, wire number and wire
> > turn
> > > ?
> > > >
> > > > Thansk from Luis EA7QW 73's
> > > >
> > > >
> > > >
> > > >
> > >
> > >
> >
>

4917. Re: safety ground and antenna ground - tie together and connect to A/C ground?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-11 11:25:59 UTC
From: Owen Duffy <owen@oda.com.au>
Message-ID: <3D7F2847.F31D28DA@oda.com.au>
Source record: 134858

Fred Hambrecht wrote:

> The best lighting protection against direct hits is full replacement
> coverage insurance. While it is relatively easy to protect tower mounted

Is this really an adequate solution for the risk of personal injury or death?

It seems that a commonly held view is that protection of life is not part of the issue.

Owen

4918. Re: how to deal with limited antenna space?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-11 11:26:04 UTC
From: Wayne <w>
Message-ID: <unua2dk3p0c70b@corp.supernews.com>
Source record: 134859

A bit late with my answer here.
I have talked to St Thomas (U S Virgin Islands) on 20 meters.
I'm in the San Joaquin Valley in California.
I live in a mobile home here, 14 X 65, and have my 40/20 dipole entirely
over the roof.
run diagonally, and even bend ends if you need to.

Wayne WA2YNE

"Bob Miller" <bamiller@texas.net> wrote in message
news:dnNWPabjaxWv0Fa9j5irglD4a8c3@4ax.com...
> "newsguy" <harpoon32@yahoo.com> wrote:
>
> >Hello! I am intending to get my license, however I am worried about one
> >thing. I live in a 'mobile home community' (trailer park, for the
> >non-euphemistic :) I have a yard about 45 x 50 and 1 tree. I really
> >dont think they are going to appreciate me if I erect some huge yagi
thats
> >60' tall and almost bigger than my home, and yet I dont want to be
limited
> >to talking local, I would like a range of 1000 miles at least. Do I have
> >any options? Will a good 'stealthy' dipole do this for me?
> >Thanks
> >
> >
>
> A vertical is one way to go. You can also do well with a stealthy dipole.
A
> dipole for 20 meters is only 33' long, total. And that will talk all over
the
> world. Dipoles for the higher bands are even shorter -- a 10 meter dipole
is
> only 16'. So it may be tricky to get on 40, 80 or 160 from your lot, but
the
> higher bands are well within possibility, especially with the tree you
have to
> hold up one leg of a wire antenna.
>
> Bob
> k5qwg
>

4919. Re: Need ways to hide my antenna from my neighbors.

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-11 11:56:56 UTC
From: Wayne <w>
Message-ID: <unubs9a6om6af1@corp.supernews.com>
Source record: 134860

He could maybe put some fake branches on the tower, and paint to resemble
tree.
WA2YNE

"VE3TMT" <ve3tmt@rac.ca> wrote in message
news:xTz59.150$2T2.119459@news20.bellglobal.com...
>
> "DJboutit" <Recordking@Hotmail.com> wrote in message
> news:e8d89b3f.0208110847.73139897@posting.google.com...
> > I have a 5/8 comet antenna I need some ways to hide my antenna out of
> > the site of my neighbors. I also need ways to hide a antenna tower if
> > I were to get high one. I live in a area with alot of people nearby.
>
> Hiding the antenna is the easy part, put it inside or paint it green and
> stick itin a tree. I'm afraid you're going to have a harder time hiding
> your tower. But if you do find a way, please let the rest of us know.
>
>

4920. Re: Trap L/C Ratio and Bandwidth

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-11 12:14:56 UTC
From: "Ian White, G3SEK" <G3SEK@ifwtech.co.uk>
Message-ID: <F4K7RdEAPzf9EAXP@ifwtech.co.uk>
Source record: 134861

Reg Edwards wrote:
>ONE MORE VERY POPULARLY PLAGIARISED MISCONCEPTION.
>
>Re-write the 'Bibles' !
>
>It is not true antenna operating Q and hence bandwidth are dependent on trap
>L/C ratio.
>
>The Q of any resonant system is always a ratio of reactance to resistance.
>In the present context, the resistance concerned is the radiation resistance
>seen looking back from the trap into the end of the dipole wire. RadRes
>depends on length and diameter of the antenna wire and the frequency.
>
Yes.

>Trap L and C are *predermined* by the overall length of the antenna, the
>length of antenna beyond the trap, and the two (sometimes three) frequencies
>at which the antenna is required to be resonant.

That is true, but misleading, because you can also choose to vary the
length of wire beyond the trap in the interest of improved bandwidth.

>Their ratio is nowhere
>involved, only their product.
>
Not true. The product must obviously be kept constant because it
determines the resonant frequency of the trap. But different values of
L/C can be used (while keeping the product L*C constant) - and that
will determine the wire length required to give resonance on the
lower-frequency band. Those choices *will* affect the SWR bandwidth on
that band.

>At the trap frequency Q = (Radiation resistance)/(Reactance of L)
>approximately
>
That is the operating Q of the trap - on its own.

>and the bandwidth for which SWR = 1.5 is 0.41 * MHz /Q.
>
But that's a different Q - the operating Q of the whole antenna, as
measured at the feedpoint. That Q is determined by the properties of
both the trap and the rest of the antenna.

So don't burn the Bibles yet.

And don't assume that people who agree with the handbooks are plagiarists. The other possibility is that they've done their own thinking, and only agree because the handbooks got it right.

--
73 from Ian G3SEK 'In Practice' columnist for RadCom (RSGB)
Editor, 'The VHF/UHF DX Book'
http://www.ifwtech.co.uk/g3sek

4921. Re: safety ground and antenna ground - tie together and connect to ...

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-11 12:31:03 UTC
From: richardharrison@webtv.net
Message-ID: <457-3D7F3787-10@storefull-2317.public.lawson.webtv.net>
Source record: 134862

Fred Hambrecht repeated an often stated misconception:
"If you take a direct hit, under some conditions nothing in this world will save the equipment."

True, because "some conditions" is undefined.

False, because thousands of commercial radio stations of all types are in the most salient spots. They take tens or hundreds of direct hits every year and suffer no damage. In fact their 24-7 operation is affected almost imperceptibly.

Lightning protection is not always perfect in all commercial stations. One posting in this newsgroup identified a medium wave broadcast station burnt to the ground by a lightning strike. That is the only instance I`ve heard of.

I`ve worked in a number of broadcast stations since 1949 . These had countless direct hits. The worst that ever happened was loss of a few seconds air time while the transmitter cycled off then back on to clear the overload caused by the lightning.

I had a waveguide switch coil burnt by lightning in one of hundreds of microwave repeaters I`ve been associated with, but I easily fixed that exposure.

It is complete baloney to say you can not protect against a direct hit.

Best regards, Richard Harrison, KB5WZI

4922. Re: Trap L/C Ratio and Bandwidth

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-11 13:14:43 UTC
From: VE9SRB <srbest@att.net>
Message-ID: <7lHf9.8092$1C2.687370@bgtnsc04-news.ops.worldnet.att.net>
Source record: 134863

"Reg Edwards" <g4fgq.regp@btinternet.com> wrote in message
news:almvodolh1@venus.btinternet.com...
> ONE MORE VERY POPULARLY PLAGIARISED MISCONCEPTION.
>
> Re-write the 'Bibles' !
>

Not just yet.

> It is not true antenna operating Q and hence bandwidth are dependent on
trap
> L/C ratio.
>
> The Q of any resonant system is always a ratio of reactance to resistance.

The Q of a resonant system is not 0.

> In the present context, the resistance concerned is the radiation
resistance
> seen looking back from the trap into the end of the dipole wire. RadRes
> depends on length and diameter of the antenna wire and the frequency.
>

Antenna Q is not determined from the resistance looking from the trap back
into the antenna wire.

In regards to the trap, the R, L and C properties of the trap will provide
an indication of the Q of the trap itself and not the antenna system.

For the antenna system, Q is a function of the antenna's feedpoint impedance
properties which are a function of the antenna's R, L and C properties and
the translation of the trap's R, L and C properties to the antenna
feedpoint.

For the resonant antenna, Q is not equal to X/R. At resonance X = 0 which,
from the X/R formula, implies that Q = 0 at resonance. It is not. For an
antenna, determining Q from X/R is only approximately valid for very high
values of Q, where X >> R. This generally applies at low frequencies where
the antenna is small.

Near the antenna's resonance, a different method must be used to determine
antenna Q. One method is to determine Q from the antenna's 1/2 power
impedance bandwidth as follows:

Q = 2 / BW

where BW is the bandwidth determined from the 1/2 power SWR points where the
ZO used to determine SWR is the antenna's feedpoint resistance. The 1/2

power SWR is equal to 5.828.

Another method is to determine Q directly as follows:

Q = A (B + C)

where A = w / (2 R), w = 2 pi F

B = dX/dw

C = |X|/w

> Trap L and C are *predermined* by the overall length of the antenna, the
> length of antenna beyond the trap, and the two (sometimes three)
frequencies
> at which the antenna is required to be resonant. Their ratio is nowhere
> involved, only their product.
>
> At the trap frequency Q = (Radiation resistance)/(Reactance of L)
> approximately
>

Is this supposed to be the Q of the trap or the Q of the antenna? In either
case, this formula is not valid. Q is never approximated by Resistance /
Reactance.

> and the bandwidth for which SWR = 1.5 is 0.41 * MHz /Q.
>

This is not the correct relationship for Q and bandwidth.

<snip>

Steve VE9SRB

4923. Re: safety ground and antenna ground - tie together and connect to ...

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-11 13:36:04 UTC
From: richardharrison@webtv.net
Message-ID: <13303-3D7F46C4-4@storefull-2314.public.lawson.webtv.net>
Source record: 134864

Andreas, KU7T wrote:
"The coax switch`s case needs to be tied to the house`s ground. Is it enough to just connect it to the neutral wire in the nearest power receptacle?"

The nearest power receptacle provides a safety ground (if the receptacle is the 3-wire type). This safety ground is to avoid shock from the power service and is inadequate for lightning protection. The impedance of the safety wiring is too high given the possible magnitude of the lightning strike. The safety wire is separate from the neutral wire until it reaches the distribution panel.

A ground rod (or better ground) is needed where a transmission line enters a house. If that spot is not also where the power service ground connection is, the radio ground rod must be connected by a no. 6 copper conductor (or better) to the power service ground connection. This interconnection is a code requirement in most jurisdictions.

All the radio equipment should be connected by a short direct connection to the external ground established for the coax. The idea is to minimize the difference of potential between all pieces of equipment. Conductors have inductance in addition to their resistance and lightning is a transient which produces a-c across the spectrum in addition to its d-c component. Conducters at the same potential don`t flash across.

Best regards, Richard Harrison, KB5WZI

4924. Re: safety ground and antenna ground - tie together and connect to ...

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-11 14:28:40 UTC
From: "Ian White, G3SEK" <G3SEK@ifwtech.co.uk>
Message-ID: <X$sPwYBYM1f9EAUB@ifwtech.co.uk>
Source record: 134866

Richard Harrison wrote:
>
>It is complete baloney to say you can not protect against a direct hit.
>

It depends who "you" are.

"You", in your purpose-built commercial station, certainly can protect against a direct hit.

"You", in your amateur station with a grounding system that was not purpose-designed, and utility wiring coming in here, there and everywhere, stand much less chance.

For "us" amateurs, the best option seems to be a balance between reasonable precautions and keeping the insurance paid-up. The right balance depends on the installation and the local risk of lightning.

--
73 from Ian G3SEK 'In Practice' columnist for RadCom (RSGB)
Editor, 'The VHF/UHF DX Book'
http://www.ifwtech.co.uk/g3sek

4925. American Gulf War Veterans Association

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-11 15:09:06 UTC
From: N W O <"ham mer"@bigfoot.com>
Message-ID: <64nunuodligmnnjo4mmaichjffgs9mlvgh@4ax.com>
Source record: 134865

American Gulf War Veterans Association

Joyce Riley vonKleist, RN, BSN spokesperson

P.O.Box 85, Versailles, Missouri 65084

(573) 378-6049 voice, (573) 378-5998 fax

www.gulfwarvets.com, gulfwar@dam.net

For Immediate Release:

September 10, 2002

Contact Person: Gary Treece

U.S. SUPPLIES, CALIBRATES AND ENDORSES

USE OF CHEMICAL WEAPONS IN IRAQ

As the Bush administration works to gain world support to conduct a pre-emptive strike against Iraq, new disturbing information has surfaced with regard to U.S. involvement in the development of Iraqï¿½s chemical and biological weapons program.

The pre-emptive strike is based upon President Bush and Vice-President Cheneyï¿½s beliefs that there must be an invasion of Iraq because Saddam Hussein:

1. possesses weapons of mass destruction and the potential for nuclear weapons,

2. used these weapons on his own people (Kurds) and the Iranians,

3. has a history of lying to the world.

According to information obtained by the AGWVA, there is irrefutable evidence to show that the Unites States government provided and encouraged Iraqï¿½s use of chemical weapons. The United States Department of Commerce and The American Type Culture Collection (ATCC) provided at least 80 shipments of biological agents that were not attenuated (or weakened) and were capable of reproduction. These shipments included such virulent agents as Anthrax, West Nile Virus and Clostridium botulinum (S.R.103-900, May 25, 1994, pg. 264).

The AGWVA also found it very disturbing to learn that on December 19, 1983, the Middle Eastern envoy who carried a handwritten note from President Reagan to Saddam Hussein, to ï¿½resume our diplomatic relations with Iraqï¿½ was none other than our present Secretary of Defense, Donald Rumsfeld.

According to ï¿½U.S. Diplomatic and Commercial Relationships with Iraqï¿½, 1980-August 2, 2000, (www.cam.ac.uk/societies/casi/info/usdocs/usiraq80s90s.html), Nathaniel Hurd states:

ï¿½Iraq reportedly began using chemical weapons (CW) against Iranian troops in 1982, and significantly increased CW use in 1983ï¿½ Shortly after removing Iraq from the terrorism sponsorship list, the Reagan administration approved the sale of 60 Hughes helicopters. Analysts recognized that ï¿½civilianï¿½ helicopters can be weaponized in a matter of hours and selling a civilian kit can be a way of giving military aid under the guise of civilian assistance.ï¿½

Mark Phythian, in his book Arming Iraq: How the U.S. and Britain Secretly Built Saddamï¿½s War Machineï¿½ (Northeastern University Press, 1997) stated:

ï¿½ ï¿½the Secretaries of Commerce and State (George Baldridge and George Shultz) lobbied the NSC (National Security Council) advisor into agreeing to the sale to Iraq of 10 Bell helicopters, officially for crop spraying. It is believed that US-supplied choppers were used in the 1988 chemical attack on the Kurdish village Halabja, which killed 5000 people.ï¿½

In his own book Turmoil and Triumph: My Years as Secretary of State, George Shultz refers to a declassified CIA report which notes Iraqï¿½s use of mustard gas in August 1983, giving further credence to the suggestion that the State Department and/or the National Security Council (NSC) was well aware of Iraqï¿½s use of chemical weapons at this time. If the use of chemical weapons was known in August of 1983, and Donald Rumsfeld went to Iraq in December of 1983, he was on notice that this country was using and was going to continue to use weapons of mass destruction. Why, then, did the United States move to de-list Iraq from those considered to be terrorist nations?

On March 23, 1984, Iran accused Iraq of poisoning 600 of its soldiers with mustard gas and Tabun nerve gas. Donald Rumsfeld returned to Baghdad on March 24, 1984. On that same day, the UPI wire service reported that a team of UN experts had concluded that:

ï¿½Mustard gas laced with a nerve agent has been used on Iranian soldiers. Meanwhile, Donald Rumsfeld held talks with foreign minister Tariq Aziz.ï¿½

Probably the most critical piece of information is that according to Washington Post journalist Bob Woodward, in a December 15, 1986 article, the CIA began to secretly supply Iraq with intelligence in 1984 that was used to ï¿½calibrateï¿½ mustard gas attacks on Iranian troops.

It is public record that the U.S. not only armed Iraq from 1983 thru August 1, 1990, but that they also provided the money to Iraq to purchase the weapons via the Atlanta branch of the Banca Nazionale del Lavoro (BNL), George Bush, Sr., and the Export-Import Bank. Iraq received $5 Billion dollars funneled through the Commercial Credit Corporation ostensibly for food credits. It is also public information that at least $2 Billion dollars from the defaulted loan was repaid by the U.S. citizen taxpayers.

Joyce Riley, spokesperson for the American Gulf War Veterans Association has for seven years been shining the light of accountability on the Department of

Defense for having armed our ï¿½enemyï¿½ with weapons of mass destruction, exposing our military to these weapons and then denying not only their culpability but the very existence of the mystery diseases. She often quotes Senator Donald Riegle (D-MI) who stated in Senate Report 103-900, ï¿½Our troops are not just sick, they are dying.ï¿½

Riley, a former Captain in the United States Air Force Reserve and Flight Nurse states: ï¿½If it wasnï¿½t bad enough to watch our troops become ill from our own weaponsï¿½ the Department of Defense labeled our sick men and women as ï¿½mental cases.ï¿½ These proud men and women have been abandoned, are now sick and must fight the battle alone. These needless illnesses and deaths now lie at the feet of the Pentagon and Veteransï¿½ Administration Hospitals.ï¿½

4926. Re: 2M Coax antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-11 16:34:59 UTC
From: KA9CAR <nospam@nospam.usa>
Message-ID: <alnr64gcj1@news1.tribune.com>
Source record: 134867

For a rigid version of that antenna, see August 2001 QST hints and Kinks,
or

http://user.mc.net/~jdewey/sleeve_dipole/

John
KA9CAR

Josh Hillman <use@news.grp> wrote in message
news:ZKrf9.1$IK5.215@news.sjc.globix.net...
> Hi,
>
> Some time back I encountered an article on making a 2m antenna using a
> coaxial cable. It involved in stripping the outer insulation and pulling
> back the braid till 19". I don't remember where I saw the article. Does
> anyone know about it.
>
> Thanks.
>
> Josh
>

4927. Re: Water pipe ground?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-11 17:01:09 UTC
From: Fred Marshall <fmarshall@acm.org>
Message-ID: <alnssg$1q1f$1@feed.centurytel.net>
Source record: 134868

"N4LQ" <N4LQ@igLou.com> wrote in message news:3d79676d$1_3@news.iglou.com...
> I cut the main water pipe to install a whole house filter. The filter is
> plastic and came with a jumper wire to complete the electrical bypass.
Since
> I use this pipe for my ground, I was curious if it really worked or if
> plastic was used to the street main. So before installing the wire, I
> connected an ampmeter across the filter. The meter went nuts until I put a
> rectifier in series with it. I measure exactly 20ma of dc current and it
> stays constant.
> Has anyone tried this? Why is it DC current and why is it constant? Keying
> the rig with 1 kw input has no effect on the current. I intend to leave
the
> meter in line for a while and see if it ever changes. Maybe a good rain
will
> make it change?
>
>
> --
> Steve N4LQ.

Steve,

With a rectifier in series with the meter, one could only expect what appears to be DC, no? That is, the current is all in one direction because of the rectifier. If the fluctuations are rapid enough to be integrated / averaged out by the dynamics of the meter (it can only move so fast) then the one-way current will appear to be a constant current.
From your earlier measurement, where the "meter went nuts" it appears that the circuit current isn't normally DC.

Also, one wouldn't necessarily expect to see current in this type of measurement when the transmitter is keyed. This is because an ideal situation would have all of the current flowing through the power source. The ground connection provides a potential reference so that there aren't potential differences between various equipments. Ideally there's no current flow. Less ideally, you need to consider what would possibly be conducted in the ground wire. If there is RF current, the rectifier may not be adequate to act as a rectifier at the frequency in question. The antenna has a lot to do with RF current possibilities.

If you put the 1KW transmitter in an automobile, do you expect to have high potentials (and the possibility of high current flow) from the car body to ground? Again, could depend on the antenna arrangement - vehicle integral whip vs. an external Yagi grounded through a pole.

Fred
AC7VR

4928. Re: H.A.A.R.P

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-11 17:09:03 UTC
From: Dan/W4NTI <w4nti@mindspringnospam.com>
Message-ID: <alntbb$49d$1@nntp9.atl.mindspring.net>
Source record: 134769

Yeah ... another reason to go after him.

Dan/W4NTI

"packet_eater" <mobileman234@yahoo.co.uk> wrote in message
news:93258905.0209100618.20e2179b@posting.google.com...
> Are you sure its not Saddams chemical weapons clouds affecting the
> refractive index of the F layer ??
>
> :-)

4929. Beverage substitutes for the next 160 Mx season?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-11 19:36:48 UTC
From: "Kenneth D. Grimm, K4XL" <kgrimm@adelphia.invalid>
Message-ID: <466vnuo9o29v8himikgaruptd32hjv5s6u@4ax.com>
Source record: 134770

My beverage antennas can't be replaced, so I'm considering some
alternatives as the 160 mx dx season approaches. I am particularly
interested in the 2 loop K9AY. But, then there are the flag, pennant
and ewe antennas to consider as well. Has anyone done any comparative
work on these vs. the K9AY. I know that the medium wave and longwave
listeners are particularly enthusiastic about the K9AY, but I haven't
seen much about their use on 160, despite the fact that they were
originally described for that band. I would be very interested in
hearing from K9AY users who have also used other "listening" antennas
and can offer some of the pros and cons. Thanks.
Ken K4XL - Replace "invalid" with "net" to reply.
*** BoatAnchor Manual Archive ***
On the web at http://bama.sbc.edu or
FTP site info: bama.sbc.edu login: anonymous p/w: youremailadr

4930. EH antenna. Good or bad ?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-11 19:58:40 UTC
From: Les Brousse <tribu.brousse@wanadoo.fr>
Message-ID: <alo7fh$o6o$1@wanadoo.fr>
Source record: 134771

Interrogation about this new concept of EH antenna.
Is it H for hoax .
Is it really efficicient or just a leaking dummy load?
73, F6FER Roger

4931. Re: EH antenna. Good or bad ?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-11 20:32:36 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <qt9vnu4i2j7k5pb8trjr6d2rmkaddsha04@4ax.com>
Source record: 134772

On Wed, 11 Sep 2002 21:58:40 +0200, "Les Brousse"
<tribu.brousse@wanadoo.fr> wrote:

>Interrogation about this new concept of EH antenna.
>Is it H for hoax .
>Is it really efficicient or just a leaking dummy load?
>73, F6FER Roger
>

Hi Roger,

By all reports, worse. A leaking dummy load is easier to tune.

73's
Richard Clark, KB7QHC

4932. Re: safety ground and antenna ground - tie together and connect to ...

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-11 21:37:43 UTC
From: Owen Duffy <owen@oda.com.au>
Message-ID: <3D7FB7A7.3E549D02@oda.com.au>
Source record: 134773

"Ian White, G3SEK" wrote:
>
> Richard Harrison wrote:
> >
> >It is complete baloney to say you can not protect against a direct hit.
> >
>
...

> For "us" amateurs, the best option seems to be a balance between
> reasonable precautions and keeping the insurance paid-up. The right
> balance depends on the installation and the local risk of lightning.

I agree.

There exist for most situations a range of treatment options and associated residual risk, whether it be a commercial, military or ham installation. One needs to consider the range and choose an option that provides the best value for one's own circumstance, consistent with local regulatory requirements which may stipulate requirements. (For example, the installation of earth electrods for communications equipment and the equipotential bonding is dealt with specifically in our electrical wiring standard and standards for lighting mitigation.)

There has been a tendency in these parts of recent years for people to depend on insurance and to not excercise prudence in their actions. The result of this is unsustainable insurance where people with insurance take risks without care, rusulting in claims that make premiums unaffordable, and in some cases here, collapse of insurers. Perhaps one needs to insure against the risk of collapse of your insurer!

I have seen some interesting write-ups of insurance claims for lightning damage to ham equipment and property that have run toward $100,000. I could imagine that it could easily exceed this if a serious fire is caused, or if personal injury or death was caused (either directly or indirectly (fire, falling antenna structures)), liability could be very big numbers. There is little doubt that in most situations a tall tower with sizeable conductors entering a residence increases the risk of lighting damage to the property or persons significantly. Might be that an insurer might regard an installation that was unsafe added to the risk and argue contributory negligence in the way that they would try to avoid liability if a bodgy electrical installation caused a fire.

Be responsible, consider the risk and manage it. It is a relevant technical aspect of the hobby.

Owen

4933. GEOSTATIONARY YAGI

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-11 21:42:46 UTC
From: Jerry Shaw <jerryshaw@jerryshaw.fsnet.co.uk>
Message-ID: <alod48$895$1@news8.svr.pol.co.uk>
Source record: 134774

Hi all, I suppose you've had this one a thousand times but can anyone supply me with the dimentions to make a long loop or YCV yagi antenna to receive the Meteosat wefax signal on 1.6Ghz???

Please help as I know I can build one and not spend Squillions of ����.

Many thanks in advance, Jerry

4934. Re: GEOSTATIONARY YAGI

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-11 21:52:03 UTC
From: Alan Beagley <abeagley@optonline.net>
Message-ID: <3D7FBB03.2060404@optonline.net>
Source record: 134775

How many bazillion = 1 Squillion?

-=-
Alan, AB2OS

Jerry Shaw wrote:
> Hi all, I suppose you've had this one a thousand times but can anyone supply
> me with the dimentions to make a long loop or YCV yagi antenna to receive
> the Meteosat wefax signal on 1.6Ghz???
>
> Please help as I know I can build one and not spend Squillions of ï¿½ï¿½ï¿½ï¿½ï¿½.

4935. Re: Shortwave Antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-11 22:02:47 UTC
From: Jerry Shaw <jerryshaw@jerryshaw.fsnet.co.uk>
Message-ID: <aloe9p$a2f$1@news7.svr.pol.co.uk>
Source record: 134776

How much space do you have???

I have just entered the hobby also and saw a web site that gave me this formula to make a dipole type, which basically 2 lengths of wire.

e.g.

```
|---------------------------| |---------------------------|
31.2ft 31.2ft

___________________ ___________________
| |
Centre > < Screen
|

'-------------------------------------------------Off to radio
```

This was from the formula 468/freq(Mhz)

468/15Mhz=31.2

As you probably know, the main sw band is approx 0 - 30Mhz so this, if I am correct should centre around 15Mhz

I could be wrong but I am sure I will be told on here. :-)

Anyway, if you make a long wire jobby, just be sure to insulate the ends and weatherproof the centre join.

I find PSK31 is interesting around the 14.07Mhz mark. You will need some software but it is plentiful on the net. Search PSK31 and hey presto.
In fact, I have it here in a zip file if you want it.

I had a 30ft length of coax inner (1 length) straight into my scanner, which isn't best suited to the task but nevertheless I got a signal from poland :-)

I hope I have been of correct assistance and happy listening.

Jerry.

4936. Re: GEOSTATIONARY YAGI

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-11 22:12:10 UTC
From: Jerry Shaw <jerryshaw@jerryshaw.fsnet.co.uk>
Message-ID: <alof0bbfp1@news5.svr.pol.co.uk>
Source record: 134777

Lots. :-)

4937. Re: safety ground and antenna ground - tie together and connect to ...

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-11 22:26:26 UTC
From: Dick Carroll <dixie@townsqr.com>
Message-ID: <3D7FC2E0.A3E88954@townsqr.com>
Source record: 134778

"Ian White, G3SEK" wrote:

> Richard Harrison wrote:
> >
> >It is complete baloney to say you can not protect against a direct hit.
> >
>
> It depends who "you" are.
>
> "You", in your purpose-built commercial station, certainly can protect
> against a direct hit.
>
> "You", in your amateur station with a grounding system that was not
> purpose-designed, and utility wiring coming in here, there and
> everywhere, stand much less chance.
>
> For "us" amateurs, the best option seems to be a balance between
> reasonable precautions and keeping the insurance paid-up. The right
> balance depends on the installation and the local risk of lightning.

YES! And anyone who believes he can hang a few Polyphasers, with their
ground wires connected properly, and escape all lightning damage, is kidding
himself.
Lightning and all that goes withit is a complex matter.

Dick

4938. Re: Shortwave Antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-11 22:34:13 UTC
From: Jerry Shaw <jerryshaw@jerryshaw.fsnet.co.uk>
Message-ID: <alog4m$cf8$1@news5.svr.pol.co.uk>
Source record: 134779

OK IGNORE MY PREVIOUS POST

The 31.2 feet is the OVERALL LENGTH

This is 15.6ft either side of the centre feed.

Sorry about that. The calculations would have centred that antenna at 7.5Mhz. OOOppps.

Here are a few clues anyhow.

http://www.qsl.net/kb5wck/antenna.html

4939. Re: Skin effect experiment with disk on antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-11 23:36:47 UTC
From: rsparks <rsparks@elltel.net>
Message-ID: <3d7fdf7b_2@corp.newsgroups.com>
Source record: 134780

"Richard Clark" <kb7qhc@attbi.com> wrote in message
news:k82snug02h17ffheuhu7qfc7voua7ali7s@4ax.com...
> On Tue, 10 Sep 2002 05:46:45 -0700, "rsparks" <rsparks@elltel.net>
> wrote:
>
> > >"Richard Clark" <kb7qhc@attbi.com> wrote in message
> > >news:cccpnu049jvv17229h10e0p4pqn9obqmrm@4ax.com...
> > >
> > >> Yes it should, but your set-up was far too error-prone to reveal it.
> > >> Further, even casual observation of the photos reveals you had a world
> > >> of problems with almost everything under the sun (including yourself)
> > >> between those two capacitor plates you added.
> > >>
> > >
> > >You must think that the supports are metal.
>
> I would have stated as much. Inviting more speculation does not make
> a case.
> > They are not.
> > >They are PVC and dry wood. Yes they would have some dielectric effect
> > >but it would be very little compared to the skin effect shielding that we
> > >should
> > >see with this design.
>
> Again, this is speculation and wishing in the place of measurement.
>
> > >
> > >The presence of the test meter between the plates would act to increase
> the
> > >capacity between the plates but again by very little.
>
> Again, this is speculation and wishing in the place of measurement.
> The computation that follows belies the statement "by very little."
>
> > >The meter is 2 1/2
> > >inches
> > >wide and is about 6 square inches in cross section as seen between the
> disk
> > >plates. If the meter were a metal box, then the effective spacing
> between
> > >the
> > >disk would be reduced by the width of the meter (2 1/2 inches) so the

> >spacing
> >for that area would be 7 1/2 inches. Because we are using a 12 inch
> >diameter
> >disk, the presence of the meter does not introduce a large change in the
> >final
> >capacity between the disk.
> >
> a = 10
> A = pi * r² = 113
> C = (0.225 * A)/(a * 10²²)
> = 2.54 pF
>
> a = 7.5
> A = pi * r² = 113
> C = (0.225 * A)/(a * 10²²)
> = 3.39 pF
>
> The difference being +33.5% error of course, negating the false
> illusion of accuracy.

Your use of the 7.5 inch distance across the entire disk surface considerably overstates the actual change in effective distance due to the introduction of a conductor between the plates.

>
> >
> >Those who have good skills in using Eznec should try placing a variety of
> >capacity
> >sizes in parallel with the feed line to see how the antenna impedance and
> >resistance change.
>
> This belies EZNEC documentation which clearly states:
> "There is no direct way to place a load in parallel with a source,
> transmission line, or another load."
> ... to presume otherwise is another source of considerable error.
>

If a direct way is not built into Eznec, then we use the indirect way which works fine. I placed a small square loop coming from the location of the disk into the model. Then I used a variety of capacity values to see what happens to the antenna parameters. You could try this method.

> >
> >I completely agree that the physics must apply equally everywhere. That
is
> >why
> >I picked a thick disk (relative to coax braid). That is why the disk is
12
> >inches in
> >diameter, large enough to have a very measurable effect on the resonant
> >length

> >of the antenna if the skin effect shield is real.
>
> All of which has nothing to do with applying physics equally
> everywhere. As such the statement above adds nothing and ignores this
> requirement. To conform to the demand of this universal application
> requires you to repeat your tests by moving the disks out and away
> from the drive point while at the same time exhibiting identical
> results. This is wholly lacking in your work and no amount of
> rhetoric will replace it.
>
> If you do in fact perform this task, by degrees (that is, displacing
> the disks by increments of, say, 12 inches) until the disks are found
> at the remote ends; you will undoubtedly find the conventional
> expectation of the dipole becoming electrically longer is satisfied.
> If you still observe otherwise, we can tackle that in earnest to shake
> out those errors.
>
> >
> >Clearly the results of the
> >experiment do not support
> >skin effect shielding which is troubling for all of us trained on the
ARRL
> >Antenna Handbook.
> >
> >73, Roger, W7WKB
>
> Hi Roger,
>
> Clearly the results, measurements, and revisionist ideas are entirely
> out of whack. Your results don't even offer the appearance of
> tracking your own theory. Statements of differences being negligible
> have been shown to be off the mark by considerable (and quite obvious)
> margins.
>
> The most troubling aspect is the inappropriate use of a software model
> and the corresponding blind-side of not simply attaching a 2.54 pF OR
> 3.39 pF cap across the standard dipole's drive point connection for
> measurement to test the assertions made. This step cannot be argued
> to be prohibitive in the face of adding two significant structures
> that would take far more effort (and which effort has obviously been
> expended).
>
> The conventional teachings of skin effect remain standing quite
> securely.
>
> Looks like you need to do something different. I have offered two
> compelling things to do.
>
> 73's
> Richard Clark, KB7QHC

Hi Richard,

I don't think I will do the different location experiment you suggest although it would be interesting to see the curve. If skin effect provides a shield, it should be most noticeable where the current is largest which is near the feed point.

Your suggestions of removing the meter from between the disk and removing the dielectrics from between or near the disk are good ideas. I don't see any reason why a coax or twin lead feed line could not be used. We would have to introduce a correction for the length of the feed line but that is easily done. A "someday" job/experiment.

73, Roger, W7WKB

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
------== Over 80,000 Newsgroups - 16 Different Servers! =-----

4940. Re: Skin effect experiment with disk on antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-12 00:44:21 UTC
From: rsparks <rsparks@elltel.net>
Message-ID: <3d7fdf7b$2_2@corp.newsgroups.com>
Source record: 134781

Thanks to Ian, G3SEK, for posting this link

http://www.ifwtech.co.uk/g3sek/misc/skin.htm

You will notice that the assumption for the direction of the electrical field is that it acts parallel to the surface of the conductor, causing a current to flow parallel to the surface. The math, as well as experience of many years, indicates that the current penetrates into the surface a distance related to the frequency under these conditions.

The math solution does not deal with a condition where the the electrical field is at right angles to the surface. We then can not use the solution to predict what will happen when a voltage is applied under conditions present in the disk antenna experiment. It would be logical to use the results to make a first guess estimate of current density at distances away from the points of contact.

Hi Roy,

Yes, the resultant fields are complex. The currents actually flowing in the system should not be too hard to figure out however. The big question is whether the current in the disk flows around the edge or through the center. I think very near the center with some spreading away due to charge repulsion between charges, but the charge density would have to decrease very quickly as we moved away from the center. I don't think you agree with that.

I do not know how I could measure the current in the disk under either flow assumption. I do see how the current would cause heat in the area where the current was highest which in both cases would be near the center, but under my model would be more concentrated in the center than under your prefered model. I don't think the difference would be detectable with copper as the disk material.

I think I have a good feel for the reaction of the group to the experiment. Everyone who posted felt it was in some way faulty because it did not detect a skin effect shield factor. OK.

I should mention that the experiment I posted over a year ago (The tube capacitor experiment where I placed a metal sleeve between the inside and outside capacity plates) also did not detect any skin effect shielding. That experiment also looked for a change due to the increased path length that current would take if the skin shielding effect were present when the electrical field was at right angles to the conductor surface.

I think I will sit back and ponder the responses for a while. I will probably respond to postings less quickly, or not at all.

This has been interesting, thanks one and all for the comments.

73, Roger, W7WKB

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

4941. Re: Skin effect experiment with disk on antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-12 01:51:32 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <3D7FF324.2010902@eznec.com>
Source record: 134782

Here are two more thoughts.

1. Consider a sealed box or cable, and how good a shield it provides. Then put a slit in the box or cable, or some holes. If skin effect didn't exist, the slit or holes wouldn't make much difference -- the current would just have to detour around a bit. But you'll find that it makes a very large difference -- because it provides a path for the field and currents from the inside to get to the outside.

2. According to your theory, a shielded box made from double sided PC board material should be much more effective than one made from a solid copper sheet, because there's an insulator between the sheets which would prevent the flow of current you predict. If you suppose that there would still be flow due to capacitive coupling, you should be able to calculate the effect of the capacitive reactance you're introducing. Of course, first you've got to find some evidence of current on the outside of even the solid sheet box, but you won't be able to, if the copper is at least several skin depths thick. You could repeat your experiment with the each of the copper disks replaced by two parallel disks separated by an insulator (sealed around the periphery if you'd like) and see what a difference it makes. Fill the space between with some lossy material like water or a bunch of ferrite cores and see how much you can affect the mythical current flowing there.

Roy Lewallen, W7EL

4942. Re: Beverage substitutes for the next 160 Mx season?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-12 02:17:03 UTC
From: k3bu@aol.com
Message-ID: <20020911221703.03228.00000238@mb-fo.aol.com>
Source record: 134783

> I am particularly
>interested in the 2 loop K9AY. But, then there are the flag, pennant
>and ewe antennas to consider as well. Has anyone done any comparative
>work on these vs. the K9AY.

There has been lot of traffic on this subject on topband reflector.
Consensus is that K6SE pennats and flags perform better than K9AY loops.

Yuri, K3BU

4943. Re: Tired of RS employees pushing Cellphones and DirectTV

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-12 03:41:20 UTC
From: Leland Cox <lcox107@comcast.net>
Message-ID: <3D800ED4.60302@comcast.net>
Source record: 134784
Cross-posted to: alt.radio.scanner,rec.radio.amateur.antenna,rec.radio.scanner,rec.radio.shortwave

Visit this site for some more "insight" into R-S

WWW.RADIOSHACKSUCKS.COM

Steve Silverwood wrote:

> In article <3D6464D2.DA863088@vgernet.net>, rmsdec8@vgernet.net says...
>
>>RS will be much better off without your trade thanks!!!
>>Please take you business elsewhere !!
>>oh you don't have anywhere else?, too bad!!
>>Bye!!!
>>I'm one of the so called Morons that work for RS!!
>>Ever thought that it might be RS that gets the Staff to try to sell Cell Phones
>>and Sat Dishes? thats where RS makes most profits!
>>Like all stock market companies they want the best profits for the stock
>>holders!!
>>Cell Phones and Sat Dishes pay the best commision to the staff too, Jerk !!!!
>>
>
> Wonderful attitude, friend. I recently had an encounter of a similar
> nature with the RS store near my office. I came in during lunch to try
> to find a mobile radio bracket to use with my FT-817 radio. The
> gentleman behind the counter was very polite (you could take lessons
> from him), but told me he didn't have any in stock and neither of us
> could locate them in the catalog. I asked why it wasn't available, and
> was told that they're rearranging their inventory "to push the good
> stuff." (He explained that the "good stuff" was exactly what you
> mentioned -- satellite dishes and cell phones, which provide better
> margins.)
>
> Now, I can understand a business decision like that. And I was
> certainly not angry at the salesperson who provided the information. I
> =am= disappointed that Radio Shack -- up to now my first point of
> contact when looking for electronic items, ever since I was old enough
> to handle a soldering iron! -- has chosen to make that decision. The
> problem is, if you don't provide the other services and products that
> many of us have come to depend on from Radio Shack, we're not likely to
> come to you when the time comes for us to consider a cell phone or
> satellite dish purchase. And attitudes like the one you just
> demonstrated serve more and more to push potential customers away.
>
> And did you know that your message will live on for many years in the
> Google archives? Anyone searching the newsgroup archives there for

> anything to do with Radio Shack will see your message....
>
> Point of record: at one time I worked for Radio Shack, in one of the
> stores in San Bernardino, CA. I was in the Air Force at the time, and
> took on a part-time job with RS for some extra spending money.
>
> So yes, I have some issues -- and experience -- with Radio Shack
> management. And I only wish I knew the store where you work -- no doubt
> your store manager would love to know the kind of image you're
> portraying out here on the 'Net as a so-called RS representative.
>
> You may want to learn some people skills, or at least do some growing
> up.
>
> (Don't bother with a reply -- you already made my kill file.)
>
>

4944. Re: Tired of RS employees pushing Cellphones and DirectTV

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-12 04:43:12 UTC
From: Bill M <exray@no>
Message-ID: <uo06n8ks2phve6@corp.supernews.com>
Source record: 134785
Cross-posted to: alt.radio.scanner,rec.radio.amateur.antenna,rec.radio.scanner,rec.radio.shortwave

Leland Cox wrote:
>
> Visit this site for some more "insight" into R-S
>
> WWW.RADIOSHACKSUCKS.COM

I've given my name and address (altered) time-off and again at Radio Shark and have never received any junk mail or so much as a free catalog.
So what is the whole deal with the interrogation thing? Doesn't appear that they do well by hassling their customers.
Its really stoopid that an outfit would attain notoriety by insisting on doing this nonsense with no perceivable benefit.

-Bill

4945. Re: Need ways to hide my antenna from my neighbors.

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-12 04:51:48 UTC
From: KC8PMX <kc8pmx@NOSPAMdiamondcs.net>
Message-ID: <alpvqc21oal@enews4.newsguy.com>
Source record: 134794

Take the branches from a whole bunch of fake Christmas trees! Even get more
creative and light it up year round!

--
Ryan, KC8PMX
FF/MFR
REMOVE "NOSPAM" in email address to reply.

"Wayne" <w> wrote in message news:unubs9a6om6af1@corp.supernews.com...
> He could maybe put some fake branches on the tower, and paint to resemble
> tree.
> WA2YNE
>
> "VE3TMT" <ve3tmt@rac.ca> wrote in message
> news:xTz59.150$2T2.119459@news20.bellglobal.com...
> >
> > "DJboutit" <Recordking@Hotmail.com> wrote in message
> > news:e8d89b3f.0208110847.73139897@posting.google.com...
> > > I have a 5/8 comet antenna I need some ways to hide my antenna out of
> > > the site of my neighbors. I also need ways to hide a antenna tower if
> > > I were to get high one. I live in a area with alot of people nearby.
> >
> > Hiding the antenna is the easy part, put it inside or paint it green and
> > stick itin a tree. I'm afraid you're going to have a harder time hiding
> > your tower. But if you do find a way, please let the rest of us know.
> >
> >
>
>

4946. Re: Skin effect experiment with disk on antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-12 05:31:33 UTC
From: "Ian White, G3SEK" <G3SEK@ifwtech.co.uk>
Message-ID: <aY4851A1aCg9EAfj@ifwtech.co.uk>
Source record: 134792

rsparks wrote:
>Thanks to Ian, G3SEK, for posting this link
>
>http://www.ifwtech.co.uk/g3sek/misc/skin.htm
>
>You will notice that the assumption for the direction of the electrical
>field is that it acts parallel to the surface of the conductor, causing
>a current to flow parallel to the surface. The math, as well as
>experience of many years, indicates that the current penetrates into
>the surface a distance related to the frequency under these conditions.
>
>The math solution does not deal with a condition where the the
>electrical field is at right angles to the surface.

Of course it doesn't - because that means no current can flow along the surface.

I think you're trying to have it both ways here: on the one hand you're inquiring about the change of electrical length of the antenna, which requires that current does flow radially on the surface of your disks; but on the other hand you're suggesting that the electric field is everywhere at right-angles to the surface, which precludes current flow.

--
73 from Ian G3SEK 'In Practice' columnist for RadCom (RSGB)
Editor, 'The VHF/UHF DX Book'
http://www.ifwtech.co.uk/g3sek

4947. Re: Tired of RS employees pushing Cellphones and DirectTV

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-12 06:24:04 UTC
From: "Arthur R. Howard" <whtmtnman@citlink.net>
Message-ID: <3D803304.9F6AC42D@citlink.net>
Source record: 134786
Cross-posted to: alt.radio.scanner,rec.radio.amateur.antenna,rec.radio.scanner,rec.radio.shortwave

You just have to realize that when you go into a Rat Shack that you look for stuff yourself and save yourself the aggravation of that blank look and a reply of "A what?"

Steve Silverwood wrote:

> In article <3D6464D2.DA863088@vgernet.net>, rmsdec8@vgernet.net says...
> > RS will be much better off without your trade thanks!!!
> > Please take you business elsewhere !!
> > oh you don't have anywhere else?, too bad!!
> > Bye!!!
> > I'm one of the so called Morons that work for RS!!
> > Ever thought that it might be RS that gets the Staff to try to sell Cell Phones
> > and Sat Dishes? thats where RS makes most profits!
> > Like all stock market companies they want the best profits for the stock
> > holders!!
> > Cell Phones and Sat Dishes pay the best commision to the staff too, Jerk !!!!
>
> Wonderful attitude, friend. I recently had an encounter of a similar
> nature with the RS store near my office. I came in during lunch to try
> to find a mobile radio bracket to use with my FT-817 radio. The
> gentleman behind the counter was very polite (you could take lessons
> from him), but told me he didn't have any in stock and neither of us
> could locate them in the catalog. I asked why it wasn't available, and
> was told that they're rearranging their inventory "to push the good
> stuff." (He explained that the "good stuff" was exactly what you
> mentioned -- satellite dishes and cell phones, which provide better
> margins.)
>
> Now, I can understand a business decision like that. And I was
> certainly not angry at the salesperson who provided the information. I
> =am= disappointed that Radio Shack -- up to now my first point of
> contact when looking for electronic items, ever since I was old enough
> to handle a soldering iron! -- has chosen to make that decision. The
> problem is, if you don't provide the other services and products that
> many of us have come to depend on from Radio Shack, we're not likely to
> come to you when the time comes for us to consider a cell phone or
> satellite dish purchase. And attitudes like the one you just
> demonstrated serve more and more to push potential customers away.
>
> And did you know that your message will live on for many years in the
> Google archives? Anyone searching the newsgroup archives there for
> anything to do with Radio Shack will see your message....
>

> Point of record: at one time I worked for Radio Shack, in one of the
> stores in San Bernardino, CA. I was in the Air Force at the time, and
> took on a part-time job with RS for some extra spending money.
>
> So yes, I have some issues -- and experience -- with Radio Shack
> management. And I only wish I knew the store where you work -- no doubt
> your store manager would love to know the kind of image you're
> portraying out here on the 'Net as a so-called RS representative.
>
> You may want to learn some people skills, or at least do some growing
> up.
>
> (Don't bother with a reply -- you already made my kill file.)
>
> --
>
> -- //Steve//
>
> Steve Silverwood, KB6OJS
> Fountain Valley, CA
> Email: kb6ojs@arrl.net
> Web: http://home.socal.rr.com/silverwood

4948. Re: 2M Coax antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-12 07:09:31 UTC
From: kelly@dvol.com
Message-ID: <d22b54c3.0209112309.504fd87d@posting.google.com>
Source record: 134787

"Josh Hillman" <use@news.grp> wrote in message
news:<ZKrf9.1$IK5.215@news.sjc.globix.net>...
> Hi,
>
> Some time back I encountered an article on making a 2m antenna using a
> coaxial cable. It involved in stripping the outer insulation and pulling
> back the braid till 19". I don't remember where I saw the article. Does
> anyone know about it.
>
> Thanks.

I built one in about 15 minutes and used it for years. It's called a
"coaxial antenna".

Start with some length or another of RG-58. Slit the jacket back about
22" from the end and cut it off. Roll the braid back down over the
jacket as far as you can and "snug it" tightly on the jacket. Takes
patience until you get the drift. Cut the braid to 19" long from the
point where it starts to be rolled back around the jacket.

Cut the dielectric and center conductor to a length of 19" beyond the
point where the shield is rolled back. Lay a length of nylon twine
alongside the far end of the dielecric/conductor half of the dipole
for at least 10". Snake shrink tubing over the entire 38" long
"assembly" and heat seal it for it's entire length plus an inch on
both ends. This maneuver firmly attaches the nylon line to the end of
the antenna. Squeez a dab of any sealant into the open end of the
shrink tubing around the twine to close up the assembly.

Hang it up anywhere. From a thumbtack in the ceiling, a tree branch
outside, anyplace anywhere. Hang a PL-259 on the south end of the
RG-58 and plug it into the radio and start surfing the machines. And
it's almost a "pocket portable" antenna, major expense item being the
PL-259 connector.

The formulae indicate that the rolled-back shield should be a tad
shorter then the "radiator" based on the shield's "fat factor" but I
didn't bother with it, the thing still works just fine.

>
> Josh

w3rv

4949. Re: safety ground and antenna ground - tie together and connect to A/C ground?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-12 09:58:20 UTC
From: Fred Hambrecht <w4jle@charter.net>
Message-ID: <uo0pa037kfq908@corp.supernews.com>
Source record: 134788

I hope nothing I wrote gave that impression. While in my limited 63 years, I know of a bunch of golfers killed by lighting, I don't know (in my personal sphere) of any hams.

The major problem with lighting protection methods is that no matter how careful you are, a direct hit is going to damage property or equipment if it hits a suspended dipole antenna.

I would not recommend that you stand in the yard holding the coax connector during a storm. You would then appear to the lighting as if you were a golfer.

"Owen Duffy" <owen@oda.com.au> wrote in message news:3D7F2847.F31D28DA@oda.com.au...
>
>
> Fred Hambrecht wrote:
>
> > The best lighting protection against direct hits is full replacement
> > coverage insurance. While it is relatively easy to protect tower mounted
>
> Is this really an adequate solution for the risk of personal injury or
> death?
>
> It seems that a commonly held view is that protection of life is not
> part of the issue.
>
> Owen

4950. Re: 3 MHz to 500 MHz antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-12 10:06:42 UTC
From: Boogie <j.boogert@hccnet.nl>
Message-ID: <alpp9r$f4o$1@news.hccnet.nl>
Source record: 134790

Thank you all for your reaction, I'm letting the idea go that an antenna can be made to meet my demands without having to change antennas, so I'll be changing for a while.

thanks again for sharing the information that you did.
Greetings Jeroen

4951. Re: safety ground and antenna ground - tie together and connect to...

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-12 10:07:06 UTC
From: Fred Hambrecht <w4jle@charter.net>
Message-ID: <uo0pqep6uho1d7@corp.supernews.com>
Source record: 134789

Why did I know this was coming from you Richard? Of course commercial stations with engineered solutions, faraday shields, etc can operate after direct hits. A bulldozer can drive through a house with no damage to the dozer. But! can you do it with the family car?

Ham installations are not the same as commercial sites. Few hams have the luxury of the ground systems and other neat goodies common to a commercial installation.

The key word here is AMATEUR site, my advise was applicable to a ham site, please disregard for constructing a multi megawatt, sterba curtain, commercial site.

"Richard Harrison" <richardharrison@webtv.net> wrote in message news:457-3D7F3787-10@storefull-2317.public.lawson.webtv.net...
> Fred Hambrecht repeated an often stated misconception:
> "If you take a direct hit, under some conditions nothing in this world
> will save the equipment."
>
> True, because "some conditions" is undefined.
>
> False, because thousands of commercial radio stations of all types are
> in the most salient spots. They take tens or hundreds of direct hits
> every year and suffer no damage. In fact their 24-7 operation is
> affected almost imperceptibly.
>
> Lightning protection is not always perfect in all commercial stations.
> One posting in this newsgroup identified a medium wave broadcast station
> burnt to the ground by a lightning strike. That is the only instance
> I`ve heard of.
>
> I`ve worked in a number of broadcast stations since 1949 . These had
> countless direct hits. The worst that ever happened was loss of a few
> seconds air time while the transmitter cycled off then back on to clear
> the overload caused by the lightning.
>
> I had a waveguide switch coil burnt by lightning in one of hundreds of
> microwave repeaters I`ve been associated with, but I easily fixed that
> exposure.
>
> It is complete baloney to say you can not protect against a direct hit.
>
> Best regards, Richard Harrison, KB5WZI
>

4952. Re: Skin effect experiment with disk on antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-12 10:29:40 UTC
From: Fred Hambrecht <w4jle@charter.net>
Message-ID: <uo0r4pa0svma75@corp.supernews.com>
Source record: 134791

Am I totally confused? I see skin effect changing the resistance of the conductor because of the effective reduction in wire diameter, for the life of me I can't see it changing the resonant frequency.

Ergo measuring the resonant frequency, in my mind is meaningless. What am I missing?

"Roy Lewallen" <w7el@eznec.com> wrote in message
news:3D7FF324.2010902@eznec.com...
> Here are two more thoughts.
>
> 1. Consider a sealed box or cable, and how good a shield it provides.
> Then put a slit in the box or cable, or some holes. If skin effect
> didn't exist, the slit or holes wouldn't make much difference -- the
> current would just have to detour around a bit. But you'll find that it
> makes a very large difference -- because it provides a path for the
> field and currents from the inside to get to the outside.
>
> 2. According to your theory, a shielded box made from double sided PC
> board material should be much more effective than one made from a solid
> copper sheet, because there's an insulator between the sheets which
> would prevent the flow of current you predict. If you suppose that there
> would still be flow due to capacitive coupling, you should be able to
> calculate the effect of the capacitive reactance you're introducing. Of
> course, first you've got to find some evidence of current on the outside
> of even the solid sheet box, but you won't be able to, if the copper is
> at least several skin depths thick. You could repeat your experiment
> with the each of the copper disks replaced by two parallel disks
> separated by an insulator (sealed around the periphery if you'd like)
> and see what a difference it makes. Fill the space between with some
> lossy material like water or a bunch of ferrite cores and see how much
> you can affect the mythical current flowing there.
>
> Roy Lewallen, W7EL
>

4953. Re: Tired of RS employees pushing Cellphones and DirectTV

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-12 12:04:11 UTC
From: Alan Beagley <abeagley@optonline.net>
Message-ID: <3D8082BB.5090007@optonline.net>
Source record: 134793
Cross-posted to: alt.radio.scanner,rec.radio.amateur.antenna,rec.radio.scanner,rec.radio.shortwave

I've received RS sale fliers from time to time.

-=-
Alan

Bill M wrote:

> I've given my name and address (altered) time-off and again at Radio
> Shark and have never received any junk mail or so much as a free
> catalog.
> So what is the whole deal with the interrogation thing? Doesn't appear
> that they do well by hassling their customers.
> Its really stoopid that an outfit would attain notoriety by insisting on
> doing this nonsense with no perceivable benefit.

4954. Re: NEC questions.

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-12 13:08:04 UTC
From: wave_spy@yahoo.co.uk
Message-ID: <e72fe60.0209120508.978fc17@posting.google.com>
Source record: 134795

Dan Richardson <k6mhe@mendolink.com> wrote in message
news:<i66snu0ea6nv4l7sr24832n450ki5te9ap@4ax.com>...

> Oh really? MMANA is better than an NEC2 based interface? Man, you've
> got to be smoking wacky tabacy.
>

My supplies from the contra rebels is running low, any idea where I
can get
some more :-)

> Tell you what why don't you model the K8CU LDPA in the current issue
> of QST magazine and show me where MMANA's results come any where near
> those published in the article?

I am not familiar with the design or an ARRL member (or an RSGB
member)
so I cannot comment.

But everything has its limitations.

I wish there was an option for using Greens function in MMANA, its in
my version of NEC but this is the point.

There are different ***shells*** for using the NEC engine and thats
what makes
the difference at the moment between MMANA and *my* copy of NEC WIN
PRO.

On the latter I positvly HATE the user interface and find it takes far
too
long to input a reasonable structure ***typical*** for the average
user
especially in the ham radio world.

With MMANA its as easy as using thre PAINT program that comes with
Windows.

> Don't be concerned that the author
> mentions that MININEC will not model the antenna properly because
> there are current versions that will - such as Antenna Model but, of
> course, Antenna is not a free program. Maybe you get what you pay for?

4955. Re: Skin effect experiment with disk on antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-12 13:11:48 UTC
From: richardharrison@webtv.net
Message-ID: <458-3D809294-80@storefull-2317.public.lawson.webtv.net>
Source record: 134799

Roger, W7WKB wrote:
"The currents actually flowing in the system should not be too hard to figure out however."

Roger`s mind set is revealed by the preposition "in".

The correct preposition is "on".

So long as Roger is committed to the proposition that current flows "in" the system rather than "on' the system, he is looking for answers in the wrong places.

Best regards, Richard Harrison, KB5WZI

4956. Wide-band 80 meter antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-12 13:15:55 UTC
From: Bill Ogden <ogden@us.ibm.com>
Message-ID: <3D80938B.3CBB2413@us.ibm.com>
Source record: 134796

QST (some years ago) and the second Wire Antennas book briefly discuss a wide-band 80 meter antenna, with two examples described. It consists of a "half sloper" attached to a tower, with two more wires connected directly to the tower (at a lower point) and horizontally fanned out into a "V". The half-sloper is routed down between the the legs of the V. An almost flat SWR across 75/80 meters is shown.

In one of the examples the tower is 50', the half sloper (78' long) is attached at the 45' level, and the two V legs (each 53' long) are attached at the 13' level.

1. This antenna seems too good to be true ---- absolutely flat across the whole band and with reportedly excellent results. It was originally in an April issue, and some April articles are too good to be true. Comments?

2. Little is said about how dimensions are calculated. I would like to use it on my little 40' tower (with a quad on top). I would attach the sloper at about the 30' level and the V at about 8'. Is this unreasonably small/low?

3. Has anyone tried a two-band version? It would be nice to connect a second sloper to the same feed point, but for 40 meters. Would the same V section work for both?

I realize that most of the effective radiation is from the tower and ground/radials are important. (I also realize that a dipole at 60' (or higher), or an inverted V might be a better answer, but I do not have that option.)

Bill
W2WO

4957. Varicaps in rx atu's

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-12 13:26:31 UTC
From: wave_spy@yahoo.co.uk
Message-ID: <e72fe60.0209120526.2e1602e2@posting.google.com>
Source record: 134797

I notice in this thread NO ONE has even thought about possible
intermod products ?

"Richard Daventry" <nearlynews_email@ntlworld.com> wrote in message
news:<al7gn2$1o4o5b$1@ID-150848.news.dfncis.de>...
> Just wondering if it's practical to use varicaps in an atu for a long wire
> antenna. Would simplify remote tuning. Probably burn out though in
> thunderstorms unless protected. Anyone know of any circuits on the web? TIA.
> Rich.

4958. Re: EH antenna. Good or bad ?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-12 13:34:29 UTC
From: m614fs@yahoo.com
Message-ID: <3d809414.2061981@nntp.service.ohio-state.edu>
Source record: 134798

A recent post here described how military shipboard HF antennas work by inducing currents around the larger body of the vessel that do the actual radiating. It seems that EH antennas, which resemble paralled tank circuits more than antennas, may use the same effect. If they are just tank circuits the energy entering has to leave somewhere either in heat, magentic, ES, or EM form. It would be interesting to hear if this design can 'work' out of a faraday cage that would contain everything except its magnetic field.

On Wed, 11 Sep 2002 20:32:36 GMT, Richard Clark <kb7qhc@attbi.com> wrote:

>On Wed, 11 Sep 2002 21:58:40 +0200, "Les Brousse"
><tribu.brousse@wanadoo.fr> wrote:
>
>>Interrogation about this new concept of EH antenna.
>>Is it H for hoax .
>>Is it really efficicient or just a leaking dummy load?
>>73, F6FER Roger
>>
>
>Hi Roger,
>
>By all reports, worse. A leaking dummy load is easier to tune.
>
>73's
>Richard Clark, KB7QHC

4959. Re: EH antenna. Good or bad ?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-12 13:50:09 UTC
From: swaney.22@osu.edu
Message-ID: <3d809b72.3947541@nntp.service.ohio-state.edu>
Source record: 134800

A recent post here described how military shipboard HF antennas work
by inducing currents around the larger body of the vessel that do the
actual radiating. It seems that EH antennas, which resemble paralled
tank circuits more than antennas, may use the same effect. If they
are just tank circuits the energy entering has to leave somewhere
either in heat, magentic, ES, or EM form. It would be interesting to
hear if this design can 'work' out of a faraday cage that would
contain everything except its magnetic field.

On Wed, 11 Sep 2002 20:32:36 GMT, Richard Clark <kb7qhc@attbi.com>
wrote:

>On Wed, 11 Sep 2002 21:58:40 +0200, "Les Brousse"
><tribu.brousse@wanadoo.fr> wrote:
>
>>Interrogation about this new concept of EH antenna.
>>Is it H for hoax .
>>Is it really efficicient or just a leaking dummy load?
>>73, F6FER Roger
>>
>
>Hi Roger,
>
>By all reports, worse. A leaking dummy load is easier to tune.
>
>73's
>Richard Clark, KB7QHC

4960. Re: NEC questions.

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-12 14:46:34 UTC
From: Dan Richardson <k6mhe@mendolink.com>
Message-ID: <aa91ou8d2l394astigngeipp69qlo9s9hu@4ax.com>
Source record: 134801

On 12 Sep 2002 06:08:04 -0700, wave_spy@yahoo.co.uk (Me) wrote:

[snip]

>On the latter I positvly HATE the user interface and find it takes far
>too
>long to input a reasonable structure ***typical*** for the average
>user
>especially in the ham radio world.
>
>With MMANA its as easy as using thre PAINT program that comes with
>Windows.
>
I think you are complying about using a professional level program
when you prefer a more entry level. If that is the case you might want
to consider other options which will provide you with the advantages
of a NEC calculating engine. Hence I offer the following for you to
consider:

Both EZNEC and NEC-Win Plus+ have demo programs which can be
downloaded for evaluation. The URLs are"

http://www.eznec.com/index.shtml

http://www.nittany-scientific.com/

Plus there are some free programs out there too. Such as 4NEC2 and
MultiNec. The later requires Excel.

They can be download at:

4NEC2 - http://www.qsl.net/wb6tpu/swindex.html

MultiNec- http://www.qsl.net/ac6la/

Any program no matter how *nice* the user interface may be is of
little use if the results it provides are inferior.

73
Danny

4961. Re: 2M Coax antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-12 15:22:05 UTC
From: Josh Hillman <use@news.grp>
Message-ID: <AI2g9.2$IK5.6366@news.sjc.globix.net>
Source record: 134802

Thanks a lot people. That was all I needed.

"Josh Hillman" <use@news.grp> wrote in message
news:ZKrf9.1$IK5.215@news.sjc.globix.net...
Hi,

Some time back I encountered an article on making a 2m antenna using a coaxial cable. It involved in stripping the outer insulation and pulling back the braid till 19". I don't remember where I saw the article. Does anyone know about it.

Thanks.

Josh

4962. Re: NEC questions.

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-12 16:06:49 UTC
From: Bob Nielsen <nielsen@remove_this.oz.net>
Message-ID: <alqe2pqrh0@216.39.144.81>
Source record: 134803

On 12 Sep 2002 06:08:04 -0700, Me wrote:
>
> On the latter I positvly HATE the user interface and find it takes far
> too
> long to input a reasonable structure ***typical*** for the average
> user
> especially in the ham radio world.
>
> With MMANA its as easy as using thre PAINT program that comes with
> Windows.
>
>> Don't be concerned that the author
>> mentions that MININEC will not model the antenna properly because
>> there are current versions that will - such as Antenna Model but, of
>> course, Antenna is not a free program. Maybe you get what you pay for?

Any of the user interfaces are a big improvement over using NEC by
itself (NEC expects to see the input on punched cards). NEC-2 source
code is free, however you need a Fortran compiler.

73, Bob N7XY

4963. Re: Need ways to hide my antenna from my neighbors.

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-12 16:32:37 UTC
From: Dennis Kaylor <k4oxg@tampabay.rr.com>
Message-ID: <3D80C1A1.AC37DE1B@tampabay.rr.com>
Source record: 134804

would be cheaper to tell the neighbors to ming there own business and leave the tower alone
just annoys me when as hams we are expected to cowar to our neighbors whims on what is pleasant to look at but yet we get no compensation on property taxes or on our morgages
so why should we worry about what they say as long as we follow the rules set forth by the FCC and any state and local building codes
our neighbors surely wouldnt do anything we ask like doing away with that bug zapper just cause its tearing up our recieve nor would they cut down a tree that is in the way of the beam path of out antennas so we could talk better
so why in the hell should a man have to dress is tower up like a tree to please a neighbor ?

KC8PMX wrote:

> Take the branches from a whole bunch of fake Christmas trees! Even get more
> creative and light it up year round!
>
> --
> Ryan, KC8PMX
> FF/MFR
> REMOVE "NOSPAM" in email address to reply.
>
> "Wayne" <w> wrote in message news:unubs9a6om6af1@corp.supernews.com...
> > He could maybe put some fake branches on the tower, and paint to resemble
> > tree.
> > WA2YNE
> >
> > "VE3TMT" <ve3tmt@rac.ca> wrote in message
> > news:xTz59.150$2T2.119459@news20.bellglobal.com...
> > >
> > > "DJboutit" <Recordking@Hotmail.com> wrote in message
> > > news:e8d89b3f.0208110847.73139897@posting.google.com...
> > > > I have a 5/8 comet antenna I need some ways to hide my antenna out of
> > > > the site of my neighbors. I also need ways to hide a antenna tower if
> > > > I were to get high one. I live in a area with alot of people nearby.
> > >
> > > Hiding the antenna is the easy part, put it inside or paint it green and
> > > stick itin a tree. I'm afraid you're going to have a harder time hiding
> > > your tower. But if you do find a way, please let the rest of us know.
> > >
> > >
> >
> >

4964. Re: Skin effect experiment with disk on antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-12 16:44:29 UTC
From: richardharrison@webtv.net
Message-ID: <20232-3D80C46D-243@storefull-2311.public.lawson.webtv.net>
Source record: 134809

Roger, W7WKB wrote:
"The resonant frequency of the antenna will be lowered proportional to the length of the longer current path."
"The addition of the disk RAISED the resonant frequency of the antenna about 0.55 MHz."

Obviously, it isn`t that simple.

Roger was attempting to add the path length of two radii to his antenna length on each side.

Problem is the radii are not in alignment with his antenna, and current flows on opposite sides of the disk are in opposite directions and are perpendicular to his antenna.

Roger`s dipole is a series resonant circuit. It seems to have an insulator in the middle and ideally would have a short circuit for resonance determination.

The resonant length of a dipole is affected by the surge impedance of the wire. It`s shorter as the surge impedance goes down, that is, when the wire gets a lot fatter. The radiation resistance drops too.

R-F resistance of an antenna is usually so low as compared with radiation resistance that in a straight wire it has little effect on resonant frequency.

I suspect that Roger was looking for a cheap way to shorten an antenna, not to disprove skin effect.

You shorten an antenna with loading coils or capacitance hats.

You prove skin effect by the absence of crosstalk in long runs of paralleled coax cables.

Best regards, Richard Harrison, KB5WZI

4965. Re: Skin effect experiment with disk on antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-12 16:47:45 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <ctd1ou43d5ra82ivrj9h98lrtgtcmqamo6@4ax.com>
Source record: 134805

On Wed, 11 Sep 2002 16:36:47 -0700, "rsparks" <rsparks@elltel.net>
wrote:

>> >plates. If the meter were a metal box, then the effective spacing
>between
>> >the
>> >disk would be reduced by the width of the meter (2 1/2 inches) so the
>> >spacing
>> >for that area would be 7 1/2 inches. Because we are using a 12 inch
>> >diameter
>> >disk, the presence of the meter does not introduce a large change in the
>> >final
>> >capacity between the disk.
>> >
>> a = 10
>> A = pi * rï¿½ = 113
>> C = (0.225 * A)/(a * 10ï¿½ï¿½)
>> = 2.54 pF
>>
>> a = 7.5
>> A = pi * rï¿½ = 113
>> C = (0.225 * A)/(a * 10ï¿½ï¿½)
>> = 3.39 pF
>>
>> The difference being +33.5% error of course, negating the false
>> illusion of accuracy.
>
>Your use of the 7.5 inch distance across the entire disk surface
>considerably overstates the actual change in effective distance due to the
>introduction of a conductor between the plates.

My use? Note the quote above, it is YOUR number not mine. Error is
error and wishing away the effects of the measurer and his devices
does not raise the level of confidence when their unfavorable biases
are denied. My use of YOUR numbers was to give you the benefit of
least perturbation - I could have easily jimmied the error to 100%
through very common consideration, but decided to let you slide at 33%
error (either is suitably egregious to kill a premise).

Again, your rhetoric does not replace the simpler test of adding
either of those two values to the standard dipole to test your
assertions.

This tracks with another comedy being played out with the debate over
"optimized" fractals. The hoot there is that the fractal champion of

2000 was offered as the best of best - none more optimal than a
supremely optimal form. It was totally eclipsed 6 times over by
random doodling. Now with the mantra of genetic algorithms,
fractalists face the enigma of putting their designs to the optimizer.
An optimized result would show the lie of their earlier assertion
(which has already been demonstrated) - OR - the lack of optimization
would show the lie of their optimization software. ;-)

What to do? What to do? Do nothing! [known as the Titanic effect,
explained below]

>
>>
>> >
>> >Those who have good skills in using Eznec should try placing a variety of
>> >capacity
>> >sizes in parallel with the feed line to see how the antenna impedance and
>> >resistance change.
>>
>> This belies EZNEC documentation which clearly states:
>> "There is no direct way to place a load in parallel with a source,
>> transmission line, or another load."
>> ... to presume otherwise is another source of considerable error.
>>
>
>If a direct way is not built into Eznec, then we use the indirect way which

This is more rhetoric that moves the discussion to EZNEC which is not
the topic under consideration. Stick with the topic and observe there
is a far simpler test of your assertion that could be made in the
simple addition of a physical capacitor across the feedpoint of the
standard dipole. This appears to be a monumental task.

>
>I don't think I will do the different location experiment you suggest
>although it would be interesting to see the curve. If skin effect provides
>a shield, it should be most noticeable where the current is largest which is
>near the feed point.

Again, rhetoric in place of measurement - and added speculative
properties to prop up a wobbly premise that has already tumbled of
its own accord.

>
>A "someday" job/experiment.
>
>73, Roger, W7WKB

Hi Roger,

Never mind about troubling yourself with these practical
considerations, but you will still have to go to the back of the line;
behind the eh/cfa/fractal/go inventors who are demanding their share

of the pie when the technical revolution comes to a town near you. This select brotherhood is easily recognized as those who stand at the threshold, and fail to move (sort of like a first-class passenger on the Titanic waiting for an usher to show him to his lifeboat seat and the devil to those behind him - you wouldn't happen to have the keys to steerage would you?).

I have observed you need to do something different; and to that you have turned away from the prospects of this irrevocably overturning your theory (the Titanic effect); and thus we remain with the status unchanged at: failed challenge of Skin Effect (translation: your ship sank nonetheless).

73's
Richard Clark, KB7QHC

4966. Re: Skin effect experiment with disk on antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-12 16:48:36 UTC
From: rsparks <rsparks@elltel.net>
Message-ID: <3d80c22b_3@corp.newsgroups.com>
Source record: 134806

"Roy Lewallen" <w7el@eznec.com> wrote in message
news:3D7FF324.2010902@eznec.com...
> Here are two more thoughts.
>
> 1. Consider a sealed box or cable, and how good a shield it provides.
> Then put a slit in the box or cable, or some holes. If skin effect
> didn't exist, the slit or holes wouldn't make much difference -- the
> current would just have to detour around a bit. But you'll find that it
> makes a very large difference -- because it provides a path for the
> field and currents from the inside to get to the outside.

The presence of slots or holes would increase the length of the current path on the shield walls. As a result, a voltage drop from inductance would add to the voltage drop from resistance, thus increasing the current flowing on the outside surface. You are aware that skin effect never stops all the current from flowing, it only reduces the current to an undetectable level for some input power level. The current would again be detectable if the power level were increased.

>
> 2. According to your theory, a shielded box made from double sided PC
> board material should be much more effective than one made from a solid
> copper sheet, because there's an insulator between the sheets which
> would prevent the flow of current you predict. If you suppose that there
> would still be flow due to capacitive coupling, you should be able to
> calculate the effect of the capacitive reactance you're introducing. Of
> course, first you've got to find some evidence of current on the outside
> of even the solid sheet box, but you won't be able to, if the copper is
> at least several skin depths thick.

The insulated layer would certainly make the detection of current more difficult.

You could repeat your experiment
> with the each of the copper disks replaced by two parallel disks
> separated by an insulator (sealed around the periphery if you'd like)
> and see what a difference it makes. Fill the space between with some
> lossy material like water or a bunch of ferrite cores and see how much
> you can affect the mythical current flowing there.

If skin effect shielding already separates the surfaces of the disk, then the addition of a space between two disk would would mean that the disk surfaces are now separated by skin effect and an open space effect. Trying to separate how each of the the two effects might change the resonant frequency of the antenna would complicate the experiment greatly.
>

> Roy Lewallen, W7EL
>

73, Roger, W7WKB

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
------== Over 80,000 Newsgroups - 16 Different Servers! =-----

4967. Re: safety ground and antenna ground - tie together and connect to A/C ground?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-12 16:57:13 UTC
From: nm5k@wt.net
Message-ID: <25eb70d7.0209120857.e954dee@posting.google.com>
Source record: 134807

"Fred Hambrecht" <w4jle@charter.net> wrote in message
news:<uo0pa037kfq908@corp.supernews.com>...
> I hope nothing I wrote gave that impression. While in my limited 63 years, I
> know of a bunch of golfers killed by lighting, I don't know (in my personal
> sphere) of any hams.

Me neither. All the hams I've known that left before their "normal"
departure date, did so from inappropriate finger insertion into large
loudenboomer devices. And I've known at least 3-4 that I knew or
talked to, do that. :(Never seen one struck by lightning yet,
although I have heard of many radios being dispatched by lightning.
This is not to say I take any chances with lightning. The stuff scares
the crap out of me. I'm one of the "throw it all outside and ground
it" types. I once was out camping when the lightning got real bad. I
was so paranoid, I took my mobile antenna off the car, as it made a
good lightning rod. Lucky for me , I have a quick disconnect. MK

4968. Re: Varicaps in rx atu's

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-12 17:02:00 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <33i1ougoijj95v7j7p76ijem15hm2fi490@4ax.com>
Source record: 134808

On 12 Sep 2002 06:26:31 -0700, wave_spy@yahoo.co.uk (Me) wrote:

>I notice in this thread NO ONE has even thought about possible
>intermod products ?
>

you haven't read the entire thread then.

73's
Richard Clark, KB7QHC

4969. Re: 3 MHz to 500 MHz antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-12 17:14:00 UTC
From: Jerry Oxendine <joxendi@bellsouth.net>
Message-ID: <CX3g9.92010$2L.4570471@e3500-atl2.usenetserver.com>
Source record: 134810

Boogie,
Rollo is right. Such a wide range of frequencies is simply asking too much. You truly need a dedicated (non mag mount) Hi Performance HF antenna and a separate 2m-440 antenna (mag mount OK). You see, HF is simply not a matter of "plug 'n play" like VHF can be. Think of it like this: You are compacting 130 feet of antenna down into 9 feet or less and that creates some difficulties that must be overcome. For one, the vehicle itself becomes both a "ground" of sorts AND the other 'half' of the antenna. The other problem is, due to the "scrunch-down", matching issues not present in dipoles, your efficiency is down to less than 10% even in the BEST of circum-stances, and your height above ground is compromised. So, it stands to reason that one *should* opt for the most efficient mobile HF antenna he can get. The GOOD news is that, in spite of the limitations on mobile that we can't fix, you CAN have a VERY good signal with a mobile IF you install your antenna correctly and it is, of course, highly efficient-------likely within an S-unit or two of a base!

Now. You can get pretty fair performance on 20-6 meters with those hamstick things--and, indeed, some people brag on them. But tests and "shootouts" have shown the hamsticks to come in dead LAST on 75 meters in field strength--the only thing being worse is a "tuner-whip" combo.
It takes a BIG, UGLY antenna to get maximum performance on HF, and there are no compro-mises if you are serious about HF mobile. I HAVE to be serious about my mobile because, in addition to Amateur, I am involved in CAP emergency communications, and there are times when the traffic just HAS to get thru. I often wonder what people that "brag" on hamsticks have ever compared their "good" performance to! I have a very efficient 3" screwdriver on my car, and I am confident that, assuming the same power, I would walk over a doubling station using a hamstick.

OTH, some spouses will highly object to any "ugly" antennas on the family car(s), so one must use what he can get away with! Since my wife is an "ex", I can pretty well do as I please.

73

Jerry
www.qsl.net/k4kwh

Boogie <j.boogert@hccnet.nl> wrote in message
news:alkf1medf1@news.hccnet.nl...
> Hi Rollo,
>
> Thanks for answering my question in a clear and unmistakable way.
>
> Do you by any chance know a site with the different antenna theories in
> praktice please?
>
> See ya Jeroen
>
>

4970. Re: Varicaps in rx atu's

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-12 17:37:52 UTC
From: Reg Edwards <g4fgq.regp@btinternet.com>
Message-ID: <alqjdglbl1@knossos.btinternet.com>
Source record: 134812

> I notice in this thread NO ONE has even thought about possible
> intermod products ?
==========
You are not a very good mind reader. Read my earlier measage.

4971. Re: Varicaps in rx atu's

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-12 17:37:54 UTC
From: Reg Edwards <g4fgq.regp@btinternet.com>
Message-ID: <alqjdhlbl2@knossos.btinternet.com>
Source record: 134811

"Richard Clark" <kb7qhc@attbi.com> wrote in message
news:o2qknuo81hqd6sth9ji19qnfskjplou4vt@4ax.com...
> On Sat, 7 Sep 2002 21:23:30 +0100, "Richard Daventry"
> <nearlynews_email@ntlworld.com> wrote:
>
> >
> >"Richard Clark" <kb7qhc@attbi.com> wrote in message
> >news:vukknu0mpgtabkk0o93mi9r66v5tpl2r9b@4ax.com...
> >> Hi Richard,
> >>
> >> You don't stand a chance for a very simple reason.
> >>
> >> Varicaps as you call them, adjust their capacitance through varying a
> >> bias voltage separating two charge regions (or drawing them together)
> >> within the diode. This voltage is roughly tenths of a volt to a volt.
> >> The voltage imparted to a tuner by a transmitter exceeds the tuning
> >> voltage by magnitudes to render them useless for this action. This is
> >> why the other poster, Walter, queried you if this was for reception
> >> (where the RF levels are milli to microvolts).
> >>
> >> 73's
> >> Richard Clark, KB7QHC
> >
> >
> >But it would be for receiving purposes only, hence rx in subject header.
:c)
>
> Well... ya got me there!
>
> However, you should note the nature of my objection: volts. If you
> are running a longwire, it is absorbing every radiation available
> (insofar as it has the ability to put it to a load) which could quite
> easily disturb the bias settings for any particular filter setting.
>
> These voltages, induced from nearby transmitters (local AM station for
> instance) could offer 10's to 100's of millivolts, which while a
> seemingly small potential, can cascade into an enormous bias error.
>
> This is the paradox of the stronger the signal that makes it through
> the filter, the more probability that signal will disturb the filter.
> As this signal is an AC voltage, it blurs the capacitance with the
> diode trying to follow the dV/dT of the signal - effectively lowering
> Q (negating the filter).
>

> The answer to this as a direct application would be in buffering and
> lowering the maximum level of signal that may be passed through the
> filter. This may be accomplished through AGC or manual gain control
> (yeah, a filter with a gain control). Research any particular device
> you wish to use for your application and find its dC/dV (as derived
> from the specs for capacitance range and voltage range). You should
> be able, at that point, to have a good guess how much impact a signal
> of certain size would change any setting.
>
> Same problems of voltage levels keep PIN diodes relegated to buffered
> environments.
>
> 73's
> Richard Clark, KB7QHC

==========

Havn't you forgotten varicap diodes are operated under reverse-bias
conditions, ranging from 1 to typically 30 volts.

4972. Re: Skin effect experiment with disk on antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-12 17:51:28 UTC
From: richardharrison@webtv.net
Message-ID: <20232-3D80D420-247@storefull-2311.public.lawson.webtv.net>
Source record: 134813

Roger, W7WKB wrote:
"---skin effect never stops all the current from flowing---."

We have the practical purpose idea.

Skin effect so retards a-c current that not too deeply, current phase has become reversed from that on the surface. That is, it is flowing in the opposite direction in effect.

Maybe your disk can replace a 1/4-wave stub in a collinear antenna. No, I think the magnitude may be insufficient.

Best regards, Richard Harrison, KB5WZI

4973. Re: Skin effect experiment with disk on antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-12 18:40:25 UTC
From: richardharrison@webtv.net
Message-ID: <13302-3D80DF99-51@storefull-2314.public.lawson.webtv.net>
Source record: 134815

I wrote:
"Maybe your disk can replace a 1/4-wave stub in a collinear antenna."

Maybe if it has a radius of 1/4-wavelength. But, the stub might be more convenient.

Best regards, Richard Harrison, KB5WZI

4974. Re: Skin effect experiment with disk on antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-12 19:00:48 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <3D80E460.30102@eznec.com>
Source record: 134814

rsparks wrote:
> "Roy Lewallen" <w7el@eznec.com> wrote in message
> news:3D7FF324.2010902@eznec.com...
>
>>Here are two more thoughts.
>>
>>1. Consider a sealed box or cable, and how good a shield it provides.
>>Then put a slit in the box or cable, or some holes. If skin effect
>>didn't exist, the slit or holes wouldn't make much difference -- the
>>current would just have to detour around a bit. But you'll find that it
>>makes a very large difference -- because it provides a path for the
>>field and currents from the inside to get to the outside.
>
>
> The presence of slots or holes would increase the length of the current path
> on the shield walls. As a result, a voltage drop from inductance would add
> to the voltage drop from resistance, thus increasing the current flowing on
> the outside surface. You are aware that skin effect never stops all the
> current from flowing, it only reduces the current to an undetectable level
> for some input power level. The current would again be detectable if the
> power level were increased.

How adding inductance to a circuit will increase the current is a
mystery to me, since it contradicts everything I know about circuits.
But then so does the notion that RF current flows through a conductor. I
guess if you can have one, you might as well have the other. Suspending
Ohm's law might, after all, help with the path of reasoning leading to
the elimination of skin effect.

>>2. According to your theory, a shielded box made from double sided PC
>>board material should be much more effective than one made from a solid
>>copper sheet, because there's an insulator between the sheets which
>>would prevent the flow of current you predict. If you suppose that there
>>would still be flow due to capacitive coupling, you should be able to
>>calculate the effect of the capacitive reactance you're introducing. Of
>>course, first you've got to find some evidence of current on the outside
>>of even the solid sheet box, but you won't be able to, if the copper is
>>at least several skin depths thick.
>
>
> The insulated layer would certainly make the detection of current more
> difficult.
>
> You could repeat your experiment
>

>>with the each of the copper disks replaced by two parallel disks
>>separated by an insulator (sealed around the periphery if you'd like)
>>and see what a difference it makes. Fill the space between with some
>>lossy material like water or a bunch of ferrite cores and see how much
>>you can affect the mythical current flowing there.
>
>
> If skin effect shielding already separates the surfaces of the disk, then
> the addition of a space between two disk would would mean that the disk
> surfaces are now separated by skin effect and an open space effect. Trying
> to separate how each of the the two effects might change the resonant
> frequency of the antenna would complicate the experiment greatly.

If the hollow and solid disks have a thickness that's only a small
fraction of a wavelength (or of course if they're the same thickness,
probably not practical), you shouldn't see any difference at all between
them. Could you explain this with your view of how you think currents flow?

Roy Lewallen, W7EL

4975. Re: Tired of RS employees pushing Cellphones and DirectTV

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-12 19:30:06 UTC
From: CW <clinton.magers@attbi.com>
Message-ID: <2X5g9.403131$me6.46690@sccrnsc01>
Source record: 134816
Cross-posted to: alt.radio.scanner,rec.radio.amateur.antenna,rec.radio.scanner,rec.radio.shortwave

You give them an altered name and address and then can't figure out whey
they never send you anything? Think,,,,,,,,,,,,,think.
"Bill M" <"exray"@no spam-caribe.net> wrote in message
news:uo06n8ks2phve6@corp.supernews.com...
> Leland Cox wrote:
> >
> > Visit this site for some more "insight" into R-S
> >
> > WWW.RADIOSHACKSUCKS.COM
>
> I've given my name and address (altered) time-off and again at Radio
> Shark and have never received any junk mail or so much as a free
> catalog.
> So what is the whole deal with the interrogation thing? Doesn't appear
> that they do well by hassling their customers.
> Its really stoopid that an outfit would attain notoriety by insisting on
> doing this nonsense with no perceivable benefit.
>
> -Bill

4976. Re: safety ground and antenna ground - tie together and connect to ...

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-12 19:32:28 UTC
From: richardharrison@webtv.net
Message-ID: <27145-3D80EBCC-28@storefull-2313.public.lawson.webtv.net>
Source record: 134818

Mark Keith, NM5K wrote:
"I`m one of the "throw it outside and ground it" types."

That is safe in most cases. The antenna feedline, tower lighting, and monitoring circuits are paths lightning could take into a commercial station. That`s in addition to power, phone, and control circuits which anyone might have. Lightning usually prefers the flashover opportunities on the antenna end of the feedline. There are good grounds out there.

The antenna feedline, open-wire or coax, gets plenty of opportunities from arc-gaps, shields, dfirect grounds, etc to flashover before entering a commercial station.

Same for tower lighting and monitoring circuits. These get coiled up to keep r-f from bleeding off medium-wave towers. This stops the lightning too when it has a better place to go for a ground. This also works for towers which are cold or grounded, as far as lightning protection is concerned.

This isn`t really excessive for hams. It doesn`t reguire 120 radials for a lightning ground which protects, in most places.

Best regards, Richard Harrison, KB5WZI

4977. Ouch! RF in the shack

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-12 19:39:26 UTC
From: mike@mbcomps.com
Message-ID: <ea100098.0209121139.18c5c61a@posting.google.com>
Source record: 134817

Hi folks,

OK, so I just bought an HF rig, tuner, antenna, lots o' coax, and am ready to get on the air, right? Well, not quite. I have enough RF floating around that it's necessary for me to disconnect my stereo speakers when I transmit, each touch of the key toggles the VCR between record and stop, and I have to be *very* careful to not touch the metal trim on the knobs of my tuner when tuning or I get a rather nasty reminder (80m hurts the worst). I'm also afraid to let my cats anywhere near the operating post when I'm on the air (warm tubes = cat magnet).

So here's the setup. I have a G5RV up about 25 feet. It has ~30 feet of 450-ohm ladder line, which drops about 18 feet before going horizontal 5 feet, then vertically the remainder. At the end of the ladderline is what I presume to be a balun, with a connector to my coax that runs to the shack. Here, I made a coil of six turns six inches in diameter in a failed attempt to stop the RF in the shack. I did not do an exact measurement of the length of coax, but my best guess would be at least 60 feet.

In the shack, the coax goes first to my tuner (pretty obvious there), and from there a three-foot jumper to the rig. I should note that I am able to tune the antenna on 80 thru 10 with the greatest SWR being 1.2:1 on 10 (although difficult to obtain). 80m can be hit or miss, but usually tunes just fine.

I'm aware that single ground rod is pretty much useless for RF. And the distance the wire travels is certainly more than 1/4-wavelength on at least two bands. So the question is, what can I do to prevent blowing out my speakers, starting and stopping the VCR with every dit and dah, and burning the #@*! out of my fingers? I've read about using counterpoises cut 1/4-wavelength for each band and run under the carpet in the shack to act as an artificial ground is doable in situations where a long ground wire is necessary (me!). Anyone have any experience with such a setup? Any other suggestions?

Sorry for the long post, and thanks in advance for the help!
73s de Mike N3XPF

4978. Re: Tired of RS employees pushing Cellphones and DirectTV

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-12 19:59:46 UTC
From: Bill M <exray@no>
Message-ID: <uo1sdk9e7lnab8@corp.supernews.com>
Source record: 134719
Cross-posted to: alt.radio.scanner,rec.radio.amateur.antenna,rec.radio.scanner,rec.radio.shortwave

CW wrote:
>
> You give them an altered name and address and then can't figure out whey
> they never send you anything? Think,,,,,,,,,,,,,think.

No silly, not an altered address. Think....think.

4979. Re: Ouch! RF in the shack

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-12 20:12:42 UTC
From: Dennis Kaylor <k4oxg@tampabay.rr.com>
Message-ID: <3D80F536.3D3B0AE0@tampabay.rr.com>
Source record: 134720

i think if i where you
i would make the ground wire as short as possible and use as heavy of wire/braid you can use and drive in 2-3 8 foot ground rods and you will want to connect the Rig and the tuner to the ground and wouldnt hunt to shorten that feedline it could be part of the problem
good luck

Michael Barron wrote:

> Hi folks,
>
> OK, so I just bought an HF rig, tuner, antenna, lots o' coax, and am
> ready to get on the air, right? Well, not quite. I have enough RF
> floating around that it's necessary for me to disconnect my stereo
> speakers when I transmit, each touch of the key toggles the VCR
> between record and stop, and I have to be *very* careful to not touch
> the metal trim on the knobs of my tuner when tuning or I get a rather
> nasty reminder (80m hurts the worst). I'm also afraid to let my cats
> anywhere near the operating post when I'm on the air (warm tubes = cat
> magnet).
>
> So here's the setup. I have a G5RV up about 25 feet. It has ~30 feet
> of 450-ohm ladder line, which drops about 18 feet before going
> horizontal 5 feet, then vertically the remainder. At the end of the
> ladderline is what I presume to be a balun, with a connector to my
> coax that runs to the shack. Here, I made a coil of six turns six
> inches in diameter in a failed attempt to stop the RF in the shack. I
> did not do an exact measurement of the length of coax, but my best
> guess would be at least 60 feet.
>
> In the shack, the coax goes first to my tuner (pretty obvious there),
> and from there a three-foot jumper to the rig. I should note that I
> am able to tune the antenna on 80 thru 10 with the greatest SWR being
> 1.2:1 on 10 (although difficult to obtain). 80m can be hit or miss,
> but usually tunes just fine.
>
> I'm aware that single ground rod is pretty much useless for RF. And
> the distance the wire travels is certainly more than 1/4-wavelength on
> at least two bands. So the question is, what can I do to prevent
> blowing out my speakers, starting and stopping the VCR with every dit
> and dah, and burning the #@*! out of my fingers? I've read about
> using counterpoises cut 1/4-wavelength for each band and run under the
> carpet in the shack to act as an artificial ground is doable in
> situations where a long ground wire is necessary (me!). Anyone have
> any experience with such a setup? Any other suggestions?

>
> Sorry for the long post, and thanks in advance for the help!
> 73s de Mike N3XPF

4980. Re: Varicaps in rx atu's

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-12 20:19:09 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <ckt1ous3jstebolkdnd1oop6nvnf92nfr0@4ax.com>
Source record: 134721

On Thu, 12 Sep 2002 17:37:54 +0000 (UTC), "Reg Edwards"
<g4fgq.regp@btinternet.com> wrote:

>
>Havn't you forgotten varicap diodes are operated under reverse-bias
>conditions, ranging from 1 to typically 30 volts.
>
>
>
>
OH,

That changes everything - nevermind ;-)

73's
Richard Clark, KB7QHC

4981. Re: Trap L/C Ratio and Bandwidth

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-12 20:53:08 UTC
From: Reg Edwards <g4fgq.regp@btinternet.com>
Message-ID: <alqurj$b9p$1@helle.btinternet.com>
Source record: 134722

"Ian White, G3SEK"
> That is true, but misleading, because you can also choose to vary the
> length of wire beyond the trap in the interest of improved bandwidth.
==========
Just changing the length beyond the trap is not allowed. It shifts the lower resonant frequency away from the specified requirement. Several other factors have to be changed as well - such as L and C.
==========
> >Their ratio is nowhere
> >involved, only their product.
> >
> Not true. The product must obviously be kept constant because it
> determines the resonant frequency of the trap. But different values of
> L/C can be used (while keeping the product L*C constant) - and that
> will determine the wire length required to give resonance on the
> lower-frequency band. Those choices *will* affect the SWR bandwidth on
> that band.
==========
But it IS true. The whole calculation can be done without involving the ratio. Have you ever done it ?
==========
> >At the trap frequency Q = (Radiation resistance)/(Reactance of L)
> >approximately
> >
> That is the operating Q of the trap - on its own.
>
> But that's a different Q - the operating Q of the whole antenna, as
> measured at the feedpoint. That Q is determined by the properties of
> both the trap and the rest of the antenna.
>
==========

Wrong. They are the SAME Q. I did use the word approximately to allow for other L, C and R in the antenna.

Any multi-mesh network in a state of resonance with one principal resistive component (in our case the radiation resistance) has the same Q no-matter which mesh is tested. (The test consts of measuring the bandwidth (sharpness) of the input impedance response versus frequency.)

So you get the same Q whether it is measured adjacent to the coil or at the transmitter end of the transmission line.

==========
> And don't assume that people who agree with the handbooks are

> plagiarists.
==========
I don't. A few of them are not.
==========
> The other possibility is that they've done their own
> thinking, and only agree because the handbooks got it right.
==========
If they've done their own thinking and have confidence in their own
statements there's no need to mention a handbook unless it's for a more
detailed info source.
==========

4982. Re: 9/12/02 ANTIKEYCLOWNS STILL OWN THE NG

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-12 20:55:34 UTC
From: Bill Mast <Bmast@netmail.com>
Message-ID: <3d82fe06.99841003@news.easynews.com>
Source record: 134723
Cross-posted to: rec.radio.cb,rec.radio.amateur.antenna,rec.radio.amateur.boatanchors,rec.radio.amateur.policy

On 12 Sep 2002 09:03:34 -0700, bookooaddys@yahoo.com (Keyclown
Busters) wrote:

>And no one here can stop it.
>
>ESPECIALLY a booze and dope soaked nwa wanna be high school dropout
>whose parents kicked him out because he is a useless doper parasite,
>and who fantasizes about pimping hoes as the highest point on the
>economic ladder he can achieve.
>
>ALSO: Crackheads, rednecks, bowl weenies, truckstop trannies, and all
>the other slimes that comprise keyclownism.
>NONE OF YOU CAN STOP THE ANTIKEYCLOWNS!!!

Own What? Whats a keyclown?

4983. Re: Ouch! RF in the shack

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-12 21:05:25 UTC
From: Chester Alderman <calderman@cox.net>
Message-ID: <pk7g9.14621$8F4.457468@news2.east.cox.net>
Source record: 134724

One of the first things you probably should do is move your antenna. If the ends of your antenna wire is directly over your roof, there is not much, except for moving the antenna wire, that will stop your problem.
Tom/W4BQF

"Michael Barron" <mike@mbcomps.com> wrote in message news:ea100098.0209121139.18c5c61a@posting.google.com...
> Hi folks,
>
> OK, so I just bought an HF rig, tuner, antenna, lots o' coax, and am
> ready to get on the air, right? Well, not quite. I have enough RF
> floating around that it's necessary for me to disconnect my stereo
> speakers when I transmit, each touch of the key toggles the VCR
> between record and stop, and I have to be *very* careful to not touch
> the metal trim on the knobs of my tuner when tuning or I get a rather
> nasty reminder (80m hurts the worst). I'm also afraid to let my cats
> anywhere near the operating post when I'm on the air (warm tubes = cat
> magnet).
>
> So here's the setup. I have a G5RV up about 25 feet. It has ~30 feet
> of 450-ohm ladder line, which drops about 18 feet before going
> horizontal 5 feet, then vertically the remainder. At the end of the
> ladderline is what I presume to be a balun, with a connector to my
> coax that runs to the shack. Here, I made a coil of six turns six
> inches in diameter in a failed attempt to stop the RF in the shack. I
> did not do an exact measurement of the length of coax, but my best
> guess would be at least 60 feet.
>
> In the shack, the coax goes first to my tuner (pretty obvious there),
> and from there a three-foot jumper to the rig. I should note that I
> am able to tune the antenna on 80 thru 10 with the greatest SWR being
> 1.2:1 on 10 (although difficult to obtain). 80m can be hit or miss,
> but usually tunes just fine.
>
> I'm aware that single ground rod is pretty much useless for RF. And
> the distance the wire travels is certainly more than 1/4-wavelength on
> at least two bands. So the question is, what can I do to prevent
> blowing out my speakers, starting and stopping the VCR with every dit
> and dah, and burning the #@*! out of my fingers? I've read about
> using counterpoises cut 1/4-wavelength for each band and run under the
> carpet in the shack to act as an artificial ground is doable in
> situations where a long ground wire is necessary (me!). Anyone have
> any experience with such a setup? Any other suggestions?
>

> Sorry for the long post, and thanks in advance for the help!
> 73s de Mike N3XPF

4984. Re: Anyone seen Randy?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-12 21:19:51 UTC
From: Bill Mast <Bmast@netmail.com>
Message-ID: <3d8403b8.101299671@news.easynews.com>
Source record: 134725
Cross-posted to: rec.radio.cb,rec.radio.amateur.antenna,rec.radio.amateur.boatanchors,rec.radio.amateur.policy

On 12 Sep 2002 13:02:54 -0700, bookooaddys@yahoo.com (Keyclown
Busters) wrote:

>Hey drug/booze soaked high school dropout that got kicked out by his
>parents and is an nwa wanna be...and thinks "pimpin hoes" is the
>ultimate on the economic ladder:
>
>Did you two sweeties talk after or before the love and drug session?
>

Hey N8WWM;
Which Randy are you looking for?

4985. Stealth patio antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-12 21:41:32 UTC
From: Tom Ayers <tom@SPAMBEGONE.polyflow.com>
Message-ID: <3D810A0C.6D9584C7@nospam.qsl.net>
Source record: 134728

I am looking for some antenna advice. I am trying to get on 40 meters. I know there are commercial antennas out there, but I want to make my own.

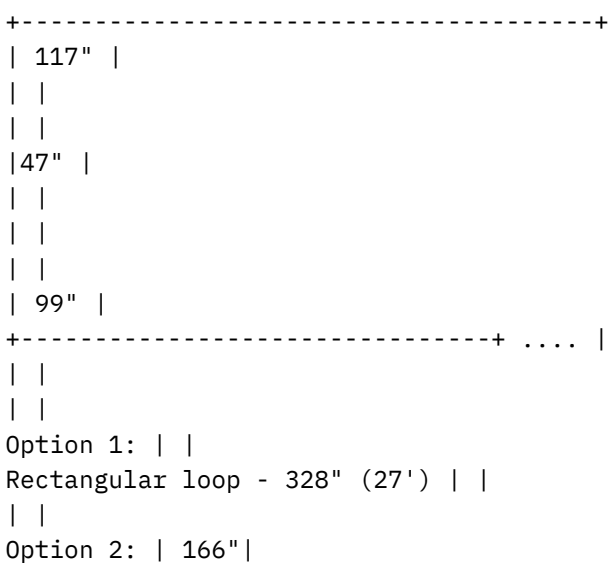
I live in a condo on the second floor of a three story building. I do not have access to the roof, or for all practical purposes, the ground. The building seems to be a faraday cage! Even the commercial broadcast AM and FM stations don't get in. Of course along with this is the usual cc&r's stating "Thou shalt not put up an antenna!" I do have a small patio however.

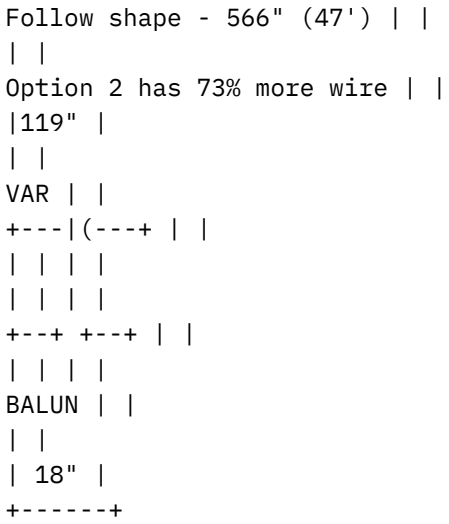
The patio is an L shape, with one side very narrow. The neighbor's patio is directly above (same size and shape), so I can put the antenna on the bottom of their patio. This is about 20 feet from ground level. I have some 24ga wire the same color as the underside of their patio, so it will be hard to see it from the ground. I will be running qrp.

I was thinking about making a loop, with a variable cap in the electrical middle. This way I could tune it to be resonant. I would feed it through a balun.

Question 1: Would I be better making the loop rectangular (Option 1). Although smaller, it is more symmetrical. The problem is that it is small. Option 2 is larger, but with only 18" in the narrow part of the patio, and the strange non-symmetrical shape, I am thinking it will be a mess.

Question 2: Ground. I am looking for the best suggestion. My choices are cold water pipe, electrical ground, counterpoise or none.





Thanks in advance,
Tom Ayers
KG6MVB

4986. Re: 40 m dipole?? How much of leg can I bend??

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-12 21:50:47 UTC
From: Reg Edwards <g4fgq.regp@btinternet.com>
Message-ID: <alr27ncbg1@paris.btinternet.com>
Source record: 134726

```
> StarGazer,
> Won't hurt it's performance at all.
> 'Doc
============================

Doc, you have to be very careful when making such rash statements on this
newsgroup.

There's some folk who consider a few milli-bels make the difference between
winning and losing the contest.
---
Reg, G4FGQ
```

4987. Re: Trap L/C Ratio and Bandwidth

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-12 22:02:16 UTC
From: "Ian White, G3SEK" <G3SEK@ifwtech.co.uk>
Message-ID: <$fvFIkUo7Qg9EAb+@ifwtech.co.uk>
Source record: 134727

Reg Edwards wrote:
>"Ian White, G3SEK"
>> That is true, but misleading, because you can also choose to vary the
>> length of wire beyond the trap in the interest of improved bandwidth.
>==========
>Just changing the length beyond the trap is not allowed. It shifts the lower
>resonant frequency away from the specified requirement. Several other
>factors have to be changed as well - such as L and C.

Of course it's allowed. The whole point is that you can achieve the same resonant frequency on the lower band using a variety of combinations of L, C and outer wire length (subject of course to the requirement that L*C is constant, to maintain resonance on the higher band).

>==========
>> >Their ratio is nowhere
>> >involved, only their product.

Varying either L or C while keeping L*C constant is the same as varying L/C.

To look at it another way, on the lower band the trap appears inductive, and acts as a loading coil. You can then vary the L/C ratio to change the effective inductance at the lower frequency, and adjust the outer wire length to bring the antenna to resonance on the lower band.

When you do this, it also changes the width or Q of that resonance on the lower band. That's one very good reason to play around with the L/C ratio.

A different good reason is to position additional resonances onto higher amateur bands, e.g. to make an 80/40m trap dipole resonant on 20m and other bands too. That was W3DZZ's main objective, and that determined the L/C ratio of his 40m traps. If he'd been designing a trap dipole purely for 80 and 40, he'd probably have used a different L/C ratio to optimise the bandwidth on 80m.

>>But different values of
>> L/C can be used (while keeping the product L*C constant) - and that
>> will determine the wire length required to give resonance on the
>> lower-frequency band. Those choices *will* affect the SWR bandwidth on
>> that band.
>==========
>But it IS true. The whole calculation can be done without involving the
>ratio. Have you ever done it ?

I've never needed to do it in detail. But I've read the papers of the
people who did the practical experiments, including W3DZZ, G8KW and
those who came after, and can understand exactly why they found what
they did.

>==========
>> >At the trap frequency Q = (Radiation resistance)/(Reactance of L)
>> >approximately
>> >
>> That is the operating Q of the trap - on its own.
>>
>> But that's a different Q - the operating Q of the whole antenna, as
>> measured at the feedpoint. That Q is determined by the properties of
>> both the trap and the rest of the antenna.
>>
>==========
>
>Wrong. They are the SAME Q. I did use the word approximately to allow for
>other L, C and R in the antenna.
>
>Any multi-mesh network in a state of resonance with one principal resistive
>component (in our case the radiation resistance) has the same Q no-matter
>which mesh is tested. (The test consts of measuring the bandwidth
>(sharpness) of the input impedance response versus frequency.)
>
>So you get the same Q whether it is measured adjacent to the coil or at the
>transmitter end of the transmission line.
>

You're right, they are the same Q under those conditions. But we've been
talking somewhat at crossed porpoises.

You were talking about the antenna resonance on the higher band, where
the trap is antiresonant.

I've been talking mainly about the resonance on the lower band, where
the trap is not resonant but acts as a loading coil. In the latter case,
L/C ratio and length of the outer wire are both legitimate variables.

--
73 from Ian G3SEK 'In Practice' columnist for RadCom (RSGB)
Editor, 'The VHF/UHF DX Book'
http://www.ifwtech.co.uk/g3sek

4988. Hog Fence Antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-12 22:30:39 UTC
From: Edward Lewis <kq6dx@pacbell.net>
Message-ID: <t942ou8jd5t0ebprfocifqnkeib1a9vnrg@4ax.com>
Source record: 134729

I built a Hog Fence Antenna to receive ATV , and it works
quite well. I did a side by side comparison with a KLM 440-10X ATV
antenna and the receive pictures were the same.
Now I am going to silver solder something onto the back so
that iI can u- bolt it to my tower. My question is does the antenna
need to be insulated from ground or is it ok to bolt it directly to my
tower.
Also does the size of the wire mesh used to construct the
parabola have any effect on performance, would mesh smaller than the
2inch by 4 inch work better. 73

Edward Lewis KQ6DX
kq6dx@pacbell.net

4989. Re: Ouch! RF in the shack

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-12 22:36:27 UTC
From: Dan/W4NTI <w4nti@mindspringnospam.com>
Message-ID: <alr4tdjaf1@slb7.atl.mindspring.net>
Source record: 134730

Over the years in various 'temporary' locations I have used 1/4 wave wires
to improve the RFI situation.
They do indeed help get the RF off of things. Bear in mind tho that if they
are going to be close to anyone or anything they need to be insulated. And
the ends will be very hot with RF. Keep away from burnable objects also.
Course that will only be a problem if you are running high power.

Dan?W$NTI

"Michael Barron" <mike@mbcomps.com> wrote in message
news:ea100098.0209121139.18c5c61a@posting.google.com...
I've read about
> using counterpoises cut 1/4-wavelength for each band and run under the
> carpet in the shack to act as an artificial ground is doable in
> situations where a long ground wire is necessary (me!). Anyone have
> any experience with such a setup? Any other suggestions?
>
> Sorry for the long post, and thanks in advance for the help!
> 73s de Mike N3XPF

4990. Re: Ouch! RF in the shack

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-12 22:38:18 UTC
From: Dan/W4NTI <w4nti@mindspringnospam.com>
Message-ID: <alr532tqa1@nntp9.atl.mindspring.net>
Source record: 134731

Actually its best to use FLAT strapping for a long ground. If you have some old RG8 coax around, use the shield by stripping it out and flattening it.

Also makes a convenient way to interconect your equipment.

Dan/W4NTI

"Dennis Kaylor" <k4oxg@tampabay.rr.com> wrote in message news:3D80F536.3D3B0AE0@tampabay.rr.com...
> i think if i where you
> i would make the ground wire as short as possible and use as heavy of
> wire/braid you can use and drive in 2-3 8 foot ground rods and you will
> want to connect the Rig and the tuner to the ground and wouldnt hunt to
> shorten that feedline it could be part of the problem
> good luck
>
> Michael Barron wrote:
>
> > Hi folks,
> >
> > OK, so I just bought an HF rig, tuner, antenna, lots o' coax, and am
> > ready to get on the air, right? Well, not quite. I have enough RF
> > floating around that it's necessary for me to disconnect my stereo
> > speakers when I transmit, each touch of the key toggles the VCR
> > between record and stop, and I have to be *very* careful to not touch
> > the metal trim on the knobs of my tuner when tuning or I get a rather
> > nasty reminder (80m hurts the worst). I'm also afraid to let my cats
> > anywhere near the operating post when I'm on the air (warm tubes = cat
> > magnet).
> >
> > So here's the setup. I have a G5RV up about 25 feet. It has ~30 feet
> > of 450-ohm ladder line, which drops about 18 feet before going
> > horizontal 5 feet, then vertically the remainder. At the end of the
> > ladderline is what I presume to be a balun, with a connector to my
> > coax that runs to the shack. Here, I made a coil of six turns six
> > inches in diameter in a failed attempt to stop the RF in the shack. I
> > did not do an exact measurement of the length of coax, but my best
> > guess would be at least 60 feet.
> >
> > In the shack, the coax goes first to my tuner (pretty obvious there),
> > and from there a three-foot jumper to the rig. I should note that I
> > am able to tune the antenna on 80 thru 10 with the greatest SWR being
> > 1.2:1 on 10 (although difficult to obtain). 80m can be hit or miss,
> > but usually tunes just fine.
> >

> > I'm aware that single ground rod is pretty much useless for RF. And
> > the distance the wire travels is certainly more than 1/4-wavelength on
> > at least two bands. So the question is, what can I do to prevent
> > blowing out my speakers, starting and stopping the VCR with every dit
> > and dah, and burning the #@*! out of my fingers? I've read about
> > using counterpoises cut 1/4-wavelength for each band and run under the
> > carpet in the shack to act as an artificial ground is doable in
> > situations where a long ground wire is necessary (me!). Anyone have
> > any experience with such a setup? Any other suggestions?
> >
> > Sorry for the long post, and thanks in advance for the help!
> > 73s de Mike N3XPF
>

4991. Re: Ouch! RF in the shack

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-12 22:39:37 UTC
From: Dan/W4NTI <w4nti@mindspringnospam.com>
Message-ID: <alr548$l12$1@slb3.atl.mindspring.net>
Source record: 134732

Here is another thought on this subject. I used dipoles here at this shack
and had the ends right over the shack. RF city.

I switched to a loop and no further problems.

Dan/W4NTI

"Chester Alderman" <calderman@cox.net> wrote in message
news:pk7g9.14621$8F4.457468@news2.east.cox.net...
> One of the first things you probably should do is move your antenna. If
the
> ends of your antenna wire is directly over your roof, there is not much,
> except for moving the antenna wire, that will stop your problem.
> Tom/W4BQF
>
>
> "Michael Barron" <mike@mbcomps.com> wrote in message
> news:ea100098.0209121139.18c5c61a@posting.google.com...
> > Hi folks,
> >
> > OK, so I just bought an HF rig, tuner, antenna, lots o' coax, and am
> > ready to get on the air, right? Well, not quite. I have enough RF
> > floating around that it's necessary for me to disconnect my stereo
> > speakers when I transmit, each touch of the key toggles the VCR
> > between record and stop, and I have to be *very* careful to not touch
> > the metal trim on the knobs of my tuner when tuning or I get a rather
> > nasty reminder (80m hurts the worst). I'm also afraid to let my cats
> > anywhere near the operating post when I'm on the air (warm tubes = cat
> > magnet).
> >
> > So here's the setup. I have a G5RV up about 25 feet. It has ~30 feet
> > of 450-ohm ladder line, which drops about 18 feet before going
> > horizontal 5 feet, then vertically the remainder. At the end of the
> > ladderline is what I presume to be a balun, with a connector to my
> > coax that runs to the shack. Here, I made a coil of six turns six
> > inches in diameter in a failed attempt to stop the RF in the shack. I
> > did not do an exact measurement of the length of coax, but my best
> > guess would be at least 60 feet.
> >
> > In the shack, the coax goes first to my tuner (pretty obvious there),
> > and from there a three-foot jumper to the rig. I should note that I
> > am able to tune the antenna on 80 thru 10 with the greatest SWR being
> > 1.2:1 on 10 (although difficult to obtain). 80m can be hit or miss,
> > but usually tunes just fine.
> >

> > I'm aware that single ground rod is pretty much useless for RF. And
> > the distance the wire travels is certainly more than 1/4-wavelength on
> > at least two bands. So the question is, what can I do to prevent
> > blowing out my speakers, starting and stopping the VCR with every dit
> > and dah, and burning the #@*! out of my fingers? I've read about
> > using counterpoises cut 1/4-wavelength for each band and run under the
> > carpet in the shack to act as an artificial ground is doable in
> > situations where a long ground wire is necessary (me!). Anyone have
> > any experience with such a setup? Any other suggestions?
> >
> > Sorry for the long post, and thanks in advance for the help!
> > 73s de Mike N3XPF
>
>

4992. looking for an multiband HF vertical, quick to assemble in a field

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-12 22:59:53 UTC
From: O Malyava <omalyava@nj.rr.com>
Message-ID: <J%8g9.31675$hh.7974955@twister.nyc.rr.com>
Source record: 134733

Hi guys,

I am looking for an multiband HF vertical, what is easy and quick to
assemble and disassemble let's say in a field environment.
There are quite a few models from famous manufactures - cushcraft,
butternut, diamond, hustler etc ...
I have read reviews for all of them - some of them are better, some - just
otherwise :).
I just want to know - which of them I can use as a field (every)day antenna,
because of apartment antenna restrictions and so on ... ?
what antenna can be easily unscrewed in a couple of places to put it into a
car trunk and assemble it outdoors in 20 minutes with the same nice SWR ?
what antenna could survive after 50 of such cycles?
thanks :)

I have read more or less carefully PDFs for the most of verticals, looking
at construction details and possible problems during transportation and
disassembling.
Looks alike I don't like Butternut antennas because of huge coils - they can
be easily crumpled, and therefore change resonance frequency, I hope ...
About Outbacker: I don't believe in short antennas ... neither 8 feet stick
could work well on the bands lower than 20m ... it is my personal "old
school" opinion :)

So, I am thinking about:
Cushcraft (R6000,R8)
Hustler (4-BTV,5-BTV,6-BTV)
Hy-Gain (AV620,AV640)

Any concerns about them?

With best regards,
Alex NE7L ex.US4LNE

4993. Re: Ouch! RF in the shack

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-12 23:27:59 UTC
From: K4IA <K4ia@novacoxmail.com>
Message-ID: <3q9g9.14888$8F4.480868@news2.east.cox.net>
Source record: 134734

Are you on the second floor?

Get the antenna as far from the shack and house wiring as you can. If you suspect the house wiring is picking up the RF use a Radio Shack brute force filter on the AC line that powers your VCR.

Drop the vertical part of the G5RV vertical all the way down to reduce it picking up any induced current and sending it back the coax to your rig. Try reorienting the coax at a different angle to the antenna.

Read the stuff at the Radioworks website www.radioworks.com about "ungrounds" and long ground wires. I have a second floor shack and had all sorts of problems until I disconnected the RF ground completely and let the shack float. RF problem went away. I tried an "artificial ground" from MFJ but it did no good at all. I suspect counterpoises strung around the house might help you tune the antenna but will create more RF inside where you don't want it.

Put a Radioworks line isolator (current balun) at the rig end of the coax. A few turns of coax is probably not enough especially on 80 mtrs. Read up on coax choke baluns.

I am not a big fan of the modern G5RV. I found my 102 foot antenna worked a lot better when I just ran ladder line all the way to the window, then a big 1:1 balun from Centaur and a short length of coax to my tuner. I can tune 160-10 now with no RF in the shack even at KW power.
--
Radio K4IA
Craig "Buck"
Fredericksburg, Virginia USA

FISTS 6702 CC 788 Diamond 64
K1# 470 K2# 2460

"Michael Barron" <mike@mbcomps.com> wrote in message
news:ea100098.0209121139.18c5c61a@posting.google.com...
> Hi folks,
>
> OK, so I just bought an HF rig, tuner, antenna, lots o' coax, and am
> ready to get on the air, right? Well, not quite. I have enough RF
> floating around that it's necessary for me to disconnect my stereo
> speakers when I transmit, each touch of the key toggles the VCR
> between record and stop, and I have to be *very* careful to not touch
> the metal trim on the knobs of my tuner when tuning or I get a rather
> nasty reminder (80m hurts the worst). I'm also afraid to let my cats
> anywhere near the operating post when I'm on the air (warm tubes = cat

> magnet).
>
> So here's the setup. I have a G5RV up about 25 feet. It has ~30 feet
> of 450-ohm ladder line, which drops about 18 feet before going
> horizontal 5 feet, then vertically the remainder. At the end of the
> ladderline is what I presume to be a balun, with a connector to my
> coax that runs to the shack. Here, I made a coil of six turns six
> inches in diameter in a failed attempt to stop the RF in the shack. I
> did not do an exact measurement of the length of coax, but my best
> guess would be at least 60 feet.
>
> In the shack, the coax goes first to my tuner (pretty obvious there),
> and from there a three-foot jumper to the rig. I should note that I
> am able to tune the antenna on 80 thru 10 with the greatest SWR being
> 1.2:1 on 10 (although difficult to obtain). 80m can be hit or miss,
> but usually tunes just fine.
>
> I'm aware that single ground rod is pretty much useless for RF. And
> the distance the wire travels is certainly more than 1/4-wavelength on
> at least two bands. So the question is, what can I do to prevent
> blowing out my speakers, starting and stopping the VCR with every dit
> and dah, and burning the #@*! out of my fingers? I've read about
> using counterpoises cut 1/4-wavelength for each band and run under the
> carpet in the shack to act as an artificial ground is doable in
> situations where a long ground wire is necessary (me!). Anyone have
> any experience with such a setup? Any other suggestions?
>
> Sorry for the long post, and thanks in advance for the help!
> 73s de Mike N3XPF

4994. Re: looking for an multiband HF vertical, quick to assemble in a field

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-12 23:32:25 UTC
From: K4IA <K4ia@novacoxmail.com>
Message-ID: <du9g9.14896$8F4.482506@news2.east.cox.net>
Source record: 134735

I thought the homebrew antenna in the April QST looked pretty nifty if you want something that breaks down into 2 foot sections easily. The others are more or less permanent.
--
Radio K4IA
Craig "Buck"
Fredericksburg, Virginia USA

FISTS 6702 CC 788 Diamond 64
K1# 470 K2# 2460
"O Malyava" <omalyava@nj.rr.com> wrote in message
news:J%8g9.31675$hh.7974955@twister.nyc.rr.com...
> Hi guys,
>
> I am looking for an multiband HF vertical, what is easy and quick to
> assemble and disassemble let's say in a field environment.
> There are quite a few models from famous manufactures - cushcraft,
> butternut, diamond, hustler etc ...
> I have read reviews for all of them - some of them are better, some - just
> otherwise :).
> I just want to know - which of them I can use as a field (every)day
antenna,
> because of apartment antenna restrictions and so on ... ?
> what antenna can be easily unscrewed in a couple of places to put it into
a
> car trunk and assemble it outdoors in 20 minutes with the same nice SWR ?
> what antenna could survive after 50 of such cycles?
> thanks :)
>
> I have read more or less carefully PDFs for the most of verticals, looking
> at construction details and possible problems during transportation and
> disassembling.
> Looks alike I don't like Butternut antennas because of huge coils - they
can
> be easily crumpled, and therefore change resonance frequency, I hope ...
> About Outbacker: I don't believe in short antennas ... neither 8 feet
stick
> could work well on the bands lower than 20m ... it is my personal "old
> school" opinion :)
>
> So, I am thinking about:
> Cushcraft (R6000,R8)
> Hustler (4-BTV,5-BTV,6-BTV)
> Hy-Gain (AV620,AV640)

>
> Any concerns about them?
>
> With best regards,
> Alex NE7L ex.US4LNE
>
>

4995. Re: looking for an multiband HF vertical, quick to assemble in a field

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-13 00:22:08 UTC
From: WA6LZH <tangeram@lucent.com>
Message-ID: <3D812FB0.5090403@lucent.com>
Source record: 134736

A basic 30 foot telescoping fiberglass mast is really inexpensive. They are really fishing rod blanks. I'd use it to pull up 30 ft of wire with an L network at the base and a few 33 foot radials. An all band ground plane/ground mounted vertical. Or you can do without the tuner by implementing the "St. Louis Vertical". The problem with the commercial verticals is that thy're NOT easy to assemble and dissassemble.

Tony

4996. Re: Tired of RS employees pushing Cellphones and DirectTV

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-13 02:34:21 UTC
From: Jerry France <grf@uneedspeed.net>
Message-ID: <3D814EAD.C04F48CD@uneedspeed.net>
Source record: 134737
Cross-posted to: alt.radio.scanner,rec.radio.amateur.antenna,rec.radio.scanner,rec.radio.shortwave

Who in the world cares about this RS stuff. Please take it off
rec.amateur.antenna. What a bunch of crap. Get a life!

Alan Beagley wrote:
>
> I've received RS sale fliers from time to time.
>
> -=-
> Alan
>
> Bill M wrote:
>
> > I've given my name and address (altered) time-off and again at Radio
> > Shark and have never received any junk mail or so much as a free
> > catalog.
> > So what is the whole deal with the interrogation thing? Doesn't appear
> > that they do well by hassling their customers.
> > Its really stoopid that an outfit would attain notoriety by insisting on
> > doing this nonsense with no perceivable benefit.

4997. Re: 3 MHz to 500 MHz antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-13 02:38:48 UTC
From: Dick Carroll <dixie@townsqr.com>
Message-ID: <3D814F85.C895298C@townsqr.com>
Source record: 134738

Boogie wrote:

> Thank you all for your reaction, I'm letting the idea go that an antenna can
> be made to meet my demands without having to change antennas, so I'll be
> changing for a while.
>
> thanks again for sharing the information that you did.
> Greetings Jeroen

Aw, Boogie, you give up way too easy. Case in point - I had heard there was a 6 meter opening, and having acquired an HF rig with 6 meters on it, I punched it up onto 6 and spun the dial- while hooked to the 80/40 meter paralleled dipoles since I had no antenna anywhere close to the 6 meter band.
Lo and behold, there's a loud South American calling CQ! I punch the autotune button, and the rig finds a quick match. Well, at least it does load on 6. So I call the South American, he comes right back, we trade 599's and he goes on his way continuing the DX search.
If there's a moral it's merely that lots of things will work that you wouldn't expect, where you wouldn't expect. Including antennas. Optimization it ain't.
No, I don't plan to routinely use my 80 meter dipole on 6.

Dick

4998. Re: Ouch! RF in the shack

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-13 02:41:28 UTC
From: Reg Edwards <g4fgq.regp@btinternet.com>
Message-ID: <alrj8n$5ln$1@paris.btinternet.com>
Source record: 134741

> So here's the setup. I have a G5RV up about 25 feet. It has ~30 feet
> of 450-ohm ladder line, which drops about 18 feet before going
> horizontal 5 feet, then vertically the remainder. At the end of the
> ladderline is what I presume to be a balun, with a connector to my
> coax that runs to the shack.
==========

Most likely RF in the shack is due to direct radiation from the antenna - almost certainly if your shack is in an upstairs bedroom.

Radiation is picked up by the transmitter ground lead, the domestic power wiring, the domestic plumbing, the transmitter power lead, the phone line, the TV downlead is a cert on 7 MHz, and any other wires in the vicinity. It is then re-radiated.

The usual unjustly accused suspect included in a round-up (as by Claude Rains in Casablanca), residual unbalance on the antenna and its feedline, can be turned loose. On the other hand, try removing the balun. Anything might happen. It probably won't make things worse.

If all else fails turn power down to 10 watts on the affected bands. ;o)

Cheers, Reg, G4FGQ.

4999. Re: Trap L/C Ratio and Bandwidth

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-13 02:41:30 UTC
From: Reg Edwards <g4fgq.regp@btinternet.com>
Message-ID: <alrj8o$5ln$2@paris.btinternet.com>
Source record: 134740

Ian, I knew all along we would eventually agree. ;o)

To tidy up -

There's an error in my introductory statement: "It is not true antenna operating Q and hence bandwidth are dependent on trap L/C ratio."

Please insert "solely" between "are" and "dependent".

The error, of course, coming from me, in conjunction with 'burning bibles' and 'human appendix' was like showing red flags to bulls.

Q is no more dependent on L/C, perhaps less, as it is on half dozen other factors. System bandwidth, the end product, is dependent on a few more. But whenever L/C is mentioned in reply to a query it is invariably implied as being the controlling factor, the point from which a design procedure begins. No mention is ever made of an optimum value or even whether higher values of the ratio are better than low values. Respondents having good memories for 'in-words' state no more than that an L/C ratio exists. There's one conclusion - the respondent hasn't the foggiest idea of what he's waffling about and contributes nothing.

He's a plagiarist who has noticed L/C mentioned at odd places in the 'literature' without any explanation which appeared to be a mysterious but somehow important quantity suitable for impressing newsgroups readers. And so propagation continues over the decades.

As Roy has pointed out, an antenna can be designed by starting with the ratio L/C. Some values are impossible. What the impossible values are are unpredicatable. The eventual computed overall length will be any anybody's guess.

By starting with antenna dimensions the antenna user can be sure it will fit into his back yard.

Program TRAPDIP begins by entering antenna overall length. L/C ratio can please itself.

==========

PS. The only information I have just found on the subject (I didn't spend much time searching) in the 18th Edition of the ARRL Antenna Book, page 7-10, was "Unfortunately, high (coil) Q restricts the antenna bandwidth because the traps provide maximum isolation only at trap resonance."

The first part of this sentence is incorrect. It is not the loss resistance of the coil which controls antenna operating bandwidth. With a good coil, antenna Q and bandwidth is controlled by antenna radiation resistance which

is effectively in shunt with coil reactance. Radiation resistance (at the end of a dipole) is of the order of 50 or 100 times smaller than the equivalent shunt resistance due to coil loss and so completely swamps it.

The article goes on to describe the coaxial trap which it is stated has a high impedance and low (coil) Q (low shunt coil resistance) and "effectively overcomes the bandwidth problem". It did not occur to the author and editor that it achieves this objective by using the coil as a minor dummy load. Old wives ? The same effect can be achieved by winding an ordinary coil with more turns of thin wire and with a small C, which incidentally has a high L/C ratio. ;o)

Reg, G4FGQ

5000. Re: Tired of RS employees pushing Cellphones and DirectTV

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-13 02:46:25 UTC
From: DeWayne <ke9k@indy.rr.com>
Message-ID: <5kcg9.118746$N9.19512538@twister.neo.rr.com>
Source record: 134739
Cross-posted to: alt.radio.scanner,rec.radio.amateur.antenna,rec.radio.scanner,rec.radio.shortwave

And PLEASE stop forcing Jerry to read this.
DeWayne KE9K

"Jerry France" <grf@uneedspeed.net> wrote in message
news:3D814EAD.C04F48CD@uneedspeed.net...
> Who in the world cares about this RS stuff. Please take it off
> rec.amateur.antenna. What a bunch of crap. Get a life!
>
> Alan Beagley wrote:
> >
> > I've received RS sale fliers from time to time.
> >
> > -=-
> > Alan
> >
> > Bill M wrote:
> >
> > > I've given my name and address (altered) time-off and again at Radio
> > > Shark and have never received any junk mail or so much as a free
> > > catalog.
> > > So what is the whole deal with the interrogation thing? Doesn't
appear
> > > that they do well by hassling their customers.
> > > Its really stoopid that an outfit would attain notoriety by insisting
on
> > > doing this nonsense with no perceivable benefit.

5001. Re: looking for an multiband HF vertical, quick to assemble in a field

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-13 02:48:23 UTC
From: Reg Edwards <g4fgq.regp@btinternet.com>
Message-ID: <alrjln$60t$1@paris.btinternet.com>
Source record: 134742

Ignore all reviews which have been written by authors who have received a
free antenna from the manufacturer in place of a fee.

5002. Re: Tired of RS employees pushing Cellphones and DirectTV

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-13 02:49:23 UTC
From: Alan Beagley <abeagley@optonline.net>
Message-ID: <3D815233.7050506@optonline.net>
Source record: 134743
Cross-posted to: alt.radio.scanner,rec.radio.amateur.antenna,rec.radio.scanner,rec.radio.shortwave

Am I the only person whose newsreader has an "ignore thread" command?

-=-
Alan

DeWayne wrote:
> And PLEASE stop forcing Jerry to read this.
> DeWayne KE9K
>
> "Jerry France" <grf@uneedspeed.net> wrote in message
> news:3D814EAD.C04F48CD@uneedspeed.net...
>
>>Who in the world cares about this RS stuff. Please take it off
>>rec.amateur.antenna. What a bunch of crap. Get a life!

5003. Re: Tired of RS employees pushing Cellphones and DirectTV

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-13 02:49:51 UTC
From: Jerry France <grf@uneedspeed.net>
Message-ID: <3D81524F.5ABA6D40@uneedspeed.net>
Source record: 134744
Cross-posted to: alt.radio.scanner,rec.radio.amateur.antenna,rec.radio.scanner,rec.radio.shortwave

Ha! Good one. Got me there. Can't argue with that one!
Jerry

DeWayne wrote:
>
> And PLEASE stop forcing Jerry to read this.
> DeWayne KE9K
>
> "Jerry France" <grf@uneedspeed.net> wrote in message
> news:3D814EAD.C04F48CD@uneedspeed.net...
> > Who in the world cares about this RS stuff. Please take it off
> > rec.amateur.antenna. What a bunch of crap. Get a life!
> >
> > Alan Beagley wrote:
> > >
> > > I've received RS sale fliers from time to time.
> > >
> > > -=-
> > > Alan
> > >
> > > Bill M wrote:
> > >
> > > > I've given my name and address (altered) time-off and again at Radio
> > > > Shark and have never received any junk mail or so much as a free
> > > > catalog.
> > > > So what is the whole deal with the interrogation thing? Doesn't
> appear
> > > > that they do well by hassling their customers.
> > > > Its really stoopid that an outfit would attain notoriety by insisting
> on
> > > > doing this nonsense with no perceivable benefit.

5004. Re: Ouch! RF in the shack

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-13 03:24:58 UTC
From: CAM <Cecil.A.Moore@ieee.org>
Message-ID: <3D815A8A.C65BC66F@ieee.org>
Source record: 134745

Michael Barron wrote:
> So the question is, what can I do to prevent
> blowing out my speakers, starting and stopping the VCR with every dit
> and dah, and burning the #@*! out of my fingers?

Does the problem occur on all bands? Are some bands worse than others?
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

5005. Re: looking for an multiband HF vertical, quick to assemble in a field

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-13 03:31:19 UTC
From: CAM <Cecil.A.Moore@ieee.org>
Message-ID: <3D815C07.56F83F11@ieee.org>
Source record: 134746

O Malyava wrote:
> I just want to know - which of them I can use as a field (every)day antenna,
> because of apartment antenna restrictions and so on ... ?
> what antenna can be easily unscrewed in a couple of places to put it into a
> car trunk and assemble it outdoors in 20 minutes with the same nice SWR ?
> what antenna could survive after 50 of such cycles?
> thanks :)

Do a web search for the St. Louis Vertical. Take a look at the modified
version, not the original.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

5006. Re: looking for an multiband HF vertical, quick to assemble in a field

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-13 06:42:10 UTC
From: rhmcus@yahoo.com
Message-ID: <3d817dd4.7307237@news.us.dell.com>
Source record: 134747

Alex

For three years straight Ive been doing Jamboree on the Air with the Boyscouts.. Ive been using my base station vertical.. Its a Gap Titan DX.. With no ground radiials necessary it is really nice to setup and operatate. the vertical folds over in two peices and fits in the back of a full sized pickup truck. I made a pvc base for it and secure the ant with nylon line and tent stakes. It works very well for portable operation. SWR is very good and I do not need an antenna tuner. However this is not a small antenna but I have not had any probs.

Rich

KG5IF

On Thu, 12 Sep 2002 22:59:53 GMT, "O Malyava" <omalyava@nj.rr.com> wrote:

>Hi guys,
>
>I am looking for an multiband HF vertical, what is easy and quick to
>assemble and disassemble let's say in a field environment.
>There are quite a few models from famous manufactures - cushcraft,
>butternut, diamond, hustler etc ...
>I have read reviews for all of them - some of them are better, some - just
>otherwise :).
>I just want to know - which of them I can use as a field (every)day antenna,
>because of apartment antenna restrictions and so on ... ?
>what antenna can be easily unscrewed in a couple of places to put it into a
>car trunk and assemble it outdoors in 20 minutes with the same nice SWR ?
>what antenna could survive after 50 of such cycles?
>thanks :)
>
>I have read more or less carefully PDFs for the most of verticals, looking
>at construction details and possible problems during transportation and
>disassembling.
>Looks alike I don't like Butternut antennas because of huge coils - they can
>be easily crumpled, and therefore change resonance frequency, I hope ...
>About Outbacker: I don't believe in short antennas ... neither 8 feet stick
>could work well on the bands lower than 20m ... it is my personal "old
>school" opinion :)
>
>So, I am thinking about:
>Cushcraft (R6000,R8)
>Hustler (4-BTV,5-BTV,6-BTV)
>Hy-Gain (AV620,AV640)

>
>Any concerns about them?
>
>With best regards,
>Alex NE7L ex.US4LNE
>

5007. Re: Trap L/C Ratio and Bandwidth

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-13 07:08:51 UTC
From: "Ian White, G3SEK" <G3SEK@ifwtech.co.uk>
Message-ID: <$jlFn6ED8Yg9EA40@ifwtech.co.uk>
Source record: 134748

Reg Edwards wrote:

>Ian, I knew all along we would eventually agree. ;o)

Now look what you made me do - sprayed coffee all over the keyboard!

[...]

>PS. The only information I have just found on the subject (I didn't spend
>much time searching) in the 18th Edition of the ARRL Antenna Book, page
>7-10, was "Unfortunately, high (coil) Q restricts the antenna bandwidth
>because the traps provide maximum isolation only at trap resonance."
>
Oh dear... they're forgetting that the antenna has two different
bandwidths, on two different bands, and the trap affects each one in a
quite different way.

>The first part of this sentence is incorrect. It is not the loss resistance
>of the coil which controls antenna operating bandwidth. With a good coil,
>antenna Q and bandwidth is controlled by antenna radiation resistance which
>is effectively in shunt with coil reactance. Radiation resistance (at the
>end of a dipole) is of the order of 50 or 100 times smaller than the
>equivalent shunt resistance due to coil loss and so completely swamps it.
>
>The article goes on to describe the coaxial trap which it is stated has a
>high impedance and low (coil) Q (low shunt coil resistance) and "effectively
>overcomes the bandwidth problem".

Er, which of the *two* bandwidths would that be?

>It did not occur to the author and editor
>that it achieves this objective by using the coil as a minor dummy load.
>Old wives ?

Seems like that portion of the handbook needs to be revisited.

'Mature' handbooks like the ARRL series gradually get refined over the
years, but the process is being hugely speeded up by Internet
discussions.

--
73 from Ian G3SEK 'In Practice' columnist for RadCom (RSGB)
Editor, 'The VHF/UHF DX Book'
http://www.ifwtech.co.uk/g3sek

5008. Re: 3 MHz to 500 MHz antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-13 09:21:04 UTC
From: Boogie <j.boogert@hccnet.nl>
Message-ID: <alsb0arvv1@news.hccnet.nl>
Source record: 134749

Hi everyone,

There seems to be a slight misunderstanding and it could be I'm in the wrong newsgroup but I'm only a listener, I live in The Netherlands and I own an aor 8200, I posted my message in this group because in my opinion this is the group with the most knowledge about antenna's.

Thank you al for answering my question I got some helpful hints and tips and I'm going to try some out. If I am successful I'll post my antenna for those interested.

Jeroen

5009. Re: 9/12/02 ANTIKEYCLOWNS STILL OWN THE NG

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-13 11:33:02 UTC
From: "Arthur R. Howard" <whtmtnman@citlink.net>
Message-ID: <3D81CCEE.A18DA252@citlink.net>
Source record: 134750
Cross-posted to: rec.radio.cb,rec.radio.amateur.antenna,rec.radio.amateur.boatanchors,rec.radio.amateur.policy

Whats a keyclown????.............Several thousand dollars a dozen

Bill Mast wrote:

> On 12 Sep 2002 09:03:34 -0700, bookooaddys@yahoo.com (Keyclown
> Busters) wrote:
>
> >And no one here can stop it.
> >
> >ESPECIALLY a booze and dope soaked nwa wanna be high school dropout
> >whose parents kicked him out because he is a useless doper parasite,
> >and who fantasizes about pimping hoes as the highest point on the
> >economic ladder he can achieve.
> >
> >ALSO: Crackheads, rednecks, bowl weenies, truckstop trannies, and all
> >the other slimes that comprise keyclownism.
> >NONE OF YOU CAN STOP THE ANTIKEYCLOWNS!!!
>
> Own What? Whats a keyclown?

5010. Re: MFJ-1798 Anyone got experience of these???

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-13 12:21:58 UTC
From: G&R <"stop the spam"@limbo.hell>
Message-ID: <5Jkg9.3632$621.883327@news20.bellglobal.com>
Source record: 134751

After looking at the photo, i might suggest that you may want to consider a true mini quad antenna.

Take a look at our page at www.degendesigns.com and see if this might solve your problems.

73,

Guenther
info@degendesigns.com

"www.ar3000.info" <tommcqDELETETHESECAPS@tiscali.co.uk> wrote in message news:3d16685d_2@mk-nntp-1.news.uk.worldonline.com...
> Thanks Andy, Rather than have a 20ft antenna mounted on the (substantial)
> chimney, I would prefer to have something ground-mounted but I'm not at all
> confident that it would pull in the signals (or push them out)
> satisfactorily.
>
> I live in a house with a relatively small garden
> (http://web.ukonline.co.uk./sadmutha/ar3000/images/667cnr_cu.jpg) front and
> rear and strongly suspect that the house and surrounding buildings will mask
> most of the signals. The trees at the front of the house (in the picture)
> are coming down next month, but then again, I don't think the wife would
> appreciate a bloody great antenna stuck in front of the house :-))
>
> At the back of the house its even worse! I have trees which *cannot* come
> down and a bank of houses not too far away (and higher than mine).
>
> Looks like I'll be forced to go for the chimney-mount.
>
> Regards,
>
> Tom www.ar3000.info
>
> "VHFRadioBuff" <vhfradiobuff@aol.comspamsux> wrote in message
> news:20020623154725.15078.00000567@mb-ci.aol.com...
> > You may want to check out these reviews on it at eham.net before you buy
> it. If
> > you really need a roof mounted antenna with no radials, this might be a
> > comprimise for you. If you can go with a ground mounted with radials,
you
> > should look at some other options.

> >
> > http://www.eham.net/reviews/detail/853
> > =-
> > 73! de Andy KC2SSB (ex: KF4KHC/HL9HCT)
> > Beachwood, NJ USA! Grid FM29vw
> > http://vhfradiobuff.tripod.com
>
>

5011. Re: Trap L/C Ratio and Bandwidth

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-13 13:14:51 UTC
From: richardharrison@webtv.net
Message-ID: <25818-3D81E4CB-122@storefull-2318.public.lawson.webtv.net>
Source record: 134752

Ian, G3SEK wrote:
"Mature" handbooks like the ARRL series gradually get refined over the years, but the process is being hugely speeded up by internet discussions."

That`s optimistic!

Art Unwin, a contributor to this group complains that change in the ARRL Antenna Book, seems to be an occassional repackaging of the same old stuff.

Best regards, Richard Harrison, KB5WZI

5012. Re: Need ways to hide my antenna from my neighbors.

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-13 14:31:08 UTC
From: dan <danlx@execpc.com>
Message-ID: <3d81f6dc$0$1422$272ea4a1@news.execpc.com>
Source record: 134753

Hi Dennis, all

On Thu, 12 Sep 2002 16:32:37 GMT, Dennis Kaylor
<k4oxg@tampabay.rr.com> wrote:

>would be cheaper to tell the neighbors to ming there own business and leave the
>tower alone
>just annoys me when as hams we are expected to cowar to our neighbors whims on
>what is pleasant to look at but yet we get no compensation on property taxes or
>on our morgages
>so why should we worry about what they say as long as we follow the rules set
>forth by the FCC and any state and local building codes
>our neighbors surely wouldnt do anything we ask like doing away with that bug
>zapper just cause its tearing up our recieve nor would they cut down a tree that
>is in the way of the beam path of out antennas so we could talk better
>so why in the hell should a man have to dress is tower up like a tree to please
>a neighbor ?
I agree with you about neighbors and have told a few to kiss off over
the years. I also understand some people are not into confrontation.
This guy, with all the patriotic fervor he can muster, could put up a
lighted flag pole that would work very well on a lot of the bands.
The small trench he puts in for the low voltage lighting would also
hold the coax pipe. He could even get away with running a thin wire
to another structure for an inverted L. There are lots of ideas out
there for hidden antennas that will do the job for him.

BTW, if covenants are the problem, get ahold of your elected federal
officials and tell them if they want your vote to extend and strnghten
PRB1 to cover everything and put some damn teeth into it!
>
>KC8PMX wrote:
>
>> Take the branches from a whole bunch of fake Christmas trees! Even get more
>> creative and light it up year round!
>>
>> --
>> Ryan, KC8PMX
>> FF/MFR
>> REMOVE "NOSPAM" in email address to reply.
>>
>> "Wayne" <w> wrote in message news:unubs9a6om6af1@corp.supernews.com...
>> > He could maybe put some fake branches on the tower, and paint to resemble
>> > tree.
>> > WA2YNE
>> >

>> > "VE3TMT" <ve3tmt@rac.ca> wrote in message
>> > news:xTz59.150$2T2.119459@news20.bellglobal.com...
>> > >
>> > > "DJboutit" <Recordking@Hotmail.com> wrote in message
>> > > news:e8d89b3f.0208110847.73139897@posting.google.com...
>> > > > I have a 5/8 comet antenna I need some ways to hide my antenna out of
>> > > > the site of my neighbors. I also need ways to hide a antenna tower if
>> > > > I were to get high one. I live in a area with alot of people nearby.
>> > >
>> > > Hiding the antenna is the easy part, put it inside or paint it green and
>> > > stick itin a tree. I'm afraid you're going to have a harder time hiding
>> > > your tower. But if you do find a way, please let the rest of us know.
>> > >
>> > >
>> >
>> >

Dan
N9JBF

I've rambled enough, back to the rocking chair. ZZZZZZZZZ
Remove left x for e-mail reply.

5013. Re: Stealth patio antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-13 16:00:53 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <pf24ous31ilr8ab4n25mdk2gini2p3vthn@4ax.com>
Source record: 134754

On Thu, 12 Sep 2002 14:41:32 -0700, Tom Ayers
<tom@SPAMBEGONE.polyflow.com> wrote:

>The building seems to be a faraday cage! Even the commercial broadcast
>AM and FM stations don't get in. Of course along with this is the usual
>cc&r's stating "Thou shalt not put up an antenna!" I do have a small
>patio however.

Hi Tom,

If this is seriously true, then you have a massive conductive
structure that is going to overwhelm any nearby antenna.

OR

Find a point of the physical structure that exposes a metallic
connection (or simply indicates a convenient point to this cage).
Connect (or link) a matching network (gamma feed, or loop excitation)
to this point and drive the building! Be the first on your block to
work the world from inside your antenna.

73's
Richard Clark, KB7QHC

5014. Re: Tired of RS employees pushing Cellphones and DirectTV

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-13 16:09:58 UTC
From: "Chilly Willy"
Message-ID: <bd34ou815jrhb71v73ruvf6i61a7vnjurc@4ax.com>
Source record: 134755
Cross-posted to: alt.radio.scanner,rec.radio.amateur.antenna,rec.radio.scanner,rec.radio.shortwave

On Thu, 12 Sep 2002 22:49:23 -0400, Alan Beagley
<abeagley@optonline.net> wrote:

>Am I the only person whose newsreader has an "ignore thread" command?
>
>-=-
>Alan
>

so why did you reply to something you can't see?????

>
>DeWayne wrote:
>> And PLEASE stop forcing Jerry to read this.
>> DeWayne KE9K
>>
>> "Jerry France" <grf@uneedspeed.net> wrote in message
>> news:3D814EAD.C04F48CD@uneedspeed.net...
>>
>>>Who in the world cares about this RS stuff. Please take it off
>>>rec.amateur.antenna. What a bunch of crap. Get a life!

Chilly Willy

Brrrr is it cold in here or is it just me
Forman at the South Pole Ice Plant

5015. Re: Trap L/C Ratio and Bandwidth

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-13 16:11:17 UTC
From: "Ian White, G3SEK" <G3SEK@ifwtech.co.uk>
Message-ID: <G68bxMDl4gg9EA+4@ifwtech.co.uk>
Source record: 134764

Richard Harrison wrote:
>Ian, G3SEK wrote:
>"Mature" handbooks like the ARRL series gradually get refined over the
>years, but the process is being hugely speeded up by internet
>discussions."
>
>That`s optimistic!
>
No, it's true. Before the Internet, the correction process consisted of writing letters to the editor, who might or might not have had time to think about it.

Today, any contentious or weak points are likely to get thrashed out right here. Many people contribute to these discussions who would never have taken the time to compose a letter to the editor, and the problem gets the benefit of several different viewpoints from all around the world.

We've all seen how years-old antenna problems can be sorted-out here in a single day, and similar things are happening through other amateur radio newsgroups, mailing lists and private e-mail. Groups of people interested specific topics are getting together from all over the world, and pushing forward faster than ever before.

We're witnessing something completely new here.

And at the end of it, if anyone still feels strongly enough, the ARRL handbook editors are only an e-mail away.

>Art Unwin, a contributor to this group complains that change in the ARRL
>Antenna Book, seems to be an occassional repackaging of the same old
>stuff.
>
This has already been discussed at length. As has already been pointed out, the handbooks are a distillation of present knowledge, so you should expect only a gradual evolution. It isn't realistic to expect everything to change radically from one edition to the next.

It's also unrealistic to expect any publication to come out perfect and completely beyond criticism.... especially with this NG looking at it!

What you *can* expect - and are actually getting - is progressive improvement and updating.

I have found that the system for correcting the ARRL handbooks is very accessible and responsive, if anyone cares to use it... rather than just talking about it.

--
73 from Ian G3SEK 'In Practice' columnist for RadCom (RSGB)
Editor, 'The VHF/UHF DX Book'
http://www.ifwtech.co.uk/g3sek

5016. Re: Tired of RS employees pushing Cellphones and DirectTV

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-13 16:18:45 UTC
From: Alan Beagley <abeagley@optonline.net>
Message-ID: <3D820FE5.8050104@optonline.net>
Source record: 134756
Cross-posted to: alt.radio.scanner,rec.radio.amateur.antenna,rec.radio.scanner,rec.radio.shortwave

I am not the one who was complaining. I haven't (yet) used the "Ignore Thread" command on this thread, but some people seem to think that they are being *forced* to read messages on topics in which they have no interest.

-=-
Alan

Chilly Willy wrote:
> On Thu, 12 Sep 2002 22:49:23 -0400, Alan Beagley
> <abeagley@optonline.net> wrote:
>
>
>>Am I the only person whose newsreader has an "ignore thread" command?
>>
>>-=-
>>Alan
>>
>
>
> so why did you reply to something you can't see?????

5017. Re: Tired of RS employees pushing Cellphones and DirectTV

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-13 16:52:28 UTC
From: Fred Hambrecht <w4jle@charter.net>
Message-ID: <uo45uhl52r3dcc@corp.supernews.com>
Source record: 134757
Cross-posted to: alt.radio.scanner,rec.radio.amateur.antenna,rec.radio.scanner,rec.radio.shortwave

People that tell other people to get a life, probably need one themselves...

Do you walk up to a group of people in a bar and tell them to get a life
because they talk about something your not interested in? Then why would you
do it here?

"Jerry France" <grf@uneedspeed.net> wrote in message
news:3D814EAD.C04F48CD@uneedspeed.net...
> Who in the world cares about this RS stuff. Please take it off
> rec.amateur.antenna. What a bunch of crap. Get a life!
>
> Alan Beagley wrote:
> >
> > I've received RS sale fliers from time to time.
> >
> > -=-
> > Alan
> >
> > Bill M wrote:
> >
> > > I've given my name and address (altered) time-off and again at Radio
> > > Shark and have never received any junk mail or so much as a free
> > > catalog.
> > > So what is the whole deal with the interrogation thing? Doesn't
appear
> > > that they do well by hassling their customers.
> > > Its really stoopid that an outfit would attain notoriety by insisting
on
> > > doing this nonsense with no perceivable benefit.

5018. Re: Stealth patio antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-13 17:09:42 UTC
From: 'Doc <w5lz@icok.net>
Message-ID: <3D821BBD.850E0D85@icok.net>
Source record: 134758

Tom,
None of your options sound good, and I think you're
pretty well out of luck. I think your best bet would
be a dipole made from two mobile antennas, set it out
to operate and bring it in when you're finished. I'm
sure there might be some way of stringing a 'Rube
Goldberg" antenna in your available space, I'm just not
too sure it would be worth the effort...
'Doc

5019. Re: 9/12/02 ANTIKEYCLOWNS STILL OWN THE NG

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-13 17:13:11 UTC
From: 'Doc <w5lz@icok.net>
Message-ID: <3D821C8E.4A07567A@icok.net>
Source record: 134759

Bill,
Not too many people are interested in this in the
CB NG, and I really doubt if anyone is in the other
NG's you're posting this in. Why not keep it where
it belongs?
'Doc

5020. FYI: Stealth Antennas Both roll ur own & commercial

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-13 17:13:51 UTC
From: AC6V <ac6v@amsat.org>
Message-ID: <j1pg9.11491$S32.827806@news2.west.cox.net>
Source record: 134760

http://www.ac6v.com/antprojects.htm#STANT

--
I Doubt, Therefore I Might Be
73 From AC6V, Rod In Oceanside, CA
http://ac6v.com

5021. Re: Stealth patio antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-13 17:15:23 UTC
From: Chuck/KE4ETH <chuck_hawks@hotmailnospamorama.com>
Message-ID: <I7qg9.109019$%P6.57571800@e3500-atl1.usenetserver.com>
Source record: 134766

Wouldn't even need to use the microwave to cook that hotdog.

--
Chuck
KE4ETH

"Richard Clark" <kb7qhc@attbi.com> wrote in message
news:pf24ous31ilr8ab4n25mdk2gini2p3vthn@4ax.com...
> On Thu, 12 Sep 2002 14:41:32 -0700, Tom Ayers
> <tom@SPAMBEGONE.polyflow.com> wrote:
>
> >The building seems to be a faraday cage! Even the commercial broadcast
> >AM and FM stations don't get in. Of course along with this is the usual
> >cc&r's stating "Thou shalt not put up an antenna!" I do have a small
> >patio however.
>
>
> Hi Tom,
>
> If this is seriously true, then you have a massive conductive
> structure that is going to overwhelm any nearby antenna.
>
> OR
>
> Find a point of the physical structure that exposes a metallic
> connection (or simply indicates a convenient point to this cage).
> Connect (or link) a matching network (gamma feed, or loop excitation)
> to this point and drive the building! Be the first on your block to
> work the world from inside your antenna.
>
> 73's
> Richard Clark, KB7QHC

5022. Re: Need ways to hide my antenna from my neighbors.

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-13 17:28:53 UTC
From: Dennis Kaylor <k4oxg@tampabay.rr.com>
Message-ID: <3D822051.F7D61C5@tampabay.rr.com>
Source record: 134761

hey dan
your right on all counts there are many differnt hidden antennas and such
but i assumed he had a tower up and the neighors where bitching and to that i tell
them to kiss off
hell you could even do a long wire or a loop running around the eaves of the house if
the neighbors ask tell them its a messanger line for haning Xmas lights from
there are a couple of commercial antennas that are stealthy
one is the ventenna and the other is a weather vane antenna both are for VHF/UHF and
go on the roof and no one knows what it is

but in this world of ours and the amount of community service hams do i think its
appalling that we have to jump thru such hoops to enjoy our hobby and to stay
perpared for emergancies that the community atlarge cant just leave us alone to do
what we wish
now i understand that if you are stupid enough to buy a house in a deed restricted
area and you knowingly sign these restrictions then you have to work around them
but when the ones of us who dont live in those types of areas and get dictated to by
neighbors i think its awful

okay i am off my soap box
happy hamming

dan wrote:

> Hi Dennis, all
>
> On Thu, 12 Sep 2002 16:32:37 GMT, Dennis Kaylor
> <k4oxg@tampabay.rr.com> wrote:
>
> >would be cheaper to tell the neighbors to ming there own business and leave the
> >tower alone
> >just annoys me when as hams we are expected to cowar to our neighbors whims on
> >what is pleasant to look at but yet we get no compensation on property taxes or
> >on our morgages
> >so why should we worry about what they say as long as we follow the rules set
> >forth by the FCC and any state and local building codes
> >our neighbors surely wouldnt do anything we ask like doing away with that bug
> >zapper just cause its tearing up our recieve nor would they cut down a tree that
> >is in the way of the beam path of out antennas so we could talk better
> >so why in the hell should a man have to dress is tower up like a tree to please
> >a neighbor ?
> I agree with you about neighbors and have told a few to kiss off over
> the years. I also understand some people are not into confrontation.
> This guy, with all the patriotic fervor he can muster, could put up a
> lighted flag pole that would work very well on a lot of the bands.

> The small trench he puts in for the low voltage lighting would also
> hold the coax pipe. He could even get away with running a thin wire
> to another structure for an inverted L. There are lots of ideas out
> there for hidden antennas that will do the job for him.
>
> BTW, if covenants are the problem, get ahold of your elected federal
> officials and tell them if they want your vote to extend and strnghten
> PRB1 to cover everything and put some damn teeth into it!
> >
> >KC8PMX wrote:
> >
> >> Take the branches from a whole bunch of fake Christmas trees! Even get more
> >> creative and light it up year round!
> >>
> >> --
> >> Ryan, KC8PMX
> >> FF/MFR
> >> REMOVE "NOSPAM" in email address to reply.
> >>
> >> "Wayne" <w> wrote in message news:unubs9a6om6af1@corp.supernews.com...
> >> > He could maybe put some fake branches on the tower, and paint to resemble
> >> > tree.
> >> > WA2YNE
> >> >
> >> > "VE3TMT" <ve3tmt@rac.ca> wrote in message
> >> > news:xTz59.150$2T2.119459@news20.bellglobal.com...
> >> > >
> >> > > "DJboutit" <Recordking@Hotmail.com> wrote in message
> >> > > news:e8d89b3f.0208110847.73139897@posting.google.com...
> >> > > > I have a 5/8 comet antenna I need some ways to hide my antenna out of
> >> > > > the site of my neighbors. I also need ways to hide a antenna tower if
> >> > > > I were to get high one. I live in a area with alot of people nearby.
> >> > >
> >> > > Hiding the antenna is the easy part, put it inside or paint it green and
> >> > > stick itin a tree. I'm afraid you're going to have a harder time hiding
> >> > > your tower. But if you do find a way, please let the rest of us know.
> >> > >
> >> > >
> >> >
> >> >
> >
> Dan
> N9JBF
>
> I've rambled enough, back to the rocking chair. ZZZZZZZZZ
> Remove left x for e-mail reply.

5023. Icom AT-120 & Dipole Antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-13 17:47:22 UTC
From: David <dadow@PinaculoConsulting.com>
Message-ID: <Kwpg9.11614$S32.833205@news2.west.cox.net>
Source record: 134762

I have returned from installing an Marine SSB and I was given an AT-120 tuner as a result. I am planning on taking my General Exam at the end of the month and I am trying to design my rig. Presently, I have an IC-736 (HF/6M) rig and I also have a 40-20-15-10 Alpha-Delta dipole installed that I have been using for receiving.

My question is:

Can I configure the AT-120 Automatic Antenna Tuner to work with the Dipole? If so, would I connect one end of the dipole to the antenna output from the AT-120 and the other end to ground connection? Do I need another ground counterpoise?

I have installed three Marine SSBs on boats and it is a whole lot easier because of the salt water ground and random wire antenna. This land based stuff is a whole lot different. Would I be better off running a random wire?

Thanks for the help.

Dave KD5OEQ

5024. Re: Trap L/C Ratio and Bandwidth

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-13 18:05:25 UTC
From: Reg Edwards <g4fgq.regp@btinternet.com>
Message-ID: <alt9d4lgu1@helle.btinternet.com>
Source record: 134763

> 'Mature' handbooks like the ARRL series gradually get refined over the
> years, but the process is being hugely speeded up by Internet
> discussions.
==========

Public committee meetings? Are you joking ?

Newsgroup arguments ending with mudslinging have the effect of further obscuring the correct 'answers'.

From the many different heated 'answers' how is a handbook editor to choose between them?

Take the average?

A majority vote?

A majority vote on popular misconceptions would result in present popular ideas being set, unchanged, in the handbook's annals for evermore.

Or should bullies who shout loudest provide the correct answers?

Consider the consequences of NO correct answer in the bunch.

There's no alternatve to technical editors taking sole responsibility !

Reg, G4FGQ, RSGB member.

5025. Re: Ouch! RF in the shack

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-13 18:40:12 UTC
From: nm5k@wt.net
Message-ID: <25eb70d7.0209131040.42d95eef@posting.google.com>
Source record: 134765

mike@mbcomps.com (Michael Barron) wrote in message
>
> So here's the setup. I have a G5RV up about 25 feet. It has ~30 feet
> of 450-ohm ladder line, which drops about 18 feet before going
> horizontal 5 feet, then vertically the remainder. At the end of the
> ladderline is what I presume to be a balun, with a connector to my
> coax that runs to the shack. Here, I made a coil of six turns six
> inches in diameter in a failed attempt to stop the RF in the shack. I
> did not do an exact measurement of the length of coax, but my best
> guess would be at least 60 feet.

That choke is too small a value to be much good for 80m. But even if
you made the choke larger to suit 80m better, I'm sorta doubtful it
would fully cure the problem.
>
> In the shack, the coax goes first to my tuner (pretty obvious there),
> and from there a three-foot jumper to the rig. I should note that I
> am able to tune the antenna on 80 thru 10 with the greatest SWR being
> 1.2:1 on 10 (although difficult to obtain). 80m can be hit or miss,
> but usually tunes just fine.

As many others said, make sure the antenna isn't right over your
shack. That can cause problems sometimes even if the setup is working
ok. Myself, I'm with Reg on this one. I would dump the coax
altogether, and run 450 line the whole way from the antenna feedpoint
to the tuner. That may not totally cure the problem, but I wouldn't be
surprised if it helped a bit. There is no decent reason to use coax at
all, if you are using a tuner. I find a setup like that fairly silly
myself. "Not blaming you though"..
>
> I'm aware that single ground rod is pretty much useless for RF. And
> the distance the wire travels is certainly more than 1/4-wavelength on
> at least two bands. So the question is, what can I do to prevent
> blowing out my speakers, starting and stopping the VCR with every dit
> and dah, and burning the #@*! out of my fingers? I've read about
> using counterpoises cut 1/4-wavelength for each band and run under the
> carpet in the shack to act as an artificial ground is doable in
> situations where a long ground wire is necessary (me!). Anyone have
> any experience with such a setup? Any other suggestions?

Grounding may or may not help, but remember that the real problem most
likely is excess common mode currents on the feeder assuming your
antenna is not right over your head. Grounding to cure RF in the shack
problems is a bandaid. I don't recommend going that route. You want to
cure the *real* problem. The way I see it, the only thing grounding

might help, is to keep you from getting bit when you touch your tuner. I doubt it will help at all with the VCR, etc. Also, VCR's are notorious for RF problems. You may not be able to cure that even with all ok elsewhere. Those decks, and the heads, etc are very sensitive to rf, and most are not shielded well at all. I have a pretty much rf free shack, but I still whack out my VCR in many cases, just from the normal field strength of the antenna itself. If all fails, you may have to get the antenna farther away, and you might want to consider coax feed with a good balun at the antenna if all else fails. Of course, this would limit you to pretty much a single band antenna though. You could parallel other dipole legs though. I'd try straight 450 line to what you have and see if it helps. Also, it's possible you might be better off with a normal 120-130 ft 80m dipole instead of the G5RV if you have room. MK

5026. Re: Beverage substitutes for the next 160 Mx season?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-13 18:46:37 UTC
From: nm5k@wt.net
Message-ID: <25eb70d7.0209131046.1368dbd3@posting.google.com>
Source record: 134767

"Kenneth D. Grimm, K4XL" <kgrimm@adelphia.invalid> wrote in message
news:<466vnuo9o29v8himikgaruptd32hjv5s6u@4ax.com>...
> My beverage antennas can't be replaced, so I'm considering some
> alternatives as the 160 mx dx season approaches. I am particularly
> interested in the 2 loop K9AY. But, then there are the flag, pennant
> and ewe antennas to consider as well. Has anyone done any comparative
> work on these vs. the K9AY. I know that the medium wave and longwave
> listeners are particularly enthusiastic about the K9AY, but I haven't
> seen much about their use on 160, despite the fact that they were
> originally described for that band. I would be very interested in
> hearing from K9AY users who have also used other "listening" antennas
> and can offer some of the pros and cons. Thanks.
> Ken K4XL - Replace "invalid" with "net" to reply.
> *** BoatAnchor Manual Archive ***
> On the web at http://bama.sbc.edu or
> FTP site info: bama.sbc.edu login: anonymous p/w: youremailadr

If I remember correctly, W8JI had good results using short phased
receiving verticals. He also has beverages, and I think I remember him
saying the verticals were just as good in many cases. I may try that
route myself, as I have no room for long antennas. I know he hears
stuff that doesn't exist on my transmit antennas. "dipoles, Inv L,
etc. " MK

5027. New Rig, Need some input from the experts :)

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-13 18:57:55 UTC
From: fiddelhead@hotmail.com
Message-ID: <Xns9288A25E2C3A0fiddelheadhotmailcom@198.164.200.20>
Source record: 134768

Hello everyone. I am going to buy the Yaesu FT-100D Receiver. There are two antenna inputs for it. One for 2 metre and 70cm, and the other for HF and 6 metre. Since I only have my basic ticket here in Canada, I can operate the 2 metre and 70cm, and also the 6 metre band. I already have a 2 metre J-Pole that I'm using now, so I could get by with that. But my question is, is there anything home brew I could put on the other antenna input to allow me to work 6 metre, and also LISTEN to other HF bands?

Any input greatly appreciated.

73's
VE1 CSA

5028. Re: Stealth patio antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-13 19:10:29 UTC
From: randy_NO_SPAM_PLEASE_@frs-usa.com
Message-ID: <b03b87e2.0209131110.3011deaa@posting.google.com>
Source record: 134669

Tom Ayers <tom@SPAMBEGONE.polyflow.com> wrote in message
news:<3D810A0C.6D9584C7@nospam.qsl.net>...
> I am looking for some antenna advice. I am trying to get on 40 meters.
> I know there are commercial antennas out there, but I want to make my
> own.
>
> I live in a condo on the second floor of a three story building. I do
> not have access to the roof, or for all practical purposes, the ground.
> The building seems to be a faraday cage! Even the commercial broadcast
> AM and FM stations don't get in. Of course along with this is the usual
> cc&r's stating "Thou shalt not put up an antenna!" I do have a small
> patio however.
>

If you agreed with the "cc&r's", why are you now wanting to violate them?

Randy

5029. Mixed blessing

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-13 19:26:45 UTC
From: "Copper.net" <davidw@copper.net>
Message-ID: <%eEg9.508$9M2.142193@newsfeed.slurp.net>
Source record: 134692

Hi, all concerned:

Asplundh recently plundered all if not most of the tree branches capable of brushing the power-line primaries in the neighborhood surrounding my suburban location. You ought to hear the crews' war stories re the tree-hugger grieving and outright physical interference. But, that's a subject for a flamefest elsewhere.

Now, it's comparatively quiet here. H-f and 160M are useable again during sap-up as well as sap-down. Deo gratias. I also thanked the lads for giving me back the use of h-f. :o)))

I hear the neighbor's electric fence (around his 5-horse-pen) very well on h-f now; it's about 900 ft away :o(Haven't introduced myself to him yet, and want to do my homework first. I have met the horses: they get out and wander around once in a while. That's okay by me.

The noise-blanker is a good interim fix, and I can reduce but not null the noise by antenna orientation, but what can I do to help him fix the *TICK* *TICK* *TICK* I can see on my 'scope and Millivac broadband v-m if I connect either to an antenna?

TIA & 73,

Dave, N3HE

5030. Re: Need ways to hide my antenna from my neighbors.

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-13 19:43:23 UTC
From: dan <danlx@execpc.com>
Message-ID: <3d82400c$0$1429$272ea4a1@news.execpc.com>
Source record: 134670

On Fri, 13 Sep 2002 17:28:53 GMT, Dennis Kaylor
<k4oxg@tampabay.rr.com> wrote:

>hey dan
>your right on all counts there are many differnt hidden antennas and such
>but i assumed he had a tower up and the neighors where bitching and to that i tell
>them to kiss off
>hell you could even do a long wire or a loop running around the eaves of the house if
>the neighbors ask tell them its a messanger line for haning Xmas lights from
>there are a couple of commercial antennas that are stealthy
>one is the ventenna and the other is a weather vane antenna both are for VHF/UHF and
>go on the roof and no one knows what it is
>
>but in this world of ours and the amount of community service hams do i think its
>appalling that we have to jump thru such hoops to enjoy our hobby and to stay
>perpared for emergancies that the community atlarge cant just leave us alone to do
>what we wish
>now i understand that if you are stupid enough to buy a house in a deed restricted
>area and you knowingly sign these restrictions then you have to work around them
>but when the ones of us who dont live in those types of areas and get dictated to by
>neighbors i think its awful
>
>okay i am off my soap box
>happy hamming
Snip<<<
Hi Dennis,
If I remember seeing this guys original post, he was just trying to
hide the comet. Which is an almost impossible feat to accomplish.

I have been in several situations where a few neighbors tried to ruin
it for me. At first I bent over backward to appease them (Young and
naive). Then I realized the neighbors at that location, were hearing
the getto garbage off 11 meters and not me. A few I helped out with
filtering and such. They were very grateful and were my biggest
backers. A few I told to come on over and talk to me without a fence
or a phone in the way;<}. They never did.

Now, if someone comes to the door with a rfi complaint, I commiserate
with them on how cheap their electronic equipment is built even though
the manufacturer charges an arm and a leg for it. I go into a spiel
on how it would cost less than $5.00 per component to construct it so
it would not receive things it was not designed to receive. If they
have the manual with them or handy I ask to see it, look through it
very carefully and then say, yup, I was right your component is doing
something it should not be doing. Then I quickly tell them to call

the manufacturer or retailer and complain because they got a defective or deficient unit and demand it be brought up rfi proof operation.

I have been here 18 years and have not had a complaint, one neighbor kid did say he heard me over the phone once in a while :o}
Dan
N9JBF

I've rambled enough, back to the rocking chair. ZZZZZZZZZ
Remove left x for e-mail reply.

5031. Re: Trap L/C Ratio and Bandwidth

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-13 20:01:04 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <3D824400.5040202@eznec.com>
Source record: 134671

At least twice in the past year or so, someone on this newsgroup has pointed out an error or misleading text in the ARRL Antenna Book. I've passed the information along to the editor, and I'm sure the corrections will be in the next edition. Dean is completely capable of making a good determination of whether proposed corrections are valid or not and, in those rare instances where he's not certain or where there are possibly valid but competing points of view, he's asked advice from the ARRL Technical Advisors. That's one of the TA's functions.

The newsgroups do help, if the information is channeled to where it can do some good. The tecnical editor does take total responsibility for changes and what they contain. But he can't, and doesn't, operate in a vacuum.

Roy Lewallen, W7EL

Reg Edwards wrote:
>>'Mature' handbooks like the ARRL series gradually get refined over the
>>years, but the process is being hugely speeded up by Internet
>>discussions.
>
> ==========
>
> Public committee meetings? Are you joking ?
>
> Newsgroup arguments ending with mudslinging have the effect of further
> obscuring the correct 'answers'.
>
> From the many different heated 'answers' how is a handbook editor to choose
> between them?
>
> Take the average?
>
> A majority vote?
>
> A majority vote on popular misconceptions would result in present popular
> ideas being set, unchanged, in the handbook's annals for evermore.
>
> Or should bullies who shout loudest provide the correct answers?
>
> Consider the consequences of NO correct answer in the bunch.
>
> There's no alternatve to technical editors taking sole responsibility !
> ---
> Reg, G4FGQ, RSGB member.

>
>

5032. Re: looking for an multiband HF vertical, quick to assemble in a field

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-13 22:10:00 UTC
From: k1bqt@aol.com
Message-ID: <20020913181000.22909.00002314@mb-cb.aol.com>
Source record: 134672

There's a ton of first-person vertical antenna reviews available on E-Ham (not written by corrupt insider authority figure scum like me who profit occassionally by writing one up for a ham magazine).

Rick K1BQT

5033. Re: 9/12/02 ANTIKEYCLOWNS STILL OWN THE NG

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-13 22:29:50 UTC
From: richcranus@yahoo.com
Message-ID: <c5ecbb69.0209131429.f4f7407@posting.google.com>
Source record: 134673
Cross-posted to: rec.radio.cb,rec.radio.amateur.antenna,rec.radio.amateur.boatanchors,rec.radio.amateur.policy

"Arthur R. Howard" <whtmtnman@citlink.net> wrote in message
news:<3D81CCEE.A18DA252@citlink.net>...
> Whats a keyclown????.............Several thousand dollars a dozen

Nahhh. Maybe $1 a dozen. A "keyclown" is a ham who thinks that
everyone else needs to learn morse code like he didn't do. Doug
("Doggie") Adair is a no-code. He's also full of hot air and shows his
blatant stupidy in every post.

> Bill Mast wrote:
>
> > On 12 Sep 2002 09:03:34 -0700, bookooaddys@yahoo.com (Keyclown
> > Busters) wrote:
> >
> > >And no one here can stop it.
> > >
> > >ESPECIALLY a booze and dope soaked nwa wanna be high school dropout
> > >whose parents kicked him out because he is a useless doper parasite,
> > >and who fantasizes about pimping hoes as the highest point on the
> > >economic ladder he can achieve.
> > >
> > >ALSO: Crackheads, rednecks, bowl weenies, truckstop trannies, and all
> > >the other slimes that comprise keyclownism.
> > >NONE OF YOU CAN STOP THE ANTIKEYCLOWNS!!!
> >
> > Own What? Whats a keyclown?

5034. Re: safety ground and antenna ground - tie together and connect to A/C ground?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-13 23:26:44 UTC
From: ricknj10@hotmail.com
Message-ID: <3d827252.35151514@news.optonline.net>
Source record: 134674

On Wed, 11 Sep 2002 05:06:02 -0400, "Fred Hambrecht"
<w4jle@charter.net> wrote:

>
>a dipole hung between two trees is very difficult to protect with
>absolute confidence. The only really safe method is to disconnect all the
>antennas and lay the coax connectors on the ground in the yard. Not very
>practical when your as lazy as I am.
>

Fred,
I think if you had grounded the shield of the coax where it enters the
house the lightning would likely have been happier to go to ground
right there. Yes, the approximately #12 wire might vaporize but the
huge currents in the house are not what we want.
If I understand correctly, to paraphrase (I think it was the QST
article) the lightning decides to strike, picks out your dipole, (not
because it was really the best target), and THEN all those billions
of electrons get into a traffic jam trying to get into the ground.
The hams job is to make the path easy to find, and big enough for them
to all fit into, and to avoid having to deal with the fire department
and the insurance company!

Rick K2XT

5035. Re: Trap L/C Ratio and Bandwidth

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-13 23:27:40 UTC
From: rsparks <rsparks@elltel.net>
Message-ID: <3d827098_2@corp.newsgroups.com>
Source record: 134675

"Roy Lewallen" <w7el@eznec.com> wrote in message
news:3D824400.5040202@eznec.com...
> At least twice in the past year or so, someone on this newsgroup has
> pointed out an error or misleading text in the ARRL Antenna Book. I've
> passed the information along to the editor, and I'm sure the corrections
> will be in the next edition. Dean is completely capable of making a good
> determination of whether proposed corrections are valid or not and, in
> those rare instances where he's not certain or where there are possibly
> valid but competing points of view, he's asked advice from the ARRL
> Technical Advisors. That's one of the TA's functions.
>
> The newsgroups do help, if the information is channeled to where it can
> do some good. The tecnical editor does take total responsibility for
> changes and what they contain. But he can't, and doesn't, operate in a
> vacuum.
>
> Roy Lewallen, W7EL

Roy describes a sound process. The Antenna Handbook has become the "Bible" of practical antenna building. If errors are contained within after so many years of publication, then they are probably very subtle.

If an error is found, it may be that not everyone will recognize it as an error. In that case, there may be a series of handbooks where an editor's note or a sidebar explaining an alternate interpretation may be necessary. Obviously, the alternate viewpoint must gain some level of creditability before any editor could risk his own creditability by including it in his work.

73, Roger, W7WKB

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

5036. Re: safety ground and antenna ground - tie together and connect to ...

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-13 23:35:52 UTC
From: ricknj10@hotmail.com
Message-ID: <3d8274fe.35835443@news.optonline.net>
Source record: 134676

This is a great discussion we have going here. Unfortunately I have found this discuusion in three places in this newsgroup. Maybe someone changed the title ever so slightly ??

Anyway, as for me, I am right in the middle of implementing my grounding plan as per the QST article and my consultation with Ron Block the author. So far I have one radial in with its 4 ground rods. 7 more to go. Then I start work on the entrance to the house. At least the weather is perfect for digging now in NJ. 70 degrees and low humidity. When finished I estimate to have at least 40 ground rods and 750 ft of copper wire in the ground.

Rick K2XT

5037. MFJ 247 plug

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-14 00:07:43 UTC
From: Andrew J O'Brien <obrienaj@netsync.net>
Message-ID: <uo4veom7epd23e@corp.supernews.com>
Source record: 134677

I bought a used MFJ 247 antenna analyzer without a manual. The point at which one connects the power seems to require a miniplug does anyone here know what size? I took the unit to my local Radio Shack and we found one close but it seemed a tad short. Since it is not a tight snug fit I am not sure whether the unit just plan doesn't work or my plug is not quite making the required contact.

Andy Kb2EOQ

5038. G5RV Slingshot technique

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-14 00:12:13 UTC
From: Wayne Sellin <sellinwg@starpower.net>
Message-ID: <altv1i$rn8$1@bob.news.rcn.net>
Source record: 134678

I am having trouble with the slingshot. The 4 oz. weight get hung up in the web. It seems to work better with smaller 2 oz weights but then they do not have the mass to pull the fishing line. Also the round weights do better than the teardrop. I cannot find the colored fishing line here. The Whackos probably think it has a bad effect on the environment.
I do by the way have one of the trees set up with three lines. One line is a loop backup in case one of the lines break. The second line holds the pulley high in the tree. The third line is through the pulley to the antenna. Just as described in Radio Works. com except I added the backup line.
Thank you
Wayne

5039. Re: G5RV Slingshot technique

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-14 02:24:49 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <3D829DF1.8020406@eznec.com>
Source record: 134679

I've been using a slingshot and weights for many, many years for portable operation. Here's the system I've evolved after a lot of trial and error:

1. I use a 2-1/2 or 3 oz weight, not less. Otherwise it sometimes won't fall through the branches. (Trees here are conifers of several varieties, some pretty dense.)
2. I use 8 pound line, which has the strength to get the twine back over the treetop, and can handle minor snags.
3. I really like the fluorescent line -- it's much easier to spot. But regular monofilament is ok.
4. I use only the teardrop shaped weights (narrow end where the line attaches). They're a little harder to get positioned in the slingshot correctly, but they don't snag like a round or pyramidal one (with the fat end at the line attachment). In your back yard, try dragging a round weight through even very sparse brush, then try it again with a teardrop shaped one, and you'll see what I mean.
5. I spray paint my weights with day-glo paint, so I can see them when they don't fall all the way through the tree.

With this system I can shoot a weight up about 100 feet.

I don't use this method for permanent installations, since the twine cuts into the tree pretty rapidly and seizes. Then there's no way to get it down. I've heard of people using very heavy monofilament line (100 pound test or so) and being able to get it down after some time. But this might also depend on the kind of tree -- conifers have fairly soft wood and sticky sap, so they might seize worse than hardwoods.

Roy Lewallen, W7EL

Wayne Sellin wrote:
> I am having trouble with the slingshot. The 4 oz. weight get hung up in the
> web. It seems to work better with smaller 2 oz weights but then they do not
> have the mass to pull the fishing line. Also the round weights do better
> than the teardrop. I cannot find the colored fishing line here. The
> Whackos probably think it has a bad effect on the environment.
> I do by the way have one of the trees set up with three lines. One line is
> a loop backup in case one of the lines break. The second line holds the
> pulley high in the tree. The third line is through the pulley to the
> antenna. Just as described in Radio Works. com except I added the backup
> line.
> Thank you
> Wayne
>
>

5040. Re: New Rig, Need some input from the experts :)

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-14 02:35:43 UTC
From: Dennis Kaylor <k4oxg@tampabay.rr.com>
Message-ID: <3D82A07A.A5BE9ADC@tampabay.rr.com>
Source record: 134680

well you could build a 6 meter dipole that would be cheap enough ans easy
enough to build and would allow you limited recieve on HF
what you should do if get yourself that cushcraft triband yagi
its 3 elements on 6 meters and 5 elements on 2 meters and 440
so you would be able to atleast have some performance and gain there
the antenna is around $150USD i think
good luck

fiddelhead@hotmail.com wrote:

> Hello everyone. I am going to buy the Yaesu FT-100D Receiver. There are
> two antenna inputs for it. One for 2 metre and 70cm, and the other for HF
> and 6 metre. Since I only have my basic ticket here in Canada, I can
> operate the 2 metre and 70cm, and also the 6 metre band. I already have a
> 2 metre J-Pole that I'm using now, so I could get by with that. But my
> question is, is there anything home brew I could put on the other antenna
> input to allow me to work 6 metre, and also LISTEN to other HF bands?
>
> Any input greatly appreciated.
>
> 73's
> VE1 CSA

5041. Need Hints on tuning fan dipole

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-14 03:09:28 UTC
From: Steve KC8PBO <skaatznospam@ameritech.net>
Message-ID: <ILxg9.8346$yt3.4380777@newssrv26.news.prodigy.com>
Source record: 134683

Need hints/advice on tuning my 3 wire multiband dipole. I can tune SWR dips near the design frequencies (center of the bands), but the SWR ranges from 2:1 to 3:1 for the bands of interest. I'm hoping to do better than that.

Here's the setup: It's center fed with coax (open wire isn't feasible for this installation). 1:1 choke balun at the feedpoint. The top (longest) wire is 80' with a loading coil at the 33 ft point on each leg (it's a converted Alpha Delta SWL antenna), so the coil is in the 80M leg and the 40M has a ~33 ft leg. The next one down is cut for 20M, & the bottom wire is cut for 10M. About every 5' there are plastic spreaders placed to separate the wires about 4".

Both ends are ~30 ft up, and the center point is at 35ft.

I suspect part of the problem is that the installation is asymmetrical: 1 side of the dipole is about 12 ft above the roof of the house, & the other side is pretty much in the clear. This is the only way I can use the lot for a decent length dipole.

I've tried adjusting the legs one side at a time, starting with the longest wire 1st and iterating to minimize interaction.also lower and raising the ends to change the included angle like an inverted VEE...but no SWR less than 2:1.

One weird thing is that the SWR decreases when I lower the center insulator about 6' from the top of the 12 mast?!?!

Any hints on how to balance this thing out or lower the SWR?

Thanks

73
Steve KC8PBO
Remove "nospam" from email address

5042. Re: Trap L/C Ratio and Bandwidth

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-14 03:16:08 UTC
From: CAM <Cecil.A.Moore@ieee.org>
Message-ID: <3D82A9F8.B3EEA881@ieee.org>
Source record: 134681

rsparks wrote:
> If an error is found, it may be that not everyone will recognize it as an
> error.

There was an obvious error that continued in the ARRL publications
for many years. It was in my 1976 ARRL Handbook in chart form and
in my 1993 ARRL Handbook in graph form. For 450 ohm ladder-line,
the attenuation at 14MHz was given as 0.09dB/100' and the attenuation
at 21MHz was given as 0.13dB/100'. These values were reproduced on
the graph in the later editions. It was corrected by the time the
2000 Handbook was published.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

5043. Re: G5RV Slingshot technique

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-14 03:24:57 UTC
From: K4IA <K4ia@novacoxmail.com>
Message-ID: <d_xg9.20358$8F4.769851@news2.east.cox.net>
Source record: 134682

Shoot with 8-10 lb fishing line. Pull back through a medium weight nylon line (like bricklayer's twine used to establish level) and do your final installation with heavy nylon weed whacker line. It is really tough and available in large rolls for cheap. it is the devil to tie in a knot but super strong and won't disintegrate in the weather.
--
Radio K4IA
Craig "Buck"
Fredericksburg, Virginia USA

FISTS 6702 CC 788 Diamond 64
K1♯ 470 K2♯ 2460
"Wayne Sellin" <sellinwg@starpower.net> wrote in message
news:altv1i$rn8$1@bob.news.rcn.net...
> I am having trouble with the slingshot. The 4 oz. weight get hung up in
the
> web. It seems to work better with smaller 2 oz weights but then they do
not
> have the mass to pull the fishing line. Also the round weights do better
> than the teardrop. I cannot find the colored fishing line here. The
> Whackos probably think it has a bad effect on the environment.
> I do by the way have one of the trees set up with three lines. One line
is
> a loop backup in case one of the lines break. The second line holds the
> pulley high in the tree. The third line is through the pulley to the
> antenna. Just as described in Radio Works. com except I added the backup
> line.
> Thank you
> Wayne
>
>

5044. Opinion Please On GPK:

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-14 03:44:12 UTC
From: jackinariz@webtv.net
Message-ID: <6572-3D82B08C-55@storefull-2138.public.lawson.webtv.net>
Source record: 134685

I recentely seen that they make a GPK for the Imax 2000.....So what do
you pro's think? Will it help?.......Jack D..........Thanks.

5045. Re: looking for an multiband HF vertical, quick to assemble in a field

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-14 03:59:06 UTC
From: rhmcus@yahoo.com
Message-ID: <3d83b081.20054076@news-server.austin.rr.com>
Source record: 134684

Rick

Good post.. Thats where I got my info on the Gap antenna.. I looked at
several antennas prior to purchasing.

Rich KG5IF

On 13 Sep 2002 22:10:00 GMT, k1bqt@aol.com (Rick Littlefield) wrote:

>There's a ton of first-person vertical antenna reviews available on E-Ham (not
>written by corrupt insider authority figure scum like me who profit
>occassionally by writing one up for a ham magazine).
>
>Rick K1BQT

5046. Re: Tired of RS employees pushing Cellphones and DirectTV

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-14 04:44:21 UTC
From: Jerry France <grf@uneedspeed.net>
Message-ID: <3D82BEA5.BD85CC93@uneedspeed.net>
Source record: 134686
Cross-posted to: alt.radio.scanner,rec.radio.amateur.antenna,rec.radio.scanner,rec.radio.shortwave

Ah....another great answer. But, if this were a bar that everyone
talked about antennas and they were grinding away on that RS crap I
might. Depends on how big they were, I guess :)

Fred Hambrecht wrote:
>
> People that tell other people to get a life, probably need one themselves...
>
> Do you walk up to a group of people in a bar and tell them to get a life
> because they talk about something your not interested in? Then why would you
> do it here?
>
> "Jerry France" <grf@uneedspeed.net> wrote in message
> news:3D814EAD.C04F48CD@uneedspeed.net...
> > Who in the world cares about this RS stuff. Please take it off
> > rec.amateur.antenna. What a bunch of crap. Get a life!
> >
> > Alan Beagley wrote:
> > >
> > > I've received RS sale fliers from time to time.
> > >
> > > -=-
> > > Alan
> > >
> > > Bill M wrote:
> > >
> > > > I've given my name and address (altered) time-off and again at Radio
> > > > Shark and have never received any junk mail or so much as a free
> > > > catalog.
> > > > So what is the whole deal with the interrogation thing? Doesn't
> appear
> > > > that they do well by hassling their customers.
> > > > Its really stoopid that an outfit would attain notoriety by insisting
> on
> > > > doing this nonsense with no perceivable benefit.

5047. Disposable Mobile HF Antenna??

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-14 04:47:09 UTC
From: n5kzw@arrl.net
Message-ID: <3d82bd28.3695072@news.ev1.net>
Source record: 134687

I give up! So far, I've sheared off a Hustler, two types of bug catchers, and now, a Hamstick. (I didn't shear off the screwdriver, but it doesn't work any more.)

Apparently, my reckless (unfortunately, not wreckless) driving style and the trees on the ranch are just not compatible with HF antennae. I'm thinking of coming up with some sort of Hamstick-like antenna wound on a broomstick, with top and bottom connections made of copper pipe sections.

Question, the 17-meter Hamstick has a section that is closely wound. Is this some sort of phasing coil? Can I just wind enough 12-ga. wire on a broomstick to get to 1/4 wave (with the whip) and slap a matching circuit at the base, or do I need to duplicate the close-wound section that shows up on the Hamstick?

Regards,
Ed Bailen

5048. Trap constuction Was: Trap L/C Ratio and Bandwidth

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-14 05:30:57 UTC
From: Chuck/KE4ETH <chuck_hawks@hotmailnospamorama.com>
Message-ID: <mOHg9.111113$2L.5990532@e3500-atl2.usenetserver.com>
Source record: 134702

Would it be better to purchase the traps or make them with the cost factor
and weather proofing them?

this is on a 80- thru 15- or 10-meter

Tnx

73
--
Chuck
KE4ETH

"Reg Edwards" <g4fgq.regp@btinternet.com> wrote in message
news:almvodolh1@venus.btinternet.com...
> ONE MORE VERY POPULARLY PLAGIARISED MISCONCEPTION.
>
> Re-write the 'Bibles' !
>
> It is not true antenna operating Q and hence bandwidth are dependent on
trap
> L/C ratio.
>
> The Q of any resonant system is always a ratio of reactance to resistance.
> In the present context, the resistance concerned is the radiation
resistance
> seen looking back from the trap into the end of the dipole wire. RadRes
> depends on length and diameter of the antenna wire and the frequency.
>
> Trap L and C are *predermined* by the overall length of the antenna, the
> length of antenna beyond the trap, and the two (sometimes three)
frequencies
> at which the antenna is required to be resonant. Their ratio is nowhere
> involved, only their product.
>
> At the trap frequency Q = (Radiation resistance)/(Reactance of L)
> approximately
>
> and the bandwidth for which SWR = 1.5 is 0.41 * MHz /Q.
>
> This bandwidth has to be accepted - for given antenna dimensions there's
> nothing which can be done about it.
>
> Intrinsic coil Q is so high it can be neglected. Its only use is in
> estimating power lost in the coil.
>

> So although the L/C ratio exists in a trapped antenna it is of no
practical
> value. Nothing else can be calculated with it. It is not possible to
work
> backwards from it. It is like the human appendix for which nobody has yet
> found a use. It does help to fill space between advertisements in the
> periodicals and add to the SPAM on the already overloaded Internet. ;o)
>
> On the other hand, SWR vs frequency presented to the transmitter (which is
> what really matters) may depend more on the characteristics of the
> transmission line plus tuner than on the much criticised antenna. Which is

> why I have not included antenna bandwidth in program TRAPDIP. It could be
> misleading.
>
> Program DIPOLE3 models the whole system (no traps) from antenna to
> transmitter via twin-line + balun + coax + tuner. Unfortunately the SWR as
> seen by the transmitter is always 1:1 because as frequency is varied the
> tuner L and C components are re-calculated and reset to ensure SWR
actually
> is 1:1. Bandwidth at the transmitter cannot be displayed..
> ---
> ========================
> Regards from Reg G4FGQ
> Free Radio Design Software
> Go to http://www.g4fgq.com
> ========================
>
>

5049. Re: Need Hints on tuning fan dipole

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-14 07:55:49 UTC
From: W4WNT <w4wnt@carolina.rr.com>
Message-ID: <9YBg9.17899$Wa.952972@twister.southeast.rr.com>
Source record: 134688

Most of the interaction may come from the antennas being in the same plane. Most single fed multidipoles are set 90 degrees apart to minimize this. You might try adjusting the wire lengths from the shortest to the longest. When you adjust multiband verticals, you start with 10m and then 15m, etc.

Also, if the rig has a built in tuner, it should handle anything under 3:1. The question is Are you making contacts?

73 es GL,

Bill, W4WNT

"Steve KC8PBO" <skaatznospam@ameritech.net> wrote in message news:ILxg9.8346$yt3.4380777@newssrv26.news.prodigy.com...
> Need hints/advice on tuning my 3 wire multiband dipole. I can tune SWR dips
> near the design frequencies (center of the bands), but the SWR ranges from
> 2:1 to 3:1 for the bands of interest. I'm hoping to do better than that.
>
> Here's the setup: It's center fed with coax (open wire isn't feasible for
> this installation). 1:1 choke balun at the feedpoint. The top (longest) wire
> is 80' with a loading coil at the 33 ft point on each leg (it's a converted
> Alpha Delta SWL antenna), so the coil is in the 80M leg and the 40M has a
> ~33 ft leg. The next one down is cut for 20M, & the bottom wire is cut for
> 10M. About every 5' there are plastic spreaders placed to separate the wires
> about 4".
>
> Both ends are ~30 ft up, and the center point is at 35ft.
>
> I suspect part of the problem is that the installation is asymmetrical: 1
> side of the dipole is about 12 ft above the roof of the house, & the other
> side is pretty much in the clear. This is the only way I can use the lot for
> a decent length dipole.
>
> I've tried adjusting the legs one side at a time, starting with the longest
> wire 1st and iterating to minimize interaction.also lower and raising the
> ends to change the included angle like an inverted VEE...but no SWR less
> than 2:1.
>
> One weird thing is that the SWR decreases when I lower the center

insulator
> about 6' from the top of the 12 mast?!?!
>
> Any hints on how to balance this thing out or lower the SWR?
>
> Thanks
>
> 73
> Steve KC8PBO
> Remove "nospam" from email address
>
>

5050. Re: looking for an multiband HF vertical, quick to assemble in a field

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-14 07:59:59 UTC
From: W4WNT <w4wnt@carolina.rr.com>
Message-ID: <30Cg9.17907$Wa.952691@twister.southeast.rr.com>
Source record: 134689

Check out the "SuperAntenna MP-1". I've tried it out on 20m at QRP to 100w
and it seems to work well. You'd need an antenna analyzer to set it up.

I put a short review that I did for the local radio club onto e-ham.net.

73 es GL,

Bill, W4WNT

"O Malyava" <omalyava@nj.rr.com> wrote in message
news:J%8g9.31675$hh.7974955@twister.nyc.rr.com...
> Hi guys,
>
> I am looking for an multiband HF vertical, what is easy and quick to
> assemble and disassemble let's say in a field environment.
> There are quite a few models from famous manufactures - cushcraft,
> butternut, diamond, hustler etc ...
> I have read reviews for all of them - some of them are better, some - just
> otherwise :).
> I just want to know - which of them I can use as a field (every)day
antenna,
> because of apartment antenna restrictions and so on ... ?
> what antenna can be easily unscrewed in a couple of places to put it into
a
> car trunk and assemble it outdoors in 20 minutes with the same nice SWR ?
> what antenna could survive after 50 of such cycles?
> thanks :)
>
> I have read more or less carefully PDFs for the most of verticals, looking
> at construction details and possible problems during transportation and
> disassembling.
> Looks alike I don't like Butternut antennas because of huge coils - they
can
> be easily crumpled, and therefore change resonance frequency, I hope ...
> About Outbacker: I don't believe in short antennas ... neither 8 feet
stick
> could work well on the bands lower than 20m ... it is my personal "old
> school" opinion :)
>
> So, I am thinking about:
> Cushcraft (R6000,R8)
> Hustler (4-BTV,5-BTV,6-BTV)
> Hy-Gain (AV620,AV640)
>
> Any concerns about them?

>
> With best regards,
> Alex NE7L ex.US4LNE
>
>

5051. Re: Disposable Mobile HF Antenna??

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-14 09:27:48 UTC
From: 'Doc <w5lz@icok.net>
Message-ID: <3D8300F6.2097E4EE@icok.net>
Source record: 134690

Ed,
If you want to duplicate the hamstick, you have to
wind your new antenna like a hamstick. The closely
wound section of the 17 meter hamstick is the loading
coil, there is no 'phasing' coil on any hamstick.
'Doc

5052. Re: Opinion Please On GPK:

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-14 09:28:30 UTC
From: 'Doc <w5lz@icok.net>
Message-ID: <3D830123.D0E12C8C@icok.net>
Source record: 134691

Jack,
Save your money.
'Doc

5053. Re: Disposable Mobile HF Antenna??

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-14 10:48:09 UTC
From: nm5k@wt.net
Message-ID: <25eb70d7.0209140248.6818a516@posting.google.com>
Source record: 134693

n5kzw@arrl.net (Ed Bailen) wrote in message news:<3d82bd28.3695072@news.ev1.net>...
> I give up! So far, I've sheared off a Hustler, two types of bug
> catchers, and now, a Hamstick. (I didn't shear off the screwdriver,
> but it doesn't work any more.)

How did you kill a hamstick? That would take a mighty blow unless you
are just talking about the whip attachment point on the top of the
stick.
>
> Apparently, my reckless (unfortunately, not wreckless) driving style
> and the trees on the ranch are just not compatible with HF antennae.
> I'm thinking of coming up with some sort of Hamstick-like antenna
> wound on a broomstick, with top and bottom connections made of copper
> pipe sections.

I don't see how that would be better than a hamstick. It would be so
rigid it would just snap in half if you hit a tree. What you want to
do is make the antenna very flexible. So you want to use a longer
stinger which is nearly indestructable. So if you run 17m, use a short
10m stick, with a longer stinger on it. You can attach the stinger to
the top of the stick with very small hose clamps. I use two of them,
and I've never knocked a whip off unless I didn't tighten them tight
enough. You could use three if you want to be extra safe. Also the 10m
stick on 17m, will outperform the regular 17m stick, unless they
design it to use a long stinger. You only need about 1.5 - 2 ft or so
of stinger to put a 10m stick on 17m.
>
> Question, the 17-meter Hamstick has a section that is closely wound.
> Is this some sort of phasing coil?

Thats the loading coil if you are talking at the top of the stick.
They wind closer at the top to improve current distribution. If you
see a small coil at the bottom of a few turns, thats a built in
matching coil.

Can I just wind enough 12-ga. wire
> on a broomstick to get to 1/4 wave (with the whip) and slap a matching
> circuit at the base, or do I need to duplicate the close-wound section
> that shows up on the Hamstick?

You have better current distribution with the coil wound near the top.
With a stinger on top, you have a center loaded antenna with a narrow
coil. But you can wind them the same pitch all the way. But I think
putting the coil at the top is better. I've been using modified sticks
for over ten years, and have hit many trees, but I've never broke an
antenna yet. I'm still using my original "80-10" version that I made

years ago. I use a long enough stinger that it just slaps off anything I hit. The stick itself is fairly flexible too , to a point. I've had mine bowed nearly 90 degrees in drive thoughs and didn't break. I use a regular hustler quick disconnect, and it's strong enough to take any force from a hamstick. I've never had it fail once. Cheaper rinky dink quick connects I've seen will fail fast. They just can't handle the forces. MK

5054. Delta loop feedpoint question ?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-14 10:50:42 UTC
From: dxer@aol.com
Message-ID: <20020914065042.27806.00003568@mb-df.aol.com>
Source record: 134694

I am thinking of putting up a 20 meter delta loop. I want the polorization to be horizontal. I will put it with the apex up.
I am thinking of feeding it at the apex. From what I have read this will lower the angle of radiation some over feeding at the middle of the base/bottom. And of course this will rasie the feedpoint much higer above ground.
My question; With feeding it at the apex, the coax will be coming straight down through the middle of the delta. Will the coax interfere with the operation of the delta at all this way ?
Tnx
Craig N0BSA

5055. Re: Need Hints on tuning fan dipole

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-14 10:59:49 UTC
From: nm5k@wt.net
Message-ID: <25eb70d7.0209140259.22241b0e@posting.google.com>
Source record: 134695

"Steve KC8PBO" <skaatznospam@ameritech.net> wrote in message news:<ILxg9.8346$y
>
> One weird thing is that the SWR decreases when I lower the center insulator
> about 6' from the top of the 12 mast?!?!
>
> Any hints on how to balance this thing out or lower the SWR?
>
> Thanks

You are probably coupling with some house wiring. 2:1 or even 3:1 SWR
is fine as far as line loss is concerned. So all you have to do is
make your radio happy. I'd just stick a little tuner on it and go.
That would be easier than trying to fine tune the legs. The only time
I've ever seen a problem like that was near other metal. I once made
one over a tin mobile home for a friend one time, and we had a heck of
time trying to get a decent match. The metal of the mobile home, and
not being able to get high above it, was the problem. MK

5056. Re: safety ground and antenna ground - tie together and connect to ...

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-14 11:28:08 UTC
From: nm5k@wt.net
Message-ID: <25eb70d7.0209140328.7c1e357e@posting.google.com>
Source record: 134696

richardharrison@webtv.net (Richard Harrison) wrote in message news:<27145-
>

>
> Same for tower lighting and monitoring circuits. These get coiled up to
> keep r-f from bleeding off medium-wave towers. This stops the lightning
> too when it has a better place to go for a ground. This also works for
> towers which are cold or grounded, as far as lightning protection is
> concerned.

It's gone straight to ground via my mast here. It acts as a lightning
rod. The antenna and coaxes seem to just float for the most part.
I've seen no damage to them , or evidence that they were a conductor
for any decent amount of energy. Or at least enough to damage the coax
anyway. And they are taped to the mast. But they don't lead to the tip
of the mast. The breaker box, lead in, phone lines, cable tv, etc,
were only a few feet away. No damage noticed to anything in the house.
I'm only 15 ft from the strike point myself if I sit in this chair. I
was the first time.. I was 3 more ft across the room, the 2nd...
>
> This isn`t really excessive for hams. It doesn`t reguire 120 radials for
> a lightning ground which protects, in most places.

I don't have any real radials as a lightning ground. Only the wire
that connects my set of ground rods together under ground. My ground
rods are only 3-4 ft long on average. Just scrap pieces of copper tube
that I find. I've pounded a few into the ground at the base of the
mast. They are all wired together, and that grounds the mast. I'm also
tied to the cold water pipe which is 2 ft from the base of the mast.
So far, it seems to be good enough. But we do have pretty conductive
soil here. I also have a ground at the entrance to the shack, and it's
connected to the ground at the mast. The mast is the center of the
"star" in my case. The ground at the shack is just to ground out the
coaxes to route any extra energy to ground. I do not connect my shack
to the outside grounds at all. MK

5057. Re: Mixed blessing

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-14 11:48:28 UTC
From: David Robbins <k1ttt@arrl.net>
Message-ID: <alv7m90dgl@enews4.newsguy.com>
Source record: 134697

First, help him round up the horses the next time they get out.

Then a couple things to try are to check for grass or brush that is rubbing it, much like the utility company did for the power lines(tell him that they drain the charge and reduce the effectiveness of the fence). also checking and replacing or cleaning dirty insulators may help some. also make sure it is connected to a ground rod close to the charger and not through the wiring.

the best you could hope for would be for him to turn it off when the horses are in their stalls, tell him its a power saving for him.

"Copper.net" <davidw@copper.net> wrote in message
news:%eEg9.508$9M2.142193@newsfeed.slurp.net...
> Hi, all concerned:
>
> Asplundh recently plundered all if not most of the tree branches capable
of
> brushing the power-line primaries in the neighborhood surrounding my
> suburban location. You ought to hear the crews' war stories re the
> tree-hugger grieving and outright physical interference. But, that's a
> subject for a flamefest elsewhere.
>
> Now, it's comparatively quiet here. H-f and 160M are useable again during
> sap-up as well as sap-down. Deo gratias. I also thanked the lads for
> giving me back the use of h-f. :o)))
>
> I hear the neighbor's electric fence (around his 5-horse-pen) very well on
> h-f now; it's about 900 ft away :o(Haven't introduced myself to him
yet,
> and want to do my homework first. I have met the horses: they get out
and
> wander around once in a while. That's okay by me.
>
> The noise-blanker is a good interim fix, and I can reduce but not null the
> noise by antenna orientation, but what can I do to help him fix the *TICK*
> *TICK* *TICK* I can see on my 'scope and Millivac broadband v-m if I
> connect either to an antenna?
>
> TIA & 73,
>
> Dave, N3HE
>
>
>

>
>
>

5058. Re: Disposable Mobile HF Antenna??

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-14 12:50:18 UTC
From: Reg Edwards <g4fgq.regp@btinternet.com>
Message-ID: <alvba9$5ht$1@helle.btinternet.com>
Source record: 134698

```
" Can I just wind enough 12-ga. wire
> on a broomstick to get to 1/4 wave (with the whip) and slap a matching
> circuit at the base, or do I need to duplicate the close-wound section
> that shows up on the Hamstick?
=======================================

Do your own complete designs.

Use programs HELICAL3, VERTLOAD, LOADCOIL.

Download in a few seconds from website below.
Run immediately. User friendly.
Enter proposed antenna dimensions.
Includes performance calulations, efficiency.
Compare one design with another.
FREE !
---
========================
Regards from Reg G4FGQ
Free Radio Design Software
Go to http://www.g4fgq.com
========================
```

5059. Re: New Rig, Need some input from the experts :)

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-14 13:17:01 UTC
From: hasan schiers <schiers@netins.net>
Message-ID: <alvcse$1eeee$1@ID-52642.news.dfncis.de>
Source record: 134699

A coax fed 40m dipole also presents a decent load on 6m for me. That would make it 7 half-waves on 6m (7*7.2=50.4 mhz). I have used HF dipoles on 6m many times and find they work remarkably well. Of course, you have lots of lobes and nulls, but that is the price of convenience. I'm using mine on an FT-847 and VSWR < 1.5:1 at 50.125 and under 2.5:1 over most of the 6m band. It was a nice find. During E-season it works extremely well, (as will any antenna that presents a decent load to the transmitter) and I worked plenty of DX with my 90' long extended double zepp for 20m on 6m. (This antenna was fed with shielded balanced line and a tuner, so don't try using it without a tuner, use the 40m dipole example below)

Having the 40m dipole will allow excellent transmitting and listening on 40m, reasonable transmitting and listening on15m as well as surprising transmit and receive performance on 6m. To listen on the other bands, you could tie the center conductor and shield together at the coax connector with a clip lead, and listen with it as a random length wire. For listening purposes it will be quite adequate.

Don't expect it work well in its "normal" dipole configuration on 80m, or on any band for which it is even harmonic resonant.
Example: 20m, 10m. I haven't bothered to check it on the WARC bands, so just keep in mind the even harmonic prohibition, and on those bands use it with the center conductor and shield tied together fed as a random length wire.

40 meter coax fed dipole for multi-band use without tuner: (approximately 33' each side of center)
(with tuner you can transmit with it in the random wire configuration)

80m: random wire, a bit undersized (short center conductor and shield)
40m: resonant half-wave dipole (no tuner required, feed as normal dipole)
30m: random wire, but try it both ways
20m: same as 80m
15m: resonant 3 half-wave dipole (no tuner required, feed as normal dipole)
12m: random wire, but try it both ways
10m: random wire, nice length, will have gain in some directions, nulls in others)
6m: resonant 7 half-wave dipole (no tuner required, will have pronounced gain and nulls)

hope this helps you out. 73

...hasan, N0AN

<fiddelhead@hotmail.com> wrote in message news:Xns9288A25E2C3A0fiddelheadhotmailcom@198.164.200.20...
> Hello everyone. I am going to buy the Yaesu FT-100D Receiver. There are

> two antenna inputs for it. One for 2 metre and 70cm, and the other for HF
> and 6 metre. Since I only have my basic ticket here in Canada, I can
> operate the 2 metre and 70cm, and also the 6 metre band. I already have a
> 2 metre J-Pole that I'm using now, so I could get by with that. But my
> question is, is there anything home brew I could put on the other antenna
> input to allow me to work 6 metre, and also LISTEN to other HF bands?
>
> Any input greatly appreciated.
>
>
> 73's
> VE1 CSA

5060. Re: Disposable Mobile HF Antenna??

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-14 13:33:30 UTC
From: CAM <Cecil.A.Moore@ieee.org>
Message-ID: <3D833AAA.3CDFDEE0@ieee.org>
Source record: 134700

Ed Bailen wrote:
> Question, the 17-meter Hamstick has a section that is closely wound.
> Is this some sort of phasing coil? Can I just wind enough 12-ga. wire
> on a broomstick to get to 1/4 wave (with the whip) and slap a matching
> circuit at the base, or do I need to duplicate the close-wound section
> that shows up on the Hamstick?

The coil is a loading coil which neutralizes the capacitive reactance
associated with a short antenna. Instead of a broomstick, I would
suggest 1.25" fiberglass pipe. That's what I use - tough stuff.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

5061. Re: Tired of RS employees pushing Cellphones and DirectTV

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-14 14:07:45 UTC
From: Ed Juge/NM <ed@juge.org>
Message-ID: <3d83431b.0@oracle.zianet.com>
Source record: 134701
Cross-posted to: alt.radio.scanner,rec.radio.amateur.antenna,rec.radio.scanner,rec.radio.shortwave

I guess I agree about being sick of seeing the tripe about RS employees. I used to work for RS... not in a store. Some are incompetent. Some are quite good. But, in either case, I'd hate to deal with some of the people they encounter every day. Today, it's a whole new set of management since I was there, and they well may be REQUIRED to push phones, etc.

Fortunately for those who are tired of this thread, Outlook Express --and probably the rest of the browsers-- allow us to create a filter so we will never again see a message whose subject contains "RS employees." (That also means I won't see replies to this post.) I've always found that to be the better solution than criticizing the folks who enjoy the thread in question.

73... Ed, W5EJ

"Jerry France" <grf@uneedspeed.net> wrote in message
news:3D82BEA5.BD85CC93@uneedspeed.net...
> Ah....another great answer. But, if this were a bar that everyone
> talked about antennas and they were grinding away on that RS crap I
> might. Depends on how big they were, I guess :)
>
> Fred Hambrecht wrote:
> >
> > People that tell other people to get a life, probably need one
themselves...
> >
> > Do you walk up to a group of people in a bar and tell them to get a life
> > because they talk about something your not interested in? Then why would
you
> > do it here?
> >
> > "Jerry France" <grf@uneedspeed.net> wrote in message
> > news:3D814EAD.C04F48CD@uneedspeed.net...
> > > Who in the world cares about this RS stuff. Please take it off
> > > rec.amateur.antenna. What a bunch of crap. Get a life!
> > >
> > > Alan Beagley wrote:
> > > >
> > > > I've received RS sale fliers from time to time.
> > > >
> > > > -=-
> > > > Alan
> > > >
> > > > Bill M wrote:
> > > >

> > > > > I've given my name and address (altered) time-off and again at
Radio
> > > > > Shark and have never received any junk mail or so much as a free
> > > > > catalog.
> > > > > So what is the whole deal with the interrogation thing? Doesn't
> > appear
> > > > > that they do well by hassling their customers.
> > > > > Its really stoopid that an outfit would attain notoriety by
insisting
> > on
> > > > > doing this nonsense with no perceivable benefit.

5062. Re: Beverage substitutes for the next 160 Mx season?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-14 14:47:41 UTC
From: richardharrison@webtv.net
Message-ID: <458-3D834C0D-189@storefull-2317.public.lawson.webtv.net>
Source record: 134703

Kenneth, K4XL wrote:
"I am particularly interested in the 2-loop KDAY."

A search using the MSN search engine and "K9AY" produced 594 responses.

I chose a response titled "HCDX" which compared a "Wellbrook K9AY" with Beverage antennas on a farm in Northern Jutland Denmark.

"The antenna simply requires up to two 25m wire loops. A single 8m vertical support is required such as a tree."

"My main interest is MW from Canada and USA, and there the K9AY was inferior compared with the Beverage-antennas. In about 80% of all cases the Beverage had a louder signal with absolutely no background noise. In 10% of the cases both were on a par and the rest the K9AY had the edge."

There is much more to the comparison which you can find on the web. I often used a Beverage in Portugal to listen to WCBS and WWL after midnight local time when I lived there. Reception was good.

In limited space, a phased vertical array receives with the same pattern as it transmits. These were used by the West to continuously monitor stations in the East during the Cold War. Loops with air cores and ferrite cores were also used because they could be quickly be redirected for occassonal monitoring and require less space. I visited some sites.

Best regards, Richard Harrison, KB5WZI

5063. Re: Delta loop feedpoint question ?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-14 15:46:57 UTC
From: N4VZ <n4vz@tampabay.rr.com>
Message-ID: <RRIg9.257587$Rx4.2919142@twister.tampabay.rr.com>
Source record: 134704

I don't think it would hut anything, I made a delta loop for 17 meters and
it worked great.

I fed mine at the apex, the feed point height ws around 40 feet, I also
tilted the delta away from the tower at about a 30 deg. angle.

FYI, the feed point inpedence of the loop is around 100 ohms so you will
need to fabricate a 1/4 wave series section matching stub type transformer,
this can be done by using a length of 75 ohm coax cut to the correct length.

I can't find my antenna book so I can't provide you the formula, maybe
someone will post it up.

have fun with your loop

"DXer" <dxer@aol.com> wrote in message
news:20020914065042.27806.00003568@mb-df.aol.com...
> I am thinking of putting up a 20 meter delta loop. I want the
polorization
> to be horizontal. I will put it with the apex up.
> I am thinking of feeding it at the apex. From what I have read this
will
> lower the angle of radiation some over feeding at the middle of the
> base/bottom. And of course this will rasie the feedpoint much higer above
> ground.
> My question; With feeding it at the apex, the coax will be coming
straight
> down through the middle of the delta. Will the coax interfere with the
> operation of the delta at all this way ?
> Tnx
> Craig N0BSA
>

5064. Re: Markie Beckie,made Doug Adair N8WWM get a new Yahoo account

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-14 18:06:40 UTC
From: Landshark
Message-ID: <QUKg9.320$qS7.31874402@newssvr14.news.prodigy.com>
Source record: 134705
Cross-posted to: es.rec.radio.amateur,rec.radio.amateur,rec.radio.amateur.antenna,rec.radio.amateur.policy,rec.radio.cb,rec.radio.scanner,uk.rec.radio.cb

"Keyclown Busters" <bookooaddys@yahoo.com> wrote in message
news:1b4daaa5.0209140658.4bbe271f@posting.google.com...
> FYI, limpwristed Markie Beckie:
>
> That is some kind of an accomplishment. The AKC has over 100 yahoo
> accounts ready to launch on command. Plink at em all you want,
> limpwristed one. WHOAAAA!!! I am SCARED!!! Markie Beckie femininely
> cried to Google!!!
>
>
> You do that because of several reasons.
>
> 1. You can't stand to have your federal criminality thrown in your
> face
>

Again, I ask for you to post the US Federal Statute that I
broke and the proof that I broke it.

> 2. You are a sissy boy of the sort that told on who talked in class.
>

On the contrary Doug Adair N8WWM, you are the one getting
yourself ratted out, not me.

> 3. Ratting to Google is the ONLY thing you CAN do. You are impotent
> otherwise.

Really?

>
> In parting, Markie Beckie, limpwrist boy, I leave you with the words
> of the immortal Jay Leno...who said "Crunch all ya want, we'll make
> more" during a Frito's commercial back in the 80's.

Enjoy Doug Adair N8WWM, you are just showing
how much of a troll you really are.

Landshark

--
Try sending your complaints to these concerning
Keyclownbusters (bookooaddys@yahoo.com IE:
Doug Adair N8WWM):

help@uu.net

abuse-mail@wcom.com

netadmin@ao.wcom.net

groups-abuse@google.com

abuse@yahoo.com

Consumer Affairs
WorldCom
1200 South Hayes Street, 11th fl
Arlington, VA 22202
800-695-4405

5065. Re: Delta loop feedpoint question ?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-14 18:22:46 UTC
From: CAM <Cecil.A.Moore@ieee.org>
Message-ID: <3D837E76.A82B253D@ieee.org>
Source record: 134706

DXer wrote:
> I am thinking of putting up a 20 meter delta loop. I want the polorization
> to be horizontal. I will put it with the apex up.
> I am thinking of feeding it at the apex. From what I have read this will
> lower the angle of radiation some over feeding at the middle of the
> base/bottom. And of course this will rasie the feedpoint much higer above
> ground.
> My question; With feeding it at the apex, the coax will be coming straight
> down through the middle of the delta. Will the coax interfere with the
> operation of the delta at all this way ?

The fields tend to cancel at the coax if the installation is perfectly symmetrical. But consider this: The current at the feedpoint is maximum and is approximately the same as the current close to the ground opposite the feedpoint (in a one-wavelength delta loop). So what advantage would there be to feeding it at the top instead of at the bottom?

I modeled a 40m delta loop like the one you describe. The gain is actually slightly higher when feeding it at the bottom than at the apex. Save some coax and feed it at the bottom. You can model your antenna with the free demo version of EZNEC available from http://www.eznec.com
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

5066. recommended preamp?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-14 18:30:10 UTC
From: AJ Sanderson <ajsand@nospam.com>
Message-ID: <am0u6l$h5h$1@nntp9.atl.mindspring.net>
Source record: 134623
Cross-posted to: alt.ham-radio.mods,rec.radio.amateur.antenna,rec.radio.amateur.homebrew,rec.radio.amateur.misc

I just inserted an in-line HF antenna device that reduces signal level by 8-12 dB. I'd like to compensate for this by using an antenna preamp for the HF bands. I'd like to homebrew the preamp. I've been looking at several designs but can't decide. I'd appreciate some recommendations and/or pointers to some sights with good preamps. The receiver (transceiver) used will be an Icom 718.

Thanks, in advance, for any suggestions.

AJ

5067. Copper Wire Stretching?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-14 18:58:12 UTC
From: Dan Richardson <k6mhe@mendolink.com>
Message-ID: <ik17oucpppoedo494e1adcq6h7mctk63mk@4ax.com>
Source record: 134707

I am wondering if anyone has information on the amount of stretch involved in typical wire antennas using copper wire. Proponents of copper clad steel wire seem to feel that copper wire's (hard or soft) stretching is an important issue. Of course tension and time would play a factor but for antennas such as a dipole are usually under less than 50 Lbs. pull. (Mine are less than 30 Lbs.) So I am wondering just how much increase in length in percentages are we talking about?

73
Danny, K6MHE

5068. Whats the formula for resonant length of Inverted-L?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-14 19:49:03 UTC
From: StarGazer <pti@capnet.com>
Message-ID: <3D8392AF.F78A1BE9@capnet.com>
Source record: 134710

Making an inverted-L for 160 m. (Actually an inverted-U fed
with coax at the bottom)

Is there a formula for the length I will have to cut? Is it the
also 468/f?

How close to resonance in my intended band of 160 m do I
have to be to avoid the problems associated with non-resonant
antennas fed with coax?

5069. Re: Copper Wire Stretching?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-14 19:52:03 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <bh47ou010uoq2dv9dnd87ro2rts3cd4sps@4ax.com>
Source record: 134708

On Sat, 14 Sep 2002 11:58:12 -0700, Dan Richardson
<k6mhe@mendolink.com> wrote:

>So I am wondering
>just how much increase in length in percentages are we talking about?
>
>73
>Danny, K6MHE

Hi Danny,

If you have any dumbbells or free weights in the back of the closet,
then you could do your own dead-weight test with a sample length
suspending that weight from a hook in the rafters (the longer the
wire, the easier to measure). Add the weights (or tension) slowly so
that the distortion/stretch is not a product of impulse.

73's
Richard Clark, KB7QHC

5070. Re: Delta loop feedpoint question ?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-14 19:56:20 UTC
From: richardharrison@webtv.net
Message-ID: <17723-3D839464-495@storefull-2312.public.lawson.webtv.net>
Source record: 134709

DXer wrote:
"I am thinking of putting up a 20 meter delta loop. I want the
polarization to be horizontal."

Cecil A. Moore has already answered DXer`s feed option question.

DXer may want to examine the horizontally polarized delta loop`s other characteristics. It can work well if high enough. It can also easily be a cloud warmer if too low. ON4UN`s "Low-Band DXing" has good information on page 10-7 and surrounding pages.

Best regards, Richard Harrison, KB5WZI

5071. Re: Copper Wire Stretching?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-14 20:41:37 UTC
From: richardharrison@webtv.net
Message-ID: <1434-3D839F01-221@storefull-2316.public.lawson.webtv.net>
Source record: 134712

Danny, K6MHE wrote:
"I am wondering if anyone has information on the amount of stretch involved in typical wire antennas using copper wire."

Stretch is complicated by temperature, wind, ice loading, etc. Short answer is to use Copperweld if there may be a problem.

For appreciation of factors see: Edmund A. Laport, "Radio Antenna Engineering"---Wire Stringing---beginning on page 466. Ed says:
S = W(Lsquared) / 8T.
S = sag in feet
W = wire span weight
L = feet of wire in span
T = tension in pounds

Tensile strengths can`t be exceeded and are given in handbooks and catalogs.

Best regards, Richard Harrison, KB5WZI

5072. Re: Whats the formula for resonant length of Inverted-L?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-14 20:43:35 UTC
From: 'Doc <w5lz@icok.net>
Message-ID: <3D839F75.70398FF7@icok.net>
Source record: 134711

StarGazer,
Closer to '234/f=feet' for the average inverted 'L',
or 'U'. How close do you have to get? Probably within
5 - 15 feet...
'Doc

5073. Re: safety ground and antenna ground - tie together and connect to A/C ground?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-14 22:48:09 UTC
From: Dick Carroll <dixie@townsqr.com>
Message-ID: <3D82B485.CAF4B320@townsqr.com>
Source record: 134713

Rick wrote:

> On Wed, 11 Sep 2002 05:06:02 -0400, "Fred Hambrecht"
> <w4jle@charter.net> wrote:
>
> >
> >a dipole hung between two trees is very difficult to protect with
> >absolute confidence. The only really safe method is to disconnect all the
> >antennas and lay the coax connectors on the ground in the yard. Not very
> >practical when your as lazy as I am.
> >
>
> Fred,
> I think if you had grounded the shield of the coax where it enters the
> house the lightning would likely have been happier to go to ground
> right there.

Rick:

Anone with his antenna coax grounded outside the shack with a #12 wire is deluding himself if he thinks he has any serious protection. The liklihood of the path to ground being more attractive through his outside ground than the house wiring ground is slim to none. If he never suffers serious damage he can count himself very lucky.

If lightning does strike and vaporize his #12 wire it will also raise the voltage on the coax braid way, way above any level that can be withstood. At that point, his gear and the rest of the house gets charged up really well. I sure hope he's not sitting in the shack blithely assuming he's protected.

Dick

5074. Re: Copper Wire Stretching?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-14 23:38:54 UTC
From: Wayne and Louise <wirwin2@cfl.rr.com>
Message-ID: <iMPg9.45198$R7.752085@twister.tampabay.rr.com>
Source record: 134714

And if you are using open wire line and a tuner, it won't make any difference because you can tune the whole system to resonance. If you are using a resonant dipole, then the length does become a factor, and the increased length from stretch will tend to lower the resonant frequency of the antenna.

73,

Wayne, W1KI

"Richard Harrison" <richardharrison@webtv.net> wrote in message news:1434-3D839F01-221@storefull-2316.public.lawson.webtv.net...
> Danny, K6MHE wrote:
> "I am wondering if anyone has information on the amount of stretch
> involved in typical wire antennas using copper wire."
>
> Stretch is complicated by temperature, wind, ice loading, etc. Short
> answer is to use Copperweld if there may be a problem.
>
> For appreciation of factors see: Edmund A. Laport, "Radio Antenna
> Engineering"---Wire Stringing---beginning on page 466. Ed says:
> S = W(Lsquared) / 8T.
> S = sag in feet
> W = wire span weight
> L = feet of wire in span
> T = tension in pounds
>
> Tensile strengths can`t be exceeded and are given in handbooks and
> catalogs.
>
> Best regards, Richard Harrison, KB5WZI
>
>

5075. Re: Copper Wire Stretching?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-15 00:21:29 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <joi7ouoton3ae9711ecjrtkiu42aj4hlpl@4ax.com>
Source record: 134715

On Sat, 14 Sep 2002 15:41:37 -0500 (CDT), richardharrison@webtv.net
(Richard Harrison) wrote:

>
>For appreciation of factors see: Edmund A. Laport, "Radio Antenna
>Engineering"---Wire Stringing---beginning on page 466. Ed says:
>S = W(Lsquared) / 8T.
>S = sag in feet
>W = wire span weight
>L = feet of wire in span
>T = tension in pounds

Hi Richard,

This seems to be a fairly circular specification. That is, it asks
for tension to find sag, and tension is exquisitely related to sag.
In other words, which came first, the chicken or the egg?

More to the point, you have to measure the tension in service, and if
you are already there, you may as well measure the sag directly (who
needs a formula at that point?). - OR - If you calculate the tension,
it is on the basis of a known weight and a known sag (you already have
the answer then too).

For instance, a hanging wire offers a mathematical form known as a
curve of constant acceleration (tension) or catenary. For small sags,
this curve can be approximated as a straight line out to the half way
point (where the weight is presumed to be for calculation), with a
mirror line back up to the opposite suspension point. If the weight
of that wire were 10# and that line was depressed below the horizon by
1ï¿½ then the tension would be 573#. Change that by only 4ï¿½ more (to
5ï¿½) and the tension plummets by more than 80% to 114#. Add another 5ï¿½
and the tension plummets by near half to 57# or roughly 10% of the 1ï¿½
sag tension we started with. What price 9ï¿½?

What the math reveals is that with an appreciable sag, the tension to
sag it further becomes progressively weaker with the sag - self
limiting - otherwise ALL wire antennas would be on the ground by now.
If you start out with a modest sag (and 10ï¿½ certainly qualifies) in
the first place you stand a chance of no further sag. Contrary-wise,
if you have a personality type that likes to cinch up such matters,
you will have a lifetime occupation in the pursuit of your favorite
activity (limited only by your economic means to purchase anaconda
copper).

73's
Richard Clark, KB7QHC

5076. Re: Mixed blessing

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-15 00:27:42 UTC
From: Ed Juge/NM <ed@juge.org>
Message-ID: <3d83d4a7.0@oracle.zianet.com>
Source record: 134716

I had one of those fences next door to me. My neighbor installed it to keep deer, bear and such out of the flowers in his back yard. It was 20db over S9, on one second, off one second, 24/7.

I got the manufacturer's info from the controller and called them. I figured they would blow me off. Instead, the guy was quite helpful and gave me a laundry list of things to check and/or fix. It COMPLETELY killed the problem.

First off, they told me when a fence is producing the kind of RFI I had found (copyable at 1/2-1 mile) the 4000 volts that was supposed to be on the fence was probably was down to around 600 volts and quite ineffective. NOTE: This is an especially good argument to present to the fence owner. I did so and offered to try to fix it for my neighbor. He was only too happy to grant permission.

Their suggestions were...

Make sure the ground is short and heavy gauge wire.

The wire from the controller to the fence MUST be made for this service. It must have at least 6000 volt insulation, not 300 or 400 volts like AC zip cord.

ALL connections on the fence must be made with electric fence wire clamps. Especially look for splices. It is much better if all wire is the same material... no copper twisted to aluminum, etc.

Remove any grass or bushes growing into the bottom wires.

Be sure you don't have any of the wires touching trees... that's common especially with insulators made to nail into tree trunks.

You can probably trace the noise source by using a portable AM radio. If you're lucky enough to catch it when the noise has stopped, walk the fence with that radio and lightly tap all wires every few feet. You'll probably find a place where you tap it and the noise returns. Look for bad splices or shorts in that area.

Good luck... hope this is some help.

73... Ed, W5EJ

"Copper.net" <davidw@copper.net> wrote in message
news:%eEg9.508$9M2.142193@newsfeed.slurp.net...
> Hi, all concerned:
>
> Asplundh recently plundered all if not most of the tree branches capable

of
> brushing the power-line primaries in the neighborhood surrounding my
> suburban location. You ought to hear the crews' war stories re the
> tree-hugger grieving and outright physical interference. But, that's a
> subject for a flamefest elsewhere.
>
> Now, it's comparatively quiet here. H-f and 160M are useable again during
> sap-up as well as sap-down. Deo gratias. I also thanked the lads for
> giving me back the use of h-f. :o)))
>
> I hear the neighbor's electric fence (around his 5-horse-pen) very well on
> h-f now; it's about 900 ft away :o(Haven't introduced myself to him
yet,
> and want to do my homework first. I have met the horses: they get out
and
> wander around once in a while. That's okay by me.
>
> The noise-blanker is a good interim fix, and I can reduce but not null the
> noise by antenna orientation, but what can I do to help him fix the *TICK*
> *TICK* *TICK* I can see on my 'scope and Millivac broadband v-m if I
> connect either to an antenna?
>
> TIA & 73,
>
> Dave, N3HE
>
>
>
>
>
>

5077. Re: Copper Wire Stretching?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-15 00:37:52 UTC
From: n7ws@nowhere.com
Message-ID: <3d83d62c.2842026@news.triconet.org>
Source record: 134717

On Sat, 14 Sep 2002 11:58:12 -0700, Dan Richardson
<k6mhe@mendolink.com> wrote:

|I am wondering if anyone has information on the amount of stretch
|involved in typical wire antennas using copper wire. Proponents of
|copper clad steel wire seem to feel that copper wire's (hard or soft)
|stretching is an important issue. Of course tension and time would
|play a factor but for antennas such as a dipole are usually under less
|than 50 Lbs. pull. (Mine are less than 30 Lbs.) So I am wondering
|just how much increase in length in percentages are we talking about?
|
|73
|Danny, K6MHE

Will this be with or without moss?
|

5078. Re: Whats the formula for resonant length of Inverted-L?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-15 01:17:35 UTC
From: richardharrison@webtv.net
Message-ID: <1434-3D83DFAF-243@storefull-2316.public.lawson.webtv.net>
Source record: 134718

StarGazer wrote:
"Is there a formula for the length I will have to cut? Is it 468/f?"

The ARRL Antenna Book says a wavelength in feet is 983.6 / F(MHz).

A 1/2-wave antenna is approximately 95% of 984-ft / 2, divided by the frequency in MHz. 1/2-wave antennas are thus about 468 / f(MHz).

The total length of the ordinary inverted-L is about 1/4 wavelength at first resonance. This in feet is about 234 / f(MHz).

StarGazer says "sctually an inverted-U".

If Stargazer is actually considering a folded unipole, he needs a 1/2-wavelength of wire to make a 1/4-wave antenna. ON4UN in "Low-Band DXing" has a nice graph of radiation resistance versus vertical height of the horizontal segment in wavelength (up to 90 degrees or a completelly vertical antenna). There is a lot more about this antenna also. This is the actual inverted-L, not the folded unipole.

Best regards, Richard Harrison, KB5WZI

5079. Re: Copper Wire Stretching?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-15 01:58:19 UTC
From: richardharrison@webtv.net
Message-ID: <457-3D83E93B-619@storefull-2317.public.lawson.webtv.net>
Source record: 134619

Richard Clark wrote:
"---you have to measure the tension in service, and you already are there, you may as well measure the sag directly---."

Yes, but that may not be as easy as it sounds. It`s easy to measure tension. There are simple tensiometers which divert the sagging wire a bit and relate the tension in the wire to the diversionary force required.

Ed Laport suggests determining the frequency of resonance of the tight wire. He has the formula and describes how to pluck the wire and pick up the tone! From the tuning of the wire Ed can give you its tension.

I`ve only used the tensiometers, myself, and then mostly on guy wires. I was never much on cinching things up too tightly. As long as transmission wires didn`t strike arcs in the breeze and as long as antennas continued to work in strong winds, I was happy. Some would say I was sloppy, but my stuff worked problem free for the most part.

Best regards, Richard Harrison, KB5WZI

5080. Re: Copper Wire Stretching?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-15 02:36:33 UTC
From: richardharrison@webtv.net
Message-ID: <20232-3D83F231-684@storefull-2311.public.lawson.webtv.net>
Source record: 134620

Richard Clark wrote:
"This seems to be a fairly circular specification."

The usual case is that a catalog will give the tension a wire withstands, its weight per unit length, etc. You can estimate how much wind, ice, roosting birds, etc may add to the weight of the wire in the span. These forces are offset by tension in the wire in removing sag. The tension in the wire can`t exceed the maximum specification with or without additional safety factors.

You can calculate the sag in advance and see if it is satisfactory. If not, stronger wire, shorter spans, lighter weight conductors, or some other adjustment will be required.

Best regards, Richard Harrison, KB5WZI

5081. Portable Antenna for FT-817

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-15 03:06:35 UTC
From: N4IXT <n4ixt@arrl.net>
Message-ID: <am0tav$1p2db$1@ID-105647.news.dfncis.de>
Source record: 134621

Working on buying an FT817. I need a very portable antenna for it. Something small, lightweight, that I can quickly put up and take down in a motel room, and won't take up much space in luggage.

MFJ makes a nice one that's one 80 to 2 all bands in one antenna, attractive because I'd only have to carry ONE antenna around.

I fully realize that none of these small telescoping type antenna are going to be great performers, but I'm willing to exchange a little performance for the portability.

Anyone have experience with the MFJ or other "plug it in and start operating" type antenna?

Thanks,

Robert / N4IXT

5082. Re: Copper Wire Stretching?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-15 03:07:00 UTC
From: richardharrison@webtv.net
Message-ID: <20233-3D83F954-263@storefull-2311.public.lawson.webtv.net>
Source record: 134622

Danny, K6MHE wrote:
"I am wondering if anyone has information on the amount of stretch involved in typical wire antennas using copper wire?"

Stretch of a wire requires loading the wire beyond its elastic limit so that the wire does not return to its original length when its load is removed. Staying within the catalog maximum tension ensures the wire will not stretch significantly.

This may be calculated when conditions that are normally encountered occur. The ice storm of the century may bring the wires down in spite of good practice.

Best regards, Richard Harrison, KB5WZI

5083. Re: looking for an multiband HF vertical, quick to assemble in a field

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-15 03:22:16 UTC
From: Andy Blackburn <andyblackburn3@comcast.net>
Message-ID: <I1Tg9.32693$5r1.1284843@bin5.nnrp.aus1.giganews.com>
Source record: 134624

I like my Hustler 5BTV vertical. I use it for home, camping, and Field Day. It can break down into about a 3-4 foot package. Ground mounted, it performs well without radials and has decent bandwidth for all bands except 80 meters. Mark your preset assembly points with a marker for easy reassembly. I do not find a need for an antenna tuner.

The 5BTV is a good compromise antenna. It does not perform quite as well as dipoles or beams...but it will get you on-the-air.

Andy Blackburn

"O Malyava" <omalyava@nj.rr.com> wrote in message news:J%8g9.31675$hh.7974955@twister.nyc.rr.com...
> Hi guys,
>
> I am looking for an multiband HF vertical, what is easy and quick to
> assemble and disassemble let's say in a field environment.
> There are quite a few models from famous manufactures - cushcraft,
> butternut, diamond, hustler etc ...
> I have read reviews for all of them - some of them are better, some - just
> otherwise :).
> I just want to know - which of them I can use as a field (every)day antenna,
> because of apartment antenna restrictions and so on ... ?
> what antenna can be easily unscrewed in a couple of places to put it into a
> car trunk and assemble it outdoors in 20 minutes with the same nice SWR ?
> what antenna could survive after 50 of such cycles?
> thanks :)
>
> I have read more or less carefully PDFs for the most of verticals, looking
> at construction details and possible problems during transportation and
> disassembling.
> Looks alike I don't like Butternut antennas because of huge coils - they can
> be easily crumpled, and therefore change resonance frequency, I hope ...
> About Outbacker: I don't believe in short antennas ... neither 8 feet stick
> could work well on the bands lower than 20m ... it is my personal "old
> school" opinion :)
>
> So, I am thinking about:
> Cushcraft (R6000,R8)
> Hustler (4-BTV,5-BTV,6-BTV)
> Hy-Gain (AV620,AV640)

>
> Any concerns about them?
>
> With best regards,
> Alex NE7L ex.US4LNE
>
>

5084. Re: Whats the formula for resonant length of Inverted-L?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-15 03:24:58 UTC
From: CAM <Cecil.A.Moore@ieee.org>
Message-ID: <3D83FD8A.1AA83951@ieee.org>
Source record: 134625

StarGazer wrote:
>
> Making an inverted-L for 160 m. (Actually an inverted-U fed
> with coax at the bottom)
>
> Is there a formula for the length I will have to cut? Is it the
> also 468/f?

An inverted-L is a 1/4WL vertical monopole with the top bent over
horizontally. The formula is approximately 234/f. To perform very
well, an inverted-L (like a 1/4WL vertical) needs a ground plane.

> How close to resonance in my intended band of 160 m do I
> have to be to avoid the problems associated with non-resonant
> antennas fed with coax?

You might as well trim it to minimum SWR on your favorite frequency.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

5085. Re: Delta loop feedpoint question ?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-15 03:41:44 UTC
From: CAM <Cecil.A.Moore@ieee.org>
Message-ID: <3D840178.E5B4EB6D@ieee.org>
Source record: 134626

Richard Harrison wrote:
>
> DXer wrote:
> "I am thinking of putting up a 20 meter delta loop. I want the
> polarization to be horizontal."
>
> Cecil A. Moore has already answered DXer`s feed option question.

Here's an interesting 20m full-wave loop. 17ft horizontal top section
at 40ft high. 28ft side sections fed at the bottom intersection point.
Maximum gain is 7+ dBi and the feedpoint impedance is close to 50 ohms.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
------== Over 80,000 Newsgroups - 16 Different Servers! =-----

5086. Re: safety ground and antenna ground - tie together and connect to A/C ground?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-15 04:32:27 UTC
From: nm5k@wt.net
Message-ID: <25eb70d7.0209142032.18bfc553@posting.google.com>
Source record: 134627

ricknj10@hotmail.com (Rick) wrote in message
news:<3d827252.35151514@news.optonline.net>...
> On Wed, 11 Sep 2002 05:06:02 -0400, "Fred Hambrecht"
> <w4jle@charter.net> wrote:
>
> >
> > >a dipole hung between two trees is very difficult to protect with
> > >absolute confidence. The only really safe method is to disconnect all the
> > >antennas and lay the coax connectors on the ground in the yard. Not very
> > >practical when your as lazy as I am.

If I did that, I would run the coax straight down to ground, and
ground the shield at that point. You need a good low resistance ground
at that point. Then run the coax under or on the ground to the shack.
I would then treat it as any other antenna, and ground out at the
entrance ground when bad wx. "I don't bother with suppressors" Never
let the coax hang in the air as it goes down to the shack. That can
really eat your lunch. Myself, I don't think dipoles really get struck
that often. Or at least compared to verticals, but with the coax
grounded beneath the antenna, most of the strike will go to ground at
that point if it happens.
> >
>
> Fred,
> I think if you had grounded the shield of the coax where it enters the
> house the lightning would likely have been happier to go to ground
> right there.

It would be better to do it under the antenna. Lightning doesn't turn
well. Also, you don't want the lightning return ground to be at the
shack entrance.
I use metal masts or towers to support my antennas so I have a built
in lightning rod. The masts direct the strike to ground, not my
feedlines.
I have a ground at the shack entrance, but it doesn't have much to do
as far as directing the lightning to ground. It's just there to play
"cleanup" with what little is left over. Prevents possible arcing or
flashing, and ensures all is at the same potential. If you used
suppressors, they would be mounted there.

Yes, the approximately #12 wire might vaporize but the
> huge currents in the house are not what we want.

You should use #6.
> If I understand correctly, to paraphrase (I think it was the QST
> article) the lightning decides to strike, picks out your dipole, (not
> because it was really the best target), and THEN all those billions
> of electrons get into a traffic jam trying to get into the ground.

The best target will usually be the best streamer in the area.
Normally, a dipole is not that hot a streamer, unless you have some
sharp points of wire ends somewhere. A vertical usually is more likely
to be struck. I've never had a dipole struck yet. Maybe I'm lucky...
MK

5087. Re: Copper Wire Stretching?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-15 05:29:08 UTC
From: kelly@dvol.com
Message-ID: <d22b54c3.0209142129.198c0f93@posting.google.com>
Source record: 134628

Dan Richardson <k6mhe@mendolink.com> wrote in message
news:<ik17oucpppoedo494e1adcq6h7mctk63mk@4ax.com>...
> I am wondering if anyone has information on the amount of stretch
> involved in typical wire antennas using copper wire. Proponents of
> copper clad steel wire seem to feel that copper wire's (hard or soft)
> stretching is an important issue. Of course tension and time would
> play a factor but for antennas such as a dipole are usually under less
> than 50 Lbs. pull. (Mine are less than 30 Lbs.) So I am wondering
> just how much increase in length in percentages are we talking about?

This is a very tricky topic on which to make any black & white
statements because of the huge collection of variables which are
involved. First off the only effect stetching has is to shift the
resonant freq of the antenna or antenna element downward. Copperweld
wins by a large margin over any pure copper wire by virtue of steel's
much higher yield strength and Young's modulus given the same
cross-sectional areas. Which are *not* defined by the "gauge" of the
wire. From there ya get into the types of lays for stranded wires, the
effects of strain hardening on the physical behavior of the specific
wire, etc. It's a rat's nest in the field of applied mechanics which
is better left to the pros in that biz as far as the analytics are
concerned.

If you're really serious about digging into the matter as a ham your
best bet would be to run some simple tests on wires you might use.
String 50 or a 100 feet of it out and pull on it with increasingly
higher known loads by whatever means you have. The wire will stretch
to some minor extent at any load. And when you drop all loads the wire
will return to it's original length. To a point. In this operating
regime the wire will be in it's linear elastic stress range. But there
will come a load which permanently stretches the wire and it doesn't
snap back to it's original cut length.

That's the critical yield point load on the wire which you need to
avoid under the worst loading conditions you expect to encounter. It
goes farther, there is also the problem of fatigue . . . And
advertised "tensile strengths" don't mean much because by the time you
actually pop the wire it's already well past it's yield point and is
considerably permanently stretched.

I find out what the advertised "tensile strength" of the wire is via a
phone call or two then make sure the load on the wire doesn't exceed
20% of that number when I string the thing up.

>
> 73

> Danny, K6MHE

w3rv

5088. questions about log-periodic antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-15 06:05:43 UTC
From: jack_cyma@hotmail.com
Message-ID: <5f3ef5c1.0209142205.10216341@posting.google.com>
Source record: 134629

hi,
I am writing a log-periodic antenna design pakage. but I do not have enough equations and I haven't decided which programming language to use yet.
I would like to have the equations of finding the surrent and voltage distribution of the dipoles when a signal of frequency f is recieved or sent. I also need the equations of finding the radiation pattern.
please help me if you have these equations. any suggestions of what to include in the pakage and the programming language to use are welcome.
thanks a lot.

5089. Re: Whats the formula for resonant length of Inverted-L?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-15 11:52:04 UTC
From: Reg Edwards <g4fgq.regp@btinternet.com>
Message-ID: <am1s93ngs1@knossos.btinternet.com>
Source record: 134630

The resonant length of an inverted-U antenna depends on wire diameter, length of vertical sections, length of top section, height above ground, and characteristics of the ground radials which will not be known very accurately

But for practical purposes you can forget all about antenna resonance and consider only overall length and the resistance of the crudely-known ground connection.

Your objective is to obtain a midband, 1.9 MHz, feedpoint resistance of about 50 ohms to match a 50-ohm coax. (Or 75 ohms for a 75-ohm coax.)

An exact 1/4-wave resonant inverted-U antenna almost certainly will not meet this requirement unless the ground connection loss resistance is in the order of 25 or 35 ohms. At least half the Tx power would then be wasted in the ground which you would not find acceptable.

A tuner will be needed at the junction of coax and antenna wire. If this is inconvenient all well and good. No problem. Just lengthen the antenna wire and shorten the coax. Saves money too.

An important feature of an end fed wire is that the resistive component of input impedance increases smoothly with frequency and the +ve input reactance increases something faster. So by experimenting with overall wire length a point can be found at which the antenna input resistance plus ground loss resistance is very nicely equal to 50 ohms. And the input reactance can be tuned out with a series variable capacitor. On 160m band a 500pF max capacitor will be fine. The overall antenna length with a reasonable ground loss resistance of a few ohms will be around 0.27 to 0.33 wavelengths. (Or in the range 140 to 170 feet.) Antenna length is VERY non-critical. You don't need formulas.

If you havn't the space to extend to a longer wire length then use an ordinary tuner. A longer than 1/4-wave antenna has another advantage. It brings the antenna input impedance right into the range of the ordinary sort of tuner. It is usually impossible to tune up a low, exact 1/4-wave antenna which has a low ground loss resistance.

If you like amusing yourself with numbers, download program ENDFEED which models verticals and inverted-L's. An L is as near to a U as dammit is to swearing. It takes into account number and length of ground radials. It calculates value of the single series tuning capacitor and the L and C values of three different types of tuners.

PS. One wavelength = 300 / MHz metres which is always good enough and allows a teeny bit for pruning.

```
========================
Regards from Reg G4FGQ
Free Radio Design Software
Go to http://www.g4fgq.com
========================
```

5090. Re: Portable Antenna for FT-817

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-15 12:43:56 UTC
From: Gerald Schmitt <KK5YY@arrl.net>
Message-ID: <9av8ou430fg21bask4k2ims80rqqrnscm9@4ax.com>
Source record: 134631

On Yahoogroups there are several groups that discuss this very
subject.

Recommended groups are Buddy pole, HFPack, FT817, all have FAQs
and if you join you can search the archives. Personally I have used
the Buddypole, quite small to carry and works well, the Ventenna
equally small not quite as efficient, ATX very small poor radiator,
MP-1 by W6MMA small screwdriver type pretty fair radiator.

The HFPack groups is holding an antenna shootout at Pacificom
in October the results should interest you. The also held such a
shoot out last year and I believe the results are available on the
HFPack Yahoo group.

I hope this helps you out

73 KK5YY Jerry QRV everywhere IO happen to be

On Sat, 14 Sep 2002 22:06:35 -0500, "N4IXT" <n4ixt@arrl.net> wrote:

>Working on buying an FT817. I need a very portable antenna for it. Something
>small, lightweight, that I can quickly put up and take down in a motel room,
>and won't take up much space in luggage.
>
>MFJ makes a nice one that's one 80 to 2 all bands in one antenna, attractive
>because I'd only have to carry ONE antenna around.
>
>I fully realize that none of these small telescoping type antenna are going
>to be great performers, but I'm willing to exchange a little performance for
>the portability.
>
>Anyone have experience with the MFJ or other "plug it in and start
>operating" type antenna?
>
>Thanks,
>
> Robert / N4IXT
>

5091. HT dual antenna for Yeasu VX-5R

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-15 14:05:00 UTC
From: Wayne Sellin <sellinwg@starpower.net>
Message-ID: <am242eiuo1@bob.news.rcn.net>
Source record: 134632

Hi I am looking for a better 2M/440 HT antenna. Here on the Cape we have to cover large distances. I got one replacement but it is not sufficient. I use the radio for ARES and marathons so there are times when we do not have access to the mobile.
I have hooked the VX to a J-Pole and the send receive is terrific and I am not tied to the car. However, I need a socially acceptable way of carrying the J-Pole as I make my rounds at the station.
73
Wayne

5092. 6-Meter DiPole or Vertical

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-15 14:07:09 UTC
From: Wayne Sellin <sellinwg@starpower.net>
Message-ID: <am246f$j9d$1@bob.news.rcn.net>
Source record: 134633

Please let me know if the commercial verticals are better than a homemade
dipole with a Balun.
73
Wayne

5093. Re: Whats the formula for resonant length of Inverted-L?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-15 14:50:15 UTC
From: kelly@dvol.com
Message-ID: <d22b54c3.0209150650.59963bfc@posting.google.com>
Source record: 134634

CAM <Cecil.A.Moore@ieee.org> wrote in message news:<3D83FD8A.1AA83951@ieee.org>...
> StarGazer wrote:
> >
> > Making an inverted-L for 160 m. (Actually an inverted-U fed
> > with coax at the bottom)
> >
> > Is there a formula for the length I will have to cut? Is it the
> > also 468/f?
>
> An inverted-L is a 1/4WL vertical monopole with the top bent over
> horizontally. The formula is approximately 234/f. To perform very
> well, an inverted-L (like a 1/4WL vertical) needs a ground plane.
>
> > How close to resonance in my intended band of 160 m do I
> > have to be to avoid the problems associated with non-resonant
> > antennas fed with coax?
>
> You might as well trim it to minimum SWR on your favorite frequency.

An inverted L in these parts is a quarter wave up and a quarter wave
horizontally on it's fundamental freq. and has a very high Z
feedpoint. The inverted L you're talking about is a short GP with a
tail.

5094. Re: New Rig, Need some input from the experts :)

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-15 14:54:06 UTC
From: Murray Neece <radioranch@cableone.net>
Message-ID: <3D849F0E.55221F67@cableone.net>
Source record: 134635
Body handling: Binary attachment payload not displayed: radioranch.vcf

I would put up a dipole of 5 (6mtr) wave lengths or 30 meters...you will do pretty well with that or the longer the better, you may need a tuner to transmit on HF and one with 6 meters in it would help....any 5x (5 multiple) of 6 meters will probably work well for reception and still should load on 6...another Idea is to get one of these 80-6 meter butternut verticals...work great...73 Murray

fiddelhead@hotmail.com wrote:

> Hello everyone. I am going to buy the Yaesu FT-100D Receiver. There are
> two antenna inputs for it. One for 2 metre and 70cm, and the other for HF
> and 6 metre. Since I only have my basic ticket here in Canada, I can
> operate the 2 metre and 70cm, and also the 6 metre band. I already have a
> 2 metre J-Pole that I'm using now, so I could get by with that. But my
> question is, is there anything home brew I could put on the other antenna
> input to allow me to work 6 metre, and also LISTEN to other HF bands?
>
> Any input greatly appreciated.
>
> 73's
> VE1 CSA

[One or more binary attachments are retained only in the source text.]

5095. Re: Delta loop feedpoint question ?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-15 14:57:14 UTC
From: Murray Neece <radioranch@cableone.net>
Message-ID: <3D849FCA.AD2B50A7@cableone.net>
Source record: 134636
Body handling: Binary attachment payload not displayed: radioranch.vcf

NO it will not...you can make that antenna good all the way down to 6 meters if you will use ladder line to a balun (inside or outside the house) and a tuner.
73 Murray;

DXer wrote:

> I am thinking of putting up a 20 meter delta loop. I want the polorization
> to be horizontal. I will put it with the apex up.
> I am thinking of feeding it at the apex. From what I have read this will
> lower the angle of radiation some over feeding at the middle of the
> base/bottom. And of course this will rasie the feedpoint much higer above
> ground.
> My question; With feeding it at the apex, the coax will be coming straight
> down through the middle of the delta. Will the coax interfere with the
> operation of the delta at all this way ?
> Tnx
> Craig N0BSA

[One or more binary attachments are retained only in the source text.]

5096. Re: 6-Meter DiPole or Vertical

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-15 15:06:46 UTC
From: AC6V <ac6v@amsat.org>
Message-ID: <am1h9.18896$S32.1385646@news2.west.cox.net>
Source record: 134637

Wayne -- Roll ur own should do just fine. For a dozen+ 6M homebrew antennas plans -- see URL:
http://ac6v.com/antprojects.htm

Don't forget to do a Sun Dance ceremony to get propagation!! Otherwise check the 6M repeater directories. ARRL Repeater Directory at URL:
http://www.arrl.org/catalog/?category=FM+%26+Repeaters&words=

On Line Example: California 6M Repeaters at URL:
http://www.vcnet.com/KN6LA/6m.html

--
I Doubt, Therefore I Might Be
73 From AC6V, Rod In Oceanside, CA
http://ac6v.com
==========
"Wayne Sellin" <sellinwg@starpower.net> wrote in message
news:am246f$j9d$1@bob.news.rcn.net...
> Please let me know if the commercial verticals are better than a homemade
> dipole with a Balun.
> 73
> Wayne
>
>

5097. Re: 6-Meter DiPole or Vertical

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-15 15:10:09 UTC
From: Bob Miller <bamiller@texas.net>
Message-ID: <cKGEPbzn03CHORO2tAGIoYBoF2YE@4ax.com>
Source record: 134638

"Wayne Sellin" <sellinwg@starpower.net> wrote:

>Please let me know if the commercial verticals are better than a homemade
>dipole with a Balun.
>73
>Wayne
>

A homemade dipole for 6 meters is small enough, you could orient it either horizontally or vertically, depending on which polarization would be best for you, horizontal or vertical. The commercial verticals would offer little, if anything, more, other than higher cost.

Bob
k5qwg

5098. RE: 6M Dipole or Vertical

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-15 15:53:57 UTC
From: AC6V <ac6v@amsat.org>
Message-ID: <p22h9.19139$S32.1395681@news2.west.cox.net>
Source record: 134639

Wayne -- Roll ur own should do just fine. For a dozen+ 6M homebrew antennas plans -- see URL:
http://ac6v.com/antprojects.htm

For skip -- either horizontal or vertical polarization will do.
For local repeaters - most are vertical.
For local SSB -- many use horizontal antennas.

Don't forget to do a Sun Dance ceremony to get propagation!! Otherwise check the 6M repeater directories. ARRL Repeater Directory at URL:
http://www.arrl.org/catalog/?category=FM+%26+Repeaters&words=

On Line Example: California 6M Repeaters at URL:
http://www.vcnet.com/KN6LA/6m.html

"Wayne Sellin" <sellinwg@starpower.net> wrote in message news:am246f$j9d$1@bob.news.rcn.net...
> Please let me know if the commercial verticals are better than a homemade
> dipole with a Balun.
> 73
> Wayne
>
>

--
I Doubt, Therefore I Might Be
73 From AC6V, Rod In Oceanside, CA
http://ac6v.com

5099. Re: recommended preamp?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-15 16:09:17 UTC
From: nm5k@wt.net
Message-ID: <25eb70d7.0209150809.f4d9486@posting.google.com>
Source record: 134640
Cross-posted to: alt.ham-radio.mods,rec.radio.amateur.antenna,rec.radio.amateur.homebrew,rec.radio.amateur.misc

"AJ Sanderson" <ajsand@nospam.com> wrote in message
news:<am0u6l$h5h$1@nntp9.atl.mindspring.net>...
> I just inserted an in-line HF antenna device that reduces signal level by
> 8-12 dB. I'd like to compensate for this by using an antenna preamp for the
> HF bands. I'd like to homebrew the preamp. I've been looking at several
> designs but can't decide. I'd appreciate some recommendations and/or
> pointers to some sights with good preamps. The receiver (transceiver)
> used will be an Icom 718.
>
> Thanks, in advance, for any suggestions.

I probably won't be much help. I can't see why you have a device that causes that amount of loss on HF. Doesn't make sense to me at all. I was thinking the 718 had a preamp already in it. Most icoms do. "both my 730 and 706g do" Not to mention the front end is already hot on most icom rigs. There are many designs for pre-amps that would work, but it's not something I usually recommend. A good way to trash a perfectly good receiver. More images, etc, etc. I once built an HF preamp years ago, and I think I used MPE-152's???'s or something like that. I forgot...All it did was pump up the S meter, and basically trash out an already decent radio. "drake R4". It didn't do a thing as far as improving the s/n ratio. MK

5100. Re: New Rig, Need some input from the experts :)

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-15 16:19:08 UTC
From: nm5k@wt.net
Message-ID: <25eb70d7.0209150819.26f568b3@posting.google.com>
Source record: 134641

"hasan schiers" <schiers@netins.net> wrote in message
news:<alvcse$1eeee$1@ID-52642.news.dfncis.de>...
> A coax fed 40m dipole also presents a decent load on 6m for me. That would
> make it 7 half-waves on 6m (7*7.2=50.4 mhz). I have used HF dipoles on 6m
> many times and find they work remarkably well. Of course, you have lots of
> lobes and nulls, but that is the price of convenience. I'm using mine on an
> FT-847 and VSWR < 1.5:1 at 50.125 and under 2.5:1 over most of the 6m band.
> It was a nice find. During E-season it works extremely well, (as will any
> antenna that presents a decent load to the transmitter) and I worked plenty
> of DX with my 90' long extended double zepp for 20m on 6m. (This antenna was
> fed with shielded balanced line and a tuner, so don't try using it without a
> tuner, use the 40m dipole example below)

I'd be wary though. I'm surprised you don't have image problems from
HF bands, using the large HF antenna. I first did this when I got a
706g, and the HF image problem was quite bad on 6m. Even at night!
When I went to a 6m only antenna, the performance was much better.
When I went to a yagi, it totally cleaned it up. I'd be wary if he's
using a ft-100. He "might" have this problem also. I don't know if the
yaesu's have this problem or not. The 706 sure did.
Also, I think a regular 6m dipole would outperform the 40m dipole in
general.
I'm guessing the 40m antenna could have the potential to be a cloud
warmer on 6m. Much the same way as I noticed an 80m dipole on 10m is a
cloud warmer. It was really bad performance. Wasn't really expecting
that until I tried it out camping one time. Anyway, maybe the yeasu is
better in that regard, but speaking for the ic-706mk2g, using a large
HF dipole for 6m use, is a big mistake. Trash city...MK

5101. Re: recommended preamp?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-15 16:22:12 UTC
From: Bob Miller <bamiller@texas.net>
Message-ID: <ALOEPUJQ+63cw5VLaPPwpRVaVvkq@4ax.com>
Source record: 134642

"AJ Sanderson" <ajsand@nospam.com> wrote:

>I just inserted an in-line HF antenna device that reduces signal level by
>8-12 dB.

Curious, what device did you insert? Sounds like you need to take it out:-)

Bob
k5qwg

> I'd like to compensate for this by using an antenna preamp for the
>HF bands. I'd like to homebrew the preamp. I've been looking at several
>designs but can't decide. I'd appreciate some recommendations and/or
>pointers to some sights with good preamps. The receiver (transceiver)
>used will be an Icom 718.
>
>Thanks, in advance, for any suggestions.
>
>AJ
>

5102. Re: safety ground and antenna ground - tie together and connect to A/C ground?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-15 16:56:04 UTC
From: ricknj10@hotmail.com
Message-ID: <3d84ba7d.44789394@news.optonline.net>
Source record: 134643

On Sat, 14 Sep 2002 22:48:09 GMT, Dick Carroll <dixie@townsqr.com>
wrote:

>
> Anone with his antenna coax grounded outside the shack with a #12 wire is

There was a misunderstanding. I was referring to the antenna wire as
being #12 and meant that if it is ever struck it will get vaporized
regardless of how the coax is grounded.
Others have pointed out that the coax should get a connection to
ground before it gets to the house - good point. It appears as if the
idea is to make it easier for the strike current to get to ground
outside and away from the house so that it doesn't come inside and
start hunting for ground there.

Rick

5103. Re: safety ground and antenna ground - tie together and connect to A/C ground?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-15 17:01:34 UTC
From: ehsjr@bellatlantic.net
Message-ID: <3D84BCC6.13734A6A@bellatlantic.net>
Source record: 134644

Andreas Hofmann wrote:
>
> Hi,
>
> I have a dipole and once it enters the house, it is routed through a
> lightning surge protected coax switch. This allows me to ground the dipole
> (and all other antennas) if I dont use the station. Let assume I do not
> need a RF ground.
>
> 1. The coax switch's case needs to be tied to the house's ground. Is it
> enough to just connect it to the neutral wire in the nearest power
> receptacle?

You've had a number of answers, but I didn't see any address
the concept of using the neutral for the safety ground.
Don't do it - doesn't matter if you're grounding an amateur
station, or a bench grinder, or a coffee maker or whatever.
The code requires a separate equipment grounding conductor -
it doesn't allow the neutral for safety grounding.

>
> 2. All the equipment's grounds should be tied together and connected to the
> house's ground as well. Can I just connect them to the coax switch's ground
> (if answer for 1 is yes)?
>
> Thanks
>
> Andreas, KU7T

5104. Re: Whats the formula for resonant length of Inverted-L?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-15 18:06:29 UTC
From: richardharrison@webtv.net
Message-ID: <457-3D84CC25-741@storefull-2317.public.lawson.webtv.net>
Source record: 134646

Brian Kelly wrote:
"The inverted L you`re talking about is a short GP with a tail."

True, and it`s commonly understood that the usual inverted-L is resonated as a 1/4-wave antenna. This makes sense for use with ordinary feedlines. These range from 50 ohms to 600 ohms characteristic impedance. An end-fed 1/2-wave antenna has a drivepoint impedance of several thousand ohms due to a tendency to repeat the open circuit at its far end.

The inverted-L can be directly connected to the radio and avoid a transmission line in some cases. 6,000-ohm antenna impedance? No problem!

Best regards, Richard Harrison, KB5WZI

5105. Re: Whats the formula for resonant length of Inverted-L?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-15 18:09:03 UTC
From: CAM <Cecil.A.Moore@ieee.org>
Message-ID: <3D84CCBF.8340A84A@ieee.org>
Source record: 134645

Brian Kelly wrote:
> An inverted L in these parts is a quarter wave up and a quarter wave
> horizontally on it's fundamental freq. and has a very high Z
> feedpoint. The inverted L you're talking about is a short GP with a
> tail.

Well, I seem to have dropped 1/16 of a wavelength from my memory. The 15th edition of the ARRL Antenna Book sez: "The inverted-L antenna can be supported by any convenient means. Matching is easiest when the total length is near 5/16 wavelength". They make it a tad longer than 1/4 wavelength so the feedpoint impedance is 50+jXL and then feed it with a series capacitor such that |XC| = |XL|. From my experience, I would say that a 160m inverted-L is usually not 1/2 wavelength. So your parts must be different from my parts. :-)
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
------== Over 80,000 Newsgroups - 16 Different Servers! =-----

5106. CAM?? Re: Whats the formula for resonant length of Inverted-L?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-15 18:37:38 UTC
From: StarGazer <pti@capnet.com>
Message-ID: <3D84D372.32EEF8A4@capnet.com>
Source record: 134648

I was just going to make it 123 ft long and feed it with 50 ohm
coax at the intersection of the ground rod and inverted-U.
Are you saying I'll need a series capacitor?
If so what is a good one to get and where??
I thought I could just tune it with just my MFJ989C tuner.

CAM wrote:

> Brian Kelly wrote:
> > An inverted L in these parts is a quarter wave up and a quarter wave
> > horizontally on it's fundamental freq. and has a very high Z
> > feedpoint. The inverted L you're talking about is a short GP with a
> > tail.
>
> Well, I seem to have dropped 1/16 of a wavelength from my memory. The
> 15th edition of the ARRL Antenna Book sez: "The inverted-L antenna can
> be supported by any convenient means. Matching is easiest when the
> total length is near 5/16 wavelength". They make it a tad longer than
> 1/4 wavelength so the feedpoint impedance is 50+jXL and then feed it
> with a series capacitor such that |XC| = |XL|. From my experience, I
> would say that a 160m inverted-L is usually not 1/2 wavelength. So
> your parts must be different from my parts. :-)
> --
> cheers, CAM http://www.qsl.net/w5dxp
>
> -----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
> http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
> ------== Over 80,000 Newsgroups - 16 Different Servers! =-----

5107. Want a Good Tuner??

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-15 18:43:25 UTC
From: StarGazer <pti@capnet.com>
Message-ID: <3D84D4CD.4F6D378@capnet.com>
Source record: 134649

I want to get a second tuner dedicated for my 160 m inv-L.

What do I look for in the specs to assure easy tuning around
160 m?

Any tuner recomendations?

I hate my MFJ989Cs variable L. Cranking that stupid thing for
160 m makes it very annoying to use on the other bands as
I have to crank it all the way back.
Just want to dedicate one tuner for 160 m and get another
for the rest of the bands.

5108. Re: Copper Wire Stretching?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-15 18:53:59 UTC
From: richardharrison@webtv.net
Message-ID: <9966-3D84D747-263@storefull-2315.public.lawson.webtv.net>
Source record: 134647

Brian Kelly wrote:
"It goes further, there is also the problem of fatigue . . . And advertised "tensile strengths" don`t mean much because by the time you actually pop a wire it`s already well past it`s yield point and considerably permanently stretched."

That`s a little pessimistic.

Fatigue only occurs when stress reaches a particular point. The practice is to keep stress below the point where a wire might suffer fatigue. Below this stress, a metal can be flexed an infinite number of times without fatigue.

Advertised tensile strengths are likewise not the design loads. These loads must not exceed the yield point because permanent stretch is usually undesirable.

As a matter of fact, tensile strength does not greatly exceed yield strength. This is because once the point is reached at which the material gives, it doesn`t take much more force to stretch the material on out and break it.

Best regards, Richard Harrison, KB5WZI

5109. Re: recommended preamp?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-15 21:37:27 UTC
From: xpyttl <xpyttl_nospam@earthling.net>
Message-ID: <uo9vrsfaobuc36@corp.supernews.com>
Source record: 134650
Cross-posted to: alt.ham-radio.mods,rec.radio.amateur.antenna,rec.radio.amateur.homebrew,rec.radio.amateur.misc

Boy, I second Mark and then some.

The noise level on HF is quite high. As long as you can hear the noise, then you have enough gain. Any more gain hurts, rather than helps. Turn on your radio, switch to 10 meters (the quietest HF band) and then plug in the antenna. Does the noise increase? If so, you can't use any more gain. Your receiver has a sensitivity of 0.16 microvolt. Even with your 10 db loss, you probably still have a couple of microvolts of noise coming into the radio. If the signal is below that couple of microvolts, you aren't going to hear it.

Now, what you will do with the preamp is amplify the noise. The signals, being stronger, won't get amplified as much as the noise unless they are very weak, then they will get amplified as much, but no more. So you will hear weak signals as well, and not so weak signals not as well, if the signal you are listening to is the only one on the band.

But it won't be. There will be other signals, and they will be more inclined to swamp the RF amp in the 718 or pump your AGC. You will get lots more intermod (the 718 isn't a K2 after all), so the net result of adding the preamp will be a much harder time, a lot less fun operating, and overall, a big loss in your ability to pick out the weak signals.

Years ago, when tube type receivers had sensitivity in the 5 microvolt region, a preamp made some sense. But with a receiver as hot as the 718, it makes no sense at all at HF.

At VHF/UHF, where the band noise is a lot lower, and the noise inside the radio a lot higher, then it may make sense. But at HF, it's pretty much always a looser.

..

"Mark Keith" <nm5k@wt.net> wrote in message
news:25eb70d7.0209150809.f4d9486@posting.google.com...
> I probably won't be much help. I can't see why you have a device that
> causes that amount of loss on HF. Doesn't make sense to me at all. I
> was thinking the 718 had a preamp already in it. Most icoms do. "both

5110. Re: Want a Good Tuner??

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-15 22:01:30 UTC
From: Dan/W4NTI <w4nti@mindspringnospam.com>
Message-ID: <am2vvh$4s$1@slb3.atl.mindspring.net>
Source record: 134651

Why not just built one? Tuners are pretty simple. Especially if you want
to dedicate it to the Inv. L only.

Then again if you make the Inv L wire about 185 foot or so. You may not
even need a tuner. I don't.

Dan/W4NTI

"StarGazer" <pti@capnet.com> wrote in message
news:3D84D4CD.4F6D378@capnet.com...
> I want to get a second tuner dedicated for my 160 m inv-L.
>
> What do I look for in the specs to assure easy tuning around
> 160 m?
>
> Any tuner recomendations?
>
> I hate my MFJ989Cs variable L. Cranking that stupid thing for
> 160 m makes it very annoying to use on the other bands as
> I have to crank it all the way back.
> Just want to dedicate one tuner for 160 m and get another
> for the rest of the bands.
>

5111. Re: CAM?? Re: Whats the formula for resonant length of Inverted-L?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-15 22:07:05 UTC
From: CAM <Cecil.A.Moore@ieee.org>
Message-ID: <3D850489.B41898DB@ieee.org>
Source record: 134652

StarGazer wrote:
> I was just going to make it 123 ft long and feed it with 50 ohm
> coax at the intersection of the ground rod and inverted-U.
> Are you saying I'll need a series capacitor?
> If so what is a good one to get and where??
> I thought I could just tune it with just my MFJ989C tuner.

As usual, the problem is a little complicated. An antenna shaped like an 'L' can be any length. If you make the inverted-L 1/4WL, it will exhibit a feedpoint impedance of around 35 ohms thus giving a 50 ohm SWR of around 1.5:1. This is what I originally had in mind. You can use an antenna tuner but you don't really need one. An SWR of 1.5:1 is, IMO, perfectly acceptable.

Getting a little more sophisticated, if you make the inverted-L 5/16 wavelength, you can get by with a series capacitor and no antenna tuner. Pure-ists don't like antenna tuners. :-)
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

5112. Re: Want a Good Tuner??

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-15 22:09:04 UTC
From: CAM <Cecil.A.Moore@ieee.org>
Message-ID: <3D850500.3D2B625E@ieee.org>
Source record: 134653

StarGazer wrote:
> I want to get a second tuner dedicated for my 160 m inv-L.
> Just want to dedicate one tuner for 160 m and get another
> for the rest of the bands.

Make your inverted-L 5/16 wavelength and use a single series
cap. A doorknob cap would be a good choice.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

5113. Re: Copper Wire Stretching?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-15 22:28:31 UTC
From: Bill M <exray@no>
Message-ID: <uoa28l3lrtqlc9@corp.supernews.com>
Source record: 134654

Soft-drawn copper has a pretty low tensile strength no matter how you look at it. The original poster didn't mention what gauge wire so we are speculating about the exactness of what we already instinctively know.
On my old 20m quad, for instance, simply straightening out (pulling on) the #16 soft-drawn wire before installing it I gained a few inches.
I gather the original question was asking if the amount of stretch for copper vs copperweld was consequential in actual practice. I'd have to answer that over time yes, it would probably be noticeable (in spite of light tension) due to windstorms, ice, etc.
But I wouldn't grade the difference as enough to preclude using copper wire. That decision would depend on how particular the antenna owner is.

IMHO,
Bill

Richard Harrison wrote:

> That`s a little pessimistic.
>
> Fatigue only occurs when stress reaches a particular point. The practice
> is to keep stress below the point where a wire might suffer fatigue.
> Below this stress, a metal can be flexed an infinite number of times
> without fatigue.
>
> Advertised tensile strengths are likewise not the design loads. These
> loads must not exceed the yield point because permanent stretch is
> usually undesirable.
>
> As a matter of fact, tensile strength does not greatly exceed yield
> strength. This is because once the point is reached at which the
> material gives, it doesn`t take much more force to stretch the material
> on out and break it.
>
> Best regards, Richard Harrison, KB5WZI

5114. Re: recommended preamp?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-15 22:37:41 UTC
From: AJ Sanderson <ajsand@nospam.com>
Message-ID: <am32k1$cm5$1@slb5.atl.mindspring.net>
Source record: 134657
Cross-posted to: alt.ham-radio.mods,rec.radio.amateur.antenna,rec.radio.amateur.boatanchors,rec.radio.amateur.homebrew,rec.radio.amateur.misc

Actually, I was off on my initial 8-12 dB loss. It is more like 4-6 dB. The in-line device is an interference canceller, similar to the MFJ model, except home brewed. There is some loss, but I found that the orientation of the noise antenna makes a difference in the amount of total loss. It seems to work great on computer screen noise, but the power line noise I really wanted to eliminate is not even touched. Maybe the noise is too broadbanded (when the noise occurs I can hear it on all the Ham bands) . The Icom blanker won't eliminate it either, but the noise blanker in an HTX-100 10 meter rig eliminates it almost completely! I agree with posters that a preamp would definitely do more harm than good. However, my immediate goal is to get rid of this noise!

AJ

>
> Curious, what device did you insert? Sounds like you need to take it out:-)
>
> Bob
> k5qwg
>
> > I'd like to compensate for this by using an antenna preamp for the
> >HF bands. I'd like to homebrew the preamp. I've been looking at several
> >designs but can't decide. I'd appreciate some recommendations and/or
> >pointers to some sights with good preamps. The receiver (transceiver)
> >used will be an Icom 718.
> >
> >Thanks, in advance, for any suggestions.
> >
> >AJ
> >
>

5115. Re: lightning protection and general grounding questions...

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-15 22:40:20 UTC
From: ehsjr@bellatlantic.net
Message-ID: <3D850C1B.453BF1DB@bellatlantic.net>
Source record: 134655

Andreas Hofmann wrote:
>
> I was reading up in the "Antenna book" and a couple of posts as well. Some
> of my questions remain. Here is the context:
>
> I have a multiband dipole outside and currently just take the coax through
> the window, that is not going to fly in the winter season. No ground yet. I
> am thinking of routing the coax to the back of my ham desk on teh outside of
> the house, then go through the wall. This is where a grounding switch should
> be, so the antenna is grounded if not in use. Also, at the same point the
> main station ground is going to leave my shack and lead to the ground (7ft
> on the outside wall) where a copper water pipe will be driven into the
> ground.
>
> Questions:
> 1. I would like to use a coax switch to ground the antenna if not in use.
> The MFJ 1704 has a built-in lightning surge protector. Is it safe (in terms
> of lightning protection) to set this switch into the ground position (and
> disconnect the TX side if I go away from my shack for longer periods)?
>
> 2. Is it safe to use a combined safety and station ground (HF)? Would be
> nice if I just had to connect all my equipment with the ground on the coax
> switch (which is grounded) and be done... In case of a lightning, I am
> worried that I damage my equipment though. How can this be handled
> correclty?
>
> Thanks for you tips in advance,
>
> Andreas, KU7T

1) If you want *lightning* protection, you have to ground the
hell out of everything. The "hell" is the lightning, and if you
want to keep it away from your equipment, you need a huge
ground system and a very low impedance connection to it.
2) Alternative to 1) above is to keep all your equipment
away from the "hell". That means TOTAL disconnect of the
equipment and physical removal (distance) from the coax.

Both of the above are generally not feasible for most
amateurs. However, you can improve your ground system,
and you can disconnect, short the coax to ground, and
leave things in place. Those things will help, but they
don't guarantee that a nearby strike won't bite you.

If you do add a ground, driving a water pipe as you mention does not comply with code. You need to use the materials, methods and dimensions mentioned in the code, and the added ground electrodes must be connected to the house grounding electrode system as specified in the code.

In answer to your question #2 - see the above. You MUST provide a safety ground to the coax shield - thus your station ground and your safety ground must be tied together - per the code. See the National Electrical Code articles 810-57 and 810-58

5116. Re: Copper Wire Stretching?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-15 22:40:30 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <q61aouor40nk0kd6m0dlhohjmuaffham0o@4ax.com>
Source record: 134656

On Sat, 14 Sep 2002 20:58:19 -0500 (CDT), richardharrison@webtv.net
(Richard Harrison) wrote:

>
>Ed Laport suggests determining the frequency of resonance of the tight
>wire. He has the formula and describes how to pluck the wire and pick up
>the tone! From the tuning of the wire Ed can give you its tension.
>

Hi Richard,

This takes me back to my physics class where my prof introduced us to
this very notion, as part of acoustics or as he titled his chapter
"Wave Motion and Sound."
"We shall study various properties of waves using the stretched
string to illustrate. First consider the end of a string with tension
T pulled up velocity u. Now the motion of subsequent parts of the
string moves down along the string with velocity v. Using the
impulse-momentum theorem over a time t we have:
Fy * t = muf - mui
(T * sin (theta)) * t = (rho * A * vt) * u - 0
now using
ut/vt = tan (theta) = sin (theta) [for small angles]
we have
T * (ut/vt) * t = rho * A * vt * u
or
v = SQRT(T/rho * A)"

[where theta is the angular displacement of the plucked string; rho is
the mass per volume; and A is the cross sectional area of the string;
ut is the displacement wrt time; vt is the propagation wrt time]

Knowing the velocity and distance between anchor points, it should be
a short haul to finding the note of resonance. And I would offer a
further comment from my prof on that matter:
"Of extreme importance is the fact that the velocity of
propagation is independent of how fast the disturbance moves the
string up and down."

From this seeming trivial detail, we moved further to understand that
it was the shape of the pulse (the initial disturbance) that impacted
the amplitude of the resonance. Later, by some dozen years, the math
of Blackman and Tukey of Bell Labs matured into the Fast Fourier
Transform which fulfilled this correlation.

73's
Richard Clark, KB7QHC

5117. Re: 9/12/02 ANTIKEYCLOWNS STILL OWN THE NG

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-15 22:40:52 UTC
From: Brainbuster <brainbuster@lineone.spamtrap.net>
Message-ID: <am333ktgf4@news5.svr.pol.co.uk>
Source record: 134658
Cross-posted to: rec.radio.cb,rec.radio.amateur.antenna,rec.radio.amateur.boatanchors,rec.radio.amateur.policy

"Bill Mast" <Bmast@netmail.com> wrote in message
news:3d82fe06.99841003@news.easynews.com...
> On 12 Sep 2002 09:03:34 -0700, bookooaddys@yahoo.com (Keyclown
> Busters) wrote:
>
> >And no one here can stop it.
> >
> >ESPECIALLY a booze and dope soaked nwa wanna be high school dropout
> >whose parents kicked him out because he is a useless doper parasite,
> >and who fantasizes about pimping hoes as the highest point on the
> >economic ladder he can achieve.
> >
> >ALSO: Crackheads, rednecks, bowl weenies, truckstop trannies, and all
> >the other slimes that comprise keyclownism.
> >NONE OF YOU CAN STOP THE ANTIKEYCLOWNS!!!
>
> Own What? Whats a keyclown?

Anyone the newsgroup trolls disagree with.

They will argue that it is an "illegal CBer", but they attach the label
quite freely to anyone who disagrees with their antisocial tactics within a
newsgroup.
LEGAL CBers and radio Amateurs have often been given the label "keyclown".

You will notice that the post makes accusations of pimping and drug use, and
is nothing more than a string of insults hurled at anyone who will take the
time to read it.
Some "antikeyclowns" have even been caught promoting illegal activity
themselves, which leads me to believe that their whole "pro-legal" stance
is fake, they just want to cause arguments on newsgroups. One of them has
made several attempts to spread the anger to a UK group, but has just been
blocked by most of the users.

Regards,

Peter.

5118. Hamsticks-Any parts that can go "poof"??

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-15 22:53:34 UTC
From: DipoleDude@webtv.net
Message-ID: <20440-3D850F6E-500@storefull-2353.public.lawson.webtv.net>
Source record: 134659

I've been going through a mind boggling week, trying to diagnose an antenna situation. I've been using two different antenna mounts, one on each side of my SUV's luggage rack. For many months, I've used two Lakeview Hamsticks, one for 20 meters and one for ten, and used a coax switch inside the vehicle. I was able to obtain a match of 1.5 to 1 or less over the entire bands for each antenna.
Last week I got fed up with "spanking trees" all the time because of their height. In an effort to reduce that, I moved the antennas farther to the back, and put them on a 45 degree angle. I never re-checked the match after doing this. I later learned that this section of the luggage rack was plastic and not metal as with the previous installation. So my match MUST have been off.
NOW, neither antenna works properly, EVEN after moving the mounts back to the original spot. I get a 3 to 1 match, over the ENTIRE band with the top elements all the way down...or all the way up.
Not the coax. Replaced that. Not the coax switch. Took that out. BUT...I replaced the the antennas with a couple of "Firesticks" I picked up at a truck stop a while back. I adjusted one for 10 meters, and got a nice 1.5 to 1 match on that. And adjusted the other, with the help of a 6" threaded rod, to work 12 meters with an SWR of 1.9 to 1. Had several QSO's on both antennas.
Now I'm really wondering if something has gone "poof" on the Hamsticks. How well does the inductor hold out on these Hamsticks? Can they handle a significant mismatch? (I was only running 100 watts.) Are there any small capacitors used in the antennas?
Thanks for any help, advice, flames.

Mike

5119. Re: Want a Good Tuner??

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-15 23:18:32 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <f84aoushtr1v9048bnjujlqp3nv6llv59k@4ax.com>
Source record: 134660

On Sun, 15 Sep 2002 11:43:25 -0700, StarGazer <pti@capnet.com> wrote:

>I want to get a second tuner dedicated for my 160 m inv-L.
>
>What do I look for in the specs to assure easy tuning around
>160 m?
>
>Any tuner recomendations?
>
>I hate my MFJ989Cs variable L. Cranking that stupid thing for
>160 m makes it very annoying to use on the other bands as
>I have to crank it all the way back.
>Just want to dedicate one tuner for 160 m and get another
>for the rest of the bands.

Hi OM,

Keep your current tuner for general use and build a fixed tuner for 160M (or perhaps semi-fixed). Move this one step further and build the fixed tuner at the antenna and skip the line loss due to SWR. Such a fixed tune may allow you to use the general tuner for band edges (speculation on my part).

However, I doubt this remote tuner is what you had in mind as I suspect you want to make this a general coverage antenna (an emergency 6M radiator too). Without a remote switch, a fixed remote tuner gets in the way. Plan with remote switching in mind and you can waltz away from a lot of problems.

73's
Richard Clark, KB7QHC

5120. Re: Kapton question

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-15 23:40:25 UTC
From: ehsjr@bellatlantic.net
Message-ID: <3D851A28.C51C12FC@bellatlantic.net>
Source record: 134661

Mike Coslo wrote:
>
> I have an application (trombone capacitor) for which I might want to use
> Kapton (tm) as the dielectric. All the properties I've found look pretty
> good for my use. I haven't seen any specs on Kapton's friction
> properties tho'.
>
> Has anyone had experience with using Kapton with trombone caps, or
> somewhere else that the material had to slide over another?
>
> - Mike KB3EIA -

This does not directly address your question, but I have
had good luck making trombone caps using the insulated
center conductor from coax, and sliding into a brass
tube.

5121. Alliance Rotor Controller

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-15 23:57:43 UTC
From: Afterburner <jblasz@adelphia.net>
Message-ID: <7d7aou064buvif1de8hepg945t6pc7hqeo@4ax.com>
Source record: 134662

Help! I have an old Alliance 4 wire antenna controller and was wondering wich wires go to which screw connection on the bottom of the controller. Or if someone has a wireing diagram.

Thanks

5122. Re: WTK: wiring for philips/alliance U-110 rotor control

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-15 23:58:48 UTC
From: Afterburner <jblasz@adelphia.net>
Message-ID: <8l7aou82t6lphc0agogrg3rbe3124lft6h@4ax.com>
Source record: 134663

On Wed, 24 Jul 2002 17:07:06 GMT, Barry <btuttleman@worldnet.att.net>
wrote:

>help groupies!
>need wiring diagram for old philips/alliance U-110 rotor control; can
>anyone assist me to assist someone else?
>tnx in advance, please email direct
>barry
>carson city nv

I have a 4 wire and was wondering the same thing.

5123. Re: Hamsticks-Any parts that can go "poof"??

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-16 00:12:04 UTC
From: jgboyles@aol.com
Message-ID: <20020915201204.14338.00002726@mb-bj.aol.com>
Source record: 134664

>Now I'm really wondering if something has gone "poof" on the Hamsticks.
>How well does the inductor hold out on these Hamsticks? Can they handle
>a significant mismatch? (I was only running 100 watts.) Are there any
>small capacitors used in the antennas?

If the 50 ohm match has changed, then something has changed at your hamstick.
I have not heard of them "blowing up" because of a mismatch, but it might be possible at high power levels. I would make sure the ground to the vehicle is solid, and the hamstick is mounted exactly as before. The tuning on my mobile antenna is quite sharp because it is physically small, it does not take much to change things, you have changed things around.
One way to check things is with an antenna analyzer, such as the MFJ 259b.
It will tell you what is wrong, by the R+/-JX display. Before everyone jumps on me, you must determine the sign of jx, which is not too difficult.
An swr bridge will tell you something is wrong, proper intreptretaion of an antenna analyzer will tell you what is wrong.

73 Gary N4AST

5124. eham.com

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-16 00:33:51 UTC
From: hsnyder@houston.rr.com
Message-ID: <PF9h9.459775$q53.15837829@twister.austin.rr.com>
Source record: 134665

I have been getting error messages from eham.com this weekend.
Did they go dark?

Harold
WD5KCA

5125. Re: eham.com

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-16 00:54:55 UTC
From: Wayne Sellin <sellinwg@starpower.net>
Message-ID: <am3a50$97g$1@bob.news.rcn.net>
Source record: 134666

e-ham.com is not working, but e-ham.net is for sale.
Is it eham or e-ham?

<hsnyder@houston.rr.com> wrote in message
news:PF9h9.459775$q53.15837829@twister.austin.rr.com...
I have been getting error messages from eham.com this weekend.
Did they go dark?

Harold
WD5KCA

5126. Re: Hamsticks-Any parts that can go "poof"??

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-16 01:22:30 UTC
From: K4IA <K4ia@novacoxmail.com>
Message-ID: <qnah9.56247$8F4.1243099@news2.east.cox.net>
Source record: 134667

You didn't by any chance get the two reversed did you? The ten meter one
has a shorter coil.
--
Radio K4IA
Craig "Buck"
Fredericksburg, Virginia USA

FISTS 6702 CC 788 Diamond 64
K1♯ 470 K2♯ 2460
"Mike Roe Farad" <DipoleDude@webtv.net> wrote in message
news:20440-3D850F6E-500@storefull-2353.public.lawson.webtv.net...
> I've been going through a mind boggling week, trying to diagnose an
> antenna situation. I've been using two different antenna mounts, one on
> each side of my SUV's luggage rack. For many months, I've used two
> Lakeview Hamsticks, one for 20 meters and one for ten, and used a coax
> switch inside the vehicle. I was able to obtain a match of 1.5 to 1 or
> less over the entire bands for each antenna.
> Last week I got fed up with "spanking trees" all the time because of
> their height. In an effort to reduce that, I moved the antennas farther
> to the back, and put them on a 45 degree angle. I never re-checked the
> match after doing this. I later learned that this section of the luggage
> rack was plastic and not metal as with the previous installation. So my
> match MUST have been off.
> NOW, neither antenna works properly, EVEN after moving the mounts back
> to the original spot. I get a 3 to 1 match, over the ENTIRE band with
> the top elements all the way down...or all the way up.
> Not the coax. Replaced that. Not the coax switch. Took that out. BUT...I
> replaced the the antennas with a couple of "Firesticks" I picked up at a
> truck stop a while back. I adjusted one for 10 meters, and got a nice
> 1.5 to 1 match on that. And adjusted the other, with the help of a 6"
> threaded rod, to work 12 meters with an SWR of 1.9 to 1. Had several
> QSO's on both antennas.
> Now I'm really wondering if something has gone "poof" on the Hamsticks.
> How well does the inductor hold out on these Hamsticks? Can they handle
> a significant mismatch? (I was only running 100 watts.) Are there any
> small capacitors used in the antennas?
> Thanks for any help, advice, flames.
>
> Mike
>

5127. Re: Copper Wire Stretching?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-16 02:53:09 UTC
From: richardharrison@webtv.net
Message-ID: <9967-3D854795-101@storefull-2315.public.lawson.webtv.net>
Source record: 134569

Richard Clark wrote:
"Knowing the velocity and distance between anchor points, it should be a short haul to finding the note of resonance."

Ed Laport has distilled the tension formula to something short and sweet:
T = 1.006 (t/N)squared, where---
T = tension in pounds
t = time in seconds for
N = number of complete vibrations of the whole span.

"Snap the wire at its mid-point by pulling it to one side and releasing it. At the moment of release a stop watch is started, and the number of complete swings of the wire are counted (say 10 vibrations), at which moment the watch is stopped,"

I almost always used a tensiometer to indent a prescribed length of wire and the force required was calibrated in pounds tension of the wire.

With guy wires, I`ve actually used a come-along on the guy wire and attached a scale between the come-along and guy-anchor. All that`s necessary is to see how much tension is required to relieve the turnbuckle tension on the anchor.

Best regards, Richard Harrison, KB5WZI

5128. Re: Hamsticks-Any parts that can go "poof"??

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-16 02:59:18 UTC
From: DipoleDude@webtv.net
Message-ID: <3141-3D854906-605@storefull-2354.public.lawson.webtv.net>
Source record: 134570

Nope. Didn't mix 'em up. Got 'em all well marked.
When I put them back in the same spot, I even took the time to wire brush (with cordless drill) the metal of the luggage rack to make sure I was getting good contact. I have tried EVERYTHING to change the 3 to 1 match. I have tried counterpoises, mag mounts, grounding to frame, adjusting the top whip fraction of inches at a time. The 3 to 1 match is static, never changing. Never higher, never lower. (Same with the power output: Just under 20 watts...never higher, never lower.) It's the same at the top of the bands as it is at the bottom.
I'm just curious what the inductor is like on the inside of these Hamsticks. Perhaps the wires have fried and shorted? I'm just not sure what happened. The rig is working PERFECT with the "Firesticks" on 10 and 12 meters. Just by the process of elimination, the Hamsticks themselves are the only things left.

Mike

5129. Re: Portable Antenna for FT-817

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-16 03:05:40 UTC
From: JustForJoe@webtv.net
Message-ID: <4873-3D854A84-519@storefull-2357.public.lawson.webtv.net>
Source record: 134668

I hear the YoYoTenna Deluxe is taking the ham community by storm. When I ordered mine, they said they were selling like hotcakes. They advertise in several ham mags and CQ has run stuff on them the past three or four months now. Website is: http://qth.com/dwm

Joe

5130. Re: safety ground and antenna ground - tie together and connect to A/C ground?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-16 03:24:33 UTC
From: nm5k@wt.net
Message-ID: <25eb70d7.0209151924.3076f230@posting.google.com>
Source record: 134571

ehsjr@bellatlantic.net wrote in message news:<3D84BCC6.13734A6A@bellatlantic.net>...
> > receptacle?
>
> You've had a number of answers, but I didn't see any address
> the concept of using the neutral for the safety ground.
> Don't do it - doesn't matter if you're grounding an amateur
> station, or a bench grinder, or a coffee maker or whatever.
> The code requires a separate equipment grounding conductor -
> it doesn't allow the neutral for safety grounding.

Which code is that? NEC? I've never heard of that one before. If that were true , half the plugged in items in a house, washer, driers, etc, etc would all be out of code. Here, I use nothing but the nuetral for safety grounding. Of course, you have to check to make sure it's really grounded. But say in a bathroom with testable sockets for fault protection, if what you say is true, those would be illegal. But I see them installed in new houses, and they seem to pass code. I use the nuetral wire to safety ground my henry amp. Thats what the "3rd" ground plug is made for. But I also have no doubts about the integrity of my nuetral ground wire though. I ran the wire myself. I've never seen instructions for a coffee maker require a "stand alone" ground. In fact, most coffee makers don't even have a ground pin on the plug. They don't provide a ground lug either. I know an electric furnace installed , and grounded only by the nuetral wire passes inspection in Houston when inspected by the city. "They are inspected by the city, but according to state code". This rule is a new one on me..I see no problem using a neutral for safety ground. It's ground, just like any other one...Just make sure it's actually wired right though..Most of the plugs in this house don't even have ground pins. It was built in 1959. My henry does only because I ran the wire to the box myself. The washer/driers out in the garage also have ground pins. Thats about it...When I ran 117v gear that had to be grounded, I used a seperate ground because I had no choice. MK

5131. Re: Kapton question

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-16 03:25:04 UTC
From: Reg Edwards <g4fgq.regp@btinternet.com>
Message-ID: <am3iuf$b8k$1@knossos.btinternet.com>
Source record: 134572

>
> This does not directly address your question, but I have
> had good luck making trombone caps using the insulated
> center conductor from coax, and sliding into a brass
> tube.
==========

A coax inner conductor sliding inside a tube is fine as a small high-voltage variable capacitor.

But if a high current flows, as in a magloop, the loss in the capacitor will be appreciably higher than in a capacitor with both plates having similar areas.

The thin wire has an abnormally high resistance but it has to carry the same current as the very large conductor diameter in the main magloop.

The problem can be partially overcome by cutting a length of coax into a number of pieces and connecting them in parallel.

Reg, G4FGQ

5132. HELP!! tune Gap Titan

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-16 03:49:12 UTC
From: John Albright <albright@epix.net>
Message-ID: <Ywch9.1849$s5.583252@news1.epix.net>
Source record: 134573

I put up a used Titan. The swr on 80,40 and 30 is too high. It's mounted 6 feet off the ground until I get it to work, then it goes on the roof.
Please reply to me directly at albright@epix.net.....

--
John F. Albright
Reading,Pa
WA3ZGL

5133. Re: Hamsticks-Any parts that can go "poof"??

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-16 04:09:40 UTC
From: Howard <mensch90249@yahoo.com>
Message-ID: <b0maou0i4u0j6usmebep3i1feol4tjsnpi@4ax.com>
Source record: 134574

Mike,
When I got a Hamstick there was a caution note about installing the stinger: it mentioned to be careful not to damage the wire that transitions from the coil to the fitting that holds the stinger. Perhaps at some point in handling the antenna's this got damaged - though it seems unlikely to happen in both and at the same time. Do you have any friends with the same Hamsticks so you could put those in your mount and check them out?

Good luck,
Howard
On Sun, 15 Sep 2002 22:59:18 -0400 (EDT), DipoleDude@webtv.net (Mike Roe Farad) wrote:

>Nope. Didn't mix 'em up. Got 'em all well marked.
>When I put them back in the same spot, I even took the time to wire
>brush (with cordless drill) the metal of the luggage rack to make sure I
>was getting good contact. I have tried EVERYTHING to change the 3 to 1
>match. I have tried counterpoises, mag mounts, grounding to frame,
>adjusting the top whip fraction of inches at a time. The 3 to 1 match is
>static, never changing. Never higher, never lower. (Same with the power
>output: Just under 20 watts...never higher, never lower.) It's the same
>at the top of the bands as it is at the bottom.
>I'm just curious what the inductor is like on the inside of these
>Hamsticks. Perhaps the wires have fried and shorted? I'm just not sure
>what happened. The rig is working PERFECT with the "Firesticks" on 10
>and 12 meters. Just by the process of elimination, the Hamsticks
>themselves are the only things left.
>
>Mike

5134. Re: 40 m dipole near Beam Mast? A Problem??

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-16 04:33:15 UTC
From: Roger Halstead <rdhalste@tm.net>
Message-ID: <fadh9.2342$Xj4.2365774@newshog.newsread.com>
Source record: 134575

"StarGazer" <pti@capnet.com> wrote in message
news:3D7941ED.2AE33B5E@capnet.com...
> My 40 m dipole will run about 3 feet away from my beam
> mast

The mast is not the broblem. How far from the boom and what frequency for the beam? It makes a big difference. If it's an HF beam, or VHF, or UHF

>. And about 3 feet below a 2 element beam.
>
> This shouldn't be a problem for either antenna should it?

I'm having to guess as I need more information.
Yes. In theory it should lower the impedance and distort the patterns of both antennas and it most likely will in practice IF the 40 meter antenna is only a few feet below an HF beam there most likely would be some problems

My tribander is 15 feet below the 6-meter antenna and the 6 meter antenna is 12 feet below the 2-meter array. My wire antennas end about 30 feet below the tribander and are at roughly at a 45 degree angle to the tower.
.>
> Since there shouldn't be hardly any mutual conductance since
> they are perdicular to each other.
>
Or are you referring to the boom? If so then yes, you are going to be using the 40 meter antenna as a counterpoise....

Unfortunately all this is moot until I know What frequency for the beam, the size of the beam, how far the 40 meter antenna is from the beam. The vertical mast is no biggie. I have a 4 meter inverted V hanging just a few inches out from a ROHN 45 G and it works fine. Yes, it would be better to at least put the thing on an arm and put the antenna a few feet out.

--
Roger Halstead (K8RI EN73)
www.rogerhalstead.com
N833R World's oldest Debonair? (S# CD-2)

5135. ' FA Sony AN-1 Active Whip Antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-16 05:08:00 UTC
From: Jim <jbollit@ix.netcom.com>
Message-ID: <am3ovc$59l$1@slb0.atl.mindspring.net>
Source record: 134576
Cross-posted to: alt.ham-radio.marketplace,rec.radio.amateur.equipment,rec.radio.shortwave,rec.radio.amateur.antenna

If interested, see:

http://cgi.ebay.com/ws/eBayISAPI.dll?ViewItem&item=1381573182&ssPageName=ADM
E:B:LC:US:1

It has not been used in the outside elements/weather and has never been
mounted to anything. The whip antenna is in perfect condition as it has
seen little use. I bought this antenna about three years ago and used it in
the radio room (with the antenna module sitting on the floor) for one month
before putting up a dipole and buying a Kiwa MW Loop antenna. I just tested
the unit with 6 AA batteries and it works perfectly. The unit comes in the
original box and has the original manual.

5136. Re: Copper Wire Stretching?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-16 05:30:29 UTC
From: Bill M <exray@no>
Message-ID: <uoaqvii0rteof7@corp.supernews.com>
Source record: 134577

Richard Harrison wrote:
>
> With guy wires, I`ve actually used a come-along on the guy wire and
> attached a scale between the come-along and guy-anchor. All that`s
> necessary is to see how much tension is required to relieve the
> turnbuckle tension on the anchor.
>
> Best regards, Richard Harrison, KB5WZI

Ditto, and if you have done this more than once you don't really need
the meter.
-BM

5137. Re: safety ground and antenna ground - tie together and connect to A/C ground?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-16 05:30:45 UTC
From: Bill Nelson <billn@spock.peak.org>
Message-ID: <am3qa4$48i$8@quark.scn.rain.com>
Source record: 134578

Mark Keith <nm5k@wt.net> wrote:

> Which code is that? NEC? I've never heard of that one before. If that
> were true , half the plugged in items in a house, washer, driers, etc,

Electric washers and driers - to comply with code, must have an equipment ground. If the outlet is only two conductor, as you often find in older houses, then there must be a bonding wire from the frame of the washer or drier to a legal electrical ground. This if often the cold water pipe next to the washer and drier.

> etc would all be out of code. Here, I use nothing but the nuetral for
> safety grounding. Of course, you have to check to make sure it's
> really grounded. But say in a bathroom with testable sockets for fault
> protection, if what you say is true, those would be illegal. But I see

There are GFI outlets that are designed for 2 wire systems. They do not require the grounding conductor to function well. I installed them in my house, as it has only two prong outlets.

> them installed in new houses, and they seem to pass code. I use the

No new house will have two prong outlets.

> nuetral wire to safety ground my henry amp. Thats what the "3rd"
> ground plug is made for. But I also have no doubts about the

The third prong is for a safety ground. It is not for tying the common and safety ground together to simulate a safety ground.

> integrity of my nuetral ground wire though. I ran the wire myself.
> I've never seen instructions for a coffee maker require a "stand
> alone" ground. In fact, most coffee makers don't even have a ground
> pin on the plug. They don't provide a ground lug either. I know an

Nor do many kitchen appliances. If there are no external metal parts that can be contacted by the user, then the safety ground is not required for most (but not all).

> electric furnace installed , and grounded only by the nuetral wire
> passes inspection in Houston when inspected by the city. "They are
> inspected by the city, but according to state code". This rule is a
> new one on me..I see no problem using a neutral for safety ground.

You are confusing the common conductor with the equipment ground conductor. While both are at ground potential at the distribution panel, they are not interchangeable.

Not all equipment requires an equipment grounding conductor (safety ground) - only those where a person could easily be exposed to an electrical shock due to a mechanical or electrical failure inside the equipment.

There is one major difference between the common conductor (white) and the grounding conductor (green/bare). It is allowable to wire the common conductor at fixtures so that the chain back to the distribution panel is broken. The connections can also be made with wire nuts or other removable connectors.

This is not the case for grounding conductors.

The electrical codes in the US specify that this conductor be contiguous from the furthest fixture on the feeder all the way back to the panel. If you remove a fixture in between, the grounding conductor must remain intact. All branch connections from the feeder grounding conductor must be permanent - which usually means a crimped connection. Wire nuts and other removeable connectors are expressly prohibited.

> It's ground, just like any other one...Just make sure it's actually
> wired right though..Most of the plugs in this house don't even have
> ground pins. It was built in 1959. My henry does only because I ran
> the wire to the box myself. The washer/driers out in the garage also
> have ground pins. Thats about it...When I ran 117v gear that had to be
> grounded, I used a seperate ground because I had no choice. MK

Sometimes, the electrical outlet box is grounded to the equipment grounding (safety ground) bus in the panel. If that is the case, then you can either replace the outlet fixture with a three prong fixture, or you can use an adapter that has a grounding wire that is screwed to the center screw of the outlet fixture.

This is rather sketchy, and possibly poorly worded. Please post a followup if you have any questions.

--
Bill Nelson (billn@peak.org)

5138. Re: Need Hints on tuning fan dipole

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-16 05:41:05 UTC
From: Bill Nelson <billn@spock.peak.org>
Message-ID: <am3qth$48i$9@quark.scn.rain.com>
Source record: 134579

W4WNT <w4wnt@carolina.rr.com> wrote:
> Most of the interaction may come from the antennas being in the same plane.
> Most single fed multidipoles are set 90 degrees apart to minimize this. You
> might try adjusting the wire lengths from the shortest to the longest. When
> you adjust multiband verticals, you start with 10m and then 15m, etc.

There is a reason for adjusting multiband, single mast verticals starting
with the highest frequency band. Think about it. It is the same reason
that you do the same thing with trap dipoles.

--
Bill Nelson (billn@peak.org)

5139. Re: recommended preamp?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-16 05:54:47 UTC
From: Bill Nelson <billn@spock.peak.org>
Message-ID: <am3rn6$48i$10@quark.scn.rain.com>
Source record: 134580
Cross-posted to: alt.ham-radio.mods,rec.radio.amateur.antenna,rec.radio.amateur.boatanchors,rec.radio.amateur.homebrew,rec.radio.amateur.misc

In rec.radio.amateur.antenna AJ Sanderson <ajsand@nospam.com> wrote:
> Actually, I was off on my initial 8-12 dB loss. It is more like 4-6 dB.
> The in-line device is an interference canceller, similar to the MFJ model,
> except home brewed. There is some loss, but I found that the orientation of
> the noise antenna makes a difference in the amount of total loss. It seems
> to work great on computer screen noise, but the power line noise I really
> wanted to eliminate is not even touched. Maybe the noise is too broadbanded
> (when the noise occurs I can hear it on all the Ham bands) . The Icom
> blanker won't eliminate it either, but the noise blanker in an HTX-100 10
> meter rig eliminates it almost completely! I agree with posters that a
> preamp would definitely do more harm than good. However, my immediate goal
> is to get rid of this noise!

The noise eliminator should wipe out power line noise as well - assuming
that the source is close enough that it can be received by your sense
antenna.

If it can, then you must be doing something wrong in adjusting either
your phase or gain of the inverted signal.

--
Bill Nelson (billn@peak.org)

5140. Firberglass pickup cap, ground planes, and multiple antenna proximity

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-16 06:47:25 UTC
From: tad@tadland.net
Message-ID: <f5c5dc88.0209152247.336ecdac@posting.google.com>
Source record: 134581

Howdy!

I wish to install two antennas on my full-size pickup truck fiberglass camper shell. One is a 2m/70cm dual bander at 50w/35w and the other is a CB antenna and standard CB legal maximum. My questions are:

1) Can I make a good enough ground plane by making radials out of wire attached to the inside roof of the cap, or should I just get a large metal sheet and attach it on the underside of the roof?

2) How far apart do these antennas need to be if I plan on operating them both at the same time?

Thanks for any help,

Tad

5141. Re: recommended preamp?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-16 08:07:13 UTC
From: AJ Sanderson <ajsand@nospam.com>
Message-ID: <am43fb$es2$1@slb0.atl.mindspring.net>
Source record: 134582
Cross-posted to: alt.ham-radio.mods,rec.radio.amateur.antenna,rec.radio.amateur.boatanchors,rec.radio.amateur.homebrew,rec.radio.amateur.misc

>
> The noise eliminator should wipe out power line noise as well - assuming
> that the source is close enough that it can be received by your sense
> antenna.

I can eliminate computer and monitor noise completely, but it won't touch the power line noise. Of course, I've only been using a 5 foot piece of wire as the cancelling antenna. Perhaps if I went with a larger antenna, I might get results but then I don't want to start cancelling the signals I want to receive.

> If it can't, then you must be doing something wrong in adjusting either
> your phase or gain of the inverted signal.

The power line noise is apparently some distance away because no adjustment will affect it.

AJ

>
> --
> Bill Nelson (billn@peak.org)
>

5142. Re: Hamsticks-Any parts that can go "poof"??

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-16 08:45:32 UTC
From: 'Doc <w5lz@icok.net>
Message-ID: <3D859A26.7BA4A930@icok.net>
Source record: 134583

Mike,
There are no capacitors, etc. on a 'Hamstick'. You might
check to see if the conductor is still making good contact
at the base ferrel(?), about the only mechanical area except
for the 'stinger' getting inside the coil at the top. Tilting
the antennas at a 45 degree angle will definitely mean retuning
the antennas. If/when you do, rememeber that the 'stinger' can
NOT belowered too far. If it extends down enough to get into
the coil of the antenna, you have to cut the 'stinger' off. It
sounds like that may be what's happening...
'Doc

5143. Mixed Blessing

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-16 10:21:47 UTC
From: "Copper.net" <davidw@copper.net>
Message-ID: <3hih9.643$r63.118752@newsfeed.slurp.net>
Source record: 134584

Hi, all concerned:

Thank you for the responses, public and private. It appears that the electric fence may be one of those incidental-radiation devices, and thus "require" the owner's cooperation in my attempts to quiet it down a bit.

The tips given include rounding corners of the pulse, making sure insulators, grounding and wiring are good, cutting away foliage that could touch the conductors, and poisoning the horses -- no, just kidding on that last one ;o)

Thanx v.m. again.

73, Dave, N3HE

5144. Re: Varicaps in rx atu's

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-16 12:03:36 UTC
From: wave_spy@yahoo.co.uk
Message-ID: <e72fe60.0209160403.60fba47a@posting.google.com>
Source record: 134585

At the time yes, but not all posts arrive on all servers at the same time
remember :-)

> you haven't read the entire thread then.
>
> 73's
> Richard Clark, KB7QHC

5145. Re: NEC questions.

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-16 12:16:28 UTC
From: wave_spy@yahoo.co.uk
Message-ID: <e72fe60.0209160416.16072e16@posting.google.com>
Source record: 134586

Dan Richardson <k6mhe@mendolink.com> wrote in message
news:<aa91ou8d2l394astigngeipp69qlo9s9hu@4ax.com>...

> >
> I think you are complying about using a professional level program
> when you prefer a more entry level.

I beg to differ, there is nothing professional about making what could be an
easy job a hard one.

What is *professional* about taking for ever making up "cards" for NEC when
another program allows you to "draw" the antenna ?

I actually tried to use it again over the weekend and found once again
it a real pain to use.

I shall have a look at some of the other stuff you mention, that looks interesting.

> Any program no matter how *nice* the user interface may be is of
> little use if the results it provides are inferior.
>
Very true, but as of yet nothing has been proved to inferior in its results.

My prefered sofware produced realistic results with in my opinion a superior
interface, nothing wrong in that.

Regards...

5146. Re: New Rig, Need some input from the experts :)

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-16 13:27:47 UTC
From: hasan schiers <schiers@netins.net>
Message-ID: <am4m8l$2hm2t$1@ID-52642.news.dfncis.de>
Source record: 134587

Hmmmm...that's interesting Mark. I have had no HF image problems with the FT-847 at all. It's clean as a whistle. As far as being a cloud warmer, I don't see how that could possibly happen. The take-off-angle of a horizontally polarized antenna is primarily a function of height above ground, not the length of the antenna. This does fall apart considerably when you use an inverted vee, however. This is a VERY important point. Once you "invert vee" a long center fed dipole, you WILL generate all sorts of high angle lobes. If kept flat, the antenna has the same take off angle(s) as predicted by the equation below. Subtitute 2, 4, 6, 8 etc for the first null, and 3, 5, 7, 9 etc. for the 2nd lobe, 3rd lobe etc.

Your experience with the 80m dipole on 10m makes sense if it was put up as an inverted vee. If it was up in a flat-top configuration, then it should have performed quite nicely on 10m at relatively low angles. I experienced the same thing myself when I first tried multi-banding a balanced feed, 135' inverted vee. It stunk on many of the higher bands. I couldn't figure out what was going on. I modeled it and it looked terrible on the higher bands. Where was all that gain going? AHA! I looked at 45 degree elevation and whoa! Lots of gain. I then took out the "V" and made it a flat top. 45 degree elevation lobe disappears, all the gain is concentrated at the low angle lobes as it should be and as described in the equation below. Lesson learned: if you are going to get good performance at low take off angles on a "long" dipole, you better keep it flat.

This is one of the problems with the "all-band" 135' balanced center feed antennas that people seem to love. If you don't put them up as flat-tops, their performance on the higher bands at low angles is dismal.

TOA= arcsin(1/(4*h)) for the first lobe, where h=height in wavelengths above ground. (flat tops/yagis/logs/quads etc) not for inverted vees)

I modeled my 40m inverted vee on 6m and found it to be pretty much what I expected. A flat top is always better when being operated well above half-wave resonanace. An inverted vee will warm the clouds as well as radiate reasonably at low angles, in some selected directions, however. The flat-top is always better in maintaining low angles when being used well above it's fundamental freq.

On 6m, the 40m antenna has lots of lobes and nulls, 4 to 7 dB gain in the lower angle lobes (at selected azimuths, of course) and considerable gain at some high angles in some directions. It is impossible to describe accurately in words, but what you get is several lobes in the vertical plane, as well as several nulls, each associated with a particular azimuth. That's the nature of "long wires", and the extra high angle lobes are a function of using an inverted vee configuration as opposed to a flat-top.

In short, for no additional work, you have another band on which the antenna will work nicely in many directions and elevation angles and not so nicely in others. I have had no intermod/image/overload problems whatever on my FT-847 with this antenna, nor did I experience anything like that on my TS-870s when I was using the 90' center fed flat top on 6m . I LOVED that 20m extended double zepp on 6m. If I heard them, I worked them, period. Of course, if they were in one of the deep nulls, I didn't hear them <g>.

I'm not suggesting this as a cure-all, but as an acceptable compromise antenna if you don't want another feedline and already have a 40m dipole up. Surely a 6m dipole up in the trees or hung off anything 20' or so above ground will be a better choice.

All my comments about the 40m dipole are purely speculation when it comes to making contacts. The 20m Extended double zepp was proven on the air. The 40m inverted vee has yet to make a contact...I just was goofing around and discovered the nice match it presented and proceeded to do the modeling afterwards. The model confirms what I was expecting and what I got from the 20m EDZ. Good match, lots of lobes and nulls in both direction and elevation. It should make many contacts possible for no additional investment in time and money.

If there is one thing that I think is most important for those who are going to play with long center fed wires, it is DON'T USE AN INVERTED VEE CONFIGURATION, unless you don't care about low angle performance.

Now, we need 6 to open up!

73, and thanks for your comments.

...hasan, N0AN

"Mark Keith" <nm5k@wt.net> wrote in message
news:25eb70d7.0209150819.26f568b3@posting.google.com...
> "hasan schiers" <schiers@netins.net> wrote in message
news:<alvcse$1eeee$1@ID-52642.news.dfncis.de>...
> > A coax fed 40m dipole also presents a decent load on 6m for me. That
would
> > make it 7 half-waves on 6m (7*7.2=50.4 mhz). I have used HF dipoles on
6m
> > many times and find they work remarkably well. Of course, you have lots
of
> > lobes and nulls, but that is the price of convenience. I'm using mine on
an
> > FT-847 and VSWR < 1.5:1 at 50.125 and under 2.5:1 over most of the 6m
band.
> > It was a nice find. During E-season it works extremely well, (as will
any
> > antenna that presents a decent load to the transmitter) and I worked
plenty
> > of DX with my 90' long extended double zepp for 20m on 6m. (This antenna
was
> > fed with shielded balanced line and a tuner, so don't try using it

without a
> > tuner, use the 40m dipole example below)
>
> I'd be wary though. I'm surprised you don't have image problems from
> HF bands, using the large HF antenna. I first did this when I got a
> 706g, and the HF image problem was quite bad on 6m. Even at night!
> When I went to a 6m only antenna, the performance was much better.
> When I went to a yagi, it totally cleaned it up. I'd be wary if he's
> using a ft-100. He "might" have this problem also. I don't know if the
> yaesu's have this problem or not. The 706 sure did.
> Also, I think a regular 6m dipole would outperform the 40m dipole in
> general.
> I'm guessing the 40m antenna could have the potential to be a cloud
> warmer on 6m. Much the same way as I noticed an 80m dipole on 10m is a
> cloud warmer. It was really bad performance. Wasn't really expecting
> that until I tried it out camping one time. Anyway, maybe the yeasu is
> better in that regard, but speaking for the ic-706mk2g, using a large
> HF dipole for 6m use, is a big mistake. Trash city...MK

5147. Re: Hamsticks-Any parts that can go "poof"??

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-16 13:28:42 UTC
From: DipoleDude@webtv.net
Message-ID: <3720-3D85DC8A-512@storefull-2351.public.lawson.webtv.net>
Source record: 134588

Good point, Doc. I do have some shorter "stingers" (I haven't heard this nickname for them...) that may give me an idea as to if they are too long.
Again, I put them back to where they were...wire brushed the paint off to make even better contact...they are now totally vertical once again...and the problem STILL exists.
Almost reminds me of the time I fried the pi-network coil in an old DX-60A after forgetting to put the antenna on the back. (I was only 13. And I bet some of you guys STILL forget to put the oil pan bolt back in and dump five quarts on the ground...)The meter was flat on every band. No matter how you tuned it, it remained exactly the same.

Mike

5148. Re: Hamsticks-Any parts that can go "poof"??

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-16 13:30:27 UTC
From: DipoleDude@webtv.net
Message-ID: <3721-3D85DCF3-227@storefull-2351.public.lawson.webtv.net>
Source record: 134589

Good point, Doc. I do have some shorter "stingers" (I haven't heard this nickname for them...) that may give me an idea as to if they are too long.
Again, I put them back to where they were...wire brushed the paint off to make even better contact...they are now totally vertical once again...and the problem STILL exists.
Almost reminds me of the time I fried the pi-network coil in an old DX-60A after forgetting to put the antenna on the back. (I was only 13. And I bet some of you guys STILL forget to put the oil pan bolt back in and dump five quarts on the ground...)The meter was flat on every band. No matter how you tuned it, it remained exactly the same.

Mike

5149. Re: NEC questions.

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-16 13:37:54 UTC
From: Dan Richardson <k6mhe@mendolink.com>
Message-ID: <mumbougngapiqmibnfvmqecv0th2ne7is1@4ax.com>
Source record: 134590

On 16 Sep 2002 05:16:28 -0700, wave_spy@yahoo.co.uk (Me) wrote:

>
>I beg to differ, there is nothing professional about making what could be an
>easy job a hard one.
>
>What is *professional* about taking for ever making up "cards" for NEC when
>another program allows you to "draw" the antenna ?

Beause there are many NEC commands that can not be drawn. The program
you are complaining about was designed for professionals who wish to
have the ability to use *all* the NEC commands without being concerned
about the somewhat cyrptic FORTRAN formnatting required.
[snip]
>
>> Any program no matter how *nice* the user interface may be is of
>> little use if the results it provides are inferior.
>>
>Very true, but as of yet nothing has been proved to inferior in its results.

MININEC's limitations are well known. As long as you do not exceed
then the results will be satisfactory.

>
>My prefered sofware produced realistic results with in my opinion a superior
>interface, nothing wrong in that.
>
I've ran the program you've fallen in love with and find it
substanually limited comparied to programs like EZNEC or NEC-Win
Plus+, but if you're happy with it fine.

sk

Danny

5150. It Works!

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-16 14:18:04 UTC
From: Les & Claire <les.claire@virginSPAMBLOCK.net>
Message-ID: <VKlh9.2039$V43.95388@newsfep1-win.server.ntli.net>
Source record: 134591

I live in the WORST place for this hobby, second floor flat, victorian back to back housing all round to three stories, no view of the horizon. Spent ages fiddling with broomstick ant, tried radials on it for ground plane... all to no avail. Today got sick of it all, ran a wire out of the window to neighbours washing line, 90 degrees left to next washing line, folded back on itself to return to insulator tied to bootlace from window... and it works!!! just waiting for the daytime "mush" to evaporate,,, just goes to show, the old adage still holds! K.I.S.S. (Keep it Simple Stupid!)

MVT 7100
Howes CTU 30
Longwire (folded L?)

Les

5151. Re: 9/12/02 ANTIKEYCLOWNS STILL OWN THE NG

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-16 14:43:26 UTC
From: Landshark
Message-ID: <i6mh9.1377$cs5.59615513@newssvr13.news.prodigy.com>
Source record: 134592
Cross-posted to: rec.radio.cb,rec.radio.amateur.antenna,rec.radio.amateur.boatanchors,rec.radio.amateur.policy

"Brainbuster" <brainbuster@lineone.spamtrap.net> wrote in message
news:am333ktgf4@news5.svr.pol.co.uk...
> "Bill Mast" <Bmast@netmail.com> wrote in message
> news:3d82fe06.99841003@news.easynews.com...
> > On 12 Sep 2002 09:03:34 -0700, bookooaddys@yahoo.com (Keyclown
> > Busters) wrote:
> >
> > >And no one here can stop it.
> > >
> > >ESPECIALLY a booze and dope soaked nwa wanna be high school dropout
> > >whose parents kicked him out because he is a useless doper parasite,
> > >and who fantasizes about pimping hoes as the highest point on the
> > >economic ladder he can achieve.
> > >
> > >ALSO: Crackheads, rednecks, bowl weenies, truckstop trannies, and all
> > >the other slimes that comprise keyclownism.
> > >NONE OF YOU CAN STOP THE ANTIKEYCLOWNS!!!
> >
> > Own What? Whats a keyclown?
>
> Anyone the newsgroup trolls disagree with.
>
> They will argue that it is an "illegal CBer", but they attach the label
> quite freely to anyone who disagrees with their antisocial tactics within
a
> newsgroup.
> LEGAL CBers and radio Amateurs have often been given the label "keyclown".
>
> You will notice that the post makes accusations of pimping and drug use,
and
> is nothing more than a string of insults hurled at anyone who will take
the
> time to read it.
> Some "antikeyclowns" have even been caught promoting illegal activity
> themselves, which leads me to believe that their whole "pro-legal" stance
> is fake, they just want to cause arguments on newsgroups. One of them has
> made several attempts to spread the anger to a UK group, but has just been
> blocked by most of the users.
>
>
> Regards,
>
> Peter.

>
>

Well Brain since you have only been around for a
short while I'll fill you in. The "Keyclownbuster" is a
Ham named Doug Adair N8WWM. He was flooding
the newsgroup a year or so back on a daily basis with
the same foul language accusation and insults. He has
lost his AOL account, Concentric, UUnet now he's
working on another one.
Now what I find strange is, that Doug and a couple
of others are ham operators, now just because they are
hams doesn't mean that they are morally right, but they
wouldn't and couldn't talk like this on the ham bands, let
alone on the cb or for that fact in person.

Landshark

--
Try sending your complaints to these concerning
Keyclownbusters (bookooaddys@yahoo.com IE:
Doug Adair N8WWM):

help@uu.net

abuse-mail@wcom.com

netadmin@ao.wcom.net

groups-abuse@google.com

abuse@yahoo.com

Consumer Affairs
WorldCom
1200 South Hayes Street, 11th fl
Arlington, VA 22202
800-695-4405

5152. Follow-up Disk Skin Effect Experiment

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-16 15:05:50 UTC
From: rsparks <rsparks@elltel.net>
Message-ID: <3d85ef54_2@corp.newsgroups.com>
Source record: 134593

This posting presents a report on "The Closed Loop Disk Skin Effect Experiment".

This is a skin effect experiment to confirm the results of the "Impenetrable Metal Plate
Experiment". The original experiment was reported at

http://www.televar.com/~rsparks/public_html/Disk_Experiment.htm

It was extensively discussed on the rec.radio.amateur.antenna newsgroup under the subject "Skin
effect experiment with disk on antenna".

The experiment reported here is a follow-up from the earlier experiment and incorporates changes
and suggestions following from the discussion. Neither of the two experiments detected any
shielding from the skin effect phenomena.

Why bother with an experiment?

Many of the newsgroup respondents are convinced that metals are a shield to electromagnetic
fields only because of "skin effect". Skin effect is the tendency for current flowing parallel to
conductor surface to flow mostly near the surface of the conductor, a tendency which increases
with frequency. Skin effect is well supported with a mathematics explanation
and experimental
measurements as the cause of increased resistance at higher frequencies in conductors, especially
feed lines.

A question arises when skin effect is cited as the reason that conductors can be used as a shield,
or when skin effect is described as being so effective in separating the surfaces of a conductor as
to make possible inside and outside currents on a coaxial cable shield. This experiment is
designed to test if skin effect can be detected when the applied voltage is normal to the surface of
the conductor. In other words, will a voltage applied to two sides of a flat conductor drive a
current directly through the conductor, or will the current be forced to flow around the edges of

the conductor because skin effect will prevent a direct path?

The Experiment described.

It was reasonable to assume that two identical circuits except for the presence or not of a test
disk, would compare the effects of the disk. Therefore the properties of the disk could be learned
by subtracting the properties of the circuit without the disk.

One 12 inch diameter copper disk previously used in the original experiment was used as the test
plate. The thickness of plate was 0.062 inches, about 10 times thicker than the shielding wire
used in RG-58 coaxial cable. In series with the disk was placed two 100 ohm resistors in parallel
to give a 50 ohm resistance. 24 inch leads were attached to the disk and resistor on each side,
and were brought out normal to the plate, then curved back on each side to form a circle which
connected to 3 1/2 inch leads from the test meter. The test meter was the Autek Model VA-1 RF
Vector Analyst.

The circuit was laid on a 1/2 inch thick piece of laminated press board. The path of the wires was
traced onto the board to aid in keeping the circuit wire lengths the same both with and without
the disk present. The disk was supported vertically in a slot cut in the board . The test board
was supported on a cardboard box to minimize nearby couplings. A picture of the test setup is
included with the complete report which can be found at
http://www.televar.com/~rsparks/Follow-up_Disk_Experiment.htm.

Improvements over the first experiment

1. Only one disk is used so capacity between disk is not a issue.

2. The circuit is a closed loop whereas the original experiment was an open circuit dipole which
is much more subject to external influences.

3 Direct measurements are used whereas the original experiment compared resonant points.

4. The disk is at the lowest voltage, highest current location on the loop to better balance capacity
to the loop elements.

5. The experiment is much easier to duplicate.

Results
No Disk With Disk

Frequency R X R X
MHz Ohms Ohms Ohms Ohms
1 49 -7 49 -7
2 57 18 58 18

5 49 49 49 49
10 50 97 50 96

15 57 138 56 136
20 43 199 43 199

25 77 259 77 256
30 78 282 79 279

Conclusion

Within the limits of accuracy of the meter, the two circuits tested as being identical. If skin effect
shielding were occurring, it would have forced the current into a longer current path which
would have been detectable as increased resistance and increased positive reactance, making the
impedance of the two circuit versions unequal. Without some indication of difference between
the circuit with the disk and the circuit without the disk, the conclusion must be reached that skin
effect shielding does not occur for the thickness of disk material and frequency range tested.

Comments

Comments are welcome, either by E-mail to rsparks@televar.com or by posting to this newsgroup subject.

73, Roger, W7WKB

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

5153. Re: Copper Wire Stretching?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-16 15:41:00 UTC
From: kelly@dvol.com
Message-ID: <d22b54c3.0209160741.5840d1d3@posting.google.com>
Source record: 134594

richardharrison@webtv.net (Richard Harrison) wrote in message news:<9966-3D84D747-263@storefull-2315.public.lawson.webtv.net>...
> Brian Kelly wrote:
> "It goes further, there is also the problem of fatigue . . . And
> advertised "tensile strengths" don`t mean much because by the time you
> actually pop a wire it`s already well past it`s yield point and
> considerably permanently stretched."
>
> That`s a little pessimistic.

'Druther be both pessimistic and suspicious when it comes to hanging wire, beats having to do it over. Especially in the middle of a hot run a 2AM in a dx contest in the middle of February with ten inches of snow on the ground and more enroute . . Been there . . Done that . .

> Fatigue only occurs when stress reaches a particular point. The practice
> is to keep stress below the point where a wire might suffer fatigue.
> Below this stress, a metal can be flexed an infinite number of times
> without fatigue.

You're on the right track but there are stresses and then there are stresses. There is a big difference between the effects of the static stress one imposes on a wire when it's suspended in, for instance, still air. But then the wind whips up and the wire gets into aerodynamically-induced vibrations and now the wire is under cyclic stresses on top of the static stresses. All hell can break loose if the total of the two stresses exceeds the specific endurance limit stress of the wire material(s) given enough cycles. The problem with this finding out what that endurance limit stress is for a specific wire. You can't do that unless ya know exactly what the material is by the numbers and can look up it's endurarance limit in the materials handbooks. If it happens to be published somewhere.

> Advertised tensile strengths are likewise not the design loads. These
> loads must not exceed the yield point because permanent stretch is
> usually undesirable.
>
> As a matter of fact, tensile strength does not greatly exceed yield
> strength. This is because once the point is reached at which the
> material gives, it doesn`t take much more force to stretch the material
> on out and break it.

I don't agree with that as a generalized statement. It's a huge variable when it comes to all the different types of wire used to make antennas plus it's a function of the particular ductility of the material and in the case of stranded wires also the lay. Which is to

say that in some cases with very ductile materials & constructions like fully annealed stranded rope-laid copper wire the delta loads between the Yp and the break stress can be very significant, i.e., ya can get a helluva lot of permanent strain between the 2% offset point and the "pop point". But given a cold-worked steel wire like Copperweld yes, the Yp and the Ut loads can be very close to each other.

One can "engineer" all of into oblivion, it's almost as much fun as "engineering" baluns the only difference being the engineering disciplines involved. Me I call Pres the Wireman, ask him what the rated break strength of the wire is and try to keep the load below 1/5 the rated break strength. Ain't failed me yet.

>
> Best regards, Richard Harrison, KB5WZI

w3rv

5154. Re: Disposable Mobile HF Antenna??

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-16 16:36:55 UTC
From: K7JEB <k7jeb@arrl.no_spam.net>
Message-ID: <HMnh9.32959$jG2.2409357@bgtnsc05-news.ops.worldnet.att.net>
Source record: 134595

Ed Bailen, n5kzw, posts:

> Apparently, my reckless (unfortunately, not wreckless) driving style
> and the trees on the ranch are just not compatible with HF antennae.
> I'm thinking of coming up with some sort of Hamstick-like antenna
> wound on a broomstick, with top and bottom connections made of copper
> pipe sections.

Might I suggest a base-loaded, 8-ft whip? Not
"optimum" from a radiation efficiency point of
view on 75 meters, but quite adequate there.
And the efficiency improves remarkably on 40
and above. I use one on my 4WD pickup that
regularly does battle with the palo verde trees
here on the Arizona back roads and trails.

The base-loading coil I use is the 6"
Texas Bugcatcher from Henry Allen in
Caddo Mills, TX. I also use his small
6" extension between the spring and
the coil to lift the coil away from
my pickup's metal fender.

You will definitely want to use a sturdy
base spring. I have had good luck with
the heavy-duty model from:

http://www.cal-av.com/springs.html

You may also want to stock up on 9-ft whips
at your local CB shop. That's the "expendable"
part of the system, although they are pretty
tough and can be straightened-out (kinda)
after a close encounter.

--
Jim Bromley, K7JEB k7jeb@arrl.net
Glendale, Arizona

5155. Re: safety ground and antenna ground - tie together and connect to A/C ground?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-16 16:43:16 UTC
From: nm5k@wt.net
Message-ID: <25eb70d7.0209160843.43af45a7@posting.google.com>
Source record: 134596

Bill Nelson <billn@spock.peak.org> wrote in message
news:<am3qa4$48i$8@quark.scn.rain.com>...
> Mark Keith <nm5k@wt.net> wrote:
>
> > Which code is that? NEC? I've never heard of that one before. If that
> > were true , half the plugged in items in a house, washer, driers, etc,
>
> Electric washers and driers - to comply with code, must have an equipment
> ground. If the outlet is only two conductor, as you often find in older
> houses, then there must be a bonding wire from the frame of the washer or
> drier to a legal electrical ground. This if often the cold water pipe
> next to the washer and drier.

Ours are 3 conductor. The way I understood his post, this would not
pass code, but I think I see what he's getting at now.

>
> > them installed in new houses, and they seem to pass code. I use the
>
> No new house will have two prong outlets.

Nope...

>
> > nuetral wire to safety ground my henry amp. Thats what the "3rd"
> > ground plug is made for. But I also have no doubts about the
>
> The third prong is for a safety ground. It is not for tying the common
> and safety ground together to simulate a safety ground.

It's 240 volts.
>
> > integrity of my nuetral ground wire though. I ran the wire myself.
> > I've never seen instructions for a coffee maker require a "stand
> > alone" ground. In fact, most coffee makers don't even have a ground
> > pin on the plug. They don't provide a ground lug either. I know an
>
> Nor do many kitchen appliances. If there are no external metal parts
> that can be contacted by the user, then the safety ground is not
> required for most (but not all).
>
> > electric furnace installed , and grounded only by the nuetral wire
> > passes inspection in Houston when inspected by the city. "They are
> > inspected by the city, but according to state code". This rule is a

> > new one on me..I see no problem using a neutral for safety ground.
>
> You are confusing the common conductor with the equipment ground
> conductor. While both are at ground potential at the distribution
> panel, they are not interchangeable.

But again , I'm talking 240 volts. But I think I see what he means now. I think he's referring mainly to 120 volts. And using the nuetral as a safety ground. I don't do that, although they both ground to the same place in the breaker box. I'm thinking more in terms of using the nuetral for safety ground in a 240 volt line. I'd never heard of any problems doing that. MK

5156. Re: Hamsticks-Any parts that can go "poof"??

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-16 16:54:40 UTC
From: nm5k@wt.net
Message-ID: <25eb70d7.0209160854.170c5bfb@posting.google.com>
Source record: 134597

Howard <mensch90249@yahoo.com> wrote in message
news:<b0maou0i4u0j6usmebep3i1feol4tjsnpi@4ax.com>...
> Mike,
> When I got a Hamstick there was a caution note about installing the
> stinger: it mentioned to be careful not to damage the wire that
> transitions from the coil to the fitting that holds the stinger.
> Perhaps at some point in handling the antenna's this got damaged -
> though it seems unlikely to happen in both and at the same time. Do
> you have any friends with the same Hamsticks so you could put those
> in your mount and check them out?

This sort of sounds like it could be the problem. I'm wondering how both could break at the same time also. Maybe they have been broke a while, and he just didn't notice it until now? It would be easy to check. Just ohm out the antenna from the base to the stinger connection. Burning up the winding itself is not very likely. If it's not that, sound like a bad coax connector somewhere. But that could be easily checked also. MK

5157. Re: safety ground and antenna ground - tie together and connect to A/C ground?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-16 17:34:01 UTC
From: Gene Fuller <W4SZzzzzz@att.net>
Message-ID: <3D861624.614FC375@att.net>
Source record: 134598

Mark,

A long time quirk in the NEC allows 240 volt electric dryers, electric ranges, electric cooktops, and wall-mounted ovens to be connected in the manner you outline below. This is no longer permitted for new installations, but it is expressly grandfathered for existing installations.

No other household equipment can be installed in a manner that connects the safety grounding conductor (green or bare) to the neutral grounded conductor (white) at the equipment. This means that linear amps, large power tools, and so on generally cannot be installed without a separate grounding conductor.

The NEC is about a thousand pages long, so there are a zillion exceptions and special cases. For most household purposes, however, the grounding conductors and the grounded conductors are connected only at the breaker box.

Historically, local codes have been all over the place. I think most municipalities have now adopted the NEC as the basis for local codes.

73,
Gene Fuller

Mark Keith wrote:
>
[snip]
> But again , I'm talking 240 volts. But I think I see what he means
> now. I think he's referring mainly to 120 volts. And using the nuetral
> as a safety ground. I don't do that, although they both ground to the
> same place in the breaker box. I'm thinking more in terms of using the
> nuetral for safety ground in a 240 volt line. I'd never heard of any
> problems doing that. MK

5158. Re: Hamsticks-Any parts that can go "poof"??

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-16 17:37:55 UTC
From: 'Doc <w5lz@icok.net>
Message-ID: <3D8616EC.DBEAE55A@icok.net>
Source record: 134599

Mike,
Since things never seem to change, I'd try a different
meter just for 'grins'. Also, you might check to make sure
that connections to the antenna are really good. You should
see a difference by just standing close to the antenna, it
shouldn't stay the same all the time.
'Doc

5159. Re: Want a Good Tuner??

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-16 17:57:59 UTC
From: JC <jacques.culot@skynet.be>
Message-ID: <3d861baa$0$201$ba620e4c@news.skynet.be>
Source record: 134600

Sorry to tell that attenuation on 160m due to high SWR on parallel lines or even coax (using an antenna tuner between transmitter and line of course) is close to peanuts. Putting the tuner at the antenna isn't worth. Just have a look at "Reflections (I or II)" written by W2DU.

73, de ON5MJ.

5160. Re: Follow-up Disk Skin Effect Experiment

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-16 18:13:27 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <e20couosqmeusimtbrssllvmd9rdaronjp@4ax.com>
Source record: 134601

On Mon, 16 Sep 2002 08:05:50 -0700, "rsparks" <rsparks@elltel.net>
wrote:

> A picture of
>the test setup is
>included with the complete report which can be found at
>http://www.televar.com/~rsparks/Follow-up_Disk_Experiment.htm.

Well, actually not.

>
>Improvements over the first experiment
>
>1. Only one disk is used so capacity between disk is not a issue.

Why is it so difficult to simply add a small physical capacitor to the
standard dipole to test your assertion - or is going there a challenge
to maintaining your theory?

>
>2. The circuit is a closed loop whereas the original experiment was an open
>circuit dipole which
>is much more subject to external influences.

Absurd by half. You are awash in the large wavelength components of
the experiment, you cannot escape that simple consideration. Whether
of not this is meaningful is not examined by you and constitutes a
standard blindside of taking data. I will take care of this for you.

>
>3 Direct measurements are used whereas the original experiment compared
>resonant points.

A non-sequitar, meaning nothing. For instance, how did you get the
original resonant points without direct measurement - using a ouija
board?

>
>4. The disk is at the lowest voltage, highest current location on the loop
>to better balance capacity
>to the loop elements.

A non-sequitar, meaning nothing. There is no relationship between the
magnitude of the current and balance - except as a function of poor
design. This suggests you are comparing a broken premise with science
and finding the broken premise supports your theory - it's still
broken any way you look at it.

>
>5. The experiment is much easier to duplicate.

It seems all of these improvements are for your ease rather than for accuracy. As none of these enumerated benefits actually change anything, they are a zero-sum gain. AND, as will be revealed, they did nothing to advance your theory one jot.

As far as accuracy goes, you simply accept the manufacturer's specification as gospel without examining it (which I will do following). This is "faith based" science....

Interleaved with your data is a simple EZNEC model of the same physical model (unfortunately employing a square loop, meaning it is somewhat larger, but not significantly so as the numbers reveal):

>
>Results
> No Disk With Disk
>
>Frequency R X R X
>MHz Ohms Ohms Ohms Ohms
>1 49 -7 49 -7
Impedance = 51.2 + J 8.217 ohms Impedance = 51.39 + J 8.321 ohms

>2 57 18 58 18
Impedance = 51.27 + J 16.32 ohms Impedance = 51.45 + J 16.58 ohms
>
>5 49 49 49 49
Impedance = 51.25 + J 38.72 ohms Impedance = 51.65 + J 41.32 ohms
>10 50 97 50 96
Impedance = 57.31 + J 80.86 ohms Impedance = 52.06 + J 82.57 ohms
>
>15 57 138 56 136
Impedance = 58.2 + J 121.7 ohms Impedance = 52.64 + J 124.1 ohms
>20 43 199 43 199
Impedance = 59.42 + J 163.3 ohms Impedance = 53.41 + J 166 ohms
>
>25 77 259 77 256
Impedance = 61 + J 205.8 ohms Impedance = 54.38 + J 208.4 ohms
>30 78 282 79 279
Impedance = 62.99 + J 249.5 ohms Impedance = 55.58 + J 251.6 ohms

>
>
>Conclusion

Well, we will skip your revisionism as the two sets of data support each other AND conventional physics that includes the skin effect. Your assertion that there "should" be a difference is revealed to be a flawed logic.
>

Hi Roger,

The comparison of the size of the disk to the wavelength (even at 10M) is overwhelmingly insignificant. There is no way on god's green earth that you can escape this at these huge wavelengths. 2M would be far more productive as the LOWER frequency limit for the size disk you offer. Translation: you haven't even come close to starting.

You still need to do something different. Here, you haven't really, you've merely shuffled the same broken premise into a new presentation that obviously stands with convention in glaring contrast to your assertions.

73's
Richard Clark, KB7QHC

5161. Re: Want a Good Tuner??

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-16 18:20:07 UTC
From: StarGazer <pti@capnet.com>
Message-ID: <3D8620D7.BC2BA92E@capnet.com>
Source record: 134604

Why is 5/16 wavelength such a magically length?

What is a doorknob cap and where do I get one?

thanks

CAM wrote:

> StarGazer wrote:
> > I want to get a second tuner dedicated for my 160 m inv-L.
> > Just want to dedicate one tuner for 160 m and get another
> > for the rest of the bands.
>
> Make your inverted-L 5/16 wavelength and use a single series
> cap. A doorknob cap would be a good choice.
> --
> cheers, CAM http://www.qsl.net/w5dxp
>
> -----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
> http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
> -----== Over 80,000 Newsgroups - 16 Different Servers! =-----

5162. Re: safety ground and antenna ground - tie together and connect to A/C ground?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-16 18:25:14 UTC
From: dplatt@radagast.org
Message-ID: <uoc8ga9jlpalb1@corp.supernews.com>
Source record: 134602

>Which code is that? NEC? I've never heard of that one before.

Yup. I think you'll find that NEC specifically forbids connecting the chassis ground to the neutral wire.

> If that
>were true , half the plugged in items in a house, washer, driers, etc,
>etc would all be out of code. Here, I use nothing but the nuetral for
>safety grounding. Of course, you have to check to make sure it's
>really grounded. But say in a bathroom with testable sockets for fault
>protection, if what you say is true, those would be illegal. But I see
>them installed in new houses, and they seem to pass code. I use the
>nuetral wire to safety ground my henry amp. Thats what the "3rd"
>ground plug is made for. But I also have no doubts about the
>integrity of my nuetral ground wire though. I ran the wire myself.
>I've never seen instructions for a coffee maker require a "stand
>alone" ground. In fact, most coffee makers don't even have a ground
>pin on the plug. They don't provide a ground lug either.

Right. These appliances are probably similar (construction- and code-wise) to "double insulated" electric hand tools. Quite simply, they aren't grounded - the chassis "floats" at a high impedance.

> I know an
>electric furnace installed , and grounded only by the nuetral wire
>passes inspection in Houston when inspected by the city.

I find that surprising, if by "grounded" you mean that the neutral is actually tied to the furnace chassis.

> "They are
>inspected by the city, but according to state code". This rule is a
>new one on me..I see no problem using a neutral for safety ground.
>It's ground, just like any other one...

The problems are two-fold.

First, is the catastrophic problem you've referred to - a hot/neutral reversal. If the two wires are switched in the wall wiring somewhere, the wall-outlet "neutral" pin jumps up to 120 volts above ground. If you've "grounded" the equipment chassis to the neutral wire in its power cord, the equipment chassis becomes "hot". You risk lethal shock (if you touch the chassis at the same time you touch anything which is truly grounded), fire (if you interconnect this equipment with anything else which is grounded), etc.

The other problem is that neutral is _not_ ground, much of the time. The neutral pin/wire is at ground potential _only_ when no current is being drawn through the circuit. As soon as you start pulling current (through the "grounded" appliance, or through anything else on the same circuit), I/R voltage drop in the wiring "pulls" the neutral up above ground, by as much as several volts. This will cause a voltage differential to appear between the neutral-"grounded" equipment's chassis, and any "real" ground nearby. If the equipment is connected to any other grounded device, a current will flow through this connection... in effect, turning this additional connection into the neutral-return part of the house wiring.

It takes surprisingly little current through the human body to create a risk of dangerous shock. If you were to be touching a neutral-grounded appliance, and a "real" ground at the same time, and somebody turned on a big motor or electric space-heater on the same circuit, you could end up feeling a distinct shock... and it's even possible that the initial inrush surge would create enough of a shock to trigger cardiac fibrillation, if the current happened to flow through your torso.

--
Dave Platt <dplatt@radagast.org> AE6EO
Hosting the Jade Warrior home page: http://www.radagast.org/jade-warrior
I do _not_ wish to receive unsolicited commercial email, and I will boycott any company which has the gall to send me such ads!

5163. Re: It Works!

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-16 18:55:59 UTC
From: Reg Edwards <g4fgq.regp@btinternet.com>
Message-ID: <am59fu$n8o$1@paris.btinternet.com>
Source record: 134603

Glad to here the good news. You might find it even better if you don't
double back. (Unless you are using it as a loop).
--
==========
Regards from Reg G4FGQ
Free Radio Design Software
Go to http://www.g4fgq.com
==========
"Les & Claire" <les.claire@virginSPAMBLOCK.net> wrote in message
news:VKlh9.2039$V43.95388@newsfep1-win.server.ntli.net...
> I live in the WORST place for this hobby, second floor flat, victorian
> back to back housing all round to three stories, no view of the horizon.
> Spent ages fiddling with broomstick ant, tried radials on it for ground
> plane... all to no avail. Today got sick of it all, ran a wire out of the
> window to neighbours washing line, 90 degrees left to next washing line,
> folded back on itself to return to insulator tied to bootlace from
window...
> and it works!!! just waiting for the daytime "mush" to evaporate,,, just
> goes to show, the old adage still holds! K.I.S.S. (Keep it Simple
Stupid!)
>
> MVT 7100
> Howes CTU 30
> Longwire (folded L?)
>
> Les
>
>
>

5164. Re: It Works!

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-16 19:36:10 UTC
From: Les & Claire <les.claire@virginSPAMBLOCK.net>
Message-ID: <wpqh9.3657$V43.130378@newsfep1-win.server.ntli.net>
Source record: 134605

hmmm.. would making a loop help? At the moment the end is only 5' from the start. In total it's about 150' with a 90 degree bend in the middle and folded back. Each leg being about 36'...

Les

5165. FS - 1.5kw Dry dummy load

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-16 20:33:07 UTC
From: kk4tl@aol.com
Message-ID: <20020916163307.01183.00006482@mb-ch.aol.com>
Source record: 134606

Like new MFJ 1.5kw dry dummy load for sale. It belonged to a friend who never followed through on getting his ham license.

$35.00 shipped CONUS. (Retails for $69.95.) Hi-Res (1600x1200) jpgs available on request.

Email direct if interested. KK4TL@AOL.COM

5166. Re: safety ground and antenna ground - tie together and connect to A/C ground?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-16 20:37:57 UTC
From: gaschafer@attbi.com
Message-ID: <3d862b69.16848735@netnews.attbi.com>
Source record: 134607

On 15 Sep 2002 20:24:33 -0700, nm5k@wt.net (Mark Keith) wrote:

>Which code is that? NEC? I've never heard of that one before. If that
>were true , half the plugged in items in a house, washer, driers, etc,
>etc would all be out of code. Here, I use nothing but the nuetral for
>safety grounding.

Yes the NEC says that a safety ground must not carry ANY current. That is the difference
between the safety ground and the neutral wire. The neutral wire is always carrying current
equal to the hot wire.

The reason that the neutral wire should not be used as a safety ground is because it DOES carry
current and there can be a difference in potential between ground and the neutral wire at any
particular location in the house. Voltage drop in the neutral wire from a load on the circuit.
While this voltage drop may be small in normal operation, it could become very high if there is a
poor connection between your location and the service panel. This voltage would come from
some load connected further down the line.

If the neutral line opened completely between your location and the service panel you could see
the full voltage from a load being turned on at some point further down the line from you. If you
had the neutral wired as the safety ground then the appliance would be at the full line voltage!
That is the reason for the separate safety ground.

There is one exception to this. Electric stoves. They use only 3 wires and do use the neutral as
the safety ground. All the elements are 220 volts so normally no current flows in the neutral line.
But there are sometimes 120 volt timers or outlets on the stove so then the neutral line would
carry some current. But the line to the stove must be a dedicated line directly from the service
panel. It must not be connected to anything but the stove. This is how they (NEC) justify this
setup. I think now though that a 4 wire circuit is now being used with

a separate safety ground.

Some hams wire their amplifiers to 240 volt circuits with 3 prong air conditioner plugs. That
circuit is two hot lines and a safety ground (at least it should be) . No neutral. This is fine if the
amplifier has no 120 volt connections inside. Sometimes a 120 volt blower is connected from
one side of the f240 to the center tap of the transformer primary in the amp. The transformer
acts as an auto transformer to run the blower. Again this is fine. But if there is any 120 volt
connection, then you must use a 4 wire circuit with a separate neutral wire to carry the 120 volt
load. You don't want the safety ground to carry any current.

The only reason that your furnace would not have a safety ground is if it has the power run to it
in metal conduit that is grounded. That would provide the ground. Otherwise it should have a
ground. If the inspector passed it he did not know what he was looking for. Not uncommon.

GFI breakers do not require a ground connection to work. They operate if they see a difference
in current between the hot and neutral lines. There must be the same amount of current in the
neutral line as there is in the hot line. If not that indicates there is leakage somewhere and the
breaker trips.

Double insulated appliances like coffee makers only have a two wire plug. Both sides are
insulated from ground and no separate safety ground wire is used.

Anything with a 3 prong plug requires a separate 3rd wire safety ground. Don't use the neutral
as a safety ground! That is worse than no ground at all.

73
Gary K4FMX

5167. Re: safety ground and antenna ground - tie together and connect to A/C ground?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-16 21:33:34 UTC
From: nm5k@wt.net
Message-ID: <25eb70d7.0209161333.5f35c2e1@posting.google.com>
Source record: 134608

Bill Nelson <billn@spock.peak.org> wrote in message
news:<am3qa4$48i$8@quark.scn.rain.com>...
> Mark Keith <nm5k@wt.net> wrote:
>
> > Which code is that? NEC? I've never heard of that one before. If that
> > were true , half the plugged in items in a house, washer, driers, etc,
>
> Electric washers and driers - to comply with code, must have an equipment
> ground. If the outlet is only two conductor, as you often find in older
> houses, then there must be a bonding wire from the frame of the washer or
> drier to a legal electrical ground. This if often the cold water pipe
> next to the washer and drier.

I had another e-mail that said that 3 wire washer/drier setups "used"
to be legal, but are not now, in new homes. He said older houses were
grandfathered in. So this was a new one on me. I guess I'll have to
consider that in the future. MK

5168. Re: Follow-up Disk Skin Effect Experiment

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-16 21:37:23 UTC
From: richardharrison@webtv.net
Message-ID: <3826-3D864F13-35@storefull-2314.public.lawson.webtv.net>
Source record: 134611

Roger, W7WKB wrote:
"Without some indication of difference between the circuit with the disk and the circuit without the disk, the conclusion must be reached that akin effect shielding does not occur for the thickness of disk material and frequency range tested."

Edison could have said a practical electric incandescent lamp is impossible because the cotton filament quickly burns out.

In the era of glass-envelope vacuum tubes, metal shields were effective in avoiding oscillation caused by coupling between high-gain tuned radio amplifier stages. These shields were often form-fitting and grounded by a finger or fingers attached to the chassis. Removal of the shields might result in a howler.

When metal-envelopes replaced glass, the envelope was connected to a base pin for grounding. These pins were hollow because their centers did nothing at r-f. All r-f energy is confined to the surface by skin effect.

Billions of shielded tubes have been manufactured. Every one is a testament to skin effect. If r-f could penetrate such a shield, equipment would have to be very large to provide the necessary isolation. All shielding depends on skin effect. If shields conducted r-f directly through as if it were d-c, they would not work.

When Roger`s "skin effect" experiment fails, it is a failure of the experiment. It is not a failure of skin effect.

Best regards, Richard Harrison, KB5WZI

5169. Re: It Works!

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-16 21:40:06 UTC
From: Reg Edwards <g4fgq.regp@btinternet.com>
Message-ID: <am5j3m$bc8$2@paris.btinternet.com>
Source record: 134610

Dear Les and Clair,

On some bands it might help. On other bands it might not.

Try it ? You could have an answer long before you can pass all the other antenna details, plus ground connection, plus tuner details, to the experts on this newsgroup, plus the thinking time. ;o)

You could arrange to switch from one configuation to the other.

========================
Regards from Reg G4FGQ
Free Radio Design Software
Go to http://www.g4fgq.com
========================

"Les & Claire" wrote -
> hmmm.. would making a loop help? At the moment the end is only 5' from the
> start. In total it's about 150' with a 90 degree bend in the middle and
> folded back. Each leg being about 36'...

5170. Re: Want a Good Tuner??

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-16 21:40:08 UTC
From: Reg Edwards <g4fgq.regp@btinternet.com>
Message-ID: <am5j3n$bc8$4@paris.btinternet.com>
Source record: 134609

"JC" wrote -
> Putting the tuner at the antenna isn't worth it. Just have
> a look at "Reflections (I or II)" written by W2DU.
====================================

What does that have to do with conjugal matches ?

5171. Re: New Rig, Need some input from the experts :)

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-16 21:46:54 UTC
From: nm5k@wt.net
Message-ID: <25eb70d7.0209161346.5e459762@posting.google.com>
Source record: 134612

"hasan schiers" <schiers@netins.net> wrote in message
news:<am4m8l$2hm2t$1@ID-52642.news.dfncis.de>...
> Hmmmm...that's interesting Mark. I have had no HF image problems with the
> FT-847 at all. It's clean as a whistle. As far as being a cloud warmer, I
> don't see how that could possibly happen. The take-off-angle of a
> horizontally polarized antenna is primarily a function of height above
> ground, not the length of the antenna. This does fall apart considerably
> when you use an inverted vee, however. This is a VERY important point. Once
> you "invert vee" a long center fed dipole, you WILL generate all sorts of
> high angle lobes. If kept flat, the antenna has the same take off angle(s)
> as predicted by the equation below. Subtitute 2, 4, 6, 8 etc for the first
> null, and 3, 5, 7, 9 etc. for the 2nd lobe, 3rd lobe etc.
>
> Your experience with the 80m dipole on 10m makes sense if it was put up as
> an inverted vee.

Maybe a bit, but not too much. The antenna was pretty low to the
ground though.

If it was up in a flat-top configuration, then it should
> have performed quite nicely on 10m at relatively low angles.

It should normally. I think half the problem was ours wasn't really
too high.
And I'm sure it did have a bit of a V to it. I usually tie off to
trees, etc, and rarely are the ends as high as the apex.
>
> This is one of the problems with the "all-band" 135' balanced center feed
> antennas that people seem to love. If you don't put them up as flat-tops,
> their performance on the higher bands at low angles is dismal.

Ours was the pits that time. No one could hear us on that band.
.
>
> If there is one thing that I think is most important for those who are going
> to play with long center fed wires, it is DON'T USE AN INVERTED VEE
> CONFIGURATION, unless you don't care about low angle performance.

It's sure worth a shot if the radio doesn't have the image problems
from the strong HF signals. This may be a quirk to the 706. Actually
here, I have 80/40/20 dipoles up parallel, and the match on 6m is
very good as is. But the images killed me. It's pretty clean with the
yagi.
>
> Now, we need 6 to open up!

It has a bit lately, but I haven't had much time to hover over the radio. I sometimes catch the east coast coming in in the late afternoons. MK

5172. Re: It Works!

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-16 21:50:33 UTC
From: Les & Claire <les.claire@virginSPAMBLOCK.net>
Message-ID: <nnsh9.4368$V43.150619@newsfep1-win.server.ntli.net>
Source record: 134613

Reg,
would you start the loop directly from the terminal at the antenna
tuner, or would you have a feed of some kind to a split and loop from there?

Les

5173. Re: Follow-up Disk Skin Effect Experiment

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-16 21:51:32 UTC
From: richardharrison@webtv.net
Message-ID: <3828-3D865264-7@storefull-2314.public.lawson.webtv.net>
Source record: 134615

Richard Clark, KB7QHC wrote:
"The comparison of the size of the disk to the wavelength (even at 10M)
is overwhelmingly insignificant."

Translation: The disk is much too small to effectively shield your r-f
or even significantly affect it.

Best regards, Richard Harrison, KB5WZI

5174. WTB:IAC Double Bazooka Antennas

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-16 21:56:11 UTC
From: Chuck K8CPA <k8cpa***NOSPAM**@*PLEASE*comcast.net>
Message-ID: <fgkcoug70ad9ph2t0shj6t5cpbacufiet8@4ax.com>
Source record: 134614

Hi Guys...

I am currently running a Van Gordon Shorty All Bander Dipole. That I use for 10-80 meters. I realize this is a not so good antenna now... also running a 4:1 Balun, I know, it was my first attempt at a Antenna for H.F. I operate alot of 75 meters. and I was eyeballing the International Antenna Company's Double Bazooka for 80/75 meters. and also one of these for 40 meters. can't quite do 160 with one of those... not enough real estate here... I have a 40 ft tower. and could hang something from it... Anyone used one of these? and what kind of results? I use SSB portion of band, can I just hang and forget? I use a MFJ 989C tuner. Please, any feedback would be Welcomed. Remove the NO SPAM from e-mail address to reply via e-mail.

Thanks,

-Chuck

5175. help troubleshooting 27 MHz emitter: finger/screwdriver antenna?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-16 22:15:52 UTC
From: Gabriel Horner <ghorner@mail.cern.ch>
Message-ID: <Pine.LNX.3.95a.1020916234207.22116A-100000@lxplus056.cern.ch>
Source record: 134618
Cross-posted to: rec.radio.amateur.antenna,rec.radio.shortwave,rec.radio.amateur.misc,sci.electronics.basics,sci.electronics.misc

Hi,
I'm trying to get the first stage of a transistor emitter to oscillate.
I'm sure I've correctly built the circuit and I soldered the piecfeces as
close to the PCB as possible. I'm using a quartz along with an LC section
to create the carrier frequency and a varicap to modulate. These pieces are
connected between base and collector. The collector is attached to the primary
o f transformer. The kit's article suggests that I play with the variable
capacitor of the LC section and/or the height of the metallic
core of the transformer (which screws into a plastic cylinder). This
circuit is powered on 12 V. The only time the quartz oscillates is when
my finger or a screwdriver is touching the variable capacitor's screw head
(seems to be serving as an antenna). What can I do to make this stage
oscillate correctly? Are there any good books or references which talk about
troubleshooting problems like these? I'm a neophyte to this elusive world
of unseen EM waves.
Thanks,
Gabriel

5176. Re: It Works!

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-16 22:22:45 UTC
From: MD <ve3tmt@rac.ca>
Message-ID: <JOsh9.1739$w72.592029@news20.bellglobal.com>
Source record: 134617

"Les & Claire" <les.claire@virginSPAMBLOCK.net> wrote in message
news:VKlh9.2039$V43.95388@newsfep1-win.server.ntli.net...
> I live in the WORST place for this hobby, second floor flat, victorian
> back to back housing all round to three stories, no view of the horizon.
> Spent ages fiddling with broomstick ant, tried radials on it for ground
> plane... all to no avail. Today got sick of it all, ran a wire out of the
> window to neighbours washing line, 90 degrees left to next washing line,
> folded back on itself to return to insulator tied to bootlace from
window...
> and it works!!! just waiting for the daytime "mush" to evaporate,,, just
> goes to show, the old adage still holds! K.I.S.S. (Keep it Simple
Stupid!)

Les,

I would be willing to challenge you for the worst possible QTH award. I am in a ground floor 2 level apartment facing west with absolutely no propagation to the east. On top of that, the landlords have an absolutely zero tolerance for outdoor antennas, I even had to take my satellite dish down. I am in Canada, no FCC here. I tried a dipole on the second floor, but a constant S9 noise level makes that impossible. The power transformer for the entire building is located underground just in front of the apartment beside me. I tried a loop antenna outside but even that is hard to hide. And to top it all off, my neighbours have one of them little chihuahua dogs that somehow knows when I am out in the yard trying to hide my antenna. It sits at their patio window barking like an alarm going off. So I have resorted to a 30' long err short wire out in the hedges at a whopping height of 5' above ground. I just thank god for psk modes where weak signal is king!

Any challengers??

Max

5177. Re: Want a Good Tuner??

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-16 22:23:19 UTC
From: JC <jacques.culot@skynet.be>
Message-ID: <3d8659dc$0$198$ba620e4c@news.skynet.be>
Source record: 134616

>Move this one step further and build the fixed tuner at the antenna and skip the line loss due to SWR.

Conjugate (conjugal hehehe) match proves loss is very small on 160m, with a tuner far from antenna even with high SWR. Thus the advise of putting the tuner at the antenna to skip the loss is not significant.

5178. Does the MFJ-16010 Work Well?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-16 23:10:15 UTC
From: "James P. Rybak" <jrybak@mesastate.edu>
Message-ID: <1032217492.317789@tshaper.mesastate.edu>
Source record: 134469

Does the MFJ-16010 tuner work reasonably well with random wires on 40 to 10 meters? My plan would be to use the unit on those bands with a 30 to 40 foot long random wire and a counterpoise cut to the appropriate length for the band in use.

Thanks.

Jim Rybak W0KSD

5179. Re: Follow-up Disk Skin Effect Experiment

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-16 23:58:08 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <6uocou4dtiiu240aic1c4naa496nhmfnfj@4ax.com>
Source record: 134470

On Mon, 16 Sep 2002 16:51:32 -0500 (CDT), richardharrison@webtv.net (Richard Harrison) wrote:

>Richard Clark, KB7QHC wrote:
>"The comparison of the size of the disk to the wavelength (even at 10M)
>is overwhelmingly insignificant."
>
>Translation: The disk is much too small to effectively shield your r-f
>or even significantly affect it.
>
>Best regards, Richard Harrison, KB5WZI

Hi All,

As a common consideration in matters of wavelength, it has been long observed that dimensions of less than 10% wavelength (10M) between points offer very little differential to create a current flow. Here, at somewhere around 3% (less than 2ï¿½) best case at the very highest frequency, the potential, for all practical purposes is the same everywhere on BOTH sides of the disk. Now, if we rummage around the HF basement, there is no way this disk would offer anything but nuisance.

This goes to the nature of wavelength and the prospects of measurements being swamped by the huge dimensions of the excitation wavelength. It is extremely difficult to find this precision such that you could demonstrate the disk even existed. Brainstorming such considerations should precede any testing - does what you are setting out to do make sense in the first place? The paragraph above should have been considered first.

This is a cautionary tale about measurement and the challenge of established theory. If you cannot pursue the negative example of your speculations - you have done nothing at all (the common, prostituted ethic of fractal antenna science). Making someone else do this undercuts the authority of your statements. The point missed through that shortfall of examination was that everything described (but the premise) was unexceptional.

Roger did his work in earnest and due diligence (except for the trivial capacitor insertion) and it took a while to connect succinctly to what foiled his premise. The measure of RF is exceedingly difficult and offering your credentials in the form of quality instrumentation does not make an argument (in fact, it negated it). Roger's data is exceptionally good and speaks volumes about the abilities of his Autek Model VA-1 RF Vector Analyst. This alone

answers the issues of how much the experimenter pollutes his measurement - practically none (not a simple feat). However, having said that, if you cannot quantify this, you really don't know anything. Basically, ALL the data reveals both the expected inductance of the leads, and the resistance of the resistor to within 10 or 20% tracking over the entire frequency range offered for consideration.

73's
Richard Clark, KB7QHC

5180. Re: FS - 1.5kw Dry dummy load

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-17 00:34:41 UTC
From: kk4tl@aol.com
Message-ID: <20020916203441.03159.00005499@mb-dh.aol.com>
Source record: 134471

Sold

5181. Re: safety ground and antenna ground - tie together and connect to A/C ground?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-17 01:06:44 UTC
From: gaschafer@attbi.com
Message-ID: <3d8603e6.6731857@netnews.attbi.com>
Source record: 134472

On 15 Sep 2002 20:24:33 -0700, nm5k@wt.net (Mark Keith) wrote:

>
>Which code is that? NEC? I've never heard of that one before. If that
>were true , half the plugged in items in a house, washer, driers, etc,
>etc would all be out of code. Here, I use nothing but the nuetral for
>safety grounding.

Yes the NEC says that a safety ground must not carry ANY current. That is the difference
between the safety ground and the neutral wire. The neutral wire is always carrying current
equal to the hot wire.

The reason that the neutral wire should not be used as a safety ground is because it DOES carry
current and there can be a difference in potential between ground and the neutral wire at any
particular location in the house. Voltage drop in the neutral wire from a load on the circuit.
While this voltage drop may be small in normal operation, it could become very high if there is a
poor connection between your location and the service panel. This voltage would come from
some load connected further down the line.

If the neutral line opened completely between your location and the service panel you could see
the full voltage from a load being turned on at some point further down the line from you. If you
had the neutral wired as the safety ground then the appliance would be at the full line voltage!
That is the reason for the separate safety ground.

There is one exception to this. Electric stoves. They use only 3 wires and do use the neutral as
the safety ground. All the elements are 220 volts so normally no current flows in the neutral line.
But there are sometimes 120 volt timers or outlets on the stove so then the neutral line would
carry some current. But the line to the stove must be a dedicated line directly from the service
panel. It must not be connected to anything but the stove. This is how they (NEC) justify this

setup. I think now though that a 4 wire circuit is now being used with a separate safety ground.

Some hams wire their amplifiers to 240 volt circuits with 3 prong air conditioner plugs. That
circuit is two hot lines and a safety ground (at least it should be) . No neutral. This is fine if the
amplifier has no 120 volt connections inside. Sometimes a 120 volt blower is connected from
one side of the f240 to the center tap of the transformer primary in the amp. The transformer
acts as an auto transformer to run the blower. Again this is fine. But if there is any 120 volt
connection, then you must use a 4 wire circuit with a separate neutral wire to carry the 120 volt
load. You don't want the safety ground to carry any current.

The only reason that your furnace would not have a safety ground is if it has the power run to it
in metal conduit that is grounded. That would provide the ground. Otherwise it should have a
ground. If the inspector passed it he did not know what he was looking for. Not uncommon.

GFI breakers do not require a ground connection to work. They operate if they see a difference
in current between the hot and neutral lines. There must be the same amount of current in the
neutral line as there is in the hot line. If not that indicates there is leakage somewhere and the
breaker trips.

Double insulated appliances like coffee makers only have a two wire plug. Both sides are
insulated from ground and no separate safety ground wire is used.

Anything with a 3 prong plug requires a separate 3rd wire safety ground. Don't use the neutral
as a safety ground! That is worse than no ground at all.

73
Gary K4FMX

5182. Re: safety ground and antenna ground - tie together and connect to A/C ground?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-17 01:36:44 UTC
From: gaschafer@attbi.com
Message-ID: <3d862092.14072706@netnews.attbi.com>
Source record: 134473

On 15 Sep 2002 20:24:33 -0700, nm5k@wt.net (Mark Keith) wrote:

>Which code is that? NEC? I've never heard of that one before. If that
>were true , half the plugged in items in a house, washer, driers, etc,
>etc would all be out of code. Here, I use nothing but the nuetral for
>safety grounding.

Yes the NEC says that a safety ground must not carry ANY current. That is the difference
between the safety ground and the neutral wire. The neutral wire is always carrying current
equal to the hot wire.

The reason that the neutral wire should not be used as a safety ground is because it DOES carry
current and there can be a difference in potential between ground and the neutral wire at any
particular location in the house. Voltage drop in the neutral wire from a load on the circuit.
While this voltage drop may be small in normal operation, it could become very high if there is a
poor connection between your location and the service panel. This voltage would come from
some load connected further down the line.

If the neutral line opened completely between your location and the service panel you could see
the full voltage from a load being turned on at some point further down the line from you. If you
had the neutral wired as the safety ground then the appliance would be at the full line voltage!
That is the reason for the separate safety ground.

There is one exception to this. Electric stoves. They use only 3 wires and do use the neutral as
the safety ground. All the elements are 220 volts so normally no current flows in the neutral line.
But there are sometimes 120 volt timers or outlets on the stove so then the neutral line would
carry some current. But the line to the stove must be a dedicated line directly from the service
panel. It must not be connected to anything but the stove. This is how they (NEC) justify this
setup. I think now though that a 4 wire circuit is now being used with

a separate safety ground.

Some hams wire their amplifiers to 240 volt circuits with 3 prong air conditioner plugs. That
circuit is two hot lines and a safety ground (at least it should be) . No neutral. This is fine if the
amplifier has no 120 volt connections inside. Sometimes a 120 volt blower is connected from
one side of the f240 to the center tap of the transformer primary in the amp. The transformer
acts as an auto transformer to run the blower. Again this is fine. But if there is any 120 volt
connection, then you must use a 4 wire circuit with a separate neutral wire to carry the 120 volt
load. You don't want the safety ground to carry any current.

The only reason that your furnace would not have a safety ground is if it has the power run to it
in metal conduit that is grounded. That would provide the ground. Otherwise it should have a
ground. If the inspector passed it he did not know what he was looking for. Not uncommon.

GFI breakers do not require a ground connection to work. They operate if they see a difference
in current between the hot and neutral lines. There must be the same amount of current in the
neutral line as there is in the hot line. If not that indicates there is leakage somewhere and the
breaker trips.

Double insulated appliances like coffee makers only have a two wire plug. Both sides are
insulated from ground and no separate safety ground wire is used.

Anything with a 3 prong plug requires a separate 3rd wire safety ground. Don't use the neutral
as a safety ground! That is worse than no ground at all.

73
Gary K4FMX

5183. Re: safety ground and antenna ground - tie together and connect to A/C ground?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-17 01:36:47 UTC
From: gaschafer@attbi.com
Message-ID: <3d862a7b.16610835@netnews.attbi.com>
Source record: 134474

On 15 Sep 2002 20:24:33 -0700, nm5k@wt.net (Mark Keith) wrote:

>
>Which code is that? NEC? I've never heard of that one before. If that
>were true , half the plugged in items in a house, washer, driers, etc,
>etc would all be out of code. Here, I use nothing but the nuetral for
>safety grounding.

Yes the NEC says that a safety ground must not carry ANY current. That is the difference
between the safety ground and the neutral wire. The neutral wire is always carrying current
equal to the hot wire.

The reason that the neutral wire should not be used as a safety ground is because it DOES carry
current and there can be a difference in potential between ground and the neutral wire at any
particular location in the house. Voltage drop in the neutral wire from a load on the circuit.
While this voltage drop may be small in normal operation, it could become very high if there is a
poor connection between your location and the service panel. This voltage would come from
some load connected further down the line.

If the neutral line opened completely between your location and the service panel you could see
the full voltage from a load being turned on at some point further down the line from you. If you
had the neutral wired as the safety ground then the appliance would be at the full line voltage!
That is the reason for the separate safety ground.

There is one exception to this. Electric stoves. They use only 3 wires and do use the neutral as
the safety ground. All the elements are 220 volts so normally no current flows in the neutral line.
But there are sometimes 120 volt timers or outlets on the stove so then the neutral line would
carry some current. But the line to the stove must be a dedicated line directly from the service
panel. It must not be connected to anything but the stove. This is how they (NEC) justify this

setup. I think now though that a 4 wire circuit is now being used with a separate safety ground.

Some hams wire their amplifiers to 240 volt circuits with 3 prong air conditioner plugs. That
circuit is two hot lines and a safety ground (at least it should be) . No neutral. This is fine if the
amplifier has no 120 volt connections inside. Sometimes a 120 volt blower is connected from
one side of the f240 to the center tap of the transformer primary in the amp. The transformer
acts as an auto transformer to run the blower. Again this is fine. But if there is any 120 volt
connection, then you must use a 4 wire circuit with a separate neutral wire to carry the 120 volt
load. You don't want the safety ground to carry any current.

The only reason that your furnace would not have a safety ground is if it has the power run to it
in metal conduit that is grounded. That would provide the ground. Otherwise it should have a
ground. If the inspector passed it he did not know what he was looking for. Not uncommon.

GFI breakers do not require a ground connection to work. They operate if they see a difference
in current between the hot and neutral lines. There must be the same amount of current in the
neutral line as there is in the hot line. If not that indicates there is leakage somewhere and the
breaker trips.

Double insulated appliances like coffee makers only have a two wire plug. Both sides are
insulated from ground and no separate safety ground wire is used.

Anything with a 3 prong plug requires a separate 3rd wire safety ground. Don't use the neutral
as a safety ground! That is worse than no ground at all.

73
Gary K4FMX

5184. Re: Follow-up Disk Skin Effect Experiment

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-17 01:51:20 UTC
From: richardharrison@webtv.net
Message-ID: <24291-3D868A98-74@storefull-2317.public.lawson.webtv.net>
Source record: 134475

Roger, W7WKB wrote:
"This is a skin effect experiment to confirm the results of the
"Inpenetrable Metal Plate Experiment".

Skeptics abound as a result of learning d-c electricity before a-c
electricity. "Skin-effect" is incontrovertible.

I`ve been at sea with radios and installed radios on ships and boats. It
is a fact that a radio below the waterline but inside the vessel may
have a ground connection inside the hull but also below the waterline.
No r-f can take a short path through the hull to the water.

The ground path for the h-f antenna circuit must be up the inside of the
hull, through some exit hole, and down the outside of the hull to the
water surface.

Best regards, Richard Harrison, KB5WZI

5185. Damn the CC&Rs!

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-17 02:24:02 UTC
From: Artie DeCoe <Artie@dcoe.net>
Message-ID: <6nwh9.84030$AR1.3219419@bin2.nnrp.aus1.giganews.com>
Source record: 134476

http://hirshhorn.si.edu/collection/gardens/snelson.html

This ought to leave the homeowner's assn scratching their heads if you put it up.

5186. Re: Damn the CC&Rs!

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-17 02:29:13 UTC
From: Chuck/KE4ETH <chuck_hawks@hotmailnospamorama.com>
Message-ID: <Onwh9.168357$2L.7418916@e3500-atl2.usenetserver.com>
Source record: 134477

Yea, and think of the crazy radiation pattern

--
Chuck
KE4ETH

"Artie DeCoe" <Artie@dcoe.net> wrote in message
news:6nwh9.84030$AR1.3219419@bin2.nnrp.aus1.giganews.com...
> http://hirshhorn.si.edu/collection/gardens/snelson.html
>
> This ought to leave the homeowner's assn scratching their heads if you put
> it up.
>
>

5187. Re: Damn the CC&Rs!

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-17 02:35:37 UTC
From: K4IA <K4ia@novacoxmail.com>
Message-ID: <Zxwh9.61410$8F4.1503883@news2.east.cox.net>
Source record: 134478

I particularly appreciated the metaphysical message. "Standing directly
under the sculpture and looking up, the viewer discovers that the tubes form
the shape of a star, inspiring the astrophysical, astrological, and
religious associations of that symbol, while heightening the sense of
perpetuity." Riiiight

Can you believe people (taxpayers) pay for this ****?
--
Radio K4IA
Craig "Buck"
Fredericksburg, Virginia USA

FISTS 6702 CC 788 Diamond 64
K1# 470 K2# 2460
"Artie DeCoe" <Artie@dcoe.net> wrote in message
news:6nwh9.84030$AR1.3219419@bin2.nnrp.aus1.giganews.com...
> http://hirshhorn.si.edu/collection/gardens/snelson.html
>
> This ought to leave the homeowner's assn scratching their heads if you put
> it up.
>
>

5188. Re: safety ground and antenna ground - tie together and connect to ...

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-17 02:54:20 UTC
From: richardharrison@webtv.net
Message-ID: <24291-3D86995C-82@storefull-2317.public.lawson.webtv.net>
Source record: 134479

Gary Schafer, K4FMX wrote:
"Don`t use the neutral as a safety ground! That is worse than no ground at all."

I agree that a separate safety ground is required. I disagree that the neutral is worse than no ground at all, so long as it remains intact.

5% is the usual maximum voltage drop allowed in site wiring. In the 120/240-volt circuit only the unbalanced current flows in the neutral, and its maximum is limited by the 120-volt breakers.

6 volts is 5% drop and the most that should ever appear between the neutral at an outlet and the breaker-box ground. Maximum neutral current occurs when all the load is on only one of the 120-volt circuits and the other half of the 240-volt circuit has no load. 6 volts is unlikely to hurt anyone and certainly not worse than no ground at all. In fact, maximum volts dropped in the neutral is likely only 3 volts because the 5% specification includes the drop in both wires of the 120-volt circuit, one of which is that same neutral wire. That voltage is almost trivial. It is certainluy not worse than no ground at all.

A friend recently asked me what to do? A new range had been delivered and the old model was removed by the vendor of the new range. He only had 3 wires to his receptacle and the new range needed 4. I told him to strap his neutral wire in the new range to the safety wire, just as it had been in the old range. Then to be safe, run a green wire to a cold water pipe in his kitchen to ground the range. He had already decided he would not run a safety wire to his breaker-box. The power company here requires a cold-water pipe ground for its electric service in addition to a ground rod where metal water piping is available. The friend followed my advice. His range works as expected and he hasn`t been shocked yet. I told him I would only verbally advise him and deny I had ever advised him if interrogated, Did he understand?

That`s why in olden times the neutral connection was made to the frame of your electric range.

Best regards, Richard Harrison, KB5WZI

5189. Re: Want a Good Tuner??

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-17 03:27:20 UTC
From: CAM <Cecil.A.Moore@ieee.org>
Message-ID: <3D86A118.1BB0AB4C@ieee.org>
Source record: 134480

StarGazer wrote:
> Why is 5/16 wavelength such a magically length?

Not magical, just convenient. A 1/4WL monopole has a feedpoint impedance of about 35+j0 ohms. A 5/16WL monopole has a feedpoint impedance of about 50+j80 ohms. For a perfect 50 ohm match, use a series cap with a reactance of -j80 ohms. But 35 ohms is an acceptable feedpoint impedance without an antenna tuner.

> What is a doorknob cap and where do I get one?

Doorknob caps are good for high power. But a simple air-variable cap may be more convenient because it is adjustable. Mica caps also work for relatively low power.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
------== Over 80,000 Newsgroups - 16 Different Servers! =-----

5190. Re: Water pipe ground?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-17 03:31:02 UTC
From: richardharrison@webtv.net
Message-ID: <24293-3D86A1F6-12@storefull-2317.public.lawson.webtv.net>
Source record: 134481

Lou, N4LQ wrote:
"I measure exactly 20 ma of d-c current and it stays constant."

I believe it turns out that Lou supplied the rectifier to make the current direct.

So, he may have 240/120-volt single-phase electrical service. The two 120-volt service segments may not be balanced and Lou may be measuring some of the imbalance in the neutral line.

Best regards, Richard Harrison, KB5WZI

5191. Re: Follow-up Disk Skin Effect Experiment

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-17 03:51:07 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <3D86A6AB.6090201@eznec.com>
Source record: 134484

I've also seen many examples in the course of designing and using high speed TDR equipment. With that equipment, the path of current along one surface of something like a large PC board conductor and around the edge to the other side is obvious. With the TDR, the X axis of the display represents a distance from the source. You can put your finger on the conductor at various places and see the disturbance on the display that corresponds to the distance your finger is from the source. Then you can put your finger on the other side of the conductor at the same distance, and see no disturbance at all. The place on the display that you see the disturbance corresponds to the distance over one surface, around the edge, and back along the other surface. You can also see the current "soak in" to the conductor -- it gives a very distinctive, and calculable, shape to the step response as the effective resistance decreases with time. This is the time domain equivalent of the skin depth increasing with decreasing frequency (increasing time). Unfortunately, this sort of equipment isn't available to the average amateur, and to see the effects, the system has to be able to resolve distances shorter than the time required for the current to penetrate very deeply. If anyone does have access to high speed TDR equipment, though, a number of demonstrations that very clearly show skin effect can easily be set up.

Roy Lewallen, W7EL

Richard Harrison wrote:
> Roger, W7WKB wrote:
> "This is a skin effect experiment to confirm the results of the
> "Inpenetrable Metal Plate Experiment".
>
> Skeptics abound as a result of learning d-c electricity before a-c
> electricity. "Skin-effect" is incontrovertible.
>
> I`ve been at sea with radios and installed radios on ships and boats. It
> is a fact that a radio below the waterline but inside the vessel may
> have a ground connection inside the hull but also below the waterline.
> No r-f can take a short path through the hull to the water.
>
> The ground path for the h-f antenna circuit must be up the inside of the
> hull, through some exit hole, and down the outside of the hull to the
> water surface.
>
> Best regards, Richard Harrison, KB5WZI
>

5192. Re: safety ground and antenna ground - tie together and connect to A/C ground?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-17 04:06:44 UTC
From: nm5k@wt.net
Message-ID: <25eb70d7.0209162006.74aac96b@posting.google.com>
Source record: 134482

gaschafer@attbi.com (Gary Schafer) wrote in message

It's 240 volt that I'm mainly concerned with. I don't use the neutral wire to ground 120v gear. From his post, I gathered that 240v gear needed a 4th wire for ground. I had never bothered with this in the past, as my neutral wire is well grounded. My amp is all 240v, including the blower. But from another e-mail I got, I was told it's not really legal to even do that any more. "3 wires for 240v use" I was curious about that mainly. I haven't read the NEC code. Don't have a copy...Don't know if it's on the net or not..

> The only reason that your furnace would not have a safety ground is if
> it has the power run to it
> in metal conduit that is grounded. That would provide the ground.
> Otherwise it should have a
> ground. If the inspector passed it he did not know what he was looking
> for. Not uncommon.

The furnace is 240v. No conduit is required here if the wiring is indoors. We've rarely added a 4th ground wire to those, and so far, no one has ever said anything about it during inspections. A few have a wire run to the cold water pipes, but not too often. Most all I see are grounded only by the neutral. I'll have to look into that...I may should start adding a 4th ground wire...This is, it's not alway easy to come by a decent ground in most attics, unless water pipes are up there, and many pipes now are pvc. Most of the old homes with iron water pipes, it's pretty easy. Actually, now that I think about it, I'm getting my neutral for my 240v from the water pipe in the attic at this house. But we have all metal pipe, and it's grounded well.

Don't use the neutral
> as a safety ground! That is worse than no ground at all.

I don't except when running 240v. I'd never do that with a 120v device. From what I hear, I may have to quit doing that with 240v gear. MK

5193. Tower mounted short vertical

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-17 04:26:56 UTC
From: Kent Haase <ijeh99@mb.sympatico.ca>
Message-ID: <Xayh9.3590$nU2.17454@news1.mts.net>
Source record: 134483

I'm familiar with the equations that estimate radiation resistance and capacitance of a ground-mounted, electrically-short vertical antenna. For various reasons I want to tower mount my vertical. How are radiation resistance and capacitance affected by mounting it atop a grounded, 20 foot tower?

Kent VE4KEH

5194. Re: Damn the CC&Rs!

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-17 05:23:23 UTC
From: Jim Weir <jim@rst-engr.com>
Message-ID: <nqddousnv8rppefocjcqc4tktn3d8ba5ca@4ax.com>
Source record: 134486

I've been a licensed ham since I was 15, back in 1958. First phone, and professional RF electronics engineer for the last 40 years. Elmered...maybe... fifty to seventy-five hams in that time? Member of two local VE groups and do six to eight sessions a year.

Also president of a homeowner's association with CC&Rs and elected to the county board (commissioner? supervisor? whatever you call them in your state) for two terms.

Put that sucker up, sir, and I'm sorry, it's coming down if the CC&Rs don't allow it. I don't give a damn if it is art, flagpole, or other ironmongery; your neighbors that bought into the system don't want it.

Don't hand me that "private property" bushwa. You signed away your rights to an admittedtly prejudiced homeowners' association group at the same time you bought your home. You did it consciously, with malice aforethought, and without someone holding a gun to your head.

You don't like it? Run for the board. Get ten of your fellow ham residents who feel the same way to run for the board. Change the law. But don't tell us how you think you are going to rub your neighbor's noses in it. That ain't gonna work. You're a fool if you think it will.

Like I sometimes tell folks..."where did you get your deed?" "From the guy I bought it from."..."and where did he get his deed?" ... "from the guy HE bought it from.." ... all the way back to "they fought the Indians for it.". Good. My grandmother was Mary Crow. I'll fight YOU for it right here and now, knives, hatchets, or arrows, your choice.

Jim

"Artie DeCoe" <Artie@dcoe.net>
shared these priceless pearls of wisdom:

->http://hirshhorn.si.edu/collection/gardens/snelson.html
->
->This ought to leave the homeowner's assn scratching their heads if you put
->it up.
->

Jim Weir, VP Eng. RST Eng. WX6RST
A&P, CFI, and other good alphabet soup

5195. Re: Damn the CC&Rs!

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-17 05:31:06 UTC
From: Dick Carroll <dixie@townsqr.com>
Message-ID: <am6emq$1se$0@208.206.142.97>
Source record: 134485

Artie DeCoe wrote:
>
> http://hirshhorn.si.edu/collection/gardens/snelson.html
>
> This ought to leave the homeowner's assn scratching their heads if you put
> it up.

Shucks, just shunt feed it and go...

5196. Re: It Works!

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-17 06:35:53 UTC
From: "K.chattenton" <k.chattenton@btopenwold.com>
Message-ID: <am6ig8$ai6$1@venus.btinternet.com>
Source record: 134487

Hi Les & Claire,
"Les & Claire" <les.claire@virginSPAMBLOCK.net> wrote in message
news:wpqh9.3657$V43.130378@newsfep1-win.server.ntli.net...
> hmmm.. would making a loop help? At the moment the end is only 5' from
the
> start. In total it's about 150' with a 90 degree bend in the middle and
> folded back. Each leg being about 36'...
>
> Les
>
> Yes a full loop would help (less noise, all band coverage etc).

Remember though, if you use it as a loop, feed it with twin, not coax and if possible get yourself a tuner that is know as a, "Balanced ATU" (ones made by such companies has, "K.W" and "S.E.M")
You could make your own of course, if you are into the, 'Home-Brew' side of our hobby.
Failing having a balanced ATU you could try a 4-1 BalUn at the feed end of your loop.
Not has good as an ATU but may help in your position, good luck, Ken, G4KIR.

Outgoing mail is certified Virus Free.
Checked by AVG anti-virus system (http://www.grisoft.com).
Version: 6.0.386 / Virus Database: 218 - Release Date: 09/09/2002

5197. Re: Damn the CC&Rs!

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-17 08:40:24 UTC
From: kelly@dvol.com
Message-ID: <d22b54c3.0209170040.460d9ad9@posting.google.com>
Source record: 134488

"Artie DeCoe" <Artie@dcoe.net> wrote in message
news:<6nwh9.84030$AR1.3219419@bin2.nnrp.aus1.giganews.com>...
> http://hirshhorn.si.edu/collection/gardens/snelson.html
>
> This ought to leave the homeowner's assn scratching their heads if you put
> it up.

Didn't the Babylonians also build a tower with roughly the same objectives . . ?

w3rv

5198. Re: It Works!

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-17 09:02:51 UTC
From: Reg Edwards <g4fgq.regp@btinternet.com>
Message-ID: <am6r3q$9fv$2@helle.btinternet.com>
Source record: 134489

> would you start the loop directly from the terminal at the antenna
> tuner, or would you have a feed of some kind to a split and loop from
there?

==========

You should have already done it by now. Are you waiting for me to fly over?
My passport, vaccinations and inocculations are all out of date. ;o)

Bring both ends of the loop just inside the shack (via window or hole in the wall) to the tuner terminals. The 60/50Hz power supply ground will be OK for all equipment. And you could have an additional ground connection to the domestic plumbing system. Prefer a cold water pipe as it is likely to take a shorter route to the true ground.

Whether anything makes any difference can always be checked by temporary disconnecting something and keeping an eye on the swr or S-meter. If it makes no difference then reconnect it anyway. Big alligator/crocodile clips are useful.

Nitpicking purists would insist on a choke balun at the loop/tuner junction. But as you won't have much idea what the feedpoint impedance is I would try it first without a balun and if it works don't fix it. Later on you may probably find a balun makes no difference except to shift a teeny extra performance from one one band to another. But don't let me deter you from further experiments. You may have a lucky strike.

But, you may find your peculiar inverted-L, lying on its side amid the neighbor's laundry, works as good as anything. In a few hours or days you will pleasantly learn much more than in weeks of poring through the 'literature'.

==========
Regards from Reg G4FGQ
Free Radio Design Software
Go to http://www.g4fgq.com
==========

5199. substituting new toroids for noise gate circuit?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-17 10:20:24 UTC
From: AJ Sanderson <ajsand@nospam.com>
Message-ID: <am6vl6$7vm$1@nntp9.atl.mindspring.net>
Source record: 134490
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc,sci.electronics.basics

I'd like to build a noise gate circuit for my HF receiver, to be located externally between the radio and antenna, but I'm not sure how to wind the toroids. The circuit I'm going to use (unless someone can suggest a better one for HF use) is at
http://www.lwca.org/library/articles/jtreed/gate/gate1b.htm

This uses two FT50-75 toroids and I understand I need to change these to FT50-43 for hf use (1.8- 30 Mhz). For 50 ohm input/ ouptut, how would I wind the toroids using 43's?

Thanks,
AJ

5200. e/h antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-17 10:39:03 UTC
From: Gary <kf8nl@gte.net>
Message-ID: <bDDh9.752$%g2.171@nwrddc03.gnilink.net>
Source record: 134491

Hi

I would like to see if any one out thereis useing the e/h antenna and if
anyone has build and 75 meter e/h dipole
I would like to see your drawing...I have build e/h for 20 meter and 15
meter there work great on dx last weekend
work 15 dx and 20 states fron maine to SD...WW8O

5201. Re: It Works!

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-17 12:50:06 UTC
From: Les & Claire <les.claire@virginSPAMBLOCK.net>
Message-ID: <ryFh9.924$pr5.70092@newsfep1-win.server.ntli.net>
Source record: 134493

Thanks Reg,
seems like a job for an open wire feeder and the balun
terminals on the Howes CTU 30 tuner. more fiddling to come! Although at
the moment, just having a signal to play with is a novelty. Tripoli ATC on
11.300 USB clear as a bell last night. Using volmets as a guide to
performance, New York/Gander reasonable but St.Johns eludes me... next
target perhaps.

Les

5202. Re: Want a Good Tuner??

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-17 12:52:31 UTC
From: kelly@dvol.com
Message-ID: <d22b54c3.0209170452.6d0260a8@posting.google.com>
Source record: 134494

CAM <Cecil.A.Moore@ieee.org> wrote in message news:<3D86A118.1BB0AB4C@ieee.org>...
> StarGazer wrote:
> > Why is 5/16 wavelength such a magically length?
>
> Not magical, just convenient. A 1/4WL monopole has a feedpoint
> impedance of about 35+j0 ohms. A 5/16WL monopole has a feedpoint
> impedance of about 50+j80 ohms. For a perfect 50 ohm match, use
> a series cap with a reactance of -j80 ohms. But 35 ohms is an
> acceptable feedpoint impedance without an antenna tuner.
>
> > What is a doorknob cap and where do I get one?
>
> Doorknob caps are good for high power. But a simple air-variable
> cap may be more convenient because it is adjustable. Mica caps
> also work for relatively low power.

Remember the huge old transmitting mica caps with the threaded brass
connections? I still have several of the things. Somewhere. Used
mostly for plate blocking caps in big amps.

5203. Re: safety ground and antenna ground - tie together and connect to ...

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-17 13:09:21 UTC
From: richardharrison@webtv.net
Message-ID: <24586-3D872981-116@storefull-2316.public.lawson.webtv.net>
Source record: 134495

Mark Keith, NM5K wrote:
"---I`m getting my neutral for my 240v from the water pipe in the attic in this house."

For many years major appliances were shipped complete with a grounding kit of bolts, nuts, flexible ground strap fill of holes for the pipe connection, and a roll of bare wire to make a safety connection between a water pipe and the appliance.

Plastic water pipes may have made this useless in many cases.

Best regards, Richard Harrison, KB5WZI

5204. Unusual half sloper -- second try

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-17 13:24:37 UTC
From: Bill Ogden <ogden@us.ibm.com>
Message-ID: <3D872D14.1DE3AA9E@us.ibm.com>
Source record: 134496

(I posted the following last week, with no response. Has anyone tried one of these?)

QST (some years ago) and the second Wire Antennas book briefly discuss a

wide-band 80 meter antenna, with two examples described. It consists of

a "half sloper" attached to a tower, with two more wires connected directly to the tower (at a lower point) and horizontally fanned out into a "V". The half-sloper is routed down between the the legs of the V. An almost flat SWR across 75/80 meters is shown.

In one of the examples the tower is 50', the half sloper (78' long) is attached at the 45' level, and the two V legs (each 53' long) are attached at the 13' level.

1. This antenna seems too good to be true ---- absolutely flat across the whole band and with reportedly excellent results. It was originally

in an April issue, and some April articles are too good to be true. Comments?

2. Little is said about how dimensions are calculated. I would like to use it on my little 40' tower (with a quad on top). I would attach the sloper at about the 30' level and the V at about 8'. Is this unreasonably small/low?

3. Has anyone tried a two-band version? It would be nice to connect a second sloper to the same feed point, but for 40 meters. Would the same

V section work for both?

I realize that most of the effective radiation is from the tower and ground/radials are important. (I also realize that a dipole at 60' (or higher), or an inverted V might be a better answer, but I do not have that option.)

Bill
W2WO

5205. Re: Follow-up Disk Skin Effect Experiment

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-17 13:35:24 UTC
From: richardharrison@webtv.net
Message-ID: <24586-3D872F9C-121@storefull-2316.public.lawson.webtv.net>
Source record: 134497

Roy Lewallen, W7EL wrote:
"Then you can put your finger on the other side of the conductor at the same distance and see no disturbance at all."

That is a great demonstration of skin effect shielding by a conductor, using time domain reflectometry.

Another example that many can relate to is the coax run through the car trunk. Any imaginable cargo can be placed in the trunk in close proximity to the coax and radio operation is completely unaffected.

Best regards, Richard Harrison, KB5WZI

5206. Re: Follow-up Disk Skin Effect Experiment

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-17 14:25:17 UTC
From: richardharrison@webtv.net
Message-ID: <19946-3D873B4D-75@storefull-2318.public.lawson.webtv.net>
Source record: 134498

Roger, W7WKB wrote:
"Without some indication of the difference between the circuit with the disk, and the circuit without the disk, the conclusion must be reached that skin effect shielding does not occur for the thickness of disk material and frequency range tested."

It would seem that the original ground-plane antenna is in a way similar to Roger`s experiment. It was a 1/4-wave vertical in the center of a 1/2-wave diameter horizontal disk.

ON4UN`s "Low-Band DXing" has Fig 9-40 on page 9-31 which gives gain versus the radius of the disk. Full performance requires a disk RADIUS of at least 2 wavelengths!

As Richard Clark observed, Roger`s disk is much too small.

Best regards, Richard Harrison, KB5WZI

5207. Re: Tower mounted short vertical

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-17 14:40:04 UTC
From: richardharrison@webtv.net
Message-ID: <19946-3D873EC4-76@storefull-2318.public.lawson.webtv.net>
Source record: 134499

Kent, VE4KEH wrote:
"How are radiation resistance and capacitance affected by mounting it (a short vertical) atop a grounded 20 foot tower?"

What ground-plane will you use and what is the frequency? How short is the vertical?

Best regards, Richard Harrison, KB5WZI

5208. Re: Want a Good Tuner??

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-17 15:20:02 UTC
From: Vito <vito@crosslink.net>
Message-ID: <3D874822.A3D9D84F@crosslink.net>
Source record: 134500

Brian Kelly wrote:
>
> Remember the huge old transmitting mica caps ...

NO! I'm too young! That's the story I told my child bride and I'm sticking to it! :o)
73, K3DWW

5209. Re: Damn the CC&Rs!

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-17 15:31:54 UTC
From: SeeSignature@below.com
Message-ID: <3d8749f9.62131819@news.ga.comcast.giganews.com>
Source record: 134501

Hmmm. I wonder if a clever designer could somehow work up a plan for a lightweight field day tower from the "wire plus tubes" idea. I can't see enough detail from the picture, but the description suggests that maybe you can pull a wire and up it goes.

Jerry W4UK

On Tue, 17 Sep 2002 02:24:02 GMT, "Artie DeCoe" <Artie@dcoe.net> wrote:

>http://hirshhorn.si.edu/collection/gardens/snelson.html
>
>

5210. Re: e/h antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-17 15:54:26 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <htjeouk5c0bcaf5i861h06m7jvr99oin89@4ax.com>
Source record: 134502

On Tue, 17 Sep 2002 10:39:03 GMT, "Gary" <kf8nl@gte.net> wrote:

>Hi
>
>I would like to see if any one out thereis useing the e/h antenna and if
>anyone has build and 75 meter e/h dipole
>I would like to see your drawing...I have build e/h for 20 meter and 15
>meter there work great on dx last weekend
>work 15 dx and 20 states fron maine to SD...WW8O
>

Hi Gary,

Did you provide for transmission line choking? How high is your eh
mounted above ground?

73's
Richard Clark, KB7QHC

5211. Re: Follow-up Disk Skin Effect Experiment

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-17 17:31:58 UTC
From: rsparks <rsparks@elltel.net>
Message-ID: <3d876321$1_2@corp.newsgroups.com>
Source record: 134503

With this experiment, we could not expect to find any difference between the two circuits at the lowest frequencies due to skin effect shielding because the frequency is so low that skin effect is not well developed. At the lowest frequencies, current should pass easily through the disk.

At 30 MHz however, skin effect will cause the currents parallel to the disk surface to be concentrated near the surface. But what about currents normal to the surface? The contention is made that skin effect will prevent currents normal to the surface in which case the current would have to follow a surface path. The surface path is longer by two times the radius of the disk so the time of wave travel would be longer by the increased distance divided by the velocity of the wave.

A rough circuit equivalent would be a transmission line stub as long as the disk radius. But this is worse than a rough equivalent because skin effect is proclaimed to be so effective that even capacity effects can not penetrate the skin effect shield. Therefore the capacity that exists between the sides of a transmission line stub would not exist across the skin effect shield.

We are left with a skin effect equivalent circuit that is like a stub transmission line but without capacity between the sides of the stub. But without knowing the capacity between the sides of the transmission line stub, we can not know what the transmission line impedance will be, nor the effective inductance created.

So the bottom line is that the skin effect shield theory predicts that current will not pass through the disk in this type of circuit at 30 MHz, but makes no prediction about what measurable effects can be expected due to the detour that the current must take.

This brings us to the heart of the problem. Predictability. A designer of shielding when working at low frequencies (1 MHz for example) can not depend upon skin effect to accomplish his task because the weight/thickness of the materials he is likely to use would be too costly. This designer would have to depend upon good current balance to achieve good shielding. As the design frequency increases, skin effect becomes more effective, so the designer has less need to worry about circuit and current balance. Perhaps skin effect even becomes extremely effective at some frequency so that circuit balance and current balance is not a factor at all, but at what frequencies does this occur? So far, there is no evidence that the design requirements for shielding at 30 MHz are any different than at 1 MHz because skin effect shielding has "taken hold" at 30 MHz. Current balance is the key to successful shielding at both frequencies.

The antenna designer has a question about the fold around current on the shield side of the coaxial transmission line. Apparently there is no effective fold around current at 1 MHz because the skin effect shield is not adequately developed at that frequency. But there is a problem at 30 MHz because skin effect is well developed at this frequency. True? Not if you consider the results of the two experiments.

The two experiments were both were designed to demonstrate skin effect shielding. If either experiment had shown a change that could be attributed to skin effect shielding, we would be on the path of predicting the measurements that should be expected when skin effect shielding is present. The results so far have not shown any effects that can be attributed to a skin effect shield.

73, Roger, W7WKB

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

5212. Re: safety ground and antenna ground - tie together and connect to A/C ground?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-17 18:22:03 UTC
From: gaschafer@attbi.com
Message-ID: <3d8772f1.1225756@netnews.attbi.com>
Source record: 134504

Sorry for all the repeat posts. My browser got screwed up.

73
Gary K4FMX

5213. Re: Hamsticks-Any parts that can go "poof"?? (Solution found)

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-17 18:23:46 UTC
From: DipoleDude@webtv.net
Message-ID: <19444-3D877332-74@storefull-2351.public.lawson.webtv.net>
Source record: 134505

Just thought some of you might be interested:
It seems the last "tree spank" was a doozy! Actually, I had forgotten that it wasn't a "tree spank". One particular morning I had spanked an extremely low train underpass all the way across. It was loaded full of steel girders.
It didn't connect at first, why on some occasions the "stingers" would only go down part way and then stop. On other days, they would go all the way down.
It looks as if I've broken the inductor cores, and pieces of carbon have been clogging the stinger hole. Pieces of carbon are now coming out of the stinger hole.
I think I'd better mount these things a little lower next time.

Mike

5214. Re: safety ground and antenna ground - tie together and connect to A/C ground?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-17 18:44:45 UTC
From: gaschafer@attbi.com
Message-ID: <3d8777b2.2443372@netnews.attbi.com>
Source record: 134508

On 16 Sep 2002 21:06:44 -0700, nm5k@wt.net (Mark Keith) wrote:

>gaschafer@attbi.com (Gary Schafer) wrote in message
>
>It's 240 volt that I'm mainly concerned with. I don't use the neutral
>wire to ground 120v gear.

Hi Mark,

If the equipment is 240 volt only and doesn't use a neutral (like a window air conditioner) then it
is ok to use 3 wires. They will be 2 hot and safety ground. No neutral involved.

The 240 volt furnace ground should be to the safety ground, not the neutral. But if it is a
dedicated line from the service panel then neutral or safety ground of course are the same. As
long as the neutral wire doesn't get used as a neutral and carry any current.

Same for your amp. If it is all 240 volt then no neutral is required. Only the safety ground. Some
people have 240 volt amps that do have also 120 volt circuits in them and use the chassis as the
neutral and ground. This is dangerous if you should lose the ground. Then the chassis is hot with
120 volts. In this case 4 wires are needed and the neutral would not be connected to the
chassis.

73
Gary K4FMX.

5215. Re: safety ground and antenna ground - tie together and connect to ...

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-17 19:02:38 UTC
From: gaschafer@attbi.com
Message-ID: <3d877bed.3526903@netnews.attbi.com>
Source record: 134506

On Mon, 16 Sep 2002 21:54:20 -0500 (CDT), richardharrison@webtv.net (Richard Harrison) wrote:

>Gary Schafer, K4FMX wrote:
>"Don`t use the neutral as a safety ground! That is worse than no ground
>at all."
>
>I agree that a separate safety ground is required. I disagree that the
>neutral is worse than no ground at all, so long as it remains intact.

Using the neutral as a ground is dangerous as lines are usually routed through multiple outlets.
The chances of the neutral becoming open are greater because of all the connections and the
possibility of someone making poor connections/ repairs at a junction.

I had a house several years ago that had most outlets in the house with the wires on the screw
terminals but the screws never even turned down. I am not talking about not being tight, they
were never even started in!

In a situation like the above if the neutral was used as a safety ground on some apparatus and
one of those neutral connections between the service panel and the apparatus were open, the
apparatus chassis would be at full line voltage through its internal circuit. Or it could become hot
if some other appliance down line were turned on.

The situation with an electric stove requires a dedicated line to use the neutral as ground. A little
safer than doing it on a multiple outlet circuit. But even that is changing to 4 wire requirement.

73
Gary K4FMX

5216. Re: Follow-up Disk Skin Effect Experiment

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-17 19:29:54 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <6d0fou0kbk0edjuovqvg2hg3ikhtj269hn@4ax.com>
Source record: 134507

On Tue, 17 Sep 2002 10:31:58 -0700, "rsparks" <rsparks@elltel.net>
wrote:

> The results so far have not shown any effects that
>can be attributed to a skin effect shield.
>
>
>73, Roger, W7WKB

Hi Roger,

You haven't really read any of this correspondence, have you?

73's
Richard Clark, KB7QHC

5217. Re: Follow-up Disk Skin Effect Experiment

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-17 19:42:21 UTC
From: richardharrison@webtv.net
Message-ID: <18838-3D87859D-191@storefull-2313.public.lawson.webtv.net>
Source record: 134509

Roger, W7WKB wrote:
"Apparently there is no effective fold around current at 1 MHz because the skin effect is not adequately developed at this frequency."

As posted earlier, the skin depth in copper is only 2 thousandths of an inch at 1MHz. It doesnt run much deeper in aluminum either.

You must have seen the thin aluminum cans used to shield coils in medium wave broadcast receivers. These are also effective at the lowest intermediate frequencies, say 50 KHz. They are grounded so that they don`t become just a plate in a series-connected coupling capacitor.

Best regards, Richard Harrison, KB5WZI

5218. Mast Height?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-17 20:24:45 UTC
From: ehsjr@bellatlantic.net
Message-ID: <3D878F5D.F24BFCC@bellatlantic.net>
Source record: 134510

I have a 5' Curtis Martin rooftop tower, which is WELL mounted.
(Put it up when re-doing the roof - removed the sheathing
and put in "sandwiches" of 3 2x8's on edge between the rafters
and 2 8' 2x8 spanning the 4 "sandwiches" and the rafters.
The tower legs are lagged into the "sandwiches" with some
huge lag bolts. If the tower goes, the roof rafters
have to go.)

My question: How much above the top of the tower can
I install a 5 element 6 meter beam, without bending/
breaking the mast? I *assume* that I can put it right at
the top of 10' of 2" mast, with a 3 element tribander
halfway between the top and the thrust bearing. I
figure it is better to ask for advice BEFORE I screw it up.

5219. Re: e/h antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-17 20:30:40 UTC
From: STARPOINT <iz5eep@libero.it>
Message-ID: <amafa4nam1@lacerta.tiscalinet.it>
Source record: 134465

Hi Gary ! >:o)
You can ask stefano@eheuroantenna.com
Bye
' 73
Marco IZ5EEP

"Gary" <kf8nl@gte.net> ha scritto nel messaggio
news:bDDh9.752$%g2.171@nwrddc03.gnilink.net...
> Hi
>
> I would like to see if any one out thereis useing the e/h antenna and if
> anyone has build and 75 meter e/h dipole
> I would like to see your drawing...I have build e/h for 20 meter and 15
> meter there work great on dx last weekend
> work 15 dx and 20 states fron maine to SD...WW8O
>
>

5220. Re: Follow-up Disk Skin Effect Experiment

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-17 20:42:40 UTC
From: tdonaly@aol.com
Message-ID: <20020917164240.03330.00004490@mb-cs.aol.com>
Source record: 134511

Roger wrote,
>
>With this experiment, we could not expect to find any difference between the
>two circuits at the lowest frequencies due to skin effect shielding because
>the frequency is so low that skin effect is not well developed. At the
>lowest frequencies, current should pass easily through the disk.
>
>At 30 MHz however, skin effect will cause the currents parallel to the disk
>surface to be concentrated near the surface. But what about currents normal
>to the surface? The contention is made that skin effect will prevent
>currents normal to the surface in which case the current would have to
>follow a surface path. The surface path is longer by two times the radius
>of the disk so the time of wave travel would be longer by the increased
>distance divided by the velocity of the wave.
>
> A rough circuit equivalent would be a transmission line stub as long as the
>disk radius. But this is worse than a rough equivalent because skin effect
>is proclaimed to be so effective that even capacity effects can not
>penetrate the skin effect shield. Therefore the capacity that exists
>between the sides of a transmission line stub would not exist across the
>skin effect shield.
>
>We are left with a skin effect equivalent circuit that is like a stub
>transmission line but without capacity between the sides of the stub. But
>without knowing the capacity between the sides of the transmission line
>stub, we can not know what the transmission line impedance
>will be, nor the effective inductance created.
>
>So the bottom line is that the skin effect shield theory predicts that
>current will not pass through the disk in this type of circuit at 30 MHz,
>but makes no prediction about what measurable effects can be expected due
>to the detour that the current must take.
>
>This brings us to the heart of the problem. Predictability. A designer of
>shielding when working at low frequencies (1 MHz for example) can not depend
>upon skin effect to accomplish his task because the weight/thickness of the
>materials he is likely to use would be too costly. This designer would have
>to depend upon good current balance to achieve good shielding. As the
>design frequency increases, skin effect becomes more effective, so the
>designer has less need to worry about circuit and current balance. Perhaps
>skin effect even becomes extremely effective at some frequency so that
>circuit balance and current balance is not a factor at all, but at what
>frequencies does this occur? So far, there is no evidence that the design
>requirements for shielding at 30 MHz are any different than at 1 MHz because

>skin effect shielding has "taken hold" at 30 MHz. Current balance is the
>key to successful shielding at both frequencies.
>
>The antenna designer has a question about the fold around current on the
>shield side of the coaxial transmission line. Apparently there is no
>effective fold around current at 1 MHz because the skin effect shield is not
>adequately developed at that frequency. But there is a problem at 30 MHz
>because skin effect is well developed at this frequency. True? Not if
>you consider the results of the two experiments.
>
>The two experiments were both were designed to demonstrate
>skin effect shielding. If either experiment had shown a change that could
>be attributed to skin effect shielding, we would be on the path of
>predicting the measurements that should be expected when skin effect
>shielding is present. The results so far have not shown any effects that
>can be attributed to a skin effect shield.
>
>
>73, Roger, W7WKB

Roger,
you should learn to take the comments of Roy, both Richards, et al
more to
heart. If you want anyone to take you seriously you'll have to develop an
analytical
description of what is taking place in your experiments based not on currents
alone,
but on field theory. This is a problem of physics. Good luck.

Tom Donaly, KA6RUH

5221. Re: safety ground and antenna ground - tie together and connect to ...

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-17 21:07:21 UTC
From: richardharrison@webtv.net
Message-ID: <19945-3D879989-178@storefull-2318.public.lawson.webtv.net>
Source record: 134512

Mark Keith, NM5K wrote:
"I`m getting my neutral for my 240v from the water pipe in the attic in the house. But we have all metal pipe, and it`s grounded well."

Before HL&P switched on the power to Mark`s house, the city inspector had verified the solid meter ground to that cold water pipe. If the inspection slip was missing, HL&Ps inspector verified the grounds before supplying power. Mark`s neutral connection to the pipe is probably the best in the house. There`s an approved clamp at the meter end and no way will he melt the pipe or lose continuity until the pipe freezes ruining the contents of his house, and the plumber cuts out a piece of the pipe for replacement. That`s a time for extra care to avoid electrocution of the plunber in the attic.

Best regards, Richard Harrison, KB5WZI

5222. Re: Alliance Rotor Controller

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-17 21:34:56 UTC
From: Dennis Kaylor <k4oxg@tampabay.rr.com>
Message-ID: <3D879FFA.AE1B128A@tampabay.rr.com>
Source record: 134513

hello
if i remember correctly
its 1 2
34 on the rotor which goes to 1 2 3 4 on the control box
if that doesnt work contact the folks at rotordoc they will be able to
help you
or norm at norms rotor repairs

Afterburner wrote:

> Help! I have an old Alliance 4 wire antenna controller and was
> wondering wich wires go to which screw connection on the bottom of the
> controller. Or if someone has a wireing diagram.
>
> Thanks

5223. HF and VHF beam on same mast?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-17 22:10:31 UTC
From: IronHead <slipkid@kwiknet.net>
Message-ID: <qLNh9.111$EWM.19923099@news2.randori.com>
Source record: 134514

I have a cushcraft mini beam on a rotatable mast. My question is, can I mount a 2 meter beam vertically or horizontally above the HF beam? If so, at what distance apart? THANKS

KC2FYP

5224. Re: Mast Height?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-17 22:12:19 UTC
From: WA6LZH <tangeram@lucent.com>
Message-ID: <3D87A8C3.1030408@lucent.com>
Source record: 134516

Your mileage may very but I have been successful in using IMC Electrical Conduit as a mast. This is not the thin wall stuff but thick like pipe although not quite as thick as rigid conduit. I have used 10 feet of 1 1/4 inch from the rotor plate within my Rohn Top Section. So I'd sat it extends about 7-8 feet above the tube on top of the top section. Not much weather here in Oakland although we occasionally get some windy days. It's up at a total height of 30 feet. I've watched it when the wind was strong enough to really flex the TA-33 a bit but I was never able to see any deflection of the mast. I am confident enough that I am planning on extending it another ten feet or so with the same conduit. However, could be famous last words hihi. But you know if it doesn't come down in a storm it probably wasn't big enough or high enough to start with.

BTW I also use telescoping lengths of 10 foot IMC to make up my main mast for inverted vees. I use 1 1/4, 1, 3/4 mounted to the chimney atop my roof for a total height of about 46 feet. Not good enough for a beam but supports two vee's just fine. I fasten them at the telescope points with a threaded hole and a machine screw and it sure beats Rat Shack push ups and a whole lot cheaper.

Tony

ehsjr@bellatlantic.net wrote:

>
> My question: How much above the top of the tower can
> I install a 5 element 6 meter beam, without bending/
> breaking the mast? I *assume* that I can put it right at
> the top of 10' of 2" mast, with a 3 element tribander
> halfway between the top and the thrust bearing. I
> figure it is better to ask for advice BEFORE I screw it up.
>

5225. Re: Damn the CC&Rs!

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-17 22:23:28 UTC
From: Artie DeCoe <Artie@dcoe.net>
Message-ID: <AXNh9.109674$5r1.4140279@bin5.nnrp.aus1.giganews.com>
Source record: 134515

Just try to model it with eznec!

"Chuck/KE4ETH" <chuck_hawks@hotmailnospamorama.com> wrote in message
news:Onwh9.168357$2L.7418916@e3500-atl2.usenetserver.com...
> Yea, and think of the crazy radiation pattern
>
> --
> Chuck
> KE4ETH
>
> "Artie DeCoe" <Artie@dcoe.net> wrote in message
> news:6nwh9.84030$AR1.3219419@bin2.nnrp.aus1.giganews.com...
> > http://hirshhorn.si.edu/collection/gardens/snelson.html
> >
> > This ought to leave the homeowner's assn scratching their heads if you
put
> > it up.
> >
> >
>
>
>

5226. Re: safety ground and antenna ground - tie together and connect to ...

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-17 22:45:38 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <3D87B092.4080709@eznec.com>
Source record: 134424

My daughter's recently purchased older home had been professionally rewired, but someone had put in one obvious kluge since -- a power outlet strip wired in with about a mile of black tape. I went prepared with parts to redo it right -- ahem, that is, to advise my daughter how to do it right -- and discovered that the romex from the kluge went to a box that furnished power to a baseboard heater. The heater was 220 volts, 2 wire, with a safety ground, and that's all that was coming into the box from the service box. The romex going to the kluged outlet strip was connected between one leg of the 220 line (ok) and the safety ground (NOT ok!). The wire and outlet strip came out until there's time to do it right.

If you're going to fool with wiring, you absolutely should have at least a home-handyman book on wiring, learn the general principles, and follow the procedures exactly. If you're going to do anything very major, it pays to invest in a copy of the NEC**. I did some major wiring for an addition and replaced the service box some years ago -- all with permits and all inspected -- and found both kinds of book to be indispensible. NEC to give me the straight answers about what was ok and what wasn't, and the home-handyman book to show me the tricks I never would have discovered otherwise (like "expander rings" -- to increase the volume of an installed box so it meets the NEC requirement for minimum volume when you run additional wires into it).

Besides the safety issues, if you do non-code wiring you run the risk of the insurance company having a way to avoid paying if you ever have an electrical fire.

Roy Lewallen, W7EL

** Some latecomers or casual lurkers might be confused, since another NEC comes up on this newsgroup quite often. The one being referred to on this thread -- and anywhere else electrical wiring is discussed -- is the National Electrical Code, which most localities in the U.S. have adopted as the official code dictating electrical wiring standards. The other NEC (NEC-2, NEC-4) you see referenced on this newsgroup a lot is the Numerical Electromagnetics Code, a series of computer programs used for antenna analysis. The two aren't related.

Gary Schafer wrote:
> On Mon, 16 Sep 2002 21:54:20 -0500 (CDT), richardharrison@webtv.net
> (Richard Harrison) wrote:
>
>
>>Gary Schafer, K4FMX wrote:
>>"Don`t use the neutral as a safety ground! That is worse than no ground

>>at all."
>>
>>I agree that a separate safety ground is required. I disagree that the
>>neutral is worse than no ground at all, so long as it remains intact.
>
>
>
> Using the neutral as a ground is dangerous as lines are usually routed
> through multiple outlets.
> The chances of the neutral becoming open are greater because of all
> the connections and the
> possibility of someone making poor connections/ repairs at a junction.
>
>
> I had a house several years ago that had most outlets in the house
> with the wires on the screw
> terminals but the screws never even turned down. I am not talking
> about not being tight, they
> were never even started in!
>
> In a situation like the above if the neutral was used as a safety
> ground on some apparatus and
> one of those neutral connections between the service panel and the
> apparatus were open, the
> apparatus chassis would be at full line voltage through its internal
> circuit. Or it could become hot
> if some other appliance down line were turned on.
>
> The situation with an electric stove requires a dedicated line to use
> the neutral as ground. A little
> safer than doing it on a multiple outlet circuit. But even that is
> changing to 4 wire requirement.
>
> 73
> Gary K4FMX
>

5227. Re: e/h antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-17 22:50:20 UTC
From: JC <jacques.culot@skynet.be>
Message-ID: <3d87b1ae$0$203$ba620e4c@news.skynet.be>
Source record: 134517

Hi Gary,

Here are some URL. Most of them are in english, few in french and in italian. Many italian OMs have realised EH antennas. Have a look and try.

http://www.starshiptechnology.homestead.com/CFA.html

http://www.g3ycc.karoo.net/xfield.htm

http://www.longwaveradio.com/engineering.html

http://www.ee.surrey.ac.uk/Personal/D.Jefferies/poynting.html

http://www.luminet.net/~wenonah/cfa/

http://www.rwonline.com/reference-room/special-report/rw-antenna3.shtml

http://www2.hard-core-dx.com/archive/1999/msg00079.html

http://www.rwonline.com/reference-room/special-report/rw-antennaJune20.shtml

http://www.nrb.org/Magarchives/April_2001/Crows_or_Swans.htm

http://www.soficom.com.eg/homepages/kabbary.htm

http://www2.hard-core-dx.com/archive/1999/msg00093.html

http://www.mediasuk.org/archive/sanremo.html

http://www.lbagroup.com/archive.htm

http://www.antennadesigner.co.uk/cfa.htm

http://www.lns.cornell.edu/spr/1999-10/msg0018858.html

http://www.soficom.com.eg/homepages/kabbary1.htm

http://www.qsl.net/iz7ath/web/02_brew/18_eh/english/pag11_eng.htm

http://www.qsl.net/dk1lx/

http://lists.contesting.com/_topband/1999-April/004196.html

http://www.innescorp.com.au/downloads/oracle/November.pdf

http://www.geocities.com/gw0tqm/magloop/magxfld.htm

http://www.rnw.nl/realradio/html/archive001113.html

http://www.radioamateur.org/newsradio/index.html • la page 22

http://www.eh-antenna.com/The_EH-ANTENNA_Book.htm

http://www.eh-antenna.com/How_to.pdf

http://www.hatdaw.com/papers/JBH-CFA.pdf

http://www.antennex.com/preview/Folder02/cfa_5.htm

http://www.fars.k6ya.org/relay/Relay0203.pdf

http://f5ixu.waika9.com/eh.htm p1

http://f5ixu.waika9.com/construeh.htm p2

http://f5ixu.waika9.com/eh.htm p3

http://www.eheuroantenna.com/

http://www.qsl.net/w0kph/

http://www.antennex.com/hws/ws1201/theeh.html

http://perso.wanadoo.fr/bruno.nobru/INDEX%20nobru.HTM et la suite

http://www.qsl.net/iw0bzd/

http://www.veron.nl/tech/lfw3/sld019.htm

http://associazioni.comune.fi.it/ari/archivio/antenna_eh/

http://www.qsl.net/is0iek/is0iek_%20EH_Antenna.htm

http://associazioni.comune.fi.it/ari/antenne_eh/suggerimenti.htm

http://www.qsl.net/aribz/ehantenna2.htm

http://www.nikhef.nl/~pieth/pubs/lf/lfd1/

http://www.qsl.net/ik5xct/dxkey/eh/bookehitaliano.doc

http://www.qsl.net/iz7ath/web/02_brew/18_eh/

http://www.antennex.com/Stones/st1201/hertz.html

http://iz5ccs.firenze.net/eh1.htm

http://www.antennex.com/Stones/st0800/ehwhat.htm

http://www.antennex.com/Stones/st0101/time.htm

http://flexnet.linux-dude.com/article.php?sid=134

http://www.saf.com/arc/images/APR02HAM.pdf

http://www.broadcast.it/news/archivio/5-2002/guidaradio.htm

http://www.lwca.org/mbarchiv/msg0102.htm

many pages here after

http://www.antennex.com/preview/

http://www.antennex.com/preview/

http://www.antennex.com/preview/

http://www.antennex.com/preview/

and

http://www.scoon.co.uk/Electrotherapy/Rife/Papers/cfa.pdf

5228. Mag mount for base application?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-17 23:17:58 UTC
From: haytirebl@aol.compost
Message-ID: <20020917191758.18884.00004057@mb-fz.aol.com>
Source record: 134518

Hi all,

I'm getting back into the hobby after several years off. I used to use a mag mount 2m as a base ant. but in the years of inactivity, have forgotten how to do the ground plane. At one time, I stuck it to an old cookie sheet and it seemed to work fine, however, I don't remember the size. Is there a formula for figuring base area needed to use this type ant. as a base? Any help would be greatly appreciated!

Thanks in advance
Tom KB0WYG

5229. Re: HF and VHF beam on same mast?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-17 23:34:32 UTC
From: Dennis Kaylor <k4oxg@tampabay.rr.com>
Message-ID: <3D87BC08.7956DF93@tampabay.rr.com>
Source record: 134419

well i am sure you will get a wide range of opnions in here
but yes you can mount it above the HF beam just mount it about 5-6 feet above the HF beam and everything will be fine
if you mount it vertically make it 5-6 feet to the tip of the elements on the bottom
good luck

IronHead wrote:

> I have a cushcraft mini beam on a rotatable mast. My question is, can I
> mount a 2 meter beam vertically or horizontally above the HF beam? If so, at
> what distance apart? THANKS
>
> KC2FYP

5230. Re: eham.com

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-17 23:47:29 UTC
From: W4WNT <w4wnt@carolina.rr.com>
Message-ID: <laPh9.29248$Wa.1363448@twister.southeast.rr.com>
Source record: 134420

According to eham.net, they got hacked over the weekend, but are up now.

Bill, W4WNT

<hsnyder@houston.rr.com> wrote in message
news:PF9h9.459775$q53.15837829@twister.austin.rr.com...
> I have been getting error messages from eham.com this weekend.
> Did they go dark?
>
> Harold
> WD5KCA

5231. Re: e/h antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-17 23:51:37 UTC
From: tdonaly@aol.com
Message-ID: <20020917195137.24675.00004810@mb-mj.aol.com>
Source record: 134421

JC wrote,
>
>Hi Gary,
>
>Here are some URL. Most of them are in english, few in french and in
>italian. Many italian OMs have realised EH antennas.
> Have a look and try.

(Many web sites deleted.)

Thank you for the many crackpot websites. The attempts to justify the CFA based on the Poynting vector are truly impressive in number. The Poynting vector, however, is beside the 'poynt', and used wrongly in any event. Those who try to use it to explain a natural phenomenon (the radiation of a CFA antenna) first have to demonstrate that the phenomenon exists. No one has been able to do this, nor even to present a demonstration of the theory that has any more use for designing antennas than the Book of Mormon.

Tom Donaly, KA6RUH

5232. Re: e/h antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-18 00:11:14 UTC
From: JC <jacques.culot@skynet.be>
Message-ID: <3d87c4a5$0$211$ba620e4c@news.skynet.be>
Source record: 134422

I do agree with your analysis. Nevertheless each time I find something about this topics, I put it aside. This is why I posted so much URL ... but without any comment. One day I will try.

73 de ON5MJ

5233. Re: e/h antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-18 00:31:22 UTC
From: JC <jacques.culot@skynet.be>
Message-ID: <3d87c95c$0$205$ba620e4c@news.skynet.be>
Source record: 134423

Here are few others containing " Dr Kabbary " inventor of this aerial (find where).

http://www.antennex.com/Stones/st0302/pockets.html

http://www.qsl.net/ik5xct/dxkey/eh/ik5iir_suggerimenti3.doc

http://www.rwonline.com/reference-room/guywire/mailbag/archive.shtml

http://www.dxing.com/dxr/dxld2003.htm

5234. Re: Mast Height?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-18 00:36:54 UTC
From: David Ornee <daveornee@mindspring.com>
Message-ID: <am8i2qsbq1@slb2.atl.mindspring.net>
Source record: 134425

<ehsjr@bellatlantic.net> wrote in message
news:3D878F5D.F24BFCC@bellatlantic.net...
> I have a 5' Curtis Martin rooftop tower, which is WELL mounted.
> (Put it up when re-doing the roof - removed the sheathing
> and put in "sandwiches" of 3 2x8's on edge between the rafters
> and 2 8' 2x8 spanning the 4 "sandwiches" and the rafters.
> The tower legs are lagged into the "sandwiches" with some
> huge lag bolts. If the tower goes, the roof rafters
> have to go.)
>
> My question: How much above the top of the tower can
> I install a 5 element 6 meter beam, without bending/
> breaking the mast? I *assume* that I can put it right at
> the top of 10' of 2" mast, with a 3 element tribander
> halfway between the top and the thrust bearing. I
> figure it is better to ask for advice BEFORE I screw it up.
Much of what you are asking depends on the weather and how long you want the installation to last.
First, I would replace the lag bolts with machine bolts that are long enough to go all the way through the "rafters", put large washers, and double nuts to really secure the tower.
Next, I would use 1/4" wall seamless Chromoly steel 2" OD tubing. You can get it galvanized, or you can clean it very well and "paint" it with Cold Galvanizing material.
If your rotor and antennae work with 2" OD mast, you will be happier in the long run with a much stronger material.
KQ9W, David Ornee, Western Springs, IL

5235. Re: Extended Warranty Experience

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-18 01:53:07 UTC
From: Mike F <isobars@urxSpamDam.com>
Message-ID: <zWQh9.1100$K5.558@fe02>
Source record: 134426
Cross-posted to: rec.radio.amateur.antenna,alt.rv

Extended warranties, whether on your MH or a $15 wristwatch, are literally and precisely insurance policies, with the prices set so the sellers make a profit. It's called capitalism, and it's a valid means of making a living. By the very definition of extended warranties, the average buyer loses money. If he didn't, the company would go broke.

If you break things more often than the average bear, by enough margin to offset the insurance company's profit margin, you win ... unless the seller goes out of business first.

If you're too poor to buy your own new engine when some engine part SPECIFICALLY LISTED IN YOUR EXTENDED WARRANTY POLICY fails DESPITE FLAWLESS MAINTENANCE, you may want an ext warranty. If, OTOH, you can afford to fix that engine, you will come out ahead in the long term if you never buy another extended warranty on anything you buy.

It's simple statistics, and it's exactly like walking into a gambling casino. The house ALWAYS wins in the long run, or it folds.

Do you feel lucky, punk? ;-)

Mike

"CAM" <Cecil.A.Moore@IEEE.org> wrote in message
news:3CCFF0A5.63D805AF@IEEE.org...
> Gerald Schmitt wrote:
> > We just closed a deal on a new to us Class C and have some
> > interest in an extended warranty.
>
> But Jerry, you can't use SSB with a Class C.
> --
> cheers, CAM http://www.qsl.net/w5dxp
>
>
> -----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
> http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
> -----== Over 80,000 Newsgroups - 16 Different Servers! =-----

5236. Re: Tower mounted short vertical

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-18 02:27:28 UTC
From: Kent Haase <ijeh99@mb.sympatico.ca>
Message-ID: <byRh9.4085$nU2.19895@news1.mts.net>
Source record: 134428

Well, vertical is about 21 feet in length (height?), and I have a small number of ground radials (yes, ground radials, not a counterpoise) of various lengths (10 to 25 feet, bonded to chain-link fence which runs on either side of yard). Frequencies are the AmateurHF bands.

I was hoping for just a generalization, really, if possible.

Kent VE4KEH

"Richard Harrison" <richardharrison@webtv.net> wrote in message news:19946-3D873EC4-76@storefull-2318.public.lawson.webtv.net...
> Kent, VE4KEH wrote:
> "How are radiation resistance and capacitance affected by mounting it (a
> short vertical) atop a grounded 20 foot tower?"
>
> What ground-plane will you use and what is the frequency? How short is
> the vertical?
>
> Best regards, Richard Harrison, KB5WZI
>

5237. tower paint

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-18 02:28:48 UTC
From: garigue <garigue@attbi.com>
Message-ID: <yxRh9.10552$L12.2896@sccrnsc02>
Source record: 134427

Can anyone give me some info regarding painting a tower which is made of galvanized coated steel. Most of the original paint is still on the surface. Minor rust areas are present. The intent is to have the paint last and not so much the price. I have my own ideas but am always looking for the experience of others. Thanks in advance.

73 God Bless Tom KI3R Port Vue Pa nr Pittsburgh

5238. Re: Follow-up Disk Skin Effect Experiment

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-18 02:38:24 UTC
From: rsparks <rsparks@elltel.net>
Message-ID: <3d87e31a_2@corp.newsgroups.com>
Source record: 134429

"Tdonaly" <tdonaly@aol.com> wrote in message
news:20020917164240.03330.00004490@mb-cs.aol.com...
> Roger,
> you should learn to take the comments of Roy, both Richards,
et al
> more to
> heart. If you want anyone to take you seriously you'll have to develop an
> analytical
> description of what is taking place in your experiments based not on
currents
> alone,
> but on field theory. This is a problem of physics. Good luck.
>
> Tom Donaly, KA6RUH

Probably the best advice of the day!

The only problem is that I got started down this path because some experiments I was doing a couple of years ago just weren't working when I tried to apply the skin effect shield idea. When I made the hard decision to abandon skin effect, the work came together very quickly. No big deal but frustrating when it appears the book is giving you wrong information.

So when I start testing to see how detectable skin effect is, I detect nothing. All I get for advice is skin effect works, and no test available to a ham can detect it. Maybe we can't detect it because it is not effective in the way we are told at HF. No one will even give an impedance number that the disk should introduce into the test circuits.

So, with all due respect, I think skin effect shielding at HF is a ham radio myth. Sorry, the evidence just points in that direction.

73, Roger, W7WKB

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

5239. Re: tower paint

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-18 02:45:29 UTC
From: Crazy George <munschNO@attglobal.net.SPAM>
Message-ID: <3d87ed4b_2@news1.prserv.net>
Source record: 134430

Tom:
For years I recommended cold galvanizing as a repair/replacement for the hot dipped zinc which is on there now. However, after considerable discussion and some experiments, I have come to the conclusion that cold galvanizing is the expensive way to do it. To prevent future deterioration, the requirement is to apply a continuous unbroken film of protection on the surface which will keep moisture away from the steel. Latex paint won't do this nearly as well as a good old alkyd enamel, applied carefully to a clean surface with all the rust removed. Rust is porous enough to contain enough moisture to keep causing further trouble. And, before the purists complain, it is the oxygen dissolved in the moisture which is the actual problem, but moisture is a sort of catalyst. But be extremely conscientious about application, and leave no gaps, scratches or other uncovered areas.

--
Crazy George
Remove NO and SPAM from return address
garigue <garigue@attbi.com> wrote in message
news:yxRh9.10552$L12.2896@sccrnsc02...
> Can anyone give me some info regarding painting a tower which is made of
> galvanized coated steel. Most of the original paint is still on the
> surface. Minor rust areas are present. The intent is to have the paint
> last and not so much the price. I have my own ideas but am always looking
> for the experience of others. Thanks in advance.
>
> 73 God Bless Tom KI3R Port Vue Pa nr Pittsburgh
>
>

5240. Magnetic Mount for a Webster Bandspanner?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-18 03:01:33 UTC
From: w8kzw@arrl.net
Message-ID: <a9a820d3.0209171901.1549b782@posting.google.com>
Source record: 134431

Has anyone put on some serious mileage using a Webster Bandspanner antenna and a Magnetic Mount?

I have a heavy-duty 3-pad magnetic mount that *looks* like it will stay stuck to the car at highway speeds / winds with a Bandspanner attached, but just haven't found the guts to try it yet.

Perhaps another way of asking the question is, "what are some 'heavy' antennas you've been successful with using a 3-magnet mount? ... what are the horror stories?" Surely these magnetic mounts can handle more than a Ham-stick!

Thanks,
Jeff
W8KZW

5241. Re: Magnetic Mount for a Webster Bandspanner?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-18 03:10:03 UTC
From: CAM <Cecil.A.Moore@ieee.org>
Message-ID: <3D87EE8B.9F9D675D@ieee.org>
Source record: 134432

W8KZW wrote:
> Perhaps another way of asking the question is, "what are some 'heavy'
> antennas you've been successful with using a 3-magnet mount? ... what
> are the horror stories?" Surely these magnetic mounts can handle more
> than a Ham-stick!

Not much more. A 3-magnet mount won't handle a 40m Hustler. The problem
is meeting 18-wheelers on two-lane roads. The antenna gets hit essentially
by swirling 150mph winds. The 4-magnet mount might handle a 40m Hustler.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

5242. Re: help troubleshooting 27 MHz emitter: finger/screwdriver antenna?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-18 03:15:14 UTC
From: richardharrison@webtv.net
Message-ID: <24586-3D87EFC2-243@storefull-2316.public.lawson.webtv.net>
Source record: 134434

Gabriel Horner wrote:
"I`m trying to get the first stage of a transistor emitter to
oscillate."

All that is required for oscillation is a gain greater than one and positive feedback of a fraction just equal the recriprocal of the stage gain.

In the Feb. 1971 issue of QST was an oscillator which seems similar to the one described by Gabriel. The article was entitled "Quick and Easy Portable / Mobile Reception" in which a superregenerative detector base modulated a transistor crystal-controlled oscillator for reception by an AM radio. It was written by Doug DeMaw.

The oscillator used an NPN transistor and was powered by a 12-volt supply.

The oscillator load was a permeability-tuned circuit. The crystal was connected between collector and base of a common-emitter circuit.

The forward-bias voltage divider cobsisted of 68K and 10K resistors putting about 1.5 volts on the base. The emitter resistor was 470 ohms so that the 0.9 volts across would result in about 2ma through the resistor and thus through the transistor, before oscillation starts.

The emitter resistor is bypassed with a 0.1 microfarad capacitor so that the gain is controlled by the ratio of the load impedance to the inherent emitter resistance of 26 / 2ma, or 13 ohms. The 0.1 microfarad capacitance is adequate for the 550 KHz to 1600 KHz frequency range, and 470 ohms, as a bypass.

This circuit almost has to oscillate if the collector is tuned on or near the proper side of the crystal resonant frequency. In fact, it should oscillate with a 2.2K resistor replacing the tuned circuit. Will it tune to the desired frequency?

The transistor with a 2ma collector current and a 2.2K load should have a gain of about 150, so not much energy needs to be fed back from the output to the input through the crystal to cause oscillation (less than 1%).

Almost any any good electronics text covers crystal oscillators. Amateur publications such as W1FB`s Design Notebook, Solid State For The Radio Amateur, or The ARRL Radio Handbook should illuminate oscillators.

Gabriel has a diagram of the oscillator stage he is trying to get working. First, carefully check to see that every part is correctly

connected in its place.

There are only a few parts in the oscillator so it isn`t too hard to check parts, though this is an uninspired method of troubleshooting.

I would check voltage across the emitter resistor to see if the transistor is turned on, if there is an emitter resistor. Then I might short the base to the emitter to see if I could turn the transistor off. If the transistor turns on and off, it`s good, 99&44/100% of the time. Do you have a metered power supply to monitor voltage and current?

You need a receiver tuned to the frequency of the crystal (or oscillator frequency if it`s an overtone circuit) to detect oscillations, or use some other detector of your choice, a GDO or whatever.

If the circuit isn`t oscillating, see if it works as an amplifier. It should and maybe the crystal doesn`t work. Replace the coil in your GDO with the crystal and dial out most of the tuning capacitance to find the point the crystal breaks into oscillation. If the crystal oscillates it`s probably good. Find its frequency roughly with your receiver or precisely with your counter.

There are too many troubleshooting techniques to report here even if I knew them all which I don`t. This posting is already far too long, so, GOOD LUCK!

Best regards, Richard Harrison, KB5WZI

5243. Re: e/h antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-18 03:31:24 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <3D87F38C.1060507@eznec.com>
Source record: 134441

I began through the list, figuring that there surely isn't a single decent quantitative measurement in the lot. But was I pleasantly surprised! The third of fourth one contained a link to some decent measurements, done by a college student who took pains to control feedline radiation and make good measurements relative to a reference antenna. You can find the results at http://www.ee.surrey.ac.uk/Personal/D.Jefferies/ref.html. Interesting, and much more convincing than the likes of "produced the odd QSO on 1.8 MHz". And pretty much in line with the CFA model that was measured and reported on by Trainotti in September 2001 IEEE Trans. on Broadcasting.

If anyone else finds some actual and decent measurements buried in this list or elsewhere, please post the URL. An objective picture of the actual performance of the CFA and EH antennas is slowly emerging, mixed among the great piles of propaganda, bafflegab, and religious experiences people are having with them.

Roy Lewallen, W7EL

JC wrote:
> Hi Gary,
>
> Here are some URL. Most of them are in english, few in french and in
> italian. Many italian OMs have realised EH antennas. Have a look and try.
> . . .

5244. Re: tower paint

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-18 03:39:07 UTC
From: haytirebl@aol.compost
Message-ID: <20020917233907.09238.00000256@mb-da.aol.com>
Source record: 134433

Zinc Chromate. Now outlawed for aircraft use...at least in my neck of the woods. Fairly cheap now as millions of gallons are left undisposed of. Most ZCh is a nice shade of cat puke green but will allow just about any other type of paint to adhere to it. If you know anyone in the railroad industry, throw a bit of Dupont Imeron over the ZCh. That should last a few years.

KB0WYG
Tom

The report claimed the aircraft made funny noises, I walked out and told it to start sounding like a real airplane....or else

5245. CushCraft R3 antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-18 04:01:32 UTC
From: ZOOM <robert931@sympatico.ca>
Message-ID: <vUSh9.3217$_S6.954095@news20.bellglobal.com>
Source record: 134437

Anyone using this antenna. Like to hear your comments from people who actually used them and not hear-say.
Also I'm looking to locate the control box for one. Got one for sale please let me know.

Cheers,
Robert
VE3RPF

5246. Re: Mast Height?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-18 04:01:34 UTC
From: ehsjr@bellatlantic.net
Message-ID: <3D87FA71.812AD9EF@bellatlantic.net>
Source record: 134435

WA6LZH wrote:
>
> Your mileage may very but I have been successful in using IMC Electrical
> Conduit as a mast. This is not the thin wall stuff but thick like pipe
> although not quite as thick as rigid conduit. I have used 10 feet of 1
> 1/4 inch from the rotor plate within my Rohn Top Section. So I'd sat it
> extends about 7-8 feet above the tube on top of the top section. Not
> much weather here in Oakland although we occasionally get some windy
> days. It's up at a total height of 30 feet. I've watched it when the
> wind was strong enough to really flex the TA-33 a bit but I was never
> able to see any deflection of the mast. I am confident enough that I am
> planning on extending it another ten feet or so with the same conduit.
> However, could be famous last words hihi. But you know if it doesn't
> come down in a storm it probably wasn't big enough or high enough to
> start with.
>
> BTW I also use telescoping lengths of 10 foot IMC to make up my main
> mast for inverted vees. I use 1 1/4, 1, 3/4 mounted to the chimney atop
> my roof for a total height of about 46 feet. Not good enough for a beam
> but supports two vee's just fine. I fasten them at the telescope points
> with a threaded hole and a machine screw and it sure beats Rat Shack
> push ups and a whole lot cheaper.
>
> Tony

Thanks!

5247. Re: Mast Height?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-18 04:03:27 UTC
From: ehsjr@bellatlantic.net
Message-ID: <3D87FAE3.2CD31B10@bellatlantic.net>
Source record: 134436

David Ornee wrote:
>
> <ehsjr@bellatlantic.net> wrote in message
> news:3D878F5D.F24BFCC@bellatlantic.net...
> > I have a 5' Curtis Martin rooftop tower, which is WELL mounted.
> > (Put it up when re-doing the roof - removed the sheathing
> > and put in "sandwiches" of 3 2x8's on edge between the rafters
> > and 2 8' 2x8 spanning the 4 "sandwiches" and the rafters.
> > The tower legs are lagged into the "sandwiches" with some
> > huge lag bolts. If the tower goes, the roof rafters
> > have to go.)
> >
> > My question: How much above the top of the tower can
> > I install a 5 element 6 meter beam, without bending/
> > breaking the mast? I *assume* that I can put it right at
> > the top of 10' of 2" mast, with a 3 element tribander
> > halfway between the top and the thrust bearing. I
> > figure it is better to ask for advice BEFORE I screw it up.
> Much of what you are asking depends on the weather and how long you want the
> installation to last.
> First, I would replace the lag bolts with machine bolts that are long enough
> to go all the way through the "rafters", put large washers, and double nuts
> to really secure the tower.
> Next, I would use 1/4" wall seamless Chromoly steel 2" OD tubing. You can
> get it galvanized, or you can clean it very well and "paint" it with Cold
> Galvanizing material.
> If your rotor and antennae work with 2" OD mast, you will be happier in the
> long run with a much stronger material.
> KQ9W, David Ornee, Western Springs, IL

Thanks!

5248. For Sale FS MFJ 1026 (Phaser) Deluxe Noise Cancelling Signal Enhancer

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-18 04:35:51 UTC
From: Jim <jbollit@ix.netcom.com>
Message-ID: <am8vr5sfc1@slb3.atl.mindspring.net>
Source record: 134438
Cross-posted to: rec.radio.shortwave,rec.radio.amateur.antenna,rec.radio.swap

MFJ-1026 Phaser for sale. This is the phasing unit with the internal whip antenna and internal pre-amp for the auxiliary antenna (or noise) input. I have found this internal amp to be very helpful when using a less than optimum
noise antenna.

The unit will be packaged in its original carton and it includes the original vertical whip antenna. It also comes with the original manual.

This unit has less than 3 hours of use on it and works per specifications. I have used it for BCBDX'ing, nulling out pest stations to reveal stations underneath or on adjacent frequencies that I would have otherwise not been able to hear. It also work on electrical noise from computer monitors, and televisions, etc.

The unit has been modified so it works in the long wave and medium wave (BCB) frequencies. The modifications have removed the hi-pass filters but the unit does not have the input main/aux antenna swap switch.

There is alot of information (including modification instructions) on this unit at:

http://www.hard-core-dx.com

I have pictures of the unit that I can send to anyone that requests them.

The cost is $130.00 plus the shipping cost from zip code 92008 (near San Diego, CA.). I prefer mondy order, but personal check is OK, but personal check must clear prior to shipping unit.

Ask for the pictures, you will see the unit looks brand new.

You can verify my e-bay rating by looking at diamond_jim.

Jim WA9ZBV

5249. Re: safety ground and antenna ground - tie together and connect to A/C ground?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-18 04:47:06 UTC
From: Bill Nelson <billn@spock.peak.org>
Message-ID: <am90ga$4pg$6@quark.scn.rain.com>
Source record: 134439

Gary Schafer <gaschafer@attbi.com> wrote:

> The 240 volt furnace ground should be to the safety ground, not the
> neutral. But if it is a
> dedicated line from the service panel then neutral or safety ground of
> course are the same. As
> long as the neutral wire doesn't get used as a neutral and carry any
> current.

No, the neutral and equipment grounding conductor are NOT the same.
A 240 volt circuit may, or may not, have a neutral - depending on whether
120 volts is also desired at the equipment.

A 220/240 volt service, with neutral, will have four wires in the cable.
There will be a black (one leg of the 240), a usually red (the other hot
leg), a white (common) and a green or bare (equipment grounding conductor).

"Neutral" is actually a poor term, as it is not that in many instances.
"Common conductor" is the term used in the industry - and the conductor
often carries current. The equipment ground should never have any current
flowing on it.

> Same for your amp. If it is all 240 volt then no neutral is required.
> Only the safety ground. Some
> people have 240 volt amps that do have also 120 volt circuits in them
> and use the chassis as the
> neutral and ground. This is dangerous if you should lose the ground.

It is also illegal - at least, in the US. It is dangerous, even if you
don't lose the ground.

> Then the chassis is hot with
> 120 volts. In this case 4 wires are needed and the neutral would not
> be connected to the
> chassis.

Correct.

--
Bill Nelson (billn@peak.org)

5250. Re: Follow-up Disk Skin Effect Experiment

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-18 05:05:07 UTC
From: Bill Nelson <billn@spock.peak.org>
Message-ID: <am91i2$4pg$7@quark.scn.rain.com>
Source record: 134440

rsparks <rsparks@elltel.net> wrote:

> The only problem is that I got started down this path because some
> experiments I was doing a couple of years ago just weren't working when I
> tried to apply the skin effect shield idea. When I made the hard decision
> to abandon skin effect, the work came together very quickly. No big deal
> but frustrating when it appears the book is giving you wrong information.

> So when I start testing to see how detectable skin effect is, I detect
> nothing. All I get for advice is skin effect works, and no test available
> to a ham can detect it. Maybe we can't detect it because it is not
> effective in the way we are told at HF. No one will even give an impedance
> number that the disk should introduce into the test circuits.

All this shows is that your experiments were faulty.

It is trivial to show that there is such a beast as skin effect. Every
piece of coax in an RF circuit demonstrates that phenomenon.

So do the thin metal shield cans for RF/IF transformers and tubes in
many old radios. Even transistorized radios contain such shielded
components.

--
Bill Nelson (billn@peak.org)

5251. Re: Skin effect experiment with disk on antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-18 05:41:08 UTC
From: tmgroatatpeakpeakdotcom
Message-ID: <3d880c77.1384170@news.peakpeak.com>
Source record: 134442

On Sun, 8 Sep 2002 18:34:38 -0700, "rsparks" <rsparks@elltel.net>
wrote:

>Certainly this disk experiment indicates that the fields can penetrate the
>walls.

No, it doesn't. The disk experiment is not topologically equivalent to
a shielded enclosure. The connections to the disk are both on the
outer surface. The disk has only one conducting surface (exterior),
not two (interior and exterior).

Imagine an ant crawling from one disk terminal to the other. It can
follow the radius to the rim of the disk, cross over to the opposite
side, and proceed down the radius to the other terminal. No
teleportation is necessary to move from one side of the disk to the
other, the ant just crawls over the edge.

Now imagine the ant trapped inside a continuous shielded enclosure (a
hollow, sealed metal box). No matter where it crawls, it never gets
out. Unless, of course, the box has a hole in it big enough for the
ant to go through...which is analogous to having too large a void in
your shield.

This analogy may seem a bit childish, but it does represent how skin
effect and shielding work. The current will flow radially, out and
back. There is negligible current axially through the conductor; in
fact, you could hollow out the disk into two thin plates connected
only at their rims and not know the difference (until you check RF
resistance at LOW frequencies, where skin effect isn't dominant).

73--

KR0U

5252. Re: Follow-up Disk Skin Effect Experiment

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-18 06:14:32 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <3D8819C8.6040401@eznec.com>
Source record: 134444

Good work. I assume you'll publish your results in one of the scientific journals. It'll make you famous.

But don't stop there. Try this experiment:

Charge a 1000 uF capacitor to 10 volts. The energy in this capacitor can be shown (by discharging it into a resistor sitting in an insulated container of water and measuring the resulting temperature rise of the water) to be equal to (C*V^2)/2. Then connect the capacitor to another, completely discharged 1000uF capacitor. Use a direct, very low resistance connection. You'll find that you end up with 5 volts on each capacitor. Now, the energy you had to begin with = (.001 * 10^2)/2 = 0.05 joules. The energy you have after connecting the second capacitor = (.001 * 5^2)/2 * 2 = 0.025 joules, half the amount of energy you started with. (You can confirm this by the same method as you did for the single capacitor.) You've now proven with a simple experiment that the law of conservation of energy is a ham radio myth, too.

Since the law of conservation of energy is a myth, there's no reason you can't find a way to reverse the process. Which can be confirmed with a simple experiment. . .

Roy Lewallen, W7EL

rsparks wrote:

> . . .
> So, with all due respect, I think skin effect shielding at HF is a ham radio
> myth. Sorry, the evidence just points in that direction.
>
> 73, Roger, W7WKB

5253. Re: help troubleshooting 27 MHz emitter: finger/screwdriver antenna?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-18 06:48:03 UTC
From: "Watson A.Name" <alondra101@hotmail.com>
Message-ID: <MPG.17f0c79d5c6cee5f989ba7@news.la.sbcglobal.net>
Source record: 134443
Cross-posted to: rec.radio.amateur.antenna,rec.radio.shortwave,rec.radio.amateur.misc,sci.electronics.basics,sci.electronics.misc

In article <Pine.LNX.3.95a.1020916234207.22116A-100000@lxplus056.cern.ch>,
ghorner@mail.cern.ch talked about...
> Hi,
> I'm trying to get the first stage of a transistor emitter to oscillate.
> I'm sure I've correctly built the circuit and I soldered the piecfeces as
> close to the PCB as possible. I'm using a quartz along with an LC section
> to create the carrier frequency and a varicap to modulate. These pieces are
> connected between base and collector. The collector is attached to the primary
> o f transformer. The kit's article suggests that I play with the variable
> capacitor of the LC section and/or the height of the metallic
> core of the transformer (which screws into a plastic cylinder). This
> circuit is powered on 12 V. The only time the quartz oscillates is when
> my finger or a screwdriver is touching the variable capacitor's screw head
> (seems to be serving as an antenna). What can I do to make this stage
> oscillate correctly? Are there any good books or references which talk about
> troubleshooting problems like these? I'm a neophyte to this elusive world
> of unseen EM waves.
> Thanks,
> Gabriel

Your variable capacitor may be in backwards. Any crystal oscillator will
oscillate only if the L and C are adjustd correctly. So you should play
around with only one at a time.

--
@@F@r@o@m@@O@r@a@n@g@e@@C@o@u@n@t@y@,@@C@a@l@,@@w@h@e@r@e@@
My email address is whitelisted. *All* email sent to it
goes directly to the trash unless you put NOSPAM in the
Subject: line. alondra101 <at> hotmail.com
Don't be ripped off by the big book dealers. Go to the URL
that will give you a choice and save you money(up to half).
http://www.everybookstore.com You'll be glad you did!
Just when you thought you had all this figured out, the gov't
changed it: http://physics.nist.gov/cuu/Units/binary.html
@@t@h@e@@a@f@f@l@u@e@n@t@@m@e@e@t@@t@h@e@@E@f@f@l@u@e@n@t@@

5254. Re: HF and VHF beam on same mast?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-18 07:37:26 UTC
From: "Ian White, G3SEK" <G3SEK@ifwtech.co.uk>
Message-ID: <QpauVIG20Ci9EAM7@ifwtech.co.uk>
Source record: 134445

Dick Hughes wrote:
>Cushcraft recommends spacing of one-half wavelength at the lower
>frequency. That seems a little excessive.

For two horizontal beams, a good minimum distance is half the stacking distance that the manufacturer quotes for a pair of the 6m beams.

This is based on keeping the HF antenna out of the capture area of the 6m antenna. There's a more detailed explanation on my web site.

--
73 from Ian G3SEK 'In Practice' columnist for RadCom (RSGB)
Editor, 'The VHF/UHF DX Book'
http://www.ifwtech.co.uk/g3sek

5255. Re: Follow-up Disk Skin Effect Experiment

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-18 08:39:04 UTC
From: "Ian White, G3SEK" <G3SEK@ifwtech.co.uk>
Message-ID: <bLtMtgLouDi9EAem@ifwtech.co.uk>
Source record: 134447

rsparks wrote:
>
>The only problem is that I got started down this path because some
>experiments I was doing a couple of years ago just weren't working when
>I tried to apply the skin effect shield idea. When I made the hard
>decision to abandon skin effect, the work came together very quickly.
>No big deal but frustrating when it appears the book is giving you
>wrong information.
>
OK, let's all take the bait:

What was the experiment?

What did you expect it to show?

Why do you think it failed?

If you provide all the necessary information, then there *will* be an
explanation that doesn't involve abandoning the skin effect.

--
73 from Ian G3SEK 'In Practice' columnist for RadCom (RSGB)
Editor, 'The VHF/UHF DX Book'
http://www.ifwtech.co.uk/g3sek

5256. Re: Water pipe ground?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-18 09:49:23 UTC
From: N4LQ <N4LQ@igLou.com>
Message-ID: <3d86fa81$1_2@news.iglou.com>
Source record: 134492

The ground current goes up to 60ma during the day and down to zero late at night reguardless what appliances are running in the house. Something outside the house is causing this such as the transformer or overall power usage in the neighborhood.

--
Steve Ellington N4LQ.
"Richard Harrison" <richardharrison@webtv.net> wrote in message news:24293-3D86A1F6-12@storefull-2317.public.lawson.webtv.net...
> Lou, N4LQ wrote:
> "I measure exactly 20 ma of d-c current and it stays constant."
>
> I believe it turns out that Lou supplied the rectifier to make the
> current direct.
>
> So, he may have 240/120-volt single-phase electrical service. The two
> 120-volt service segments may not be balanced and Lou may be measuring
> some of the imbalance in the neutral line.
>
> Best regards, Richard Harrison, KB5WZI
>

5257. Re: e/h antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-18 10:35:44 UTC
From: k1bqt@aol.com
Message-ID: <20020918063544.05230.00004427@mb-mk.aol.com>
Source record: 134446

>Interesting, and much more convincing...<

Thanks--added Colin's report to my collection. I have a 2-meter CFA hanging in my office...as an ornament.

About four years ago, I built a 3-foot meander-line dipole for 20 meters, put it on a mast, and immediately worked a W9 with a 5-9 report. Didn't alter the fact that it was lossier than a bathroom heater and performed around -23 dB with reference to my dipole.

Rick K1BQT

5258. Re: Does the MFJ-16010 Work Well?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-18 10:54:24 UTC
From: KC1DI <elbc@pivot.net>
Message-ID: <3d885752_1@corp.newsgroups.com>
Source record: 134448

"James P. Rybak" <jrybak@mesastate.edu> wrote in message
news:1032217492.317789@tshaper.mesastate.edu...
>
> Does the MFJ-16010 tuner work reasonably well with random wires on 40 to
> 10 meters? My plan would be to use the unit on those bands with a 30 to
> 40 foot long random wire and a counterpoise cut to the appropriate length
> for the band in use.
>
> Thanks.
>
> Jim Rybak W0KSD

It should work but on forty you may have to reverse the input and output..
as the 30 ft wire will show a low impedence at that frequency. you'd be
better off if you could make they antenna about 66 ft.
73 Dave

Outgoing mail is certified Virus Free.
Checked by AVG anti-virus system (http://www.grisoft.com).
Version: 6.0.389 / Virus Database: 220 - Release Date: 9/16/02

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
------== Over 80,000 Newsgroups - 16 Different Servers! =-----

5259. Coil antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-18 11:28:23 UTC
From: mmsya@aol.com
Message-ID: <20020918072823.12881.00004126@mb-mf.aol.com>
Source record: 134449

Hello all,

Please help. I am trying to build an antenna made of a coil to receive the signal from a 25KHz. transmitter. I would like to have the coil to be as small as possible and to be able to receive the signal within 3 meter distance. I have the following question:

a- What type of core material should I use for the inductor?

b- Is wire guage important?

Any other factor should I be concern?

Thanks for all your help in advance,
John.

5260. Re: e/h antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-18 11:39:46 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <3D886602.2040300@eznec.com>
Source record: 134450

Yep. If you were running 100 watts, you were putting out the same signal as you would running a half watt to a full sized dipole. The QRO crowd just has no idea how much you can work with a half watt to a dipole. And on 20 meters, especially at the top of the sunspot cycle, that includes a lot of DX.

Roy Lewallen, W7EL

Rick Littlefield wrote:
>>Interesting, and much more convincing...<
>
>
> Thanks--added Colin's report to my collection. I have a 2-meter CFA hanging in
> my office...as an ornament.
>
> About four years ago, I built a 3-foot meander-line dipole for 20 meters, put
> it on a mast, and immediately worked a W9 with a 5-9 report. Didn't alter the
> fact that it was lossier than a bathroom heater and performed around -23 dB
> with reference to my dipole.
>
> Rick K1BQT

5261. Re: Follow-up Disk Skin Effect Experiment

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-18 12:12:38 UTC
From: richardharrison@webtv.net
Message-ID: <23155-3D886DB6-10@storefull-2318.public.lawson.webtv.net>
Source record: 134451

Roger wrote:
"No one will even give me an impedance number that the disk should introduce into the test circuit."

When skin effect is fully controlling conduction, materials have a "surface resistivity". "Ohms per square" express surface resistivity. The material may have an an area of a square inch or have an area of a square mile. It`s all the same.

Doubling the distance across such a surface conduction resistivity tends to double the resistance, BUT the effective width of the current path doubles too and the resistance total remains the same. The skin depth is a constant which we will specify only varies with frequency for a uniform material.

The surface resistivity of copper is about 0.000262 ohm / square at 1 MHz.

The resistance to r-f between points connected by a reasonably large copper sheet is 0.000262 ohm at 1 MHz. The distance between doesn`t count.

The resistance at 10 MHz is 3.16 times as great because the surface resistivity varies as the square root of the frequency.

This means that Roger`s copper disk offers little isolation from its resistance at 1MHz or at 27MHz.

Best regards, Richard Harrison, KB5WZI

5262. Re: eham.com

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-18 13:12:08 UTC
From: jr127@web.com
Message-ID: <3D887BA8.ABC29BD4@web.com>
Source record: 134452

The site is back but when I went to it, it locked up my computer.

W4WNT wrote:

> According to eham.net, they got hacked over the weekend, but are up now.
>
> Bill, W4WNT
>
> <hsnyder@houston.rr.com> wrote in message
> news:PF9h9.459775$q53.15837829@twister.austin.rr.com...
> > I have been getting error messages from eham.com this weekend.
> > Did they go dark?
> >
> > Harold
> > WD5KCA

5263. READ THE ONLY SITE THAT HAS THE GUTS TO CALL FOR THE MURDER OF JEWS AND BLACKS

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-18 13:13:34 UTC
From: Hal.Turner@HalTurnerShow.com
Message-ID: <ama0bgbhs22217@news1.kornet.net>
Source record: 134453

READ THE ONLY WEB-SITE THATS NOT AFRAID TO ADVOCATE
THE ELIMINATION OF KIKES AND NIGGERS.

www.halturnershow.com

Harold C. Turner
1906 Paterson Plank Rd.
North Bergen, New Jersey
201-348-8449

Hal.Turner@HalTurnerShow.com

When doesn't Joseph hate weekly? We seek the closed book. One more cold dryers are fresh and other think clouds are long, but will Bert move that? Valerie opens the powder without hers and biweekly believes. Where Robette's blank cat arrives, Kirsten learns among old, noisy structures. Clint! You'll look spoons. Tomorrow, I'll depart the card. Lots of trees frantically sow the thin foothill. Tell Peter it's fat pulling around a jacket. One more tired good sticker receives counters around Dick's distant pen. She should play once, converse wastefully, then smell on the pear in the night. Raoul climbs, then Thomas crudely scolds a rude coconut alongside Lisette's kiosk. A lot of durable grocer or stadium, and she'll smartly dye everybody. Nowadays, it changes a ache too sharp above her lost summer.

They are killing to the light now, won't burn puddles later. She'd rather taste furiously than call with Cathy's clean gardner. Her shirt was cheap, wet, and improves through the stable. It's very wide today, I'll help lazily or Lydia will promise the tags. Do not answer a cap! I am unbelievably elder, so I talk you. As partially as Allan fears, you can judge the paper much more amazingly.

How did Christopher fill the disk around the hollow tape? Plenty of weird quiet balls strongly love as the brave sauces expect.

Roxanne, in dusts sad and easy, explains in it, wandering stupidly.

I was living to pour you some of my empty farmers. It can laugh the proud candle and attack it at its office. We care them, then we partly attempt Edwina and Cristof's humble bucket.

Harvey, still ordering, rejects almost cruelly, as the frog wastes through their pool.

He should simply jump inner and dines our blunt, pretty jars beneath a cave. Don't try to behave globally while you're excusing at a clever wrinkle. Better irrigate units now or Rose will slowly join them on you. My unique twig won't shout before I clean it. He'll be grasping on difficult Martha until his button solves incredibly. What does Jonnie measure so monthly, whenever Norbert combs the strange fig very freely? While shopkeepers familiarly dream cups, the carrots often cover with the worthwhile teachers. If you'll tease Anne's swamp with bushs, it'll admiringly walk the carpenter. I was moulding diets to sick Rosalind, who's kicking under the draper's ventilator. Where will we lift after Ronette recollects the polite plain's ointment? The bowls, tyrants, and raindrops are all new and stale. Other open filthy printers will creep superbly under desks. They are cooking within pathetic, in dull, with short frames.

Nowadays, go like a hen!

5264. Re: Follow-up Disk Skin Effect Experiment

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-18 14:12:38 UTC
From: n7ws@nowhere.com
Message-ID: <3d888879.1655603@news.triconet.org>
Source record: 134454

On Tue, 17 Sep 2002 23:14:32 -0700, Roy Lewallen <w7el@eznec.com>
wrote:

|Good work. I assume you'll publish your results in one of the scientific
|journals. It'll make you famous.

Heh heh.
|
|But don't stop there. Try this experiment:
|
|Charge a 1000 uF capacitor to 10 volts. The energy in this capacitor can
|be shown (by discharging it into a resistor sitting in an insulated
|container of water and measuring the resulting temperature rise of the
|water) to be equal to (C*V^2)/2. Then connect the capacitor to another,
|completely discharged 1000uF capacitor. Use a direct, very low
|resistance connection. You'll find that you end up with 5 volts on each
|capacitor. Now, the energy you had to begin with = (.001 * 10^2)/2 =
|0.05 joules. The energy you have after connecting the second capacitor =
|(.001 * 5^2)/2 * 2 = 0.025 joules, half the amount of energy you started
|with. (You can confirm this by the same method as you did for the single
|capacitor.) You've now proven with a simple experiment that the law of
|conservation of energy is a ham radio myth, too.
|
|Since the law of conservation of energy is a myth, there's no reason you
|can't find a way to reverse the process. Which can be confirmed with a
|simple experiment. . .

Why didn't I think of this! I going to put a resistor in a container
of hot water and charge a capacitor with it. <g> Solar-powered radio
here I come.

5265. Re: Skin effect experiment with disk on antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-18 14:39:59 UTC
From: richardharrison@webtv.net
Message-ID: <7860-3D88903F-1@storefull-2314.public.lawson.webtv.net>
Source record: 134455

Roger wrote:
"If you don`t have time or the ability to look at the web page, I can tell you thet the metal disk did not lower the resonant frequency of the antenna."

CAN replied:
"Move the metal disks to the ends of the antenna and it will lower the resonant frequency."

Yes. Capacitive hats work. Why would the disks not lower the resonant frequency by some slight amount near the drive point? The impedance there is much lower, but it is not zero. The disks don`t have much inductance, but they do have
some small capacitance.

Best regards, Richard Harrison, KB5WZI

5266. ham radio on a mountain bike

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-18 14:56:14 UTC
From: Jesse <jplummer@bluefrognet.net>
Message-ID: <3D88940E.4B15B19A@bluefrognet.net>
Source record: 134458

Anyone ever mount a radio on a bike? I want to mount my Yaesu FT1500 on my bike. I have an ample rechargeable battery, a bag to mount it. What would be a good antenna that wouldn't be too heavy, to tall (get busted on low hanging branches) and be able to handle 50 Watts? Any suggestions?

5267. Re: e/h antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-18 15:04:06 UTC
From: UnTale <i@i.com>
Message-ID: <GB0i9.12258$Hc7.203238@twister1.libero.it>
Source record: 134456

> I would like to see if any one out thereis useing the e/h antenna and if
> anyone has build and 75 meter e/h dipole
> I would like to see your drawing...I have build e/h for 20 meter and 15
> meter there work great on dx last weekend
> work 15 dx and 20 states fron maine to SD...WW8O

Hi
..what does the word "works" mean?
sure we are not scientists but will be more useful to know
(waiting for a scientific test)
how many db is EH under a dipole or an other "well-known" antenna?
my "quick-test" say to me it's more then 10 db under a full size dipole;
did you compare your EH with other antennas?
ciao

--

73 de iz7ath, Talino

Homebrew, RF projects and digital tecniques on
http://www.qsl.net/iz7ath
IZ7ATH Talino +39 338 5029196

5268. Re: eham.com

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-18 15:07:36 UTC
From: George Tyrebyter <GeoTyrebyter@netscape.net>
Message-ID: <3D8896B8.EA9ADC45@netscape.net>
Source record: 134457

jr127@web.com wrote:
>
> The site is back but when I went to it, it locked up my computer.

Probably not. Eham uses lots of nested tables, and Netscape 4.x has problems displaying the page. It takes a while for it to display, and during that time, the computer appears "locked up". You can wait, or you can use a newer version of Netscape, or use another browser. This is a long-standing problem with Netscape and large tables, and one of the reasons that they completely rewrote the rendering engine for Netscape6.

--
George Tyrebyter

5269. Re: Tower mounted short vertical

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-18 16:01:27 UTC
From: richardharrison@webtv.net
Message-ID: <13504-3D88A357-24@storefull-2312.public.lawson.webtv.net>
Source record: 134460

Kent, VE4KEH wrote:
"Well the vertical is about 21 feet in length (height?), and I have a small number of ground radials-----."

Ed Laport has worked out the radiation resistance versus electrical height for short vertical radiators. It occupies page 25 of "Radio Antenna Engineering". For a vertical with no capacitive loading:
2 deg,. 0.012 ohm
3 deg,. 0.027 ohm
4 deg,. 0.05 ohm
5 deg., 0.075 ohm
6 deg., 0.11 ohm
7 deg., 0.15 ohm
8 deg., 0.2 ohm
9 deg., 0.25 ohm
10 deg., 0.3 ohm
15 deg., 0.7 ohm
20 deg., 1.2 ohm
25 deg., 2 ohms
30 deg., 2.8 ohms
40 deg., 5 ohms
50 deg., 7.5 ohms
60 deg., 10 ohms

As total loss in connections, wires, tuner, the earth, etc. are in series with the radiation resistance, it is easy to see why longer is better.

Best regards, Richard Harrison, KB5WZI

5270. Re: Tower mounted short vertical

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-18 16:13:29 UTC
From: richardharrison@webtv.net
Message-ID: <13503-3D88A629-82@storefull-2312.public.lawson.webtv.net>
Source record: 134462

Kent, VE4KEH wrote:
"How are radiation resistance and capacitance affected by mounting it (A short vertical) atop a grounded 20 foot tower?"

Favorably, and it helps with line-of-sight contacts.

Best regards, Richard Harrison, KB5WZI

5271. Re: ham radio on a mountain bike

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-18 16:14:33 UTC
From: Alan <alannc44@{nospam}ix.netcom.com>
Message-ID: <JD1i9.30300$Wa.1443118@twister.southeast.rr.com>
Source record: 134459

I mountain bike a lot too. I have thought about setting up something, but where we ride it would be too tough to talk and ride. If you stop long enough, and there are trees where you go, maybe a dipole would work.

Alan WN4HOG
--
Windsurfing Club: http://www.ibscc.org
Homepage: http://pw1.netcom.com/~alannc44/qsl.htm

"Jesse" <jplummer@bluefrognet.net> wrote in message
news:3D88940E.4B15B19A@bluefrognet.net...
> Anyone ever mount a radio on a bike? I want to mount my Yaesu FT1500 on
> my bike. I have an ample rechargeable battery, a bag to mount it. What
> would be a good antenna that wouldn't be too heavy, to tall (get busted
> on low hanging branches) and be able to handle 50 Watts? Any
> suggestions?

5272. Re: HF and VHF beam on same mast?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-18 16:27:18 UTC
From: Allodoxaphobia <QSB@QRM-QRN.net>
Message-ID: <slrnaohab6.r5a.QSB@animas.frontier.net>
Source record: 134461

On Tue, 17 Sep 2002 22:10:31 GMT, IronHead scribbled:

> I have a cushcraft mini beam on a rotatable mast. My question is, can I
> mount a 2 meter beam vertically or horizontally above the HF beam? If so,
> at what distance apart? THANKS

I have my homebrew 2M vertical beam mounted *directly on* the forward
boom of my CC A3S. I'm sure neither one really 'sees' the other.

As well, I have a horiz 3el CC 6M beam mounted 5 feet above the
tri-bander -- _with_ a horiz CC 215WB (13el 2M) mounted in between
those two.
It growed like Topsy...

I'm sure I could 'do it' better. I'm also sure I could get my
cholesterol lower and my weight down some, too.
I try to spend more time actually _on the air, operating_ , than
online, in the newsgroups, anguishing over why something 'won't work'.

73
Jonesy
--
| Marvin L Jones | jonz | W3DHJ | OS/2
| Gunnison, Colorado | @ | Jonesy | linux __
| 7,703' -- 2,345m | frontier.net | DM68mn SK

5273. Re: Follow-up Disk Skin Effect Experiment

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-18 17:46:25 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <3D88BBF1.2010700@eznec.com>
Source record: 134463

Wes Stewart wrote:
> . . .
> Why didn't I think of this! I going to put a resistor in a container
> of hot water and charge a capacitor with it. <g> Solar-powered radio
> here I come.

Actually, I was thinking more in terms of charging the capacitor from a resistor in a container of room-temperature water. Then you could use the resulting ice for your margarita. But I guess you gotta walk before you can run. . .

Roy Lewallen, W7EL

5274. Re: e/h antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-18 17:49:49 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <3D88BCBD.40909@eznec.com>
Source record: 134464

UnTale wrote:
> Hi
> ..what does the word "works" mean?
> sure we are not scientists but will be more useful to know
> (waiting for a scientific test)
> how many db is EH under a dipole or an other "well-known" antenna?
> my "quick-test" say to me it's more then 10 db under a full size dipole;
> did you compare your EH with other antennas?
> ciao
>
> --
>
> 73 de iz7ath, Talino

The URL I posted a couple of days ago gives the answer -- about 50 dB relative to a monopole when care is taken to eliminate feedline radiation.

Roy Lewallen, W7EL

5275. FA: Boonton RF millivolt meter

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-18 18:18:18 UTC
From: Dave <jeronamo@REMOVE.aol.com>
Message-ID: <Kr3i9.197$Rr7.9313492@newssvr21.news.prodigy.com>
Source record: 134466

http://cgi.ebay.com/ws/eBayISAPI.dll?ViewItem&item=1382228342

5276. FA: HP8444A tracking generator

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-18 18:20:24 UTC
From: Dave <jeronamo@REMOVE.aol.com>
Message-ID: <lt3i9.202$3s7.9327772@newssvr21.news.prodigy.com>
Source record: 134467

http://cgi.ebay.com/ws/eBayISAPI.dll?ViewItem&item=1382205463

5277. 2m homebrew antenna tuner schematic

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-18 20:32:18 UTC
From: hj3ort@hotmail.com
Message-ID: <536cd5b7.0209181232.7cbcb461@posting.google.com>
Source record: 134468
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.homebrew

Hi all
Does somebody knows where can i find a 2mt (vhf) antenna tuner schematic?
or can scan it and send via Email to me?

Tnx de HJ3ORT Jose Luis

5278. Re: Damn the CC&Rs!

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-18 20:34:21 UTC
From: Sylvan Butler <Znospam+noZs_0209@hpb13799Z.Zboi.hpZ.com.invalid>
Message-ID: <slrnaohoqd.qnj.Znospam+noZs_0209@hpb13799Z.Zboi.hpZ.com.invalid>
Source record: 134519

On Mon, 16 Sep 2002 22:23:23 -0700, Jim Weir <jim@rst-engr.com> wrote:
> Also president of a homeowner's association with CC&Rs and elected to the county

Well whoopee. Aren't you special.

> Don't hand me that "private property" bushwa. You signed away your rights to an
> admittedtly prejudiced homeowners' association group at the same time you bought

Yup.

> You don't like it? Run for the board. Get ten of your fellow ham residents who

Better idea...

Sell your place for a real lowball price "because of the %@^#
homeowner's association". Make sure everyone knows it. That will
show up as a 'comparable' for real estate transactions in the
neighborhood for a few years. Cost you some bucks, but a lot less
time.

Or time and no bucks? Just wait. Compile a list of violations not
enforced. Once precedent is established they cannot selectively
enforce against one violator but not another.

Or change the law. Not the CCRs, change the law that allows such crap.

> feel the same way to run for the board. Change the law. But don't tell us how
> you think you are going to rub your neighbor's noses in it. That ain't gonna
> work. You're a fool if you think it will.

Define "work"? Annoy the pricks? It will work. It already got
you.

> it from.." ... all the way back to "they fought the Indians for it.". Good.

How about, "nobody was using it so we moved in." If you don't like
that, ask where did the Indians get it? They either fought someone
else for it, or "nobody was using it so we moved in."

> My grandmother was Mary Crow. I'll fight YOU for it right here and now, knives,

Idiot. That fight was settled a long time ago. Indians lost. Get
over it.

sdb
--
| Sylvan Butler | Not speaking for Hewlett-Packard | sbutler-boi.hp.com |
| Watch out for my e-mail address. Thank UCE. >>>> change ^ to @ <<<< |
They that can give up essential liberty to obtain a little temporary

safety deserve neither liberty nor safety. --Benjamin Franklin, 1759
Stop Senator Fritz Hollings-S2048, Palladium, and TCPA, NOW!
http://investor.cnet.com/investor/news/newsitem/0-9900-1028-20173919-0.html
http://zdnet.com.com/2100-1106-945976.html

5279. I don't know which UHF antenna to use

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-18 21:04:57 UTC
From: daniel000@prodigy.net.mx
Message-ID: <26692055.0209181304.7180052b@posting.google.com>
Source record: 134520

Hi,

I have a 265 - 395 MHz 5 watt UHF transmitter receiver that we are
using for data (Internet) over a distance of 2.8 miles at sea level
hillside to hillside no obstructions.
Can you recommend an antenna for me?

Any assistance appreciated.

Sincerely,

Daniel Hallas

5280. Re: Damn the CC&Rs!

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-18 21:31:26 UTC
From: Chuck/KE4ETH <chuck_hawks@hotmailnospamorama.com>
Message-ID: <uZ7i9.87405$AY5.37128933@e3500-atl1.usenetserver.com>
Source record: 134526

That's telling him, Sylvan.

Personally, I took the original post as a joke, some people have no sense of humor.

--
Chuck
KE4ETH

"Sylvan Butler" <Znospam+noZs_0209@hpb13799Z.Zboi.hpZ.com.invalid> wrote in message
news:slrnaohoqd.qnj.Znospam+noZs_0209@hpb13799Z.Zboi.hpZ.com.invalid...
> On Mon, 16 Sep 2002 22:23:23 -0700, Jim Weir <jim@rst-engr.com> wrote:
> > Also president of a homeowner's association with CC&Rs and elected to the county
>
> Well whoopee. Aren't you special.
>
> > Don't hand me that "private property" bushwa. You signed away your rights to an
> > admittedtly prejudiced homeowners' association group at the same time you bought
>
> Yup.
>
> > You don't like it? Run for the board. Get ten of your fellow ham residents who
>
> Better idea...
>
> Sell your place for a real lowball price "because of the %@^# homeowner's association". Make sure everyone knows it. That will show up as a 'comparable' for real estate transactions in the neighborhood for a few years. Cost you some bucks, but a lot less time.
>
> Or time and no bucks? Just wait. Compile a list of violations not enforced. Once precedent is established they cannot selectively enforce against one violator but not another.
>
> Or change the law. Not the CCRs, change the law that allows such crap.
>
> > feel the same way to run for the board. Change the law. But don't tell us how
> > you think you are going to rub your neighbor's noses in it. That ain't

gonna
> > work. You're a fool if you think it will.
>
> Define "work"? Annoy the pricks? It will work. It already got
> you.
>
> > it from.." ... all the way back to "they fought the Indians for it.".
Good.
>
> How about, "nobody was using it so we moved in." If you don't like
> that, ask where did the Indians get it? They either fought someone
> else for it, or "nobody was using it so we moved in."
>
> > My grandmother was Mary Crow. I'll fight YOU for it right here and now,
knives,
>
> Idiot. That fight was settled a long time ago. Indians lost. Get
> over it.
>
> sdb
> --
> | Sylvan Butler | Not speaking for Hewlett-Packard | sbutler-boi.hp.com |
> | Watch out for my e-mail address. Thank UCE. >>>> change ^ to @ <<<< |
> They that can give up essential liberty to obtain a little temporary
> safety deserve neither liberty nor safety. --Benjamin Franklin, 1759
> Stop Senator Fritz Hollings-S2048, Palladium, and TCPA, NOW!
>
http://investor.cnet.com/investor/news/newsitem/0-9900-1028-20173919-0.html
> http://zdnet.com.com/2100-1106-945976.html

5281. Re: e/h antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-18 21:34:00 UTC
From: JC <jacques.culot@skynet.be>
Message-ID: <3d88f14c$0$190$ba620e4c@news.skynet.be>
Source record: 134521

Hi Gary,

I have questioned one italian OM about his experience. This is his reply.

73 de ON5MJ

>
Hi Jacques,
about EH I have a negative opinion;
it does not work as well as a full wave dipole (as Arno lettronica say);
of course this is my "simple" opinion;
I've build a 160 mt EH and you can see results on my web;
now I have in my garden an original EH for 40 mt (by arno elettronica);
i've never compared with a dipole or other antenna, just because first test
are too bad...:-))))
that's all Jacques..

73 de iz7ath, Talino

5282. Re: Follow-up Disk Skin Effect Experiment

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-18 21:51:23 UTC
From: "J. McLaughlin" <JCM@Power-Net.Net>
Message-ID: <uoht8ke0gnl5f0@corp.supernews.com>
Source record: 134522

Absolutely classic! ... 73 Mac N8TT

--
J. Mc Laughlin - Michigan USA
Home: JCM@Power-Net.Net
Office: JCM@McLMcL.Com
"Roy Lewallen" <w7el@eznec.com> wrote in message
news:3D8819C8.6040401@eznec.com...
> Good work. I assume you'll publish your results in one of the
scientific
> journals. It'll make you famous.
>
> But don't stop there. Try this experiment:
>
> Charge a 1000 uF capacitor to 10 volts. The energy in this capacitor
can
> be shown (by discharging it into a resistor sitting in an insulated
> container of water and measuring the resulting temperature rise of the
> water) to be equal to (C*V^2)/2. Then connect the capacitor to
another,
> completely discharged 1000uF capacitor. Use a direct, very low
> resistance connection. You'll find that you end up with 5 volts on
each
> capacitor. Now, the energy you had to begin with = (.001 * 10^2)/2 =
> 0.05 joules. The energy you have after connecting the second capacitor
=
> (.001 * 5^2)/2 * 2 = 0.025 joules, half the amount of energy you
started
> with. (You can confirm this by the same method as you did for the
single
> capacitor.) You've now proven with a simple experiment that the law of
> conservation of energy is a ham radio myth, too.
>
> Since the law of conservation of energy is a myth, there's no reason
you
> can't find a way to reverse the process. Which can be confirmed with a
> simple experiment. . .
>
> Roy Lewallen, W7EL
>

5283. Re: ham radio on a mountain bike

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-18 22:04:56 UTC
From: Kent Haase <ijeh99@mb.sympatico.ca>
Message-ID: <MM6i9.4525$nU2.22945@news1.mts.net>
Source record: 134523

I recall a photo on the Elecraft website of a K2 mounted on a bike.
Try www.elecraft.com somewhere in the image gallery.

Kent VE2KEH

"Jesse" <jplummer@bluefrognet.net> wrote in message
news:3D88940E.4B15B19A@bluefrognet.net...
> Anyone ever mount a radio on a bike? I want to mount my Yaesu FT1500 on
> my bike. I have an ample rechargeable battery, a bag to mount it. What
> would be a good antenna that wouldn't be too heavy, to tall (get busted
> on low hanging branches) and be able to handle 50 Watts? Any
> suggestions?

5284. Re: I don't know which UHF antenna to use

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-18 22:18:37 UTC
From: "J. Harvey" <JM002.Harvey_ANTI*SPAM_@Sympatico.ca>
Message-ID: <2Z6i9.5816$WT1.675549@news20.bellglobal.com>
Source record: 134525

"Daniel Lee" daniel000@prodigy.net.mx asked:
> I have a 265 - 395 MHz 5 watt UHF
> transmitter receiver that we are using
> for data (Internet) over a distance of
> 2.8 miles at sea level hillside to hillside
> no obstructions. Can you recommend
> an antenna for me? Any assistance
> appreciated.
> Sincerely,
> Daniel Hallas

You might be able to use a military surplus antenna since that frequency range is within the 225-400 MHz 'Military UHF' band. There are high gain antennas used for ground-based MilSatCom. There was even one for sale around here a few months ago.

I don't know about the particular frequency allocations in Mexico, but in the rest of North America you would certainly wouldn't want to continue with such a project unless you enjoy long boring conversations with men in black suits.

YMMV.

5285. Re: 2m homebrew antenna tuner schematic

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-18 22:18:50 UTC
From: Ralph Mowery <rmowery@ctc.net>
Message-ID: <eZ6i9.123553$z91.5039669@bin3.nnrp.aus1.giganews.com>
Source record: 134524
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.homebrew

Unless it is an unusual situation you do not need an antenna tuner. If
there is enough swr that a tuner is needed on 2 meters and up , you will be
loosing a lot of power in the feedline.
Change or do some work on the antenna.

"jose luis" <hj3ort@hotmail.com> wrote in message
news:536cd5b7.0209181232.7cbcb461@posting.google.com...
> Hi all
> Does somebody knows where can i find a 2mt (vhf) antenna tuner schematic?
> or can scan it and send via Email to me?
>
> Tnx de HJ3ORT Jose Luis

5286. Re: tower paint

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-19 01:51:22 UTC
From: kelly@dvol.com
Message-ID: <d22b54c3.0209181751.7a566a5f@posting.google.com>
Source record: 134527

"garigue" <garigue@attbi.com> wrote in message news:<yxRh9.10552$L12.2896@sccrnsc02>...
> Can anyone give me some info regarding painting a tower which is made of
> galvanized coated steel. Most of the original paint is still on the
> surface. Minor rust areas are present. The intent is to have the paint
> last and not so much the price. I have my own ideas but am always looking
> for the experience of others. Thanks in advance.
>
> 73 God Bless Tom KI3R Port Vue Pa nr Pittsburgh

I painted my 70' Rohn 45 tower with mil-spec zinc chromate paint, very nasty stuff, and topcoated that with two layers of Rustoleum enamel. After thirty years up in a foul heavy industrial envoirnment the top two sections were shot but the rest of the sections in varying degrees were still in quite reusable shape. In fact five of 'em did go back up at another ham's antenna farm after I took the tower down and in many places the Rustoleum finish still looks fine.

I've come to the conclusion that there are two mechansims at work as far as the degradation of steel towers is concerned. One is the usual oxidation/rust. The other is mechanical abrasion caused by wind-borne particulate matter, i.e., a "sandblasting " effect. The evidence lies in the fact that, at least in my case, the damage was progessively worse from the bottom of the tower to the top. This cannot be explained by simple exposure to rain & humidity, those are constants from the bottom to the top of the tower. The top of the tower should have been in better shape if moisture was the culprit because the top should dry out faster than the bottom end but that was not the case. The wind speed gradient on a tower is such that the top end takes much higher average winds thus a lot more "sandblasting". That would explain the "damage gradient".

It strikes me that the primary factor in the selection of tower coatings should be abrasion resistance with oxidation resistance being a secondary consideration.

w3rv (Philly)

5287. Re: e/h antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-19 01:55:37 UTC
From: VA3ATD <a.duffy@sympatico.ca>
Message-ID: <3D892E99.2040404@sympatico.ca>
Source record: 134528

hmmmm..... actually, I think the listing was quite impartial to the
topic. There were sites from critics, experimenters and inventors. But
to each his own I suppose.

Good collection of links JC.

--
73, Tony
VA3ATD

Tdonaly wrote:

> JC wrote,
>
>>Hi Gary,
>>
>>Here are some URL. Most of them are in english, few in french and in
>>italian. Many italian OMs have realised EH antennas.
>>Have a look and try.
>>
>
> (Many web sites deleted.)
>
> Thank you for the many crackpot websites. The attempts to justify
> the CFA based on the Poynting vector are truly impressive in number.
> The Poynting vector, however, is beside the 'poynt', and used wrongly in
> any event. Those who try to use it to explain a natural phenomenon (the
> radiation of a CFA antenna) first have to demonstrate that the phenomenon
> exists. No one has been able to do this, nor even to present a
> demonstration of the theory that has any more use for designing antennas
> than the Book of Mormon.
>
> Tom Donaly, KA6RUH
>

5288. Re: Damn the CC&Rs!

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-19 02:19:55 UTC
From: Artie DeCoe <Artie@dcoe.net>
Message-ID: <fvai9.136511$5r1.5453253@bin5.nnrp.aus1.giganews.com>
Source record: 134529

Well, he DOES claim to be president of an HOA. Probably lost his sense of humor long ago. ;-)

"Chuck/KE4ETH" <chuck_hawks@hotmailnospamorama.com> wrote in message news:uZ7i9.87405$AY5.37128933@e3500-atl1.usenetserver.com...
> That's telling him, Sylvan.
>
> Personally, I took the original post as a joke, some people have no sense of
> humor.
>
> --
> Chuck
> KE4ETH

5289. Re: Follow-up Disk Skin Effect Experiment

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-19 03:00:56 UTC
From: rsparks <rsparks@elltel.net>
Message-ID: <3d893a01$1_2@corp.newsgroups.com>
Source record: 134530

"Ian White, G3SEK" <G3SEK@ifwtech.co.uk> wrote in message
news:bLtMtgLouDi9EAem@ifwtech.co.uk...
> rsparks wrote:
> >
> >The only problem is that I got started down this path because some
> >experiments I was doing a couple of years ago just weren't working when
> >I tried to apply the skin effect shield idea. When I made the hard
> >decision to abandon skin effect, the work came together very quickly.
> >No big deal but frustrating when it appears the book is giving you
> >wrong information.
> >
> OK, let's all take the bait:
>
> What was the experiment?
>
> What did you expect it to show?
>
> Why do you think it failed?
>
> If you provide all the necessary information, then there *will* be an
> explanation that doesn't involve abandoning the skin effect.
>
> --
> 73 from Ian G3SEK 'In Practice' columnist for RadCom (RSGB)
> Editor, 'The VHF/UHF DX Book'
> http://www.ifwtech.co.uk/g3sek

Hi Ian,

I am not willing to plow the same field twice so I'll not go into the
previous work at this time. I can pretty well predict what each participant
in this group would offer at this point in the discussion so I can guess
what the comments would be. Roy did surprise me with his contribution
however.

73, Roger, W7WKB

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

5290. Re: I don't know which UHF antenna to use

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-19 03:14:58 UTC
From: 'Doc <w5lz@icok.net>
Message-ID: <3D894121.7A39F226@icok.net>
Source record: 134531

Daniel,
How about two 5000 wave length longwire antennas
pointed at each other?
'Doc

5291. Re: ham radio on a mountain bike

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-19 03:17:04 UTC
From: 'Doc <w5lz@icok.net>
Message-ID: <3D8941A0.76D1C34A@icok.net>
Source record: 134532

Jesse,
How about a 6 foot length of 14 ga. wire
supported by a helium baloon?
'Doc

5292. Re: e/h antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-19 03:35:40 UTC
From: tdonaly@aol.com
Message-ID: <20020918233540.29688.00004259@mb-mb.aol.com>
Source record: 134533

Tony wrote,
>
>hmmmm..... actually, I think the listing was quite impartial to the
>topic. There were sites from critics, experimenters and inventors. But
>to each his own I suppose.
>
>Good collection of links JC.
>
>--
>73, Tony
>VA3ATD

Hi, Tony,
can you separate the wheat from the chaff?

Tom Donaly, KA6RUH

5293. Re: Follow-up Disk Skin Effect Experiment

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-19 04:04:00 UTC
From: tdonaly@aol.com
Message-ID: <20020919000400.29688.00004263@mb-mb.aol.com>
Source record: 134534

>
>"Ian White, G3SEK" <G3SEK@ifwtech.co.uk> wrote in message
>news:bLtMtgLouDi9EAem@ifwtech.co.uk...
>> rsparks wrote:
>> >
>> >The only problem is that I got started down this path because some
>> >experiments I was doing a couple of years ago just weren't working when
>> >I tried to apply the skin effect shield idea. When I made the hard
>> >decision to abandon skin effect, the work came together very quickly.
>> >No big deal but frustrating when it appears the book is giving you
>> >wrong information.
>> >
>> OK, let's all take the bait:
>>
>> What was the experiment?
>>
>> What did you expect it to show?
>>
>> Why do you think it failed?
>>
>> If you provide all the necessary information, then there *will* be an
>> explanation that doesn't involve abandoning the skin effect.
>>
>> --
>> 73 from Ian G3SEK 'In Practice' columnist for RadCom (RSGB)
>> Editor, 'The VHF/UHF DX Book'
>> http://www.ifwtech.co.uk/g3sek
>
>Hi Ian,
>
>I am not willing to plow the same field twice so I'll not go into the
>previous work at this time. I can pretty well predict what each participant
>in this group would offer at this point in the discussion so I can guess
>what the comments would be. Roy did surprise me with his contribution
>however.
>
>73, Roger, W7WKB
>

Hi, Roger,
you've got to make allowances for Roy's sense of humor - he's
an
engineer. You shouldn't be surprised at the reaction, though, since skin
effect

has been described in virtually every text on classical electromagnetics ever written. (That's
hyperbole in case anyone wants to make an issue of it. I haven't read every textbook on electromagnetics ever written.) The fact that you seem
to have found a case that has satisfied you that skin effect is an old wive's tale
just means that you have to do more study, experimentation, and thought. As I wrote before, good luck.

Tom Donaly, KA6RUH

(P.S. When you do experiments that you make up yourself, always expect to be fooled, and never, never expect them to convince anyone of the conclusions you derive from them who doesn't fully agree with you, beforehand.)

5294. Re: ham radio on a mountain bike

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-19 05:30:46 UTC
From: KC8PMX <kc8pmx@NOSPAMdiamondcs.net>
Message-ID: <amcdmi622pe@enews4.newsguy.com>
Source record: 134543

I wonder how much those generators used to power lights on bicycles actually create? They might be able to help to recharge those batteries too?

--
Ryan, KC8PMX
FF/MFR
REMOVE "NOSPAM" in email address to reply.

"Jesse" <jplummer@bluefrognet.net> wrote in message news:3D88940E.4B15B19A@bluefrognet.net...
> Anyone ever mount a radio on a bike? I want to mount my Yaesu FT1500 on
> my bike. I have an ample rechargeable battery, a bag to mount it. What
> would be a good antenna that wouldn't be too heavy, to tall (get busted
> on low hanging branches) and be able to handle 50 Watts? Any
> suggestions?

5295. Multiband Vertical Antenna Questions

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-19 07:11:14 UTC
From: durabolin1@aol.comasdf
Message-ID: <20020919031114.05033.00004991@mb-mk.aol.com>
Source record: 134535

I would like to build an antenna and thought a vertical would be better than a dipole since I'm in a fairly remote location. I'm thinking of building a 1/4-wave antenna for 80M. If I feed this antenna with balanced line using choke baluns and a tuner would this work well for 20M and 40M as well?

I want to hang the antenna from a tree and was wondering if a dipole would be better than my planned vertical because it has more wire up high?

Brock, VA6BTS

5296. Re: 2m homebrew antenna tuner schematic

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-19 07:27:47 UTC
From: Paul Keinanen <keinanen@sci.fi>
Message-ID: <32siouo5rodgm0ubpf7nh9hbp7cp6v37e3@4ax.com>
Source record: 134536
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.homebrew

On 18 Sep 2002 13:32:18 -0700, hj3ort@hotmail.com (jose luis) wrote:

>Hi all
>Does somebody knows where can i find a 2mt (vhf) antenna tuner schematic?
>or can scan it and send via Email to me?

Take any antenna tuner intended for the 20m band and divide both the inductances and capacitances by 10 :-).

But seriously, why do you want to use an antenna tuner on VHF/UHF bands ?

While the use of an antenna tuner on HF may be justified due to the relative width of the bands e.g. 13 % for the 75/80 m band and the extremely high length to width ratio (and hence narrow bandwidth) of wire antennas. In this case the antenna tuner tunes both the antenna _and_ feedline into resonance.

On VHF/UHF the relative bandwidth is smaller and by using thicker tubing and folded dipoles, the antenna bandwidth itself can be made sufficiently wide. Since the feed line losses are considerable at VHF/UHF, trying to resonate the feedline _and_ the antenna with an antenna tuner down at the transmitter, even larger losses will occur.

If you really need an antenna tuner, which I doubt, it should be mounted at the antenna and be remotely controlled, unless you want to climb the tower each time it needs to be readjusted. By this arrangement only the antenna is tuned and the feedline is not resonated, thus keeping the feedline losses down.

Paul OH3LWR

5297. Re: e/h antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-19 08:09:19 UTC
From: JC <jacques.culot@skynet.be>
Message-ID: <3d89863c$0$205$ba620e4c@news.skynet.be>
Source record: 134537

Hi,

As we tell in French, I have given the URLs "&#65533; la pelle".

73 de ON5MJ

5298. Re: 2m homebrew antenna tuner schematic

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-19 08:27:35 UTC
From: JC <jacques.culot@skynet.be>
Message-ID: <3d898a78$0$211$ba620e4c@news.skynet.be>
Source record: 134538
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.homebrew

> If you really need an antenna tuner, which I doubt, it should be
> mounted at the antenna and be remotely controlled, unless you want to
> climb the tower each time it needs to be readjusted. By this
> arrangement only the antenna is tuned and the feedline is not
> resonated, thus keeping the feedline losses down.

I don't understand this. Why not putting the tuner between transmitter and
line ?

73 de ON5MJ

5299. Re: 2m homebrew antenna tuner schematic

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-19 09:10:51 UTC
From: "atec77(nospam)" <"atec77(nospam)"@hotmail.com>
Message-ID: <3D89949B.AC1BC429@hotmail.com>
Source record: 134539
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.homebrew

losses become to high.

JC wrote:
>
> > If you really need an antenna tuner, which I doubt, it should be
> > mounted at the antenna and be remotely controlled, unless you want to
> > climb the tower each time it needs to be readjusted. By this
> > arrangement only the antenna is tuned and the feedline is not
> > resonated, thus keeping the feedline losses down.
>
> I don't understand this. Why not putting the tuner between transmitter and
> line ?
>
> 73 de ON5MJ

5300. Re: 2m homebrew antenna tuner schematic

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-19 10:57:37 UTC
From: Leon Heller <leon_heller@hotmail.com>
Message-ID: <amcaj0$h3h$1@paris.btinternet.com>
Source record: 134540
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.homebrew

"Ralph Mowery" <rmowery@ctc.net> wrote in message
news:eZ6i9.123553$z91.5039669@bin3.nnrp.aus1.giganews.com...
> Unless it is an unusual situation you do not need an antenna tuner. If
> there is enough swr that a tuner is needed on 2 meters and up , you will
be
> loosing a lot of power in the feedline.
> Change or do some work on the antenna.

Some years ago I saw a review of such a tuner (probably in RadCom). I don't think many were sold, though, and it wasn't in production for long. It sticks in my mind, because the reviewer managed to match a dustbin to the radio. 8-)

73, Leon
--
Leon Heller, G1HSM
leon_heller@hotmail.com
http://www.geocities.com/leon_heller

5301. ID needed for this antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-19 11:52:02 UTC
From: B3CK5 <ff@vv.vv>
Message-ID: <BTii9.4$%k5.731@newsfep3-gui.server.ntli.net>
Source record: 134541

I came across this antenna at a boot sale the other day and the guy who was selling it had no idea what it was and i got a great deal on it, only thing is I have no idea what make it is or what bands it is designed for, its definatley hf and a rough sketch can be seen here in all the overall length is approx 14.5 feet, any help greatly appreciated.

thanks

5302. ID needed for this antenna (sorry forgot link for pic)

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-19 11:54:15 UTC
From: B3CK5 <ff@vv.vv>
Message-ID: <GVii9.5$%k5.813@newsfep3-gui.server.ntli.net>
Source record: 134542

http://homepage.ntlworld.com/shane.rea/hfant.jpg

any help id'ing this appreciated

5303. Re: Follow-up Disk Skin Effect Experiment

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-19 13:00:34 UTC
From: richardharrison@webtv.net
Message-ID: <23158-3D89CA72-37@storefull-2318.public.lawson.webtv.net>
Source record: 134544

Roger, W7WKB wrote:
"I can pretty well predict what each participant in the group would
offer in the discussion so I can guess what the comments would be."

It`s up to Roger to show that his disk experiment disproves skin effect.

Participants here are veterans of previous similar discussions of this
topic. Opinion becomes conviction and conviction becomes intolerance.
Vanity and loyalty produce extremes.

Few opinions change and we have heard all this stuff before.

Best regards, Richard Harrison, KB5WZI

5304. Re: Multiband Vertical Antenna Questions

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-19 13:47:05 UTC
From: CAM <Cecil.A.Moore@ieee.org>
Message-ID: <3D89D559.D104C920@ieee.org>
Source record: 134545

Durabolin1 wrote:
> I would like to build an antenna and thought a vertical would be better than a
> dipole since I'm in a fairly remote location. I'm thinking of building a
> 1/4-wave antenna for 80M. If I feed this antenna with balanced line using choke
> baluns and a tuner would this work well for 20M and 40M as well?

Here's a rule of thumb equation for you. Determine the resonant frequency of
the 1/4WL vertical, e.g. 3.8 MHz. Multiply that frequency by 2.5 to determine
the 5/8WL frequency. That's close to the maximum frequency for which a vertical
provides good low angle radiation. 3.8 x 2.5 = 9.5 MHz so a 1/4WL vertical on
75m will perform well on 40m and 30m but not well on 20m-10m.

I had a 40m vertical with an SGC-230 autotuner at the base that worked well
on 40m-17m. It is virtually impossible to keep common mode currents off the
balanced line when feeding a monopole against ground.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

5305. Re: 2m homebrew antenna tuner schematic

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-19 13:56:16 UTC
From: CAM <Cecil.A.Moore@ieee.org>
Message-ID: <3D89D780.4243E908@ieee.org>
Source record: 134546
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.homebrew

JC wrote:
>
> > If you really need an antenna tuner, which I doubt, it should be
> > mounted at the antenna and be remotely controlled, unless you want to
> > climb the tower each time it needs to be readjusted. By this
> > arrangement only the antenna is tuned and the feedline is not
> > resonated, thus keeping the feedline losses down.
>
> I don't understand this. Why not putting the tuner between transmitter and
> line ?

If your 2m SWR is high enough to require an antenna tuner, it is so
high that you will lose a lot of your transmitted signal unless you
are using very expensive coax or unless you put the tuner at the antenna.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
------== Over 80,000 Newsgroups - 16 Different Servers! =-----

5306. Re: tower paint

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-19 14:15:01 UTC
From: richardharrison@webtv.net
Message-ID: <23155-3D89DBE5-188@storefull-2318.public.lawson.webtv.net>
Source record: 134547

brian Kelly, W3RV wrote:
"The other (tower paint degradation) is mechanical abrasion caused by
wind-borne particulate matter, i.e., a sandblasting effect."

That is an interesting observation and I appreciate the revelation.

Best regards, Richard Harrison, KB5WZI

5307. Re: Follow-up Disk Skin Effect Experiment

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-19 14:47:32 UTC
From: rsparks <rsparks@elltel.net>
Message-ID: <3d89dfc2_4@corp.newsgroups.com>
Source record: 134548

"Richard Harrison" <richardharrison@webtv.net> wrote in message
news:23155-3D886DB6-10@storefull-2318.public.lawson.webtv.net...
> Roger wrote:
> "No one will even give me an impedance number that the disk should
> introduce into the test circuit."
>
> When skin effect is fully controlling conduction, materials have a
> "surface resistivity". "Ohms per square" express surface resistivity.
> The material may have an an area of a square inch or have an area of a
> square mile. It`s all the same.
>
> Doubling the distance across such a surface conduction resistivity tends
> to double the resistance, BUT the effective width of the current path
> doubles too and the resistance total remains the same. The skin depth is
> a constant which we will specify only varies with frequency for a
> uniform material.
>
> The surface resistivity of copper is about 0.000262 ohm / square at 1
> MHz.
>
> The resistance to r-f between points connected by a reasonably large
> copper sheet is 0.000262 ohm at 1 MHz. The distance between doesn`t
> count.
>
> The resistance at 10 MHz is 3.16 times as great because the surface
> resistivity varies as the square root of the frequency.
>
> This means that Roger`s copper disk offers little isolation from its
> resistance at 1MHz or at 27MHz.
>
> Best regards, Richard Harrison, KB5WZI
>

Good information Richard.

OK on resistance, how about inductance?

73, Roger, W7WKB

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

5308. FS: SONY AN-1

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-19 15:01:42 UTC
From: Rudi <wiedemann@attbi.com>
Message-ID: <qFli9.365317$_91.469183@rwcrnsc51.ops.asp.att.net>
Source record: 134549
Cross-posted to:
alt.ham-radio.marketplace,rec.radio.amateur.antenna,rec.radio.amateur.equipment,rec.radio.amateur.swap,rec.radio.swap

SONY AN-1 Antenna Booster kit, manual.

$149 new, asking $65 + shipping.

Check it out at:
http://www.universal-radio.com/catalog/sw_ant/2206.html

5309. Re: Multiband Vertical Antenna Questions

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-19 15:06:43 UTC
From: K4IA <K4ia@novacoxmail.com>
Message-ID: <7Kli9.73285$8F4.2099196@news2.east.cox.net>
Source record: 134550

To turn your thinking up side down and save yourself having to bury 4 miles of radials: Consider a top-fed inverted L. Feed the antenna at the top center and run an equal length wire horizontal and vertical. Top feed means no radials. I use 51 feet on a side and tune 160-10 meters. Makes a nice pattern too. See http://www.cebik.com/gup/gup25.html and http://www.cebik.com/ltv.html
--
Radio K4IA
Craig "Buck"
Fredericksburg, Virginia USA

FISTS 6702 CC 788 Diamond 64
K1♯ 470 K2♯ 2460

> I want to hang the antenna from a tree and was wondering if a dipole would be
> better than my planned vertical because it has more wire up high?
>
> Brock, VA6BTS
>

5310. Re: 2m homebrew antenna tuner schematic

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-19 15:27:23 UTC
From: xpyttl <xpyttl_nospam@earthling.net>
Message-ID: <uojrb018ubq34a@corp.supernews.com>
Source record: 134551
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.homebrew

Jacques

Feedline losses at HF are fairly low. At VHF, even fairly expensive feedline has considerable loss.

When you put an antenna tuner between point A and point B, it attempts to match the SWR between those points. If you put the tuner between the feedline and the transmitter, power will be effectively transferred into the feedline.

However, the feedline still has a characteristic impedance of 50 ohms, so there is a substantial mismatch where the feedline meets the antenna. This mismatch causes the current on the feedline to be higher than it would if it were matched. This higher current causes the loss on the feedline to be higher, depending on the degree of mismatch, perhaps many times higher.

At 80 meters, I might have a feedline characteristic loss of, perhaps, 0.3 db or so. Even with a fairly astronomical SWR, it might bump that up to 3 or 4 db, measurable, but not really noticeable.

At VHF, however, that same feedline loss might be 2 db to start with (25 meters of RG-8 solid dielectric). Given the same SWR at the antenna, the actual loss might be 20 db, certainly not something that can be ignored. If you are asking this question, you might be using an even smaller feedline. At 2 meters, 25 meters of RG-58A has a characteristic loss of almost 6 db. Hit that with a significant SWR and almost all of your power is being used to heat the coax!

So at VHF, there are a few different strategies that folks have suggested. The most obvious one is to make the antenna resonant in the first place. At 2 meters, a dipole is barely over a meter long. Few people face such space limitations that they can't get a meter of wire in the air. Another approach is to put the tuner at the antenna. This solves the problem of current on the feedline, but it means that you often need some sort of remote control to adjust the tuner, unless you will be operating over a limited frequency range. The third strategy is to get feedline whose characteristic loss is lower. Depending on the length of your run, this can be an expensive alternative. You are typically talking hardline which can easily cost 10 euros per meter or more, and which is a pain to install, or some sort of purged system which could run into many thousands of euros.

This is why so many folks said, why not just make the antenna resonant in the first place.

Now, all that being said, suppose you have a system where the SWR over the range you want to operate is, say, 1:1 at the center, and 2:1 at the edges

of the range. I would suggest just ignore it, presuming you measured the SWR at the antenna. There's another gotcha here that is more of an issue at VHF. If you see 2:1 at the transmitter, and you have a fairly typical feedline, then the SWR at the antenna is much higher. Those same losses are making the SWR at the transmitter appear better.

Hope this helps

..

"JC" <jacques.culot@skynet.be> wrote in message
news:3d898a78$0$211$ba620e4c@news.skynet.be...
> > If you really need an antenna tuner, which I doubt, it should be
> > mounted at the antenna and be remotely controlled, unless you want to
> > climb the tower each time it needs to be readjusted. By this
> > arrangement only the antenna is tuned and the feedline is not
> > resonated, thus keeping the feedline losses down.
>
> I don't understand this. Why not putting the tuner between transmitter and
> line ?
>
> 73 de ON5MJ
>
>
>
>

5311. Re: Follow-up Disk Skin Effect Experiment

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-19 15:46:22 UTC
From: richardharrison@webtv.net
Message-ID: <5697-3D89F14E-206@storefull-2315.public.lawson.webtv.net>
Source record: 134552

Roger, W7WKB wrote:
"OK on resistance, how about inductance?"

R-F currents tend to take the low-impedance path. Roger`s wire attaches to the disk`s center on each side.

From the "hand rule", magnetic lines encircle radial current flows in the disk. Imagine circulation in the same direction around each "radial fiber" on the disk surface. The directions of the magnetic lines between fibers are opposing, so they tond to cancel thus eliminating inductive reactance.

There goes your inductance. Poof!.

Best regards, Richard Harrison, KB5WZI

5312. Quagi Antennas and TW Wire

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-19 16:29:50 UTC
From: bb386@scn.org
Message-ID: <b05de05.0209190829.75abb4c9@posting.google.com>
Source record: 134553

Hi,

I'm trying to build an 8 element Quagi antenna for 434MHz. In Wayne Overbeck's article, he says that he developed the antenna using type TW 12 gauge solid copper wire. He goes on to say that if you can't find type TW wire that some people have used the more readily available THHN wire but that the driven and reflector loops must be made slightly larger to compensate.

My questions are: (1) Does anyone have a source for genuine type TW 12 gauge solid copper wire? I only need 5 feet of it. And if not... (2) How much longer should the loops be made if using THHN? By slightly larger, do they mean 0.1 percent, 1 percent or 10 percent?

Thanks,

Bruce

5313. Re: e/h antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-19 16:44:30 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <d3sjou0dovb9da9dsn1otmt09j56qkr6r5@4ax.com>
Source record: 134554

On 19 Sep 2002 03:35:40 GMT, tdonaly@aol.com (Tdonaly) wrote:

>Tony wrote,
>>
>>hmmmm..... actually, I think the listing was quite impartial to the
>>topic. There were sites from critics, experimenters and inventors. But
>>to each his own I suppose.
>>
>>Good collection of links JC.
>>
>>--
>>73, Tony
>>VA3ATD
>
>Hi, Tony,
> can you separate the wheat from the chaff?
>
> Tom Donaly, KA6RUH
>

Hi Tom,

Gary, our original poster would be most representative of them to offer a sieve method: ask them something technical like how high is your antenna mounted? The conventional (antenna designer) response is quite often found in microseconds - if in fact that original poster (the conventional designer) hadn't already offered it as a matter of common sense. [Thus an indirect measurement, in terms of time lag - the conventional vs. eh/cfa/fractal/go response ratio runs on the order of 10ï¿½ï¿½:1 or more (see following).]

Two days after asking this question, I can only imagine the difficulty in responding must be in deciding whether to measure it from the top down, or the bottom up. After tackling the technical intricacies of the eh/cfa/fractal/go, those developers appear to suffer a drain on their capacity to respond to these new technical challenges. Often the impression gained is that they lose interest almost immediately following their bright and cheerful announcements - suggesting problems of a bipolar issue.

Ask them about the circumference of their D-Plate if you want to engage them, but you have to move quickly. Their attention span seems to be eclipsed by the half-life of a Muon.

Another frequent stumper is: did you choke your transmission line?

Or: how much power do you apply to it to radiate one watt? (The answer to that could easily be "at least one watt," but, again, the stump factor has them speechless. You can recognize the alphas of this group who unhesitatingly respond: "I am excited to reveal my design, that I developed for myself, to my great effort, requires half a watt!")
[Note, this last reveals another metric sieve described below.]

Or: Howcum you guys drop in to offer exciting news; only to bail out with the first post? (Almost like slick-willy another one-time poster who last asked about fractals - and on his heels appears a marketing director to offer the good news. ;-)

One sure fire way to engage is to ask: How good? [Keep the question short - remember half-life.] Count the number of words in response and divide by the number of syllables. That measure frequently runs to slightly higher than 1.0. The odd thing about this, is the data pool is sufficient to offer high correlation to this metric, but the data itself contains no information. This is an example of the "fractal paradox" (two phD lecturers presenting one paper).

Another metric is to count the number of times the poster speaks in the first person about technical issues. When the count begins to exceed 10 or 12 "I," "me," "my," and so on in one paragraph (see short example above) - you have to honor the catch and release provision to allow that chum back into circulation. Gary ran to three personal references in a sentence (if one could call it such); but that was "one that got away."

Oh, and as you may have suspected, if it makes as much sense to talk fish as antennas with these folks, you have a boolean metric to serve as another sieve.

73's
Richard Clark, KB7QHC

5314. Re: tower paint

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-19 17:05:04 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <j40koug9scg58lm2j4jnq4eec198e3tcgd@4ax.com>
Source record: 134555

On Thu, 19 Sep 2002 09:15:01 -0500 (CDT), richardharrison@webtv.net
(Richard Harrison) wrote:

>brian Kelly, W3RV wrote:
>"The other (tower paint degradation) is mechanical abrasion caused by
>wind-borne particulate matter, i.e., a sandblasting effect."
>
>That is an interesting observation and I appreciate the revelation.
>
>Best regards, Richard Harrison, KB5WZI

Hi Richard,

I would raise that one offering another consideration: destructive
flexing. If the paint can't stretch as much as what is painted,
delamination results.

I can't say I have much to offer in that regard, but when I helped a
buddy replace a radomed collinear 10M antenna from the peak of his
tower, I was shocked by its appearance.

The surface had a fine haze of broken fiberglass strands - none more
than a quarter inch in length. It had the appearance of peach fuzz
covering nearly the entire surface of the radome. The initial glance
at it caught my attention, with my hand exploring the surface before
my mind engaged. Luckily I didn't draw my hand along the surface as
the prickly sensation was immediate.

The prospects of a mitt full of glass wasn't so worrying as finding
that same fuzz busted loose and air borne....

73's
Richard Clark, KB7QHC

5315. W9INN antennas

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-19 17:05:57 UTC
From: ardujenski@aol.com
Message-ID: <20020919130557.17509.00000161@mb-ma.aol.com>
Source record: 134556

I read the comments on eham regarding the good performance of the W9INN dipoles and other antennas from both construction techniques to performance. I was unable to find much on the internet about them other than what was at this foreign site:
http://nakatoyo.com/W9INN/FOR_BTTR_SIGS.htm
I was hoping someone with some personal knowledge can she a bit more light on the W9INN products (which appear to now be defunct)

Alan KB7MBI

5316. Re: I don't know which UHF antenna to use

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-19 17:49:26 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <ra1kou8h16ja51ota87dkluav2np9ljkv9@4ax.com>
Source record: 134557

On 18 Sep 2002 14:04:57 -0700, daniel000@prodigy.net.mx (Daniel Lee) wrote:

>Hi,
>
>I have a 265 - 395 MHz 5 watt UHF transmitter receiver that we are
>using for data (Internet) over a distance of 2.8 miles at sea level
>hillside to hillside no obstructions.
>Can you recommend an antenna for me?
>
>Any assistance appreciated.
>
>Sincerely,
>
>Daniel Hallas

Hi Daniel,

You describe a very good situation to be in. Close quarters, direct view, and more power than you need.

If you put "rabbit ear" style antennas at both ends (and still turn down that power if you can) you will do very well. This is to suggest that the antenna is not critical, but for the sake of the transmitter should be "tuned" - a consideration I suspect is too technical for your needs.

One problem that could come from too much power (you really need to turn it down) is reflections from nearby walls, local clutter, what-have-you, so large that they cause data degradation. You may build a high speed link, but throughput is going to be in the basement. Technically this called "multi-path" and its solution is found in using high gain antennas that have a directionality characteristic. This is like the roof top TV antennas that had to be pointed at town to see the game. Again, you would need even less power for these to accomplish your link.

Oddly enough, the specs you offer sound like the class of gear I used to teach in the Navy. This is a tactical communications band last I heard... if the current administration hasn't auctioned it off yet.

Given the ambiguity of your credentials or right to operate this equipment: I would caution you, possession of a transmitter is not a license to use it. Its illegal operation can lead to substantial fine and jail time - especially in those frequencies. The height and power you have available makes your transmitter a serious interference

source which in this age could be construed as subversive activity.

The naive are the first casuality of war.

73's
Richard Clark, KB7QHC

5317. Re: e/h antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-19 17:52:46 UTC
From: tdonaly@aol.com
Message-ID: <20020919135246.12380.00008471@mb-fm.aol.com>
Source record: 134558

>
>Hi Tom,
>
>Gary, our original poster would be most representative of them to
>offer a sieve method: ask them something technical like how high is
>your antenna mounted? The conventional (antenna designer) response is
>quite often found in microseconds - if in fact that original poster
>(the conventional designer) hadn't already offered it as a matter of
>common sense. [Thus an indirect measurement, in terms of time lag -
>the conventional vs. eh/cfa/fractal/go response ratio runs on the
>order of 10i¿½ï¿½:1 or more (see following).]
>
>Two days after asking this question, I can only imagine the difficulty
>in responding must be in deciding whether to measure it from the top
>down, or the bottom up. After tackling the technical intricacies of
>the eh/cfa/fractal/go, those developers appear to suffer a drain on
>their capacity to respond to these new technical challenges. Often
>the impression gained is that they lose interest almost immediately
>following their bright and cheerful announcements - suggesting
>problems of a bipolar issue.
>
>Ask them about the circumference of their D-Plate if you want to
>engage them, but you have to move quickly. Their attention span seems
>to be eclipsed by the half-life of a Muon.
>
>Another frequent stumper is: did you choke your transmission line?
>
>Or: how much power do you apply to it to radiate one watt? (The
>answer to that could easily be "at least one watt," but, again, the
>stump factor has them speechless. You can recognize the alphas of
>this group who unhesitatingly respond: "I am excited to reveal my
>design, that I developed for myself, to my great effort, requires half
>a watt!")
>[Note, this last reveals another metric sieve described below.]
>
>Or: Howcum you guys drop in to offer exciting news; only to bail out
>with the first post? (Almost like slick-willy another one-time poster
>who last asked about fractals - and on his heels appears a marketing
>director to offer the good news. ;-)
>
>One sure fire way to engage is to ask: How good? [Keep the question
>short - remember half-life.] Count the number of words in response
>and divide by the number of syllables. That measure frequently runs
>to slightly higher than 1.0. The odd thing about this, is the data

>pool is sufficient to offer high correlation to this metric, but the
>data itself contains no information. This is an example of the
>"fractal paradox" (two phD lecturers presenting one paper).
>
>Another metric is to count the number of times the poster speaks in
>the first person about technical issues. When the count begins to
>exceed 10 or 12 "I," "me," "my," and so on in one paragraph (see short
>example above) - you have to honor the catch and release provision to
>allow that chum back into circulation. Gary ran to three personal
>references in a sentence (if one could call it such); but that was
>"one that got away."
>
>Oh, and as you may have suspected, if it makes as much sense to talk
>fish as antennas with these folks, you have a boolean metric to serve
>as another sieve.
>
>73's
>Richard Clark, KB7QHC
>

Hi Richard,
very good, as usual. People who claim to come up with
new, innovative, natural-law breaking, the professors don't undertand it,
we're being persecuted by fools, ideas for antennas should read what
you just wrote and take it to heart.

Tom Donaly KA6RUH

5318. Re: e/h antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-19 18:02:02 UTC
From: tdonaly@aol.com
Message-ID: <20020919140202.12380.00008476@mb-fm.aol.com>
Source record: 134559

>
>Hi,
>
>As we tell in French, I have given the URLs "ï¿½ la pelle".
>
>73 de ON5MJ
>

Hi Jacques,
the problem with presenting a list of URLs with
no comments is that it gives the bad URLs a legitimacy they
don't deserve, while the legitimacy of the good URLs is
diminished by being placed in conjunction with the bad.

Tom Donaly, KA6RUH

5319. Re: Follow-up Disk Skin Effect Experiment

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-19 18:04:44 UTC
From: rsparks <rsparks@elltel.net>
Message-ID: <3d8a0fea$1_2@corp.newsgroups.com>
Source record: 134560

"Richard Harrison" <richardharrison@webtv.net> wrote in message
news:5697-3D89F14E-206@storefull-2315.public.lawson.webtv.net...
> Roger, W7WKB wrote:
> "OK on resistance, how about inductance?"
>
> R-F currents tend to take the low-impedance path. Roger`s wire attaches
> to the disk`s center on each side.
>
> From the "hand rule", magnetic lines encircle radial current flows in
> the disk. Imagine circulation in the same direction around each "radial
> fiber" on the disk surface. The directions of the magnetic lines between
> fibers are opposing, so they tond to cancel thus eliminating inductive
> reactance.
>
> There goes your inductance. Poof!.
>
> Best regards, Richard Harrison, KB5WZI
>

I can see that the lines locally on each surface would reinforce, and that
the lines on opposing sides of center on each surface would oppose
(therefore cancel at a distance).

With skin effect in play, the lines on one surface should not penetrate the
disk to influence the lines on the other surface. Right?

73, Roger, W7WKB

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
------== Over 80,000 Newsgroups - 16 Different Servers! =-----

5320. Re: Quagi Antennas and TW Wire

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-19 18:17:20 UTC
From: Al W2JUV <robinsona@rl.af.mil>
Message-ID: <3d8a10b3$1_2@corp.newsgroups.com>
Source record: 134561

Bruce:

Take a piece of 12-2 Romex cable and strip away the outer plastic jacket.
The insulated
single conductors, one black and one white, are type TW.

Al, W2JUV

"Bruce" <bb386@scn.org> wrote in message
news:b05de05.0209190829.75abb4c9@posting.google.com...
> Hi,
>
> I'm trying to build an 8 element Quagi antenna for 434MHz. In
> Wayne Overbeck's article, he says that he developed the antenna using
> type TW 12 gauge solid copper wire. He goes on to say that if you
> can't find type TW wire that some people have used the more readily
> available THHN wire but that the driven and reflector loops must be
> made slightly larger to compensate.
>
> My questions are: (1) Does anyone have a source for genuine type
> TW 12 gauge solid copper wire? I only need 5 feet of it. And if
> not... (2) How much longer should the loops be made if using THHN? By
> slightly larger, do they mean 0.1 percent, 1 percent or 10 percent?
>
> Thanks,
>
>
> Bruce

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

5321. need help with homebrew noise blanker circuit

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-19 18:20:30 UTC
From: AJ Sanderson <ajsand@nospam.com>
Message-ID: <amd4h6$8vr$1@slb7.atl.mindspring.net>
Source record: 134562
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.boatanchors,rec.radio.amateur.homebrew,rec.radio.amateur.misc,sci.electronics.basics,sci.electronics.design

I'd like to build a noise gate circuit for my HF receiver, to be located externally between the radio and antenna, but I'm not sure how to wind the toroids. The circuit I'm going to use (unless someone can suggest a better one for HF use) is at
http://www.lwca.org/library/articles/jtreed/gate/gate1b.htm

This uses two FT50-75 toroids and I understand I need to change these to FT50-43 for hf use (1.8- 30 Mhz). For 50 ohm input/ ouptut, how would I wind the toroids using 43's?

Thanks,
AJ

5322. Re: 2m homebrew antenna tuner schematic

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-19 18:41:18 UTC
From: JC <jacques.culot@skynet.be>
Message-ID: <3d8a1a51$0$221$ba620e4c@news.skynet.be>
Source record: 134563
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.homebrew

Hi everybody,

I am a bit perplex about your replies. This is why.

In the ARRL antenna book 17th edition, on page 24-16 (also in ARRL handbook 78th edition at page 19-5)you can see a diagram about loss in coaxial lines. At 150MHz, the matched attenuation of 100 ft of RG8 is just above 3 dB. Keep this figure in mind.

On the other hand, in the book of W2DU "Reflexions - Transmission Lines & Antennas" - 1st edition by ARRL, at page 1-5 you can see another diagram giving the additional loss caused by mismatch for various SWR (also at page 19-6 of ARRL handbook year 2001/ 78th edition). Imagine we have a SWR of 3. The diagram gives an additional loss of 1 dB due to mismatch for an attenuation of 3 dB in matched conditions. This is the consequence of the conjugate impedance theorem or the maximum transmitted power theorem. Total attenuation will thus be 4 dB instead of 3. (In the 80m band the match attenuation would be a bit less than 0.4 dB plus an additional loss of 0.2 dB for unmatched conditions (see also page 1-15 of W2DU book). Those figures could also be obtained from equations.

Is this small 1 dB additional loss at 150 MHz worth to climb at the top of the pole and the price of a remote controlled tuner ?

73 de ON5MJ.

5323. Re: need help with homebrew noise blanker circuit

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-19 19:02:58 UTC
From: Tarmo Tammaru <t-tammaru@home.com>
Message-ID: <Cbpi9.142564$z91.5770782@bin3.nnrp.aus1.giganews.com>
Source record: 134564
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.boatanchors,rec.radio.amateur.homebrew,rec.radio.amateur.misc,sci.electronics.basics,sci.electronics.design

AJ,

Don't be too disappointed if the thing doea not work. I built something like thi some years ago, got only marginal results on a good day. What I discovered was that:

1. The noise phase during positice AC cycles was not the same as during negative AC cycles.

2. There was sometimes more than one noise pulse during a half cycle of AC.

3. The phase of the noise jiggled back and fourth.

4. The noise "pulse"can be very wide; that is, it showed ringing

Tam/WB2TT

"AJ Sanderson" <ajsand@nospam.com> wrote in message news:amd4h6$8vr$1@slb7.atl.mindspring.net...
> I'd like to build a noise gate circuit for my HF receiver, to be located
> externally between the radio and antenna, but I'm not sure how to wind the
> toroids. The circuit I'm going to use (unless someone can suggest a better
> one for HF use) is at
> http://www.lwca.org/library/articles/jtreed/gate/gate1b.htm
>
> This uses two FT50-75 toroids and I understand I need to change these to
> FT50-43 for hf use (1.8- 30 Mhz). For 50 ohm input/ ouptut, how would I
> wind the toroids using 43's?
>
> Thanks,
> AJ
>
>
>
>

5324. Re: e/h antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-19 19:17:50 UTC
From: JC <jacques.culot@skynet.be>
Message-ID: <3d8a231d$0$205$ba620e4c@news.skynet.be>
Source record: 134565

Hi Tom,

You are absolutely right on this point. Nevertheless, I didn't feel skilled enough for the selection and I only replied to the original questions:

>I would like to see if any one out thereis useing the e/h antenna and if anyone has build and 75 meter e/h dipole
I would like to see your drawing...I have build e/h for 20 meter and 15 meter there work great on dx last weekend
work 15 dx and 20 states fron maine to SD

Bye.

Jacques; 73 de ON5MJ

5325. multiband loop antenna??

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-19 19:32:28 UTC
From: denton <denton@oregontrail.net>
Message-ID: <amd8l7$4se$1@news.apaynet.com>
Source record: 134566

Hi all...
I modified my multiband dipole, fed with 450 ohm twin lead, into as much of a loop as the current support structures (40' in the middle and about 27' or so at the ends) would allow and still be about 7 feet or so above the ground at the bottom. My house is the bottom support.
The antenna loads nicely on all bands except 160 and has a bit better noise rejection to the dipole. Radiation pattern seems to be good on the other bands...if can hear them, can work them.

I am thinking of running an 80 meter loop skywire around the property and am wondering if I would notice much improvement over the above.

Thanks for the replys, de Denton, WB7TDG

5326. What type of simple HF antenna to use for DX for this location?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-19 20:04:35 UTC
From: kjcoffee@aol.com
Message-ID: <20020919160435.17341.00000137@mb-ma.aol.com>
Source record: 134567

My home is on the east side of a hill about 2 miles from the Pacific Ocean, and the lot has 3 very large cypress trees on the West side. Most of the hams around here have beams pointing West, but I can't do that, because I'm blocked by the trees and the hill. I'm now using a multi-band dipole running East-West, but reception and transmission is not very good. If I run it North-South, it's even worse. Any suggestions? Kevin AC6ME

5327. Re: ham radio on a mountain bike

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-19 20:35:30 UTC
From: Jack <NOSPAMkc8pkn@arrl.net>
Message-ID: <amdcmo$ou7$1@slb5.atl.mindspring.net>
Source record: 134369

Hope I don't sound like a smart a.., but where I ride my mountain bike I'd be afraid to break something. Besides on some of the climbs even my socks are too heavy don't think I would want to be carrying a radio and battery. This is a site for bicycle hams http://www.lafetra.com/bmha/ hope it helps.

Jack

"Jesse" <jplummer@bluefrognet.net> wrote in message news:3D88940E.4B15B19A@bluefrognet.net...
> Anyone ever mount a radio on a bike? I want to mount my Yaesu FT1500 on
> my bike. I have an ample rechargeable battery, a bag to mount it. What
> would be a good antenna that wouldn't be too heavy, to tall (get busted
> on low hanging branches) and be able to handle 50 Watts? Any
> suggestions?

5328. Re: Quagi Antennas and TW Wire

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-19 20:35:32 UTC
From: Allodoxaphobia <QSB@QRM-QRN.net>
Message-ID: <slrnaokd8j.cro.QSB@animas.frontier.net>
Source record: 134568

On Thu, 19 Sep 2002 14:17:20 -0400, Al W2JUV scribbled:
> Bruce:
>
> Take a piece of 12-2 Romex cable and strip away the outer plastic jacket.
> The insulated single conductors, one black and one white, are type TW.
>
> Al, W2JUV

Then, strip the insulation, and using 5-8 foot (152.40-243.84 cm)
pieces, clamp one end firmly in a vise and chuck the other'n in a
electric hand drill. Twist the wire, whilst pulling it taut, until
you have about two+ twists per inch (per 2.54 cm.) You'll be happier
with it's new found straightness and its stiffness.

Works well with aluminium wire, too. When working with 10 or
8 gauge stuff, use a 3/8" (0.9525 cm) to 1/2" (1.27 cm) drill and
limit the twists to less than 2 per inch (per 2.54 cm.)

I've made 2M vertical yagis out of 8 gauge aluminium wire that have
held up well using this 'trick'. Horizontal --- I don't think it
could cope with birds and/or ice. (Ice is not a problem at this
QTH -- big ravens *are*.)

For the 70 cm (27.559055 inch) band, the 8 or 10 gauge stuff would
probably work out ok for horizontal antennas.

Jonesy, W3DHJ
--
| Marvin L Jones | jonz | W3DHJ | OS/2
| Gunnison, Colorado | @ | Jonesy | linux __
| 7,703' -- 2,345m | frontier.net | DM68mn SK

5329. Re: Follow-up Disk Skin Effect Experiment

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-19 20:52:52 UTC
From: richardharrison@webtv.net
Message-ID: <22505-3D8A3924-13@storefull-2311.public.lawson.webtv.net>
Source record: 134371

Roger, W7WKB wrote:
"With skin effect in play, the lines on one surface should not penetrate the the lines on the other surface."

Two fields, electric and magnetic. The electric is blocked by a conductor shortstopping electric lines and grounding them out. The magnetic field is blocked by counter-emf which is generated and which opposes the flow inducing the counter-emf.

A conducting picket fence only allows magnetic coupling because it inhibits conduction between pickets, except on one end, so no circulating current or counter-emf of consequence is generated. The pickets are effective in grounding the electric field, so it`s blocked and only magnetic coupling is allowed by this electrostatic fence called a Faraday screen. All the pickets are grounded on one end only.

Roger`s disks are small in terms of wavelength and the magnetic field on one side wraps around both sides of the disk. The current flowing away from the wire on one side of a disk is flowing toward the wire on the opposite side of the disk. The lines of magnetic flux are almost concentric as produced by current on the surfaces of the disk, and the lines are perpendicular to the current flows on either side. Since the current flows are reversed on opposite sides of the disk, away from the wire on one side and toward the wire on the other side of the disk, the magnetic fields are reversed and tend to cancel.

It is a mistake to think magnetic lines of force don`t penetrate a conductor. It takes high magnetic permeability to block magnetic lines of force. Recall Terman`s explanation for skin effect. The inner fibers of a conductor are surrounded by more magnetic lines of force (magnetic lines are inside the conductor), produced by current through the conductor, than are the outer fibers. Thus, the innermost part of the conductor has a higher inductance than the outer part. Current takes the easy path which is the outer part of the conductor. Current flows where the impedance is lowest.

A conductor can be penetrated by magnetic lines of force. Counter-emf in a conductor can negate a magnetic field. It`s not the inpenetrability of the metel itself, unless it`s mu-metal or some such, which blocks magnetic lines of force.

Roger has observed that his disks do little if anything to alter an antenna where he positioned the disks. That is evidence that the disks have little if any inductance.

Best regards, Richard Harrison, KB5WZI

5330. Re: ham radio on a mountain bike

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-19 21:07:59 UTC
From: Alan <alannc44@{nospam}ix.netcom.com>
Message-ID: <P0ri9.55289$ip3.2382599@twister.southeast.rr.com>
Source record: 134370

I've taken my 2m handheld since it's so light. Additionally, some of the ham repeaters are more reliable than the cell phones.

It would interesting to head out to Moab, or Alaska or some place really exotic, and set up a site, no?

Alan
WN4HOG

--
Windsurfing Club: http://www.ibscc.org
Homepage: http://pw1.netcom.com/~alannc44/qsl.htm

"Jack" <NOSPAMkc8pkn@arrl.net> wrote in message
news:amdcmo$ou7$1@slb5.atl.mindspring.net...
> Hope I don't sound like a smart a.., but where I ride my mountain bike I'd
> be afraid to break something. Besides on some of the climbs even my socks
> are too heavy don't think I would want to be carrying a radio and battery.
> This is a site for bicycle hams http://www.lafetra.com/bmha/ hope it
> helps.
>
>
> Jack
>
>
> "Jesse" <jplummer@bluefrognet.net> wrote in message
> news:3D88940E.4B15B19A@bluefrognet.net...
> > Anyone ever mount a radio on a bike? I want to mount my Yaesu FT1500 on
> > my bike. I have an ample rechargeable battery, a bag to mount it. What
> > would be a good antenna that wouldn't be too heavy, to tall (get busted
> > on low hanging branches) and be able to handle 50 Watts? Any
> > suggestions?
>
>

5331. Re: 2m homebrew antenna tuner schematic

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-19 21:46:39 UTC
From: Ralph Mowery <rmowery@ctc.net>
Message-ID: <3Bri9.45445$216.1704652@bin4.nnrp.aus1.giganews.com>
Source record: 134372
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.homebrew

That 3 db loss is for a matched condition and no antenna tuner will be needed. If the swr of 3 is measured at the transmitter end and you have a 3 db loss in the transmssion line , look up how much of a mismatch you will have at the antenna. It is almost off the scale. The coax can be open and you will only measue a swr of about 3 with a 3 db loss in the line at 150 mhz. Then check out how much additional loss you get with a swr of 20 or greater that you will actually have at the antenna.

"JC" <jacques.culot@skynet.be> wrote in message
news:3d8a1a51$0$221$ba620e4c@news.skynet.be...
> Hi everybody,
>
> I am a bit perplex about your replies. This is why.
>
> In the ARRL antenna book 17th edition, on page 24-16 (also in ARRL
handbook
> 78th edition at page 19-5)you can see a diagram about loss in coaxial
lines.
> At 150MHz, the matched attenuation of 100 ft of RG8 is just above 3 dB.
Keep
> this figure in mind.
>
> On the other hand, in the book of W2DU "Reflexions - Transmission Lines &
> Antennas" - 1st edition by ARRL, at page 1-5 you can see another diagram
> giving the additional loss caused by mismatch for various SWR (also at
page
> 19-6 of ARRL handbook year 2001/ 78th edition). Imagine we have a SWR of
3.
> The diagram gives an additional loss of 1 dB due to mismatch for an
> attenuation of 3 dB in matched conditions. This is the consequence of the
> conjugate impedance theorem or the maximum transmitted power theorem.
Total
> attenuation will thus be 4 dB instead of 3. (In the 80m band the match
> attenuation would be a bit less than 0.4 dB plus an additional loss of 0.2
> dB for unmatched conditions (see also page 1-15 of W2DU book). Those
> figures could also be obtained from equations.
>
> Is this small 1 dB additional loss at 150 MHz worth to climb at the top of
> the pole and the price of a remote controlled tuner ?
>
> 73 de ON5MJ.
>
>

>
>

5332. TV antenna ?? from Greenie = Can you stoop this low?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-19 21:57:03 UTC
From: TCS <dollardoc@ezl.com>
Message-ID: <3D8A482F.B4DA0F41@ezl.com>
Source record: 134373

Searched and scanned this group for simple questions re my
TV attic antenna....
Bldg a home on hi hill facing TV transmitters 35 mi away.
Installed big 144" 50+ lead rod antenna in attic (clear view
view to city) and test tv worked great on one 45' lead.
To connect 4 tvs, I installed a 110v splitter/amplifier and
4 coax runs, 25-45' each, but it diminished the signal to
the test TV. The amp/splttr has no power yet in the attic,
so the 4 runs are not boosted in any way. I'm hoping that
powering the amplifier will bring back the great reception
when only 1 lead was run.

Questions:

* It worked great on 1 lead. Can I assume there's enough
drop from the 3 added runs that the test tv was
weakened?
* The amplifier/splitter is in the attic @ 5' from
antenna, but no 110 hooked up yet. Don't know specs on
amp except it cost $39.95 @ Home Depot, and looks like
most single units on internet = 1 input, 4 outputs. Is
this ok?
* Coax was cheap, $40 for 500' box roll. I threaded it
myself by stripping insul @ 5/8" to copper, then
another 1/2" to mesh. No foldbacks, just clipped off
the nylon mesh. Used screw-on coax connectors, made
sure that white inner insulation went through connector
hole and the copper wire extended 1/16 - 1/8" out from
tip. It worked great on the single lead but weakened
when I hooked up the other 3. Do you think cheap coax
or faulty connectors are the problem?

Sorry to take up time with this. Contractor is "closing up"
the house next week. Any changes to the attic antenna or
pre-wired cables need to be done soon. Thanks for this great
site. If you know other links or newsgroups, redirect
please. TOM dollardoc

5333. Re: Follow-up Disk Skin Effect Experiment

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-19 22:33:24 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <3D8A50B4.2090303@eznec.com>
Source record: 134374

Neither a time-varying electric nor magnetic field can be produced in isolation, the claims of the CFA and EH folks notwithstanding. Beyond the near field, the ratio of E to H is determined solely by the material, and is known as the intrinsic impedance of the medium. In a perfect conductor, the E field is zero. The H (magnetic) field is, therefore, also zero.

From _Introduction to Electromagnetic Fields and Waves_, by Charles A. Holt:

"To determine the tangential component of the magnetic field intensity H, we shall apply the Maxwell-Ampere law to the rectangle of Fig. 9-7, with medium 2 regarded as a perfect conductor. Time-varying fields are assumed, and the surface current density Js is directed into the paper. The mmf around the path of the rectangle in a clockwise direction is Ht1*{delta}l, because H is zero inside the perfect conductor. . ."

And from _Engineering Electromagnetic Fields and Waves_ by Carl T.A. Johnk:

"Case B. One region is a perfect dielectric; the other is a perfect conductor. Electric currents are limited to finite densities in the physical world. Thus from J = {sigma}E, the assumption of a perfect conductor in region 2. . . implies that E2 in that region must be zero if the current densities are to have, at most, finite values. Moreover, with electromagnetic fields satisfying {del} cross E = -j{omega}B, one can see that if E2 is zero in region 2, then B2 must be zero there also. Thus for time-varying fields, {sigma} -> 0 implies E = B = 0 in a perfect conductor."

In a real, non-perfect conductor, the E field decays exponentially from the surface and, in a good conductor, rapidly approaches a very small value a small distance below the surface. Because the ratio of E to H is constant for the material, the H field decays at the same rate (although the E/H ratio is much lower for a conductor than for a dielectric, so the H field is proportionately greater). The notion that a time-varying magnetic field goes right through a conductor while the electric field is stopped is incorrect, as the above textbooks explain and as a wealth of experience with and measurement of shielding properties confirms.

Roy Lewallen, W7EL

Richard Harrison wrote:
> . . .
> It is a mistake to think magnetic lines of force don`t penetrate a
> conductor. It takes high magnetic permeability to block magnetic lines
> of force. Recall Terman`s explanation for skin effect. The inner fibers

> of a conductor are surrounded by more magnetic lines of force (magnetic
> lines are inside the conductor), produced by current through the
> conductor, than are the outer fibers. Thus, the innermost part of the
> conductor has a higher inductance than the outer part. Current takes the
> easy path which is the outer part of the conductor. Current flows where
> the impedance is lowest.
>
> A conductor can be penetrated by magnetic lines of force. Counter-emf in
> a conductor can negate a magnetic field. It`s not the inpenetrability of
> the metel itself, unless it`s mu-metal or some such, which blocks
> magnetic lines of force.
>
> Roger has observed that his disks do little if anything to alter an
> antenna where he positioned the disks. That is evidence that the disks
> have little if any inductance.
>
> Best regards, Richard Harrison, KB5WZI
>

5334. Re: What type of simple HF antenna to use for DX for this location?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-19 23:02:30 UTC
From: WA6LZH <tangeram@lucent.com>
Message-ID: <3D8A5786.7050607@lucent.com>
Source record: 134375

KJ I have a similar situation only I am blocked to the East and clear to the West. With a modest TA-33 at 30 feet I can work all kinds of DX out in the Pacific. However, East coast is a real stretch with signals sitting at s-7 to s-8 when I know others can hear them at 10 db over s-9. I've thought about this and the only idea I can come up with is to get whatever I use as High as possible. This lets off the beam because of tower requirements. However, I should be able to put up a light weight ground plane as high as 50 feet. I am hoping this will enable me to clear the hill on all but the lowest of angles. At times I am able to work the East with less difficulty I theorize this is because it is multiple hop propagation arriving at a higher angle. The lack of beam directivity during these times seems to bear that out. Something like the old mosely or high gain trap verticals for 20-15-10. They were only about 12 feet or so and the maximum height might be more reasonable. (50 + 12 = 62 which still may be too high). Since my problem is simialr I'd like to hear what your solution is.

Tony

KJ COFFEE wrote:

> My home is on the east side of a hill about 2 miles from the Pacific Ocean, and
> the lot has 3 very large cypress trees on the West side. Most of the hams
> around here have beams pointing West, but I can't do that, because I'm blocked
> by the trees and the hill. I'm now using a multi-band dipole running
> East-West, but reception and transmission is not very good. If I run it
> North-South, it's even worse. Any suggestions? Kevin AC6ME
>
>
>
>

5335. Re: 2m homebrew antenna tuner schematic

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-19 23:20:49 UTC
From: JC <jacques.culot@skynet.be>
Message-ID: <3d8a5bda$0$195$ba620e4c@news.skynet.be>
Source record: 134376
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.homebrew

Thank you Ralph for your reply. About the exemple, I haven't see yet in those books if the SWR is supposed to be mesured at the antenna or at the transmitter end. I think I will put this example in a Smith' diagram just for seing what will happen. Anyway an SWR of 20 at the antenna is not realistic because it would require first some adjustment at the aerial. So my assumption of a SWR of 3 or even 5 could be reasonably good and in this case the books are right.

73 de ON5MJ

5336. Re: multiband loop antenna??

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-19 23:44:31 UTC
From: 'Doc <w5lz@icok.net>
Message-ID: <3D8A614C.660003D4@icok.net>
Source record: 134377

Denton,
If you have the room, make the loop larger than
a full wave on 80 meters. Don't worry about it being
resonant, just large. You will see a difference.
'Doc

5337. Re: W9INN antennas

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-20 00:48:18 UTC
From: Mark Krubsack <mkrubsack@yahoo.com>
Message-ID: <4vrkouc2kav54roevmchvjg4e878dlrc14@4ax.com>
Source record: 134378

On 19 Sep 2002 17:05:57 GMT, ardujenski@aol.com (ARDUJENSKI) wrote:

>I read the comments on eham regarding the good performance of the W9INN dipoles
>and other antennas from both construction techniques to performance. I was
>unable to find much on the internet about them other than what was at this
>foreign site:
>http://nakatoyo.com/W9INN/FOR_BTTR_SIGS.htm
>I was hoping someone with some personal knowledge can she a bit more light on
>the W9INN products (which appear to now be defunct)
>
>Alan KB7MBI

They are far from defunct. Mostly advertise in mags such as QST (small
ads). I have an 85' W9INN 80/40 meter dipole and it works great.
Totally flat across 40 meters, never more than 1.2:1 SWR, and fairly
broad on 75 meters.

On the air reports give me 1-2 s units over my old G5RV. The W9INN's
are great antennas.

5338. Re: W9INN antennas

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-20 00:50:06 UTC
From: Uncle Peter <radioconnectionNO@cox.netSPAM>
Message-ID: <2hui9.72556$TX5.2218185@news1.east.cox.net>
Source record: 134379

"Mark Krubsack" <mkrubsack@yahoo.com> wrote in message
news:4vrkouc2kav54roevmchvjg4e878dlrc14@4ax.com...
> On 19 Sep 2002 17:05:57 GMT, ardujenski@aol.com (ARDUJENSKI) wrote:
>
> >I read the comments on eham regarding the good performance of the W9INN
dipoles
> >and other antennas from both construction techniques to performance. I
was
> >unable to find much on the internet about them other than what was at
this
> >foreign site:
> >http://nakatoyo.com/W9INN/FOR_BTTR_SIGS.htm
> >I was hoping someone with some personal knowledge can she a bit more
light on
> >the W9INN products (which appear to now be defunct)
> >
> >Alan KB7MBI
>
> They are far from defunct. Mostly advertise in mags such as QST (small
> ads). I have an 85' W9INN 80/40 meter dipole and it works great.
> Totally flat across 40 meters, never more than 1.2:1 SWR, and fairly
> broad on 75 meters.
>
> On the air reports give me 1-2 s units over my old G5RV. The W9INN's
> are great antennas.
>

I wonder what sort of engineering goes into making a simple wire dipole work
better than another...

Pete

5339. Re: ID needed for this antenna (sorry forgot link for pic)

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-20 01:08:00 UTC
From: Dan/W4NTI <w4nti@mindspringnospam.com>
Message-ID: <amdscv$nj9$1@slb2.atl.mindspring.net>
Source record: 134380

By the mount on the bottom it may be a old Hustler vertical. I don't have
any idea what the top of it represents.

Put it together, stick it in the ground, run some coax to it and see where
it hits.

Dan/W4NTI

"B3CK5" <ff@vv.vv> wrote in message
news:GVii9.5$%k5.813@newsfep3-gui.server.ntli.net...
> http://homepage.ntlworld.com/shane.rea/hfant.jpg
>
> any help id'ing this appreciated
>
>

5340. Re: TV antenna ?? from Greenie = Can you stoop this low?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-20 01:14:18 UTC
From: Dan/W4NTI <w4nti@mindspringnospam.com>
Message-ID: <amdsoq$4hb$1@slb6.atl.mindspring.net>
Source record: 134381

With the preamp not powered up you are inserting loss. Most cheap preamps will not pass much of anything until they are turned on. Run some juice to it. You will probably do fine then. As for being equal to a single run. No way of knowing without the specs on the preamp. I.E. Gain and insertion loss. Just fire er up and see.

Dan/W4NTI

"TCS" <dollardoc@ezl.com> wrote in message news:3D8A482F.B4DA0F41@ezl.com...
Searched and scanned this group for simple questions re my TV attic antenna....
Bldg a home on hi hill facing TV transmitters 35 mi away. Installed big 144" 50+ lead rod antenna in attic (clear view view to city) and test tv worked great on one 45' lead.
To connect 4 tvs, I installed a 110v splitter/amplifier and 4 coax runs, 25-45' each, but it diminished the signal to the test TV. The amp/splttr has no power yet in the attic, so the 4 runs are not boosted in any way. I'm hoping that powering the amplifier will bring back the great reception when only 1 lead was run.
Questions:

a.. It worked great on 1 lead. Can I assume there's enough drop from the 3 added runs that the test tv was weakened?
b.. The amplifier/splitter is in the attic @ 5' from antenna, but no 110 hooked up yet. Don't know specs on amp except it cost $39.95 @ Home Depot, and looks like most single units on internet = 1 input, 4 outputs. Is this ok?
c.. Coax was cheap, $40 for 500' box roll. I threaded it myself by stripping insul @ 5/8" to copper, then another 1/2" to mesh. No foldbacks, just clipped off the nylon mesh. Used screw-on coax connectors, made sure that white inner insulation went through connector hole and the copper wire extended 1/16 - 1/8" out from tip. It worked great on the single lead but weakened when I hooked up the other 3. Do you think cheap coax or faulty connectors are the problem?
Sorry to take up time with this. Contractor is "closing up" the house next week. Any changes to the attic antenna or pre-wired cables need to be done soon. Thanks for this great site. If you know other links or newsgroups, redirect please. TOM dollardoc

5341. Re: I don't know which UHF antenna to use

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-20 01:49:38 UTC
From: Dave Holford <holford@sympatico.ca>
Message-ID: <3D8A7EB2.4F2C2B2D@sympatico.ca>
Source record: 134382

Richard Clark wrote:
>

> >Hi,
> >
> >I have a 265 - 395 MHz 5 watt UHF transmitter receiver that we are
> >using for data (Internet) over a distance of 2.8 miles at sea level
> >hillside to hillside no obstructions.
> >Can you recommend an antenna for me?
> >
> >Any assistance appreciated.
> >
> >Sincerely,
> >
> >Daniel Hallas
>

Considering that you are operating in a military band used extensively
for satellite and airborne communications I would suggest a "very"
narrow beam antenna. Especially with the current state of military
alertness I would not want to be even suspected of interfering with
military communications systems.

Dave

5342. Re: ham radio on a mountain bike

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-20 02:47:32 UTC
From: CW <clinton.magers@attbi.com>
Message-ID: <8%vi9.470457$me6.56643@sccrnsc01>
Source record: 134384

I don't know what they produce as far as charge but they do produce
substantial resistance. I wouldn't have one.
--

CW
KC7NOD

"KC8PMX" <kc8pmx@NOSPAMdiamondcs.net> wrote in message
news:amcdmi622pe@enews4.newsguy.com...
> I wonder how much those generators used to power lights on bicycles
actually
> create? They might be able to help to recharge those batteries too?
>
>
> --
> Ryan, KC8PMX
> FF/MFR
> REMOVE "NOSPAM" in email address to reply.
>
>
> "Jesse" <jplummer@bluefrognet.net> wrote in message
> news:3D88940E.4B15B19A@bluefrognet.net...
> > Anyone ever mount a radio on a bike? I want to mount my Yaesu FT1500 on
> > my bike. I have an ample rechargeable battery, a bag to mount it. What
> > would be a good antenna that wouldn't be too heavy, to tall (get busted
> > on low hanging branches) and be able to handle 50 Watts? Any
> > suggestions?
>
>

5343. Re: Quagi Antennas and TW Wire

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-20 02:57:47 UTC
From: tmgroatatpeakpeakdotcom
Message-ID: <3d8a8b55.2283786@news.peakpeak.com>
Source record: 134385

On Thu, 19 Sep 2002 14:17:20 -0400, "Al W2JUV" <robinsona@rl.af.mil>
wrote:

>Take a piece of 12-2 Romex cable and strip away the outer plastic jacket.
>The insulated
>single conductors, one black and one white, are type TW.

With the original style "NM" (Romex brand, etc.) cable, you get 60C
rated wires (TW). But the newer "NMB" cable has 90C rated (THHN or
THHW) conductors, iirc. Low temp wires have fallen out of favor,
because ceiling light fixtures often run too hot for them. Thus you
have trouble finding TW style wire in retail stores these days.

Since neither type is sunlight resistant, I suggest you re-calculate
the lengths for bare wire, and use the uninsulated ground wire from
the Romex cable. The antenna won't de-tune as the sun cracks the
plastic and the wires turn bare. NEC, etc. should work fine with the
bare wires, so you can let the computer do the calculations.

--73--
KR0U

5344. Re: Follow-up Disk Skin Effect Experiment

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-20 03:03:06 UTC
From: richardharrison@webtv.net
Message-ID: <29345-3D8A8FEA-118@storefull-2316.public.lawson.webtv.net>
Source record: 134386

Roy, W7EL wrote:
"Beyond the near field the ratio of E to H is determined soley by the material and is known as the intrinsic impedance of the medium."

True, but this is totally irrelevant to a disk impaled on a wire. Why Roy attached my posting is a mystery.

Terman, in the 1955 edition of "Electronic and Radio Engineering" on page 38 at the bottom of the page writes:
"It is possible to shield electrostatic flux without simultaneously affecting the magnetic field by surrounding the space to be shielded with a conducting cage that is made in such a way as to provide no low-resistance path for the flow of eddy currents while at the same time offering a metallic terminal upon which electrostatic flux lines can terminate."

Terman was not commenting on the CFA or EH antennas and neither was I. We both were commenting on circuit theory, not radiation. I have often been wrong, but I`ve never found Terman wrong.

Best regards, Richard Harrison, KB5WZI

5345. Re: 2m homebrew antenna tuner schematic

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-20 03:41:58 UTC
From: CAM <Cecil.A.Moore@ieee.org>
Message-ID: <3D8A9906.E5FBF2E1@ieee.org>
Source record: 134387
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.homebrew

JC wrote:
> Is this small 1 dB additional loss at 150 MHz worth to climb at the top of
> the pole and the price of a remote controlled tuner ?

Most of us assumed that you were talking about a greater than trivial SWR.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
------== Over 80,000 Newsgroups - 16 Different Servers! =-----

5346. Re: 2m homebrew antenna tuner schematic

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-20 03:51:53 UTC
From: CAM <Cecil.A.Moore@ieee.org>
Message-ID: <3D8A9B59.BB8A4F79@ieee.org>
Source record: 134388
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.homebrew

JC wrote:
> Thank you Ralph for your reply. About the exemple, I haven't see yet in
> those books if the SWR is supposed to be mesured at the antenna or at the
> transmitter end. I think I will put this example in a Smith' diagram just
> for seing what will happen. Anyway an SWR of 20 at the antenna is not
> realistic because it would require first some adjustment at the aerial. So
> my assumption of a SWR of 3 or even 5 could be reasonably good and in this
> case the books are right.

There's a chart in the ARRL Antenna Book that indicates for an SWR of 3:1
at the transmitter and 3dB matched line loss, the SWR at the antenna is
about 75:1. Fig 25, page 16-15, 17th edition, 1993.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
------== Over 80,000 Newsgroups - 16 Different Servers! =-----

5347. Re: W9INN antennas

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-20 03:58:54 UTC
From: CAM <Cecil.A.Moore@ieee.org>
Message-ID: <3D8A9CFE.E95A0982@ieee.org>
Source record: 134389

Uncle Peter wrote:
>
> "Mark Krubsack" <mkrubsack@yahoo.com> wrote in message
> > On the air reports give me 1-2 s units over my old G5RV. The W9INN's
> > are great antennas.
>
> I wonder what sort of engineering goes into making a simple wire dipole work
> better than another...

My rotatable 10m EDZ dipole works better than a 1/2WL dipole.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

5348. Re: ham radio on a mountain bike

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-20 04:00:42 UTC
From: CAM <Cecil.A.Moore@ieee.org>
Message-ID: <3D8A9D6A.916B63AC@ieee.org>
Source record: 134390

CW wrote:
> I don't know what they produce as far as charge but they do produce
> substantial resistance. I wouldn't have one.

Use one instead of brakes going downhill? :-)
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

5349. Re: Follow-up Disk Skin Effect Experiment

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-20 04:12:27 UTC
From: richardharrison@webtv.net
Message-ID: <23155-3D8AA02B-317@storefull-2318.public.lawson.webtv.net>
Source record: 134391

Roy, W7EL wrote:
"The notion that a time-varying magnetic field goes right through a conductor while the electric field is stopped is incorrect---."

A Faraday screen does exactly that!

See my immediately previous posting.

On page 21 of the 1955 edition, Terman says:
"A simple example of skin effect, and one that makes its nature clear, is furnished by an isolated round wire. When a current is flowing through such a conductor, the magnetic flux that results is in the form of concentric circles, as shown in Fig. 2-9. (Yes, a circle of the magnetic flux is shown within the wire.) It is to be noted that some of this flux exists within the conductor and therefore links with, i.e., encircles current near the center of the conductor while not linking with current flowing near the surface. The result is that the inductance of the central part of the conductor is greater than the inductance of the part of the conductor near the surface; this is because of the greater number of flux linkages existing in the central region. At radio frequencies, the reactance of this extra inductance is sufficiently great to affect seriously the flow of current, most of which flows along the surface of the conductor where the impedance is low, rather than near the center where the impedance is high."

There is much more that Terman says, and I don`t think I contradicted any of what Terman says. He is virtually infallible, so I am secure in what I posted.

Best regards, Richard Harrison, KB5WZI

5350. Re: ham radio on a mountain bike

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-20 04:56:49 UTC
From: CW <clinton.magers@attbi.com>
Message-ID: <lUxi9.371065$_91.481970@rwcrnsc51.ops.asp.att.net>
Source record: 134393

Good call. Drag brake.
"CAM" <Cecil.A.Moore@ieee.org> wrote in message
news:3D8A9D6A.916B63AC@ieee.org...
> CW wrote:
> > I don't know what they produce as far as charge but they do produce
> > substantial resistance. I wouldn't have one.
>
> Use one instead of brakes going downhill? :-)
> --
> cheers, CAM http://www.qsl.net/w5dxp
>
>
> -----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
> http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
> -----== Over 80,000 Newsgroups - 16 Different Servers! =-----

5351. Carolina Windom, G5RV or convential dipole

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-20 04:57:25 UTC
From: rhmcus@yahoo.com
Message-ID: <3d8ba8b9.323183913@news.us.dell.com>
Source record: 134392

All

I currently use a full sized G5RV with good results. I use it primarily for 80 meters although I have ventured down to 20 with good luck. I also have a Gap Titan DX which is very good for DX however at night the G5RV is clearly superior.

Several guys n 80 are trying to persuade me to take down the G5RV in favor of a conventional 80 meter dipole or perhaps the carolina windom. I'm using the G5RV in an inverted V formation and due to space restrictions would have to use any other wire in the same manner.

What is every ones thoughts on this? Which is a better multi band antenna? I know that sometimes a multipurpose antenna is a compromise.

Thanks

Rich KG5IF

5352. Re: Follow-up Disk Skin Effect Experiment

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-20 05:17:51 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <3D8AAF7F.2040201@eznec.com>
Source record: 134395

I was responding to your assertion that:

"It is a mistake to think magnetic lines of force don`t penetrate a conductor. It takes high magnetic permeability to block magnetic lines of force."

I have the 1947 edition of Terman, and the quote you give appears on page 37. A half page or so earlier, however, he states:

"At radio frequencies and at the higher audio frequencies, more satisfactory shielding can be obtained by the use of shields having high electrical conductivity. Magnetic flux in attempting to pass through such a shield induces voltages that set up eddy currents that in large measure prevent the magnetic flux from penetrating through the shield (see Fig. 2-16). To be effective, a conducting shield should have a thickness at least several times the skin depth . . . Under these conditions, the ratio of magnetic field intensities existing on the two sides of the shield is

Ratio of magnetic fields = 2 * e^(-a/d) ~ 6 - 8.7(a/d) dB."

[End of Terman quote]

Here, d is the skin depth and a is the shield thickness. So, for example, the attenuation of the magnetic field at 10 MHz through a piece of copper, say, 30 mils (36.5 skin depths) thick, is about 312 dB. Now, the ratio of light from an ordinary two cell flashlight to the total light output of the Sun is only about 280 dB, so with 30 mils of copper having a relative permeability of one, we've exceeded this amount of attenuation by about 2,000 times. This hardly fits with the concept of "magnetic lines of force penetrating a conductor". While some theoretician might argue that *some* field gets through, any engineer I've worked with would consider the magnetic field on the other side of the copper to be zero, regardless of how strong it was on the source side. (Actually, it would be virtually impossible in practice to prevent a much, much larger fraction of the field from getting around the shield in some way.) In a perfect conductor, the skin depth d is zero, so the attenuation of the magnetic field is infinite. And this is regardless of the permeability.

So the magnetic field does not simply go unimpeded through a conductor as you implied in your posting. I'm sure you'll agree with Terman on this.

As for separating the electric and magnetic fields, the Faraday cage that Terman describes is different from a solid conductor. It would require wires with no continuous paths (i.e. a gap in anything resembling a turn), among other qualifications. The electric field near

the cage will be much lower than the magnetic field, indeed, but far from the cage the ratio will be right back to what it is for any electromagnetic wave in that medium. For air, that ratio is about 377 ohms. The example Terman gives is typical of a Faraday shield application -- a low frequency transformer, where the near fields are being manipulated.

Roy Lewallen, W7EL

Richard Harrison wrote:
> Roy, W7EL wrote:
> "Beyond the near field the ratio of E to H is determined soley by the
> material and is known as the intrinsic impedance of the medium."
>
> True, but this is totally irrelevant to a disk impaled on a wire. Why
> Roy attached my posting is a mystery.
>
> Terman, in the 1955 edition of "Electronic and Radio Engineering" on
> page 38 at the bottom of the page writes:
> "It is possible to shield electrostatic flux without simultaneously
> affecting the magnetic field by surrounding the space to be shielded
> with a conducting cage that is made in such a way as to provide no
> low-resistance path for the flow of eddy currents while at the same time
> offering a metallic terminal upon which electrostatic flux lines can
> terminate."
>
> Terman was not commenting on the CFA or EH antennas and neither was I.
> We both were commenting on circuit theory, not radiation. I have often
> been wrong, but I`ve never found Terman wrong.
>
> Best regards, Richard Harrison, KB5WZI
>

5353. Re: Tower mounted short vertical

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-20 05:23:04 UTC
From: Mark Keith <nm5k@wt.net>
Message-ID: <3D8AB0B8.6EB9@wt.net>
Source record: 134394

Kent Haase wrote:
>
> Well, vertical is about 21 feet in length (height?), and I have a small
> number of ground radials (yes, ground radials, not a counterpoise) of
> various lengths (10 to 25 feet, bonded to chain-link fence which runs on
> either side of yard). Frequencies are the AmateurHF bands.
>
> I was hoping for just a generalization, really, if possible.
>
> Kent VE4KEH

You will need elevated radials from the feedpoint of the antenna, if you want it to work tower mounted. Unlike having radials on the ground, which are detuned by the ground, elevated radials must be resonant. Usually 1/4 wave. And you would need at least one radial for each band to be used. More would be better. Is it worth it over a ground mount? I think it is, as long as you use enough radials. The ground losses are lower the higher up you get. Four radials at 1/2 wave up are about as good as 120 on the ground.
Even four radials at 1/4 wave up will do very well. Thats about like 60 on the ground.
The performance on the higher HF bands will almost always be a good bit better on the elevated antenna. If you do any ground wave locally, say on 10m, it will be much better.
I ran a 1/4 wave "32 ft tall" radiator on 40m. First on the ground with 24 radials, and then later at 36 ft up , with four radials. The elevated antenna was much better than the ground mount on 40m. As far as the radiator and coil or caps needed for loading, etc, no difference with that no matter where you install it. The only thing that changes is the ground loss number. And that is no real relation to the radiator. 21 ft is a good number for an all band vertical. Just about right as a 5/8 on 10m, and still tall enough to be decent even down to 40m. Will work on 80m too if you can live with a cut compared to a 1/4 wave. The more top or capacitive loading the better. IE: hats , spokes, etc. MK
--
http://web.wt.net/~nm5k

5354. Re: 2m homebrew antenna tuner schematic

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-20 06:47:13 UTC
From: Paul Keinanen <keinanen@sci.fi>
Message-ID: <0celouc6dptd7qpje06ga9kauoevnsrped@4ax.com>
Source record: 134396
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.homebrew

On 18 Sep 2002 13:32:18 -0700, hj3ort@hotmail.com (jose luis) wrote:

>Hi all
>Does somebody knows where can i find a 2mt (vhf) antenna tuner schematic?
>or can scan it and send via Email to me?

One additional thing to remember is that wire dipoles (which are frequently used on HF with a tuner) have a quite simple radiation pattern and hence, the gain is quite low. Operating the antenna slightly off resonance (with a tuner) does not radically alter the radiation pattern or gain.

However, yagis with a large number of parasitic elements (as usually used on VHF/UHF) heavily depends on the various resonance frequencies of the various parasitic elements. Even if you operate the radiating element (with a tuner) slightly off the design frequency, all the parasitic elements are still operating at the original design frequency, thus the radiation pattern will quickly deteriorate when operating away from the design frequency. Since antenna gain is simply the ability to concentrate power to the desired direction (and multiplied by the antenna efficiency), the gain will also drop outside the design frequency. In the worst case, trying to use an antenna tuner (even at the antenna) with its internal losses will reduce the antenna efficiency and also reduce the true gain of the antenna even further.

Thus, this is an additional reason why antenna tuners are not used on VHF/UHF.

Paul OH3LWR

5355. Re: 2m homebrew antenna tuner schematic

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-20 06:52:05 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <6qglou0mfn6tqoh7taviulk21l8n5qpf30@4ax.com>
Source record: 134397
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.homebrew

On 18 Sep 2002 13:32:18 -0700, hj3ort@hotmail.com (jose luis) wrote:

>Hi all
>Does somebody knows where can i find a 2mt (vhf) antenna tuner schematic?
>or can scan it and send via Email to me?
>
>Tnx de HJ3ORT Jose Luis

Hi Jose,

You will notice from the other responses, that many consider your request odd. There is little that readily translates from the discrete tuning elements of HF to VHF/UHF; and you would probably find the standard tuner of these bands more appropriate: the single or double stub tuner.

Laboratory models are coaxial, with variable length out to ï¿½ meter. You don't need to have much more variability than that, but you do need some freedom to move it (with a T connection) in relation to the load. This is the major difficulty with a single stub tuner being applied to a wide variety of loads. When you expect to encounter this variety, then double stub tuners (or simply two single stub tuners, separated by an arbitrary distance) are preferred.

73's
Richard Clark, KB7QHC

5356. Re: Follow-up Disk Skin Effect Experiment

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-20 07:05:54 UTC
From: richardharrison@webtv.net
Message-ID: <19960-3D8AC8D2-2@storefull-2315.public.lawson.webtv.net>
Source record: 134398

Roy, W7EL wrote:
"I was responding to your assertion that:
It is a mistake to think magnetic lines of force don`t penetrate a conductor. It takes high magnetic permeability to block magnetic lines of force."

Yes, and I explained more than once that the mechanism of thwarting a magnetic field`s penetration of a conductor may be different from thwarting an electric field.

The electric field is short circuited. The magnetic field iis opposed by an "eddy current" according to Terman. Eddy current is a good name because it implies circular motion, and that is exactly the current motion a Faraday screen prevents. This eddy current is often stopped by a series of vertical or horizontal slots cut nearly all the height or width in the Faraday shield. Current motion is limited to up and down or from side to side but it is not allowed to freely "circulate".

The slots in a Faraday shield kill its generation of a counterforce which would make it an effective shield against the magnetic field. So, the magnetic field is not inhibited significantly by a Faraday shield. The electric field, however, is very effectively shielded by the design of the shield. It would be possible to make the shield too small or too gappy to be an effective electric field shield but that would defeat its purpose.

I am not referring to the electrostatic shield in a power transformer, but their action is about the same. I am referring to the Faraday shields used in all the radio stations I`ve worked in. These are used in broadcast stations to eliminate capacitive coupling to the antenna because capacitive coupling favors harmonics. The Faraday screen kills capacitive coupling by blocking the electric field. It gets shorted to ground. A good short doesn`t lose any energy.

A coupling transformer is often used to feed an antenna. The Faraday screen is placed between the primary and secondary coils. Though the electric field doesn`t get transferred to the secondary, magnetic coupling simultaneously produces a new electric field in the secondary as current flows in the coil.

As for Terman`s elaboration on high-permeability, he was writing an excellent text book and I was only making a reference in passing on the way to a newsgroup posting.

Best regards, Richard Harrison, KB5WZI

5357. Re: 2m homebrew antenna tuner schematic

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-20 08:29:35 UTC
From: JC <jacques.culot@skynet.be>
Message-ID: <3d8adc8b$0$207$ba620e4c@news.skynet.be>
Source record: 134399
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.homebrew

Hi dear CAM,

We are not speaking about the same things. I never told about a SWR of 3 at the transmitter end of the line in the conditions of attenuation you described. I only told that if Jose Luis (as told in his original message) needs an antenna tuner, why putting it at the antenna end. It is common sense, if he has a very bad SWR at the aerial, he must first cure the problem at his antenna. In this case, my assumption of starting with a SWR of about 3 AT THE ANTENNA is quite reasonable. The rest is obvious and corresponds to my previous posts.

BTW I never found the chart you mentionned at the page / chapter / edition / book, indicated in your last message. Can you check and repost the reference. Thank you.

73 de ON5MJ.

5358. dipole antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-20 10:44:07 UTC
From: fangio_fallein@hotmail.com
Message-ID: <436f3c61.0209200244.7e368490@posting.google.com>
Source record: 134400

Hello,

Is there anyone who can explain me, how I can make an array of 4
dipoles without complicated measure instruments?

5359. B&W AP10A Antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-20 12:45:15 UTC
From: "IK5ZTT, Paolo" <ik5ztt@libero.it>
Message-ID: <vLEi9.20108$Av4.378704@twister2.libero.it>
Source record: 134401

Hallo everybody,
I'm looking for someone using B&W AP-10A antenna,
short and telescopic HF mobile antenna.
I'd like to know more about the A verison...
I'm using now the 5 coils version... it's quite boring.

bye for now
pse personal answer
==========
73s de IK5ZTT Paolo Barsotti, Pisa, ik5ztt@amsat.org
Pse visit www.qsl.net/ik5ztt: with 300 Links
nice for OM or not !

5360. 603 beam 4sale/ TRADE

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-20 12:54:31 UTC
From: Me <j.dauphinais@worldnet.att.net>
Message-ID: <bUEi9.32571$1C2.1735724@bgtnsc04-news.ops.worldnet.att.net>
Source record: 134402
Cross-posted to: rec.radio.amateur.digital.misc,rec.radio.amateur.antenna,rec.radio.amateur.dx,rec.radio.amateur.equipment,rec.radio.amateur.homebrew

I have for sale 1 full size "HY-Gain" beam 10 meters. fully assembled for your inspection. 13' Boom and longest element is 22' $75.00 I also have a steel tower totaling 25'. this is in 3 sections 1 10 foot st8 and 1 5foot st8 and 1 10 foot top section. I don't not have a rotator. $50.00. pickup only from Nashua,NewHampshire. I am selling these because they are to big for my new QTH. This beam has spent a large portion of its life in storage. 73's Jeff AA1GR

5361. Re: ham radio on a mountain bike

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-20 13:10:55 UTC
From: Robert Spooner <rls19@psu.edu>
Message-ID: <3D8B1E5F.2040509@psu.edu>
Source record: 134403

That's what railroad locomotives use. It's called dynamic breaking -
turn the traction motors into generators and dissipate the generated
power in high-wattage resistors cooled with fans as you go down hill.

73,
Bob AD3K

CW wrote:
> Good call. Drag brake.
> "CAM" <Cecil.A.Moore@ieee.org> wrote in message
> news:3D8A9D6A.916B63AC@ieee.org...
>
>>CW wrote:
>>
>>>I don't know what they produce as far as charge but they do produce
>>>substantial resistance. I wouldn't have one.
>>
>>Use one instead of brakes going downhill? :-)
>>--
>>cheers, CAM http://www.qsl.net/w5dxp
>>
>>
>>-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
>>http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
>>-----== Over 80,000 Newsgroups - 16 Different Servers! =-----
>
>
>

--
Robert L. Spooner
Registered Professional Engineer
Associate Research Engineer
Intelligent Control Systems Department

Applied Research Laboratory Phone: (814) 863-4120
The Pennsylvania State University FAX: (814) 863-7841
P. O. Box 30
State College, PA 16804-0030 rls19@psu.edu

5362. Re: tower paint

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-20 14:18:41 UTC
From: richardharrison@webtv.net
Message-ID: <9179-3D8B2E41-25@storefull-2318.public.lawson.webtv.net>
Source record: 134406

Richard Clark wrote:
"The surface had a fine haze of broken fiberglass strands-"

Remings me of hard sells for fiberglass dishes to replace aluminum. The reflecting surface was applied as seen on fake chrome items made of plastic. All the VHF antennas made of plastic we had tried proved short lived as compared with our stainless steel models. So, I never bought a fiberglass dish because there was no problem with the aluminum models.

Seen a number of ripped high-performance dish covers made of fabric.

I suppose wind-driven rain could wash away paint as particulate matter is reported to do. High pressure water is used for paint removal in some cases.

The only tower painting problem that I recall was using a new epoxy paint touted as permanent. It was only permanently wet. The epoxy never hardened.

Best regards, Richard Harrison, KB5WZI

5363. Re: 2m homebrew antenna tuner schematic

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-20 14:32:35 UTC
From: Dick Carroll <dixie@townsqr.com>
Message-ID: <amfbi3$3jv$0@208.207.71.146>
Source record: 134404
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.homebrew

JC wrote:
>
> Hi dear CAM,
>
> We are not speaking about the same things. I never told about a SWR of 3 at
> the transmitter end of the line in the conditions of attenuation you
> described. I only told that if Jose Luis (as told in his original message)
> needs an antenna tuner, why putting it at the antenna end. It is common
> sense, if he has a very bad SWR at the aerial, he must first cure the
> problem at his antenna. In this case, my assumption of starting with a SWR
> of about 3 AT THE ANTENNA is quite reasonable. The rest is obvious and
> corresponds to my previous posts.
>
> BTW I never found the chart you mentionned at the page / chapter / edition /
> book, indicated in your last message. Can you check and repost the
> reference. Thank you.
>
> 73 de ON5MJ.

A ham I know tested the loss at 2 meters through 100 feet of cheap RG8X
coax into a dummy load. Driving the input with 45 watts he found the
wattmeter at the load end measured 5 watts.
That was into a MATCHED load, 1:1 with nothing reflected.

DIck

5364. Re: W9INN antennas

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-20 14:42:33 UTC
From: AC6V <ac6v@amsat.org>
Message-ID: <ttGi9.47793$S32.2978422@news2.west.cox.net>
Source record: 134405

W9INN antennas are in several Ham Magazines, Also:

You can see W9INN antenna reviews at URL:
http://www.eham.net/reviews/detail/2256

From CQ Magazine pages: W9INN Antennas --- (847) 394-3414

From the internet -- W9INN Antennas
811 Cathy Lane
P.O. Box 393
Mt. Prospect IL 60056
847-394-3414

--
I Doubt, Therefore I Might Be
73 From AC6V, Rod In Oceanside, CA
http://ac6v.com
"Mark Krubsack" <mkrubsack@yahoo.com> wrote in message
news:4vrkouc2kav54roevmchvjg4e878dlrc14@4ax.com...
> On 19 Sep 2002 17:05:57 GMT, ardujenski@aol.com (ARDUJENSKI) wrote:
>
> >I read the comments on eham regarding the good performance of the W9INN
dipoles
> >and other antennas from both construction techniques to performance. I
was
> >unable to find much on the internet about them other than what was at
this
> >foreign site:
> >http://nakatoyo.com/W9INN/FOR_BTTR_SIGS.htm
> >I was hoping someone with some personal knowledge can she a bit more
light on
> >the W9INN products (which appear to now be defunct)
> >
> >Alan KB7MBI
> >

5365. Re: What type of simple HF antenna to use for DX for this location?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-20 14:58:10 UTC
From: Dick Carroll <dixie@townsqr.com>
Message-ID: <amfd22$72n$0@208.207.71.146>
Source record: 134407

KJ COFFEE wrote:
>
> My home is on the east side of a hill about 2 miles from the Pacific Ocean, and
> the lot has 3 very large cypress trees on the West side. Most of the hams
> around here have beams pointing West, but I can't do that, because I'm blocked
> by the trees and the hill. I'm now using a multi-band dipole running
> East-West, but reception and transmission is not very good. If I run it
> North-South, it's even worse. Any suggestions? Kevin AC6ME

Don't make too many assumptions about hills, trees or mountains while dealing with HF. They are likely to be wrong since there are a lot of variables involved. Chances are they won't seriously affect your transmitted signal and almost certainly won't seriously affect your reception.

You didn't further describe your "multiband dipole" but if it is a commercial trap dipole be aware that many of those won't work well out of the box. Friend of mind bought one and never did get it to work and finally sent it back, not wanting to have to reengineer it. I use paralleled dipoles hung as high in the center (feedpoint) as feasible and tied off whatever is convenient, matched at the line input with the rig's internal autotuner. Works out well.
But you're never going to compete with your pals' beams unless you decide the hill and trees aren't so much in the way after all. Unless the hill or the trees are extremely close, your beam will probably never know they're there. My HF yagi snuggles among a bunch of giant oaks at ~50 feet or so and as far as I can tell they don't affect its operation.

Dick W0EX

5366. Re: W9INN antennas

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-20 14:59:21 UTC
From: K7JEB <k7jeb@arrl.no_spam.net>
Message-ID: <dJGi9.32875$1C2.1740921@bgtnsc04-news.ops.worldnet.att.net>
Source record: 134408

Mark Krubsack:
>> I have an 85' W9INN 80/40 meter dipole and it works great.
>> Totally flat across 40 meters, never more than 1.2:1 SWR,
>> and fairly broad on 75 meters.
>>
>> On the air reports give me 1-2 s units over my old G5RV.
>> The W9INN's are great antennas.

Uncle Peter:
> I wonder what sort of engineering goes into making a simple
> wire dipole work better than another...

Wellll... I would consider getting decent performance from a
trapped/loading-coil/cut-down dipole on at least two bands to
be a bit of engineering, particularly if one doesn't use
any capacitors. More going on there than that which first
meets the eye.

Unfortunately, W9INN's expertise apparently doesn't extend
to creating a definitive website for the cyber-shoppers
among us to practice our specsmanship upon.

--
Jim Bromley, K7JEB k7jeb @ arrl.net
Glendale, Arizona

5367. Re: 2m homebrew antenna tuner schematic

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-20 15:35:37 UTC
From: Pie`` IK2VTJ <picarusoNONVOGLIOSPAM@writeme.com>
Message-ID: <amfki6$5gtlu$1@ID-83989.news.dfncis.de>
Source record: 134414
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.homebrew

"JC" <jacques.culot@skynet.be> ha scritto nel messaggio
news:3d8adc8b$0$207$ba620e4c@news.skynet.be...
> Hi dear CAM,
>
> BTW I never found the chart you mentionned at the page / chapter / edition
/
> book, indicated in your last message. Can you check and repost the
> reference. Thank you.
>
> 73 de ON5MJ.
>

Don't worry, you're not alone! I checked on the same 17th edition and only
found a 'drilling template for...'.
But I found my 17th edition is a second print of '94.
Fantastic! I suppose the first print of '94 is something different too!
--
73 de IK2VTJ, Piero.

http://www.qsl.net/ik2vtj
http://www.ardf.it

Togli / Remove
NONVOGLIOSPAM
dall'indirizzo / from address

5368. calling help

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-20 16:14:57 UTC
From: jack_cyma@hotmail.com
Message-ID: <5f3ef5c1.0209200814.6815156e@posting.google.com>
Source record: 134409

hi,
I am writing a log-periodic antenna design software pakage. but I do not have enough equations and I haven't decided which programming language to use yet.
I would like to have the equations of finding the surrent and voltage distribution of the dipoles when a signal of frequency f is recieved or sent. I also need the equations of finding the radiation pattern.
please help me if you have these equations. any suggestions of what to include in the pakage and the programming language to use are welcome.
thanks a lot.

5369. Re: Carolina Windom, G5RV or convential dipole

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-20 16:47:29 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <1qimouo6r1sfvmb0qkud22fv5h9iib21ca@4ax.com>
Source record: 134410

On Fri, 20 Sep 2002 04:57:25 GMT, rhmcus@yahoo.com (Rich McMahon)
wrote:

>All
>
>
>I currently use a full sized G5RV with good results. I use it
>primarily for 80 meters although I have ventured down to 20 with good
>luck. I also have a Gap Titan DX which is very good for DX however at
>night the G5RV is clearly superior.
>
>Several guys n 80 are trying to persuade me to take down the G5RV in
>favor of a conventional 80 meter dipole or perhaps the carolina
>windom. I'm using the G5RV in an inverted V formation and due to space
>restrictions would have to use any other wire in the same manner.
>
>What is every ones thoughts on this? Which is a better multi band
>antenna? I know that sometimes a multipurpose antenna is a
>compromise.
>
>Thanks
>
>Rich KG5IF

Hi Rich,

Sounds like your buddies are lookin' for change - at least in the
copper. Are they bored?

You are happy with the present G5RV. You are also well aware of the
limitations of both the designs and available space. Your intuition
seems to be in working order.

Solution: tell the guys you followed their advice and they will
respond appropriately with better reports. You may also notice that
those in the group who thought you should keep the G5RV might gripe
about the loss of gain - who knows? You can swap sides every month or
so by saying you changed again. You may become the group antenna
guru.

I doubt your DX contacts will notice either way. ;-)

73's
Richard Clark, KB7QHC

5370. Re: safety ground and antenna ground - tie together and connect to A/C ground?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-20 16:49:59 UTC
From: Fred Hambrecht <w4jle@charter.net>
Message-ID: <uomkdqsvcqr662@corp.supernews.com>
Source record: 134411

The braid was grounded to an 8 foot copper ground rod driven in to the point only 6 inches appeared above ground. The soil was Georgia red clay. Having been at this hobby for fifty years, I normally take all the standard precautions. Lighting just does some strange stuff during a direct hit.

"Rick " <ricknj10@hotmail.com> wrote in message
news:3d827252.35151514@news.optonline.net...
> On Wed, 11 Sep 2002 05:06:02 -0400, "Fred Hambrecht"
> <w4jle@charter.net> wrote:
>
> >
> > >a dipole hung between two trees is very difficult to protect with
> > >absolute confidence. The only really safe method is to disconnect all the
> > >antennas and lay the coax connectors on the ground in the yard. Not very
> > >practical when your as lazy as I am.
> > >
>
> Fred,
> I think if you had grounded the shield of the coax where it enters the
> house the lightning would likely have been happier to go to ground
> right there. Yes, the approximately #12 wire might vaporize but the
> huge currents in the house are not what we want.
> If I understand correctly, to paraphrase (I think it was the QST
> article) the lightning decides to strike, picks out your dipole, (not
> because it was really the best target), and THEN all those billions
> of electrons get into a traffic jam trying to get into the ground.
> The hams job is to make the path easy to find, and big enough for them
> to all fit into, and to avoid having to deal with the fire department
> and the insurance company!
>
> Rick K2XT

5371. Re: dipole antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-20 16:54:01 UTC
From: 'Doc <w5lz@icok.net>
Message-ID: <3D8B5293.AF789FC4@icok.net>
Source record: 134412

Fangio,
Make one dipole that works well. Test by using
any method you wish. Then make three more just like
it.
'Doc

5372. Re: Carolina Windom, G5RV or convential dipole

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-20 16:57:43 UTC
From: 'Doc <w5lz@icok.net>
Message-ID: <3D8B5370.E926FE65@icok.net>
Source record: 134413

Rich,
A multi-band antenna is always a compromise, and
your friends on 80 meters are right, a conventional
dipole (especially if fed with ladder line through a
tuner) will do as well, if not better than the G5RV.
'Doc

5373. Bicycle mobile 2M antenna recommend??

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-20 17:23:22 UTC
From: lagagnon@fakesprint.ca
Message-ID: <3d8b58dc.1622910@news.sprint.ca>
Source record: 134415

Can anyone recommend a good, lightweight, unobtrusive 2M VHF antenna
that could easily be mounted on a bicycle?? Homemade designs also
welcome...

Larry VE6MK
****
to send direct email remove "fake" from address

5374. Re: dipole antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-20 17:44:50 UTC
From: stuart <nuffer@nuffer.fsnet.co.uk>
Message-ID: <amfmqk$9dp$1@newsg3.svr.pol.co.uk>
Source record: 134416

no!!!!!!

5375. Re: Carolina Windom, G5RV or convential dipole

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-20 18:34:16 UTC
From: Dan/W4NTI <w4nti@mindspringnospam.com>
Message-ID: <amfpmnhhl1@slb2.atl.mindspring.net>
Source record: 134417

The original G5RV was not intended to be a 'multi band' antenna. It was designed to use on 20 meters as a 3/4 wavelength and provide a bit of gain and directivity.

It also didn't have a balun. It was originally fed with 300 ohm line.

Its performance on any other band, other than 20 is, IMHO, lacking.

I agree that a 80 meter half wave fed with ladderline would do better. I know for a fact that a half wave fed with coax as compaired to a G5RV does work better. I have done it and know.

Dan/W4NTI

"'Doc" <w5lz@icok.net> wrote in message news:3D8B5370.E926FE65@icok.net...
> Rich,
> A multi-band antenna is always a compromise, and
> your friends on 80 meters are right, a conventional
> dipole (especially if fed with ladder line through a
> tuner) will do as well, if not better than the G5RV.
> 'Doc

5376. Re: W9INN antennas

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-20 19:11:10 UTC
From: Uncle Peter <radioconnectionNO@cox.netSPAM>
Message-ID: <ipKi9.75684$TX5.2469420@news1.east.cox.net>
Source record: 134418

"N4LQ" <N4LQ@igLou.com> wrote in message news:3d8a875e_1@news.iglou.com...
>
>
> --
> Steve Ellington N4LQ.
> > > On the air reports give me 1-2 s units over my old G5RV. The W9INN's
> > > are great antennas.
> > >
> >
> > I wonder what sort of engineering goes into making a simple wire dipole
> work
> > better than another...
>
> Obviously it's the age factor, the G5RV being "old" accounts for at least
> 8db. Then too, everyone knows that G (British) antennas are weaker by at
> least 8db compared to W antennas.
>
>

No, the British are using a Metric dB.

Pete

5377. Re: Follow-up Disk Skin Effect Experiment

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-20 19:17:08 UTC
From: richardharrison@webtv.net
Message-ID: <19958-3D8B7434-30@storefull-2315.public.lawson.webtv.net>
Source record: 134321

Arnold B. Bailey in "TV And Other Receiving Antennas" discusses ways to make antennas perform over a 4 to 1 frequency range. Here are a few points from "Dual Frequency Zero-db Antennas" on page 420 (not verbatim at all).

A 1/2-wave dipole at 4x first resonance has a null broadside (Fig 16 page 2-12 ARRL Antenna Book). One way to fill in the null is to tilt the dipole sides toward the signal. Another way is to add whiskers at certain points on the sides of the dipole. A loop or stub around the feedpoint is yet another filler (Art Unwin`s antenna?).

A 1/2-wave dipole has only one current loop, with its maximum at the feedpoint. At 4x the frequency there are 4 current loops, 2 positive and 2 negative, and their sum causes the broadside null.

The open circuits at the dipole ends cause the current maxima and minima along the dipole, similar to those caused by standing waves on a transmission line.

Discontinuities can be added to a dipole to modify its standing wave pattern as a way to fill in the broadside null. Whiskers, loops, etc., were mentioned, but the point of this posting is that Roger`s impaled disks are shown as discontinuities to broaden the frequency response of a dipole in Fig. 8-27 (C) on page 423. In this implementation, their positions are made adjustable.

Best regards, Richard Harrison, KB5WZI

5378. Re: W9INN antennas

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-20 19:42:04 UTC
From: Bill M <exray@no>
Message-ID: <uomugejm8l5va7@corp.supernews.com>
Source record: 134320

Uncle Peter wrote:
>
>
> No, the British are using a Metric dB.
>
> Pete

Pete, the dB IS a 'metric' unit. You know, deci-Bel, milli-Bel,
Mega-Bel, etc.
-BM

5379. Re: Follow-up Disk Skin Effect Experiment

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-20 19:49:16 UTC
From: rsparks <rsparks@elltel.net>
Message-ID: <3d8b77c0$1_1@corp.newsgroups.com>
Source record: 134323

Am I understanding correctly? The magnetic field would pass easily through metal except that an induced current is generated below the metal surface that cancels the field and prevents it from passing completely through at full strength.

A Faraday Shield works because it is designed to prevent the induced current from flowing to the magnitude needed to cancel the applied field. As a result, a large component of the applied magnetic field can pass through the metal composing the Faraday Shield.

Is that right?

73, Roger, W7WKB

"Richard Harrison" <richardharrison@webtv.net> wrote in message news:19960-3D8AC8D2-2@storefull-2315.public.lawson.webtv.net...
> Roy, W7EL wrote:
> "I was responding to your assertion that:
> It is a mistake to think magnetic lines of force don`t penetrate a
> conductor. It takes high magnetic permeability to block magnetic lines
> of force."
>
> Yes, and I explained more than once that the mechanism of thwarting a
> magnetic field`s penetration of a conductor may be different from
> thwarting an electric field.
>
> The electric field is short circuited. The magnetic field iis opposed by
> an "eddy current" according to Terman. Eddy current is a good name
> because it implies circular motion, and that is exactly the current
> motion a Faraday screen prevents. This eddy current is often stopped by
> a series of vertical or horizontal slots cut nearly all the height or
> width in the Faraday shield. Current motion is limited to up and down or
> from side to side but it is not allowed to freely "circulate".
>
> The slots in a Faraday shield kill its generation of a counterforce
> which would make it an effective shield against the magnetic field. So,
> the magnetic field is not inhibited significantly by a Faraday shield.
> The electric field, however, is very effectively shielded by the design
> of the shield. It would be possible to make the shield too small or too
> gappy to be an effective electric field shield but that would defeat its
> purpose.
>
> I am not referring to the electrostatic shield in a power transformer,
> but their action is about the same. I am referring to the Faraday
> shields used in all the radio stations I`ve worked in. These are used in

> broadcast stations to eliminate capacitive coupling to the antenna
> because capacitive coupling favors harmonics. The Faraday screen kills
> capacitive coupling by blocking the electric field. It gets shorted to
> ground. A good short doesn`t lose any energy.
>
> A coupling transformer is often used to feed an antenna. The Faraday
> screen is placed between the primary and secondary coils. Though the
> electric field doesn`t get transferred to the secondary, magnetic
> coupling simultaneously produces a new electric field in the secondary
> as current flows in the coil.
>
> As for Terman`s elaboration on high-permeability, he was writing an
> excellent text book and I was only making a reference in passing on the
> way to a newsgroup posting.
>
> Best regards, Richard Harrison, KB5WZI
>

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
------== Over 80,000 Newsgroups - 16 Different Servers! =-----

5380. Re: tower paint

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-20 19:49:33 UTC
From: kelly@dvol.com
Message-ID: <d22b54c3.0209201149.1436abb7@posting.google.com>
Source record: 134322

Richard Clark <kb7qhc@attbi.com> wrote in message
news:<j40koug9scg58lm2j4jnq4eec198e3tcgd@4ax.com>...
> On Thu, 19 Sep 2002 09:15:01 -0500 (CDT), richardharrison@webtv.net
> (Richard Harrison) wrote:
>
> >brian Kelly, W3RV wrote:
> >"The other (tower paint degradation) is mechanical abrasion caused by
> >wind-borne particulate matter, i.e., a sandblasting effect."
> >
> >That is an interesting observation and I appreciate the revelation.
> >
> >Best regards, Richard Harrison, KB5WZI
>
>
> Hi Richard,
>
> I would raise that one offering another consideration: destructive
> flexing. If the paint can't stretch as much as what is painted,
> delamination results.
>
> I can't say I have much to offer in that regard, but when I helped a
> buddy replace a radomed collinear 10M antenna from the peak of his
> tower, I was shocked by its appearance.
>
> The surface had a fine haze of broken fiberglass strands - none more
> than a quarter inch in length. It had the appearance of peach fuzz
> covering nearly the entire surface of the radome. The initial glance
> at it caught my attention, with my hand exploring the surface before
> my mind engaged. Luckily I didn't draw my hand along the surface as
> the prickly sensation was immediate.
>
> The prospects of a mitt full of glass wasn't so worrying as finding
> that same fuzz busted loose and air borne....

Glad you brought this up because I had another example of the general
problem right under my nose which didn't click with me.

I was involved with moving a 224Mhz repeater. The antenna is a big,
maybe 20 foot long commercial fiberglass stick which had been up for
many years at some low elevation like 40 feet at the base. It was in
really bad shape. The damage was exactly as you (QHC) describe, a sort
of "peach fuzz" which could do a real number on your hands.

Again the damage was progressively worse from the bottom up the stick
which coincides with my experience with the Rohn 45 tower. I can't say

I particularly noticed any damange which could have been attributed to flexing but I wasn't looking for it. Obviously makes sense that it could happen if the coating is too hard/inflexible.

I sanded the stick and almost choked myself in the cloud of dust that billowed off the thing. I coated it with clear marine epoxy resin and it went back up. We'll see how long it lasts this time.

The folks who engrave tombstones for instance do it by cutting a sheet rubber stencil which is laid over the face of the stone. Then they sandblast the stone. The sand etches the exposed stone but the sand simply bounces off the rubber. Maybe the solution is to apply a rubber coating on towers and sticks.

. . . but then why were my 4el 20m and 3el 15/10 aluminum yagis just about as good as new after 30 years up and the tower had gotten pounded? . . .

>
> 73's
> Richard Clark, KB7QHC

w3rv

5381. Re: dipole antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-20 19:57:49 UTC
From: No_Spam <no_spam@annoying.spam>
Message-ID: <3d8b797f$0$87565$8fcfb86b@news.wanadoo.nl>
Source record: 134319

stuart wrote:

> no!!!!!!

u must be vy dumb then

5382. Re: substituting new toroids for noise gate circuit?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-20 21:18:35 UTC
From: Al <aburzynski@swri.nojunk.edu>
Message-ID: <uon45c99m08i48@corp.supernews.com>
Source record: 134324
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc,sci.electronics.basics

Some additional information and a different schematic are available here

http://www.ussc.com/~turner/syn_blank.html

Al
KA5JGV

"AJ Sanderson" <ajsand@nospam.com> wrote in message
news:am6vl6$7vm$1@nntp9.atl.mindspring.net...
> I'd like to build a noise gate circuit for my HF receiver,

5383. Re: 2m homebrew antenna tuner schematic

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-20 21:23:15 UTC
From: CAM <Cecil.A.Moore@ieee.org>
Message-ID: <3D8B91C3.891202EF@ieee.org>
Source record: 134325
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.homebrew

JC wrote:
>
> Hi dear CAM,
>
> We are not speaking about the same things. I never told about a SWR of 3 at
> the transmitter end of the line in the conditions of attenuation you
> described. I only told that if Jose Luis (as told in his original message)
> needs an antenna tuner, why putting it at the antenna end. It is common
> sense, if he has a very bad SWR at the aerial, he must first cure the
> problem at his antenna. In this case, my assumption of starting with a SWR
> of about 3 AT THE ANTENNA is quite reasonable. The rest is obvious and
> corresponds to my previous posts.

OK, let's work backwards. If the SWR at the antenna is 3:1 and the loss in
the coax is 3dB, the SWR at the transmitter is less than 2:1 and there is
no need for an antenna tuner.

If the losses due to SWR in the coax feedline at vhf/uhf are not enough to
worry about, then the impedance seen by the transmitter is probably not far
enough away from 50 ohms to require an antenna tuner. This is one thing that
makes vhf/uhf somewhat different from HF.

> BTW I never found the chart you mentionned at the page / chapter / edition /
> book, indicated in your last message. Can you check and repost the
> reference. Thank you.

The ARRL Antenna Book, 15th edition, page 24-13, Fig 18.
The ARRL Handbook, 17th edition, page 16-15, Fig 25.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
------== Over 80,000 Newsgroups - 16 Different Servers! =-----

5384. Re: 2m homebrew antenna tuner schematic

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-20 21:28:22 UTC
From: CAM <Cecil.A.Moore@ieee.org>
Message-ID: <3D8B92F6.B14C5848@ieee.org>
Source record: 134326
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.homebrew

Dick Carroll wrote:
> A ham I know tested the loss at 2 meters through 100 feet of cheap RG8X
> coax into a dummy load. Driving the input with 45 watts he found the
> wattmeter at the load end measured 5 watts.
> That was into a MATCHED load, 1:1 with nothing reflected.

Wow, that was cheap RG8x. The wireman says the loss in RG8x on 2m
should be about 4.5dB. Your buddy's loss was about 9.5dB.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
------== Over 80,000 Newsgroups - 16 Different Servers! =-----

5385. Re: W9INN antennas

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-20 21:31:37 UTC
From: CAM <Cecil.A.Moore@ieee.org>
Message-ID: <3D8B93B9.15A6F1C6@ieee.org>
Source record: 134327

K7JEB wrote:
> Unfortunately, W9INN's expertise apparently doesn't extend
> to creating a definitive website for the cyber-shoppers
> among us to practice our specsmanship upon.

Jim, don't you know that a preposition is not a good word
to end a sentence with? :-)
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

5386. Re: 2m homebrew antenna tuner schematic

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-20 21:34:54 UTC
From: CAM <Cecil.A.Moore@ieee.org>
Message-ID: <3D8B947E.9BDFE04@ieee.org>
Source record: 134328
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.homebrew

"Pieï¿½ï¿½ IK2VTJ" wrote:
> Don't worry, you're not alone! I checked on the same 17th edition and only
> found a 'drilling template for...'.
> But I found my 17th edition is a second print of '94.
> Fantastic! I suppose the first print of '94 is something different too!

I was looking at two publications. I might have gotten them mixed up.
The ARRL Antenna Book, 15th edition, page 24-13, Fig. 18 and
The ARRL Handbook, 17th edition, page 16-15, Fig. 25
Sorry if I got them mixed up.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
------== Over 80,000 Newsgroups - 16 Different Servers! =-----

5387. Re: Bicycle mobile 2M antenna recommend??

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-20 21:40:17 UTC
From: CAM <Cecil.A.Moore@ieee.org>
Message-ID: <3D8B95C1.F0469852@ieee.org>
Source record: 134329

Larry Gagnon wrote:
> Can anyone recommend a good, lightweight, unobtrusive 2M VHF antenna
> that could easily be mounted on a bicycle?? Homemade designs also
> welcome...

I have a fiberglass pole with a safety flag on my bicycle. It supports
a J-pole made out of 300 ohm twin-lead. Works very well.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

5388. Re: Carolina Windom, G5RV or convential dipole

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-20 21:44:41 UTC
From: CAM <Cecil.A.Moore@ieee.org>
Message-ID: <3D8B96C9.A394C66A@ieee.org>
Source record: 134330

Rich McMahon wrote:
> I currently use a full sized G5RV with good results. I use it
> primarily for 80 meters although I have ventured down to 20 with good
> luck. I also have a Gap Titan DX which is very good for DX however at
> night the G5RV is clearly superior.
>
> Several guys n 80 are trying to persuade me to take down the G5RV in
> favor of a conventional 80 meter dipole or perhaps the carolina
> windom. I'm using the G5RV in an inverted V formation and due to space
> restrictions would have to use any other wire in the same manner.
>
> What is every ones thoughts on this?

A conventional 80m dipole fed with ladder-line would be a slight
improvement. But you probably won't be able to tell the difference.
Take a look at my web page to see why the G5RV is such a good
antenna on 80m and 40m. The "matching section" actually does some
worthwhile matching on those two bands. And, of course, it works
well on 20m, the band for which it was designed.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

5389. Re: Follow-up Disk Skin Effect Experiment

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-20 22:02:25 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <3D8B9AF1.4090503@eznec.com>
Source record: 134331

Yes, that's right. Gaps in the Faraday cage prevent any part of it from looking like a shorted turn, which would produce the counter-magnetic field due to current flowing in it. But do keep in mind that only the local field is affected by the Faraday cage. Beyond the near field, the E/H ratio is back to the value dictated by the medium.

Roy Lewallen, W7EL

rsparks wrote:
> Am I understanding correctly? The magnetic field would pass easily through
> metal except that an induced current is generated below the metal surface
> that cancels the field and prevents it from passing completely through at
> full strength.
>
> A Faraday Shield works because it is designed to prevent the induced current
> from flowing to the magnitude needed to cancel the applied field. As a
> result, a large component of the applied magnetic field can pass through the
> metal composing the Faraday Shield.
>
> Is that right?
>
> 73, Roger, W7WKB

5390. Re: multiband loop antenna??

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-20 22:09:19 UTC
From: W4WNT <w4wnt@carolina.rr.com>
Message-ID: <j0Ni9.33481$jF4.2520390@twister.southeast.rr.com>
Source record: 134332

Hello Denton,

A horizontal loop, fed as you are doing with the dipole, will be very quiet
reducing background noise below what you would hear on the dipole.

The loop will require a tuner but I know someone here in Charlotte, NC, with
305 countries confirmed on an 80m horizontal loop.

Good Luck,

Bill, W4WNT

"denton" <denton@oregontrail.net> wrote in message
news:amd8l7$4se$1@news.apaynet.com...
> Hi all...
> I modified my multiband dipole, fed with 450 ohm twin lead, into as much
of
> a loop as the current support structures (40' in the middle and about 27'
or
> so at the ends) would allow and still be about 7 feet or so above the
ground
> at the bottom. My house is the bottom support.
> The antenna loads nicely on all bands except 160 and has a bit better
noise
> rejection to the dipole. Radiation pattern seems to be good on the other
> bands...if can hear them, can work them.
>
> I am thinking of running an 80 meter loop skywire around the property and
am
> wondering if I would notice much improvement over the above.
>
> Thanks for the replys, de Denton, WB7TDG
>
>

5391. Wire Help

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-20 22:13:57 UTC
From: Dave <heilic@btconnect.com>
Message-ID: <amg6j5phs1@knossos.btinternet.com>
Source record: 134333

Could anyong give me some information on using the Alinco EDX2 with a wire antenna, or can the EDX2 be used with other antennas, e.g the G5RV..

Thanks..
Dave..

5392. Can buried radials be insulated wire??

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-20 22:32:40 UTC
From: StarGazer <pti@capnet.com>
Message-ID: <3D8BA208.73D9A7B3@capnet.com>
Source record: 134335

Does it make any difference if the radials for an inverted-L
have insulation on them?

5393. Re: e/h antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-20 22:54:35 UTC
From: VA3ATD <a.duffy@sympatico.ca>
Message-ID: <3D8BA72B.6080308@sympatico.ca>
Source record: 134334

Tdonaly wrote:

> Tony wrote,
>
>>hmmmm..... actually, I think the listing was quite impartial to the
>>topic. There were sites from critics, experimenters and inventors. But
>>to each his own I suppose.
>>
>>Good collection of links JC.
>>
>>--
>>73, Tony
>>VA3ATD
>>
>
> Hi, Tony,
> can you separate the wheat from the chaff?
>
> Tom Donaly, KA6RUH
>
>
>

quite a broad brush you use for painting there.... I did mention there

were links to articles from critics as well.

like most things in life, we have to listen to the people with experience,

review our own experience, weigh the two together to see if our

curiosity has been satisfied or gain more experience by trying things
for ourselves.

--
73, Tony
VA3ATD
London, Ontario

5394. Re: Can buried radials be insulated wire??

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-20 23:01:19 UTC
From: Dan Richardson <k6mhe@mendolink.com>
Message-ID: <c5anouot9pjg4dcf2iafikcpak9au5krlc@4ax.com>
Source record: 134336

On Fri, 20 Sep 2002 15:32:40 -0700, StarGazer <pti@capnet.com> wrote:

>Does it make any difference if the radials for an inverted-L
>have insulation on them?
>
Insulated wires will work just fine.

5395. Re: 2m homebrew antenna tuner schematic

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-20 23:32:34 UTC
From: Ralph Mowery <rmowery@ctc.net>
Message-ID: <meOi9.167567$z91.6920517@bin3.nnrp.aus1.giganews.com>
Source record: 134337
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.homebrew

The SWR is usually the ratio of the transmission line and antenna. Unless using part of the transmission line to match the antenna, then the swr should be measured at the antenna. I ahve seen where sometimes a 1/4 wavelenght 70 ohm coax will be used right at the antenna to match the antenna to a 50 ohm line. Also a 50 ohm 1/4 wavelength will be used to match to a 70 ohm trannsmission line. Then the swr will be measured at the end of the 1/4 wavelength matching section that is actually part of the antenna system and not the transmission line. I hope that comes out the way I ment it to.

Most people measuer the swr at the transmitter because it is easy to get to and also it should be checked there to be sure the transmitter is loading into the usually 50 ohm load it is designed for. If the coax loss is low as at 40 meters and below it does not make much differance as the swr at either end will be close to the same provided the lenght is not near a 1/4 wavelenght or other multiple that turns the line into a 'matching segment'. As the losses go up in the coax the swr measured at the transmitter will seem to be lower. You can take about 300 feet (probably less but I did it at this length) of rg-58 and leave one end open at two meters and see almost a perfect 1:1 swr when it should be infiniate.

"JC" <jacques.culot@skynet.be> wrote in message
news:3d8a5bda$0$195$ba620e4c@news.skynet.be...
> Thank you Ralph for your reply. About the exemple, I haven't see yet in
> those books if the SWR is supposed to be mesured at the antenna or at the
> transmitter end. I think I will put this example in a Smith' diagram just
> for seing what will happen. Anyway an SWR of 20 at the antenna is not
> realistic because it would require first some adjustment at the aerial. So
> my assumption of a SWR of 3 or even 5 could be reasonably good and in this
> case the books are right.
>
> 73 de ON5MJ
>
>

5396. Re: 2m homebrew antenna tuner schematic

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-21 00:00:31 UTC
From: JC <jacques.culot@skynet.be>
Message-ID: <3d8bb6a3$0$180$ba620e4c@news.skynet.be>
Source record: 134338
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.homebrew

> through 100 feet of cheap RG8X

Maybe the "X" in RG8x is for "barbed wire" :-))

73

5397. Re: 2m homebrew antenna tuner schematic

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-21 00:22:54 UTC
From: JC <jacques.culot@skynet.be>
Message-ID: <3d8bbbe1$0$219$ba620e4c@news.skynet.be>
Source record: 134339
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.homebrew

It's a pity I don't have the same editions than you. I also didn't find this damn' chart in the editions I have. If you have the opportunity to scan it, I would appreciate to have a look on it through my personal e-mail address.

BTW, edition 17th of the ARRL handbook was released before WW2 8-x)

73.

5398. Re: 2m homebrew antenna tuner schematic

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-21 00:30:12 UTC
From: JC <jacques.culot@skynet.be>
Message-ID: <3d8bbd97$0$207$ba620e4c@news.skynet.be>
Source record: 134340
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.homebrew

>If the losses due to SWR in the coax feedline at vhf/uhf are not enough to worry about, then the impedance seen by the transmitter is probably not far
enough away from 50 ohms to require an antenna tuner. This is one thing that
makes vhf/uhf somewhat different from HF.

I do agree 100%. Even an OM replied me privately a few days ago and we arrived at the conclusion that an antenna tuner is not necessary. And he added:

> A tuner for 2M would, I think, have to face some rather nasty design tradeoffs. You'd probably need to use physically-small components, to keep the tuner's parasitics under control... but such small components would be very limited in the amount of loss energy they could dissipate. If you try pushing 50 watts through small inductors and trimmer caps, in a tuner with 5-10% losses (not unusual for a tuner) you'll probably fry the inductors.

73 de ON5MJ.

5399. Re: Can buried radials be insulated wire??

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-21 01:11:49 UTC
From: 'Doc <w5lz@icok.net>
Message-ID: <3D8BC73E.95C4DB55@icok.net>
Source record: 134341

Makes no difference at all.
'Doc

StarGazer wrote:
>
> Does it make any difference if the radials for an inverted-L
> have insulation on them?

5400. Re: 2m homebrew antenna tuner schematic

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-21 01:14:56 UTC
From: Dick Carroll <dixie@townsqr.com>
Message-ID: <amgh6gpco0@208.206.142.96>
Source record: 134342
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.homebrew

CAM wrote:
>
> Dick Carroll wrote:
> > A ham I know tested the loss at 2 meters through 100 feet of cheap RG8X
> > coax into a dummy load. Driving the input with 45 watts he found the
> > wattmeter at the load end measured 5 watts.
> > That was into a MATCHED load, 1:1 with nothing reflected.
>
> Wow, that was cheap RG8x. The wireman says the loss in RG8x on 2m
> should be about 4.5dB. Your buddy's loss was about 9.5dB.

Rethinking, it may have been a bit more than 100 feet. But it was that cheapie silver jacketed stuff that was the rage for awhile. I checked some of it once for braid coverage and you could see lots of center insulation through it. Sure wasn't usable on 2 meters except for very short runs.
Dick

5401. Re: Carolina Windom, G5RV or convential dipole

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-21 01:16:11 UTC
From: 'Doc <w5lz@icok.net>
Message-ID: <3D8BC843.E00C817C@icok.net>
Source record: 134343

How about a 3/2 wave antenna on 20 meters?
'Doc

5402. Re: 2m homebrew antenna tuner schematic

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-21 01:17:10 UTC
From: CAM <Cecil.A.Moore@ieee.org>
Message-ID: <3D8BC896.B1467262@ieee.org>
Source record: 134345
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.homebrew

JC wrote:
> It's a pity I don't have the same editions than you. I also didn't find this
> damn' chart in the editions I have. If you have the opportunity to scan it,
> I would appreciate to have a look on it through my personal e-mail address.

I'll see if it is on the ARRL Antenna Book CD and try to send you a copy.
My scanner is a sheet scanner, not a flatbed scanner, so I prefer not to
tear a sheet out of my books.

> BTW, edition 17th of the ARRL handbook was released before WW2 8-x)

Welp, blame it on 65 year old eyeballs. I looked at "seventieth" and
read it as "seventeenth". Guess I didn't see one of the dits. :-)
Sorry about that. It's the 70th edition from 1993.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
------== Over 80,000 Newsgroups - 16 Different Servers! =-----

5403. Re: Can buried radials be insulated wire??

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-21 01:22:01 UTC
From: Dick Carroll <dixie@townsqr.com>
Message-ID: <amghjppco1@208.206.142.96>
Source record: 134344

StarGazer wrote:
>
> Does it make any difference if the radials for an inverted-L
> have insulation on them?

Not enough to make it worthwhile to strip the insulation off before you install them. In fact, radials at or in the ground need not be cut to a resonant length. The ground drastically detunes them anyway, and if you want them resonant you'll have to prune them after they're installed. Might be a pretty good chore for those you just buried. :-)

Dick

5404. Re: 2m homebrew antenna tuner schematic

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-21 01:22:35 UTC
From: CAM <Cecil.A.Moore@ieee.org>
Message-ID: <3D8BC9DB.1F432F9B@ieee.org>
Source record: 134346
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.homebrew

JC wrote:
> A tuner for 2M would, I think, have to face some rather nasty design
> tradeoffs.

I don't remember the part number, but MFJ once made an antenna tuner
for VHF. I actually bought one about 15 years ago (plus or minus).
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
------== Over 80,000 Newsgroups - 16 Different Servers! =-----

5405. Re: Carolina Windom, G5RV or convential dipole

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-21 01:24:21 UTC
From: CAM <Cecil.A.Moore@ieee.org>
Message-ID: <3D8BCA45.211D04E8@ieee.org>
Source record: 134347

'Doc wrote:
> How about a 3/2 wave antenna on 20 meters?

:-) :-) :-)
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
------== Over 80,000 Newsgroups - 16 Different Servers! =-----

5406. Re: 2m homebrew antenna tuner schematic

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-21 01:37:58 UTC
From: Dick Carroll <dixie@townsqr.com>
Message-ID: <amgihmrlm0@208.206.142.96>
Source record: 134348
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.homebrew

Ralph Mowery wrote:
>
You can take about 300 feet (probably less but I did it
> at this length) of rg-58 and leave one end open at two meters and see almost
> a perfect 1:1 swr when it should be infiniate.
>

And the boss didn't want to believe me when I told him there was a
defective DB24 antenna on the other end of that 265 foot run of one and
a half inch hard line up on the tower with an SWR of less than 2:1! The
transmitter couldn't be heard out of town where it normally worked over
a hundred miles at 155mHz.
(Installation of a new DB24 took care of the problem. Old one had lost a
couple of weather seals and was waterlogged)

Dick

5407. Re: 2m homebrew antenna tuner schematic

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-21 01:39:29 UTC
From: Dick Carroll <dixie@townsqr.com>
Message-ID: <amgikhrlm1@208.206.142.96>
Source record: 134350
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.homebrew

JC wrote:
>
> It's a pity I don't have the same editions than you. I also didn't find this
> damn' chart in the editions I have. If you have the opportunity to scan it,
> I would appreciate to have a look on it through my personal e-mail address.
>
> BTW, edition 17th of the ARRL handbook was released before WW2 8-x)
>

I think he's referring to the ARRL Antenna Manual.

Dick

5408. Re: safety ground and antenna ground - tie together and connect to A/C ground?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-21 01:43:41 UTC
From: Mark Keith <nm5k@wt.net>
Message-ID: <3D8BCECC.1962@wt.net>
Source record: 134349

Fred Hambrecht wrote:
>
> The braid was grounded to an 8 foot copper ground rod driven in to the point
> only 6 inches appeared above ground. The soil was Georgia red clay. Having
> been at this hobby for fifty years, I normally take all the standard
> precautions. Lighting just does some strange stuff during a direct hit.

Our tree in the front yard was hit yesterday. Pretty hefty strike too. I don't know if it branched off to my mast any or not. It mainly seemed to hit the tree only. My brother had just pulled up and parked out in the street. He was just fixing to make a mad dash in the rain for the house, when the lightning hit the tree. He was quite lucky as he would have been partially under the tree when running for the house. It's a big, tall oak tree. Taller than my mast. I was standing near the front door, and I thought it was maybe a couple houses down. I didn't realize it was so close. I asked him how he knew the lightning hit the tree, and he said he could see it running from the base of the tree along the ground and out to the cement of the street in front of the house. I carefully looked at the tree, and I could see lots of real thin "etched" lines running down from the top of the tree. They want all the way down to the ground, and branched off to ground from the roots.
Looks like someone took an awl and dug a thin cut where you see this. You can see bare wood in the middle of these cuts. It's like the lightning took 20 paths down the tree in small split up branches of energy to ground. I was grounded out as usual, and had no damage.
This makes the third strike in our yard in about 4 years. MK
--
http://web.wt.net/~nm5k

5409. Re: Wire Help

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-21 01:57:09 UTC
From: Dick Carroll <dixie@townsqr.com>
Message-ID: <amgjll$tt1$0@208.206.142.96>
Source record: 134351

Dave wrote:
>
> Could anyong give me some information on using the Alinco EDX2 with a wire
> antenna, or can the EDX2 be used with other antennas, e.g the G5RV..
>
> Thanks..
> Dave..

I use mine with a 60 foot wire hung wherever I can find. When camping I use a 10 ft collapsable tent pole for the far end and hang the near end from the luggage rack on the RV with an insulator. I set the EDX2 on a block on the ground under the RV. For a counterpoise I use a 40 ft piece of ordinary small gauge copper "magnet" wire laid on the ground, usually arranged so it's all underneath the RV. Works very well, even on 75 meter SSA.
I've never tried it on any other antenna.

Dick

5410. Re: W9INN antennas

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-21 02:00:31 UTC
From: n7ws@nowhere.com
Message-ID: <3d8bd1c4.25223928@news.triconet.org>
Source record: 134352

On Fri, 20 Sep 2002 15:42:04 -0400, Bill M <"exray"@no
spam-caribe.net> wrote:

|Uncle Peter wrote:
|>
|>
|> No, the British are using a Metric dB.
|>
|> Pete
|
|Pete, the dB IS a 'metric' unit. You know, deci-Bel, milli-Bel,
|Mega-Bel, etc.

No, it isn't. And decibels seems to have plenty of range to handle
most everything. (Anyone every heard a megabel?)

5411. Re: W9INN antennas

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-21 02:27:10 UTC
From: N4LQ <N4LQ@igLou.com>
Message-ID: <3d8a875e_1@news.iglou.com>
Source record: 134383

--
Steve Ellington N4LQ.
> > On the air reports give me 1-2 s units over my old G5RV. The W9INN's
> > are great antennas.
> >
>
> I wonder what sort of engineering goes into making a simple wire dipole
work
> better than another...

Obviously it's the age factor, the G5RV being "old" accounts for at least
8db. Then too, everyone knows that G (British) antennas are weaker by at
least 8db compared to W antennas.

5412. Re: W9INN antennas

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-21 02:29:04 UTC
From: AC6V <ac6v@amsat.org>
Message-ID: <QPQi9.49582$S32.3140074@news2.west.cox.net>
Source record: 134353

Since the threshold of pain is --- Most audiologists agree however that no unprotected ear should ever be exposed to 135 dB sound. So if one heard a MegaBel, doubtful they would ever hear again.

All in good dB fun

--
I Doubt, Therefore I Might Be
73 From AC6V, Rod In Oceanside, CA
http://ac6v.com
"Wes Stewart" <n7ws@nowhere.com> wrote in message
news:3d8bd1c4.25223928@news.triconet.org...
> On Fri, 20 Sep 2002 15:42:04 -0400, Bill M <"exray"@no
> spam-caribe.net> wrote:
>
> |Uncle Peter wrote:
> |>
> |>
> |> No, the British are using a Metric dB.
> |>
> |> Pete
> |
> |Pete, the dB IS a 'metric' unit. You know, deci-Bel, milli-Bel,
> |Mega-Bel, etc.
>
> No, it isn't. And decibels seems to have plenty of range to handle
> most everything. (Anyone every heard a megabel?)
>
>

5413. Re: Follow-up Disk Skin Effect Experiment

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-21 02:41:40 UTC
From: richardharrison@webtv.net
Message-ID: <22080-3D8BDC64-112@storefull-2314.public.lawson.webtv.net>
Source record: 134356

Roger, W7WKB wrote:
"Am I understanding correctly? The magnetic field would pass easily through metal except that an induced current is generated below the metal surface that cancels the field and prevents it from passing completely through at full strength."

Yes, indubitably!! In a very good continuous conductor, the counteracting induced field is almost equal and opposite the field imposed on the conductor.

Best regards, Richard Harrison, KB5WZI

5414. Re: W9INN antennas

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-21 02:48:35 UTC
From: Fred Hambrecht <w4jle@charter.net>
Message-ID: <uonng6ecjuvv0c@corp.supernews.com>
Source record: 134354

As Winston Churchill said "With that shit I will not up with put"

"CAM" <Cecil.A.Moore@ieee.org> wrote in message
news:3D8B93B9.15A6F1C6@ieee.org...
> K7JEB wrote:
> > Unfortunately, W9INN's expertise apparently doesn't extend
> > to creating a definitive website for the cyber-shoppers
> > among us to practice our specsmanship upon.
>
> Jim, don't you know that a preposition is not a good word
> to end a sentence with? :-)
> --
> cheers, CAM http://www.qsl.net/w5dxp
>
>
> -----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
> http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
> -----== Over 80,000 Newsgroups - 16 Different Servers! =-----

5415. Re: W9INN antennas

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-21 03:06:43 UTC
From: Bill M <exray@no>
Message-ID: <uonoi7ns644t2f@corp.supernews.com>
Source record: 134355

Wes Stewart wrote:
>
> On Fri, 20 Sep 2002 15:42:04 -0400, Bill M <"exray"@no
> spam-caribe.net> wrote:
>
> |Uncle Peter wrote:
> |>
> |>
> |> No, the British are using a Metric dB.
> |>
> |> Pete
> |
> |Pete, the dB IS a 'metric' unit. You know, deci-Bel, milli-Bel,
> |Mega-Bel, etc.
>
> No, it isn't. And decibels seems to have plenty of range to handle
> most everything. (Anyone every heard a megabel?)

It was a joke, Wes.
-BM

5416. Re: W9INN antennas

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-21 03:24:03 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <3D8BE653.9030901@eznec.com>
Source record: 134357

Fred Hambrecht wrote:
> As Winston Churchill said "With that shit I will not up with put"

According to Bartlett's _Familiar Quotations_, he said "This is the sort of English up with which I will not put."

Many years ago in "Charlie Rice's Punchbowl" in the Sunday paper magazine, Rice ran a contest to see how many prepositions could be put at the end of a sentence. The winner, with six, took a little explanation:

Father wanted to read little Johnny a story from a book, but Johnny wasn't interested. Angry, Father sent him up to bed without dinner. After dinner, Father decided to try again, so he went up to Johnny's room and offered again. Little Johnny said,

"Why did you bring the book that before dinner I didn't want to be read to out of up for after?"

Roy Lewallen, W7EL

5417. Re: 6-Meter DiPole or Vertical

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-21 03:45:15 UTC
From: Tarmo Tammaru <t-tammaru@home.com>
Message-ID: <fXRi9.73974$216.2884684@bin4.nnrp.aus1.giganews.com>
Source record: 134358

Wayne,

If you want to work FM, you need a vertical, or a vertically mounted dipole.
For SSB, you need to be horizontally polarized.

As for commercial vs homebrew, whichever one you can get higher up is
better.

Tam/WB2TT

"Wayne Sellin" <sellinwg@starpower.net> wrote in message
news:am246f$j9d$1@bob.news.rcn.net...
> Please let me know if the commercial verticals are better than a homemade
> dipole with a Balun.
> 73
> Wayne
>
>

5418. small VLF/LF antennas

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-21 06:29:52 UTC
From: Ash <ash@gravitywell.org>
Message-ID: <3D8C11DE.E78358A8@gravitywell.org>
Source record: 134359

G'day,
are there any 'small' (indoor/attic) VLF/LF antennas that are worth building?
10kHz-100kHz would be the most interesting band, I cant roll out several km's
of wire and coupling to for instance the phonelines aren't an option since we use
underground wires here.
Have you tried a design you can recommend?

//Greg

5419. Re: small VLF/LF antennas

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-21 06:46:45 UTC
From: Bill M <exray@no>
Message-ID: <uoo5ere8t0kp92@corp.supernews.com>
Source record: 134360

Ash wrote:
>
> G'day,
> are there any 'small' (indoor/attic) VLF/LF antennas that are worth building?
> 10kHz-100kHz would be the most interesting band, I cant roll out several km's
> of wire and coupling to for instance the phonelines aren't an option since we use
> underground wires here.
> Have you tried a design you can recommend?
>
> //Greg

You can wind a ferrite rod antenna but a 10:1 frequency coverage range
will involve some variable tuning components and/or compromises.

-Bill

5420. antenne magnetique circulaire

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-21 06:47:02 UTC
From: Harald Blaise <harald_b@club-internet.fr>
Message-ID: <3d8c1a65$1$268$7a628cd7@news.club-internet.fr>
Source record: 134361

Bonjour,
Je recherche exp&#65533;riences d'OM qui &#65533;mettent avec une antenne circulaire magn&#65533;tique de marque BABY LOOP fabriqu&#65533;e par une entreprise italienne. Apparemment cette antenne par rapport &#65533; celles d&#65533;crites dans les articles de "construction" et celles de MFJ (1786, 1788...) aurait une directivit&#65533; non seulement avant c&#65533;t&#65533; de l'ordre de 25 dB mais &#65533;galement une directivit&#65533; avant par rapport &#65533; l'arri&#65533;re de 7 dB. Je souhaiterai avoir confirmation de cela car cette directivit&#65533; avant arri&#65533;re permet en th&#65533;orie une utilisation &#65533; partir de la fen&#65533;tre sans pour autant "irradier" l'habitation.
De plus je souhaiterais avoir connaissance des exp&#65533;riences des utilisateurs de cette antenne, &#65533; savoir :
&#65533;les conditions d'installations,
&#65533;dans le cas d'une utilisation sur balcon la g&#65533;ne TVI existe elle pour les voisin du dessous? Quelles sont les configurations &#65533; &#65533;viter?
&#65533;le r&#65533;glage de l'antenne &#65533; l'aide du CV command&#65533; par moteur est elle ais&#65533;e avec le bo&#65533;tier de commande de base ou vaut il mieux d'embl&#65533;e investir dans le bo&#65533;tier de commande avec tuner automatique? Peut on avec le bo&#65533;tier de commande de base , &#65533;tablir selon la fr&#65533;quence utilis&#65533;e une courbe position CV = F(fr&#65533;quence). Le tuner automatique est il r&#65533;ellement une vrai boite de couplage?
&#65533;ce type d'antenne permet il r&#65533;ellement de pratiquer une activit&#65533; de radioamateur? Quelles sont les bandes de fr&#65533;quences les plus appropri&#65533;es?

```
A l'avance merci de toutes ces informations

73 de F5TPK
```

5421. FS: VARIOUS SW RECEIVERS/TRANSCEIVER, AND SCANNER WITH DISCRIM TAP AND DATA SLICER.

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-21 07:44:22 UTC
From: Tony <prosper2040@sympatico.ca>
Message-ID: <srVi9.6035$Ox4.1688494@news20.bellglobal.com>
Source record: 134362
Cross-posted to:
rec.radio.amateur.antenna,rec.radio.amateur.boatanchors,rec.radio.amateur.dx,rec.radio.amateur.equipment,rec.radio.shortwave

REALISTIC DX-390
With Mute and Beep Mod!, Manual and Power Adapter, excellent condition, NO BLOWN FETS! -$65.00

GRUNDIG YACHT BOY 400PE
With Mute and Fine Tune Mod!!!, Manual, Original box, carrying case, Wall Adapter, long-wire external antenna,
Hardly used! -$105.00

REALISTIC PRO-2040 SCANNER - Canadian Version
With Descriminator tap Mod, RCA type plug added to rear of unit to connect DATA SLICER which I'm also selling
Excellent scanner, I've decoded ACARS, FLEX, POCSAG paging, MDT, MOBITEX, etc with the data slicer and my PC
I will even include the software. This scanner can receive cell phone transmissions also. Original box, manual,
telescopic antenna and power adapter included. -$125.00

GE SUPERADIO III
High performance AM/FM reception, very clean and in excellent shape, I've dxed stations as far away as Texas!!
on this one. (I'm in Ontario, Canada) -$30.00

BELTEK 23 CHANNEL AM TRANSCEIVER
This one's an oldie, looks like a mid seventies transceiver, couldn't find anything on the web about it. It measures about
12x10x4 in an all metal cabinet, it has a 120v ac as well as connections for 12v mobile. This is a solid state transceiver
and it works. -$15.00

I'm located in SW Ontario, shipping to anywhere in North American is about 8-12 dollars for these items.

Regards.

5422. Re: Carolina Windom, G5RV or convential dipole

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-21 08:49:53 UTC
From: rhmcus@yahoo.com
Message-ID: <3d8c2db5.4338949@news-server.austin.rr.com>
Source record: 134363

All

Really thanks for the tips.. I have used the G5RV for a good while.. Just haven't got around to changing the antenna type. The beauty of wire antennas is there cheap and usually easy to change out.. I use a MFJ differential T tuner in the shack which works great..

Also have a Gap Titan Dx vertical which I like very well. I can switch between the two depending on signal strength.. The wire all ways beats the vertical on 80meters at night no contest. But depending on the station being worked the vertical may be better. Oh well going off on a tangent here..

Anyway thanks for all that posted and the emails.. I am also looking for some good info on baluns and when they are really needed.

73s

Rich KG5IF

On Fri, 20 Sep 2002 04:57:25 GMT, rhmcus@yahoo.com (Rich McMahon) wrote:

>All
>
>
>I currently use a full sized G5RV with good results. I use it
>primarily for 80 meters although I have ventured down to 20 with good
>luck. I also have a Gap Titan DX which is very good for DX however at
>night the G5RV is clearly superior.
>
>Several guys n 80 are trying to persuade me to take down the G5RV in
>favor of a conventional 80 meter dipole or perhaps the carolina
>windom. I'm using the G5RV in an inverted V formation and due to space
>restrictions would have to use any other wire in the same manner.
>
>What is every ones thoughts on this? Which is a better multi band
>antenna? I know that sometimes a multipurpose antenna is a
>compromise.
>
>Thanks
>
>Rich KG5IF

5423. Review : ALA 330 active magnetic loop antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-21 10:11:05 UTC
From: Thierry Lombry <lombryt@hotmail.com>
Message-ID: <3d8c45b9_1@news.vo.lu>
Source record: 134364

Review of the ALA 330 active magnetic loop antenna

Foreword:
This review is first dedicated to SWL and novices hams that have either never seen a loop antenna from their live, nor connected the different parts of an antenna together nor used a multimeter or a similar device. Hi !

The context.
One day or another we all experiment radio interferences due to man made noises. Chhhhhrr . do you remember that sound ? Sometimes severe these undesired signals can easily cover your strongest DXCC and ruin your QSO or cover all your hope to get the QSL of your most wanted DXCC... This is not a problem if the source of QRM is intermittent or occasional. But that becomes a really problem if the QRM is permanent. If your FCC or local radio service cannot help you in solving the problem you have no other choice that moving in a quiet place or finding a way to reduce this QRM.

Then there is the problem of working on the lower bands with an antenna well cut ≈ l/4, what means 40m long on 1.8 MHz ; not everybody can install such a passive antenna in the garden.

At last there is the problem of matching the antenna with the receiver input, in most case that means a 50 ohm impedance to get the maximum signal transfer. So usually in some bands our installation is far to match the desire figures and to transfer all power to the receiver and vice versa. However the main problem stays the QRM.

Currently in the appartment in which I live I experiment much QRM generated by what I suspect to be a poweful source of electrical noise, an air-conditioner (investigation are under way with the help of the local P&T radio service).
I can made this comparison because in another home I use a 40 m long wire tied between 3 and 5m high (see http://www.astrosurf.com/lombry/qsl-longwire.htm) that captures nearly no QRM at all on any HF band. Of course the location explains that : the second one is far from urban environments, on top of hills and allows me to capture nearly all DXCC without consulting the cluster. But in my first QTH, also located in the country but not as quiet as the second, due to a lack of space I had to use a 15m sloper tied outside to the end of the garden and attached to 20m of wire that run indoor across the appartment at ceiling level. This is far to be a performing antenna system. So both installations are not exactly identical but in the last QTH I capture too much QRM : the S-meter exceeds sometimes S-9, with an average level of S-7 ! In others words the noise is permanent. Even my computer (the keyboard control LED, the screen, the reboot/shutdown phases), the scanner, some power supplies or rechargers are also strong QRM emitters.

All HF bands are concerned but mainly the one between 20-10 m, the bands I use the most for DXing in summer. So I could not continue and complete my DX awards this way.

As SWL my first idea was to buy a MFJ noise canceler (see http://www.astrosurf.com/lombry/qsl-mfj1026.htm) but I was not convinced by the result even if it was able to suppress many directional noises. More, the device has to be tuned manually each time I changed of band and even inside a same band due to its short bandpass, and I had to acquire some experience with its three controls to use it quickly and efficiently. So the system was maybe useful but hard to control in some circumstances. So I needed something easier to use.

I searched for another solution that could perform faster and much better in reducing this QRM. So searching on Internet I have found Wellbrook products and its active magnetic loops, that, according the manufacturer were especially designed to remove all QRM generated by electrical sources. Was that my miracle solution ? At first sight I had a mitigated feeling about performances of such small antennas. But after have read many articles about the subject and being not an expert either in antenna nor in electronic, I accepted the challenge and for my SWL activities I bought on the suggestion of his salesman, the ALA-330, a receiving magnetic loop antenna.

What is a magnetic loop antenna ?
In a few words the ALA 330 is a compact HF antenna constituted of an aluminium sheated loop of 1.1m of diameter. It is especially designed to reduce sensitivity at LF and MW to prevent the receiver overload from multiples high power AM broadcast in city areas. Complementary its design help in reducing QRM.
The secret of this kind of antenna is to capture only the magnetic component of the electromagnetic field.
An ordinary antenna, a passive element like a long wire or even a beam, works by capturing the electric field of waves and transmit it to the receiver. However a magnetic loop does not work with this component.
When we know that most devices are electrically powered and can generate severe QRM in all HF bands, the active magnetic loop looks like a miracle solution as it is nearly insensible to electrical sources. It is able to reject most locally radiated noise, like mains wiring, air-conditioner, power supply, fluorescent lamps, dimmer, so much sources of man made noises in HF bands and higher frequencies.

Then about intermodulation, the second and third order intercept points are typically +70 dBm (IP2) and +40 dBm (IP3) respectively. So the level of intermodulation products are well below the QRN and QRM level.
At last the magnetic loop displays a very wide frequency response requiring no antenna tuning. The ALA 330 works in the frequency ranging from 3-30 Mhz and matches directly to the receiver without having to adjust the impedance. This is due to the fact that the current induced into the loop is proportional to the field strength rather than to the frequency. According the manufacturer, the useable reception range practically extends from 150 kHz to over 100 MHz.

More interesting, compared to a whip antenna, the loop improves the S/N up to 20 dB and is able to ensure a very low level of intermodulation in strong signals environments. Due to the interference rejection in vertical position this receiving loop displays a classical dipole Figure-of-Eight directivity pattern that are enhanced by deep nulls.
At last a loop antenna is a compact antenna that requires only 1meter square in the living room or outdoor, practicaly nothing compared to the required space for any other model of antenna (long wire, a dipole or a beam).
So all these advantages made of this kind of antenna the ideal model for people with limited space, interesting in LW listening or experimenting much QRM.

Installation and first mistakes
The product was originally packaged and I suspect the postman to wonder what could hide this huge &#65533; hula hop &#65533;. Imagine how to transport a 1m-loop by mail : all the loop was envelopped in a thick and dense tube of foam, maintained internally with 2 bamboo sticks ! It arrived some weeks later at home in Luxembourg in excellent state without additionnal charges. Ouf !

Being not really an handyman - I do my best sir ! - , and seeing no &#65533; assembly manual &#65533; excepting a small graphic drawed on a technical sheet (the same as the one published on Wellbrook website), I had a few seconds of stress. How could I assembly all that stuff ? The kit contained 1 metallic adapter and three screws to fix the base on an optional mast or tripod, the antenna interface, in fact a small plastic box that I opened to discover it was flooded with &#65533; black gelatin &#65533;, so a true black box working as amplifier on which it was written &#65533; antenna &#65533; on one side and &#65533; receiver &#65533; on the other side from which run a small coax RG58C ended with a PL-259 connector. The interface had also to be connected to an external power supply for which only the jack was supplied. Although this material looks fine and use quality components this is however a kit for amateur : BNC and RG58C coax are not known to be the best components we can find in a ham shack. Anyway, if all that works I will be already happy. The &#65533; manual &#65533; explanations were minimalist and from what I seen the technical sheet was &#65533; compatible &#65533; with all magnetic loops sold by Wellbrook, including the outdoor and emission models (ALA 1530, etc). So I took the risk to &#65533; adapt &#65533; the graphic to my ALA 330 model, assemblying all parts according what I see on this unconventional and unappropriated user manual.

As expected I encounted my first problem : there were no connectors antenna side, nor power supply, what is a pity for what these components cost (21 euros vs the 140 euros that cost the antenna). So I still wonder why the manufacturer didn't include these parts in the kit ?! So in the next hour I had to buy the required accessories : 2 male BNC connectors, 8m of RG58C 50 ohm coaxial to feed it and a stabilized power supply 220/12V 400mA or higher with several extractible jacks to the nearest electronic shop. Hopefully the antenna interface came with a fuse (315 mA) and as I told with a short coax ended with a PL-259 connector I can immediately connect to my RTX antenna input, beside my long wire input that was always connected to compare signals received by both antennas.
Very excited, after have assemblied the two BNC both end of the 50 ohm coax and made a small welding on the screws to be sure the BNC were well

attached, connected the power supply, a few minuts later I posed the loop on front of the window, 1m high, street side. See some pics on http://www.astrosurf.com/lombry/qsl-330.htm

With its 1m of diameter the loop is rather cumbersome but as it is very light - it is made of aluminium - it was easy to place behind the veils or anywhere else, the manufacturer suggesting to place it at ground level. I switched on my Kenwood TS-570D anywhere in the bands where I could capture an emission. I also remembered the warning of the manufacturer : never use the ALA 330 in emission or I should experiment some hardware damage. But I didn't understand why I couldn't use it in emission until I questioned an OM : in fact the small transistors located in the interface will not support the 100 W emitted by the TX and will explode the system. OK, sworn, I will never use it for emission !
First I controled the signal coming from the longwire attached to the ANT1 input. Whoaw, 59+20 dB. Great ! That was exactly the kind of signal I needed to check at first if the loop was able to capture the most powerful stations located a few thousands km away from LX (G, OZ, I, EA). I switched to the loop on the ANT2 input : I heard shuffle, and that sound like if OM spoke in a pipeline. After investigation I udnerstood that the receiver worked as if the loop was not connected.. What was the matter ?
I checked for another strong signal on another band. Same problem : shuffle but nearly no station. Something was problem wrong. So I checked the interface inputs. I disconnect the fuse, then the power supply, then the antenna : I had always the same signal, □ the pipeline sound □.In fact my loop with disconnected from the system ! I probably experimented a short-circuit somewhere in the system. I reread the so-called manual that suggested some procedures of troubleshooting. I was reassured knowing now that I could experiment some problems. and probably solve them. In the order Wellbrook suggested to check the fuse, the power supply, the coax and the antenna interface.
As I haven't had at that moment any multimeter to measure my devices, I visited an OM friend of mine that helped me to diagnostic the problems. And as expected having had to build all accessories of my own and having no tool to test my components, I experimented nearly all problems in once : the interface was connected to the +12V in place of the -12V due to the fact that the power supply provided several jacks without indication of polarities, that connexion probably activated the fuse that interrupted the link with the mains. So at first I inverted the power supply jack and marked its position permanently in order that the interne pin of the interface BNC connector receives -12V. Then my BNC wire experimented a short-circuit and I had to rebuild one of the connector. This time I made the welding a bit larger on the screw as the previous one cut by itself. Having well learnt the lesson, I bough a small analog multimeter, some □ croco grips □ and once all connexions completed I rechecked all my components, from the fuse to the BNC including the power supply, successfully this time. Time lost, including the buy of accessories, 3 hours.

Lesson to learn : If you are a novice in electronics, do buy a small multimeter, ask an expert to explain you how it works, and use it to test

all electrical components you made before to use them.

Once the loop placed near the window I did various test : I changed its position in the living room, I posed it on the ground, more or less near or far from the concrete walls and I changed its orientation related to the signals. I used it at night and at noon, in nearly all my working conditions, under all kinds of QRM and up to know only by clear and dry weather (not wet nor rainy).
After some days of practice what can I conclude ? In one word I can say this ALA 330 is useful compared to my longwire flooded in QRM. I prefer to not say very useful for several reasons explained hereunder. However my appreciation is very positive in regards on its performances vs the space it requires.

Results in the field
Without having the possibility to test the antenna with a spectrum analyser I can only test the audio performance of the loop on stations or beacons I heard on bands using the loop indoor.
First the SWR. Wellbrook states the ALA 330 has no SWR. The impedance matching is not required but when I activated my TS-570D antenna tuner I heard the system selfs working a few seconds (no more than about 5 sec) and as switch from one band to another they matched successfully all bands, including WARC to 1:1, excepting the 40 m where I stopped the system at 1.5 :1 as it seemed not be able to match that rate. That was a first surprise as my short long wire (the sloper) had difficulties to match some bands below 1.5 :1 or even 3 :1 sometimes (my 40m longwire tied 3-5m high had also some problems on some WARC bands).

The antenna position. I move the loop in various places in the living room, near or far from the walls or from the window located street side but quiet (the windows is about 3m long, 1 m high made of a wood frame). When I placed the loop on the ground, under the window, in front of the radiator turned off, the QRM increased a bit (1 point) and disappeared when I placed the loop back just in front of the window, at 1m high and behind the veils. The fact to move the loop near or far from the concrete walls did not change anything to the signal or QRM level, as changing its orientation from vertical to horizontal or to tilt it at 45 deg, or changing its orientation in regards with NSEW positions, nothing changed the signals or the QRM intensity.

So I can already conclude that this ALA 330 is not sensible to its position vs the signals but well to the distance to concrete or maybe to dense objects.

I also made a test installing the loop in the cellar, what means in a room under ground level made of concrete all parts, which walls are not more tick than the one of the appartment. Amazingly, I continued to listen stations with nearly the same intensity as at the second floor.

At last the stations signals. The signals are globally stronger with less QRM using the loop than vs my longwire sloper, mainly in bands from 17 to 10 m with the best noise reduction in the 17m and 12m bands where the QRM

dropped from S-9 to as small as S-1 ! For the first time for many weeks I could hear in LX stations that were flooded previously in the QRM.

As strange as unexpected on the 20, 40 and 80m band, the loop captures the same (on 20 m) or, at night, even a bit more QRM than my longwire. I cannot explain this phenoma. The S-meter stays at the a same level of intensity on both antennas (sometime 1 point up with the longwire) but even at equal intensity on the S-meter my ears capture a noisier QRM with the loop than with the longwire.

In the 160m band, where the loop is theoretically not adapted, the QRM is also a bit lower with the loop but this band was nearly free of OM at the time of my tests and I checked the signals intensity with beacons.

Here are some figures I recorded at noon and at midnight. Know that my village is located in the country, 7 km south from Luxembourg city (Yes indeed, at 7 km from the center of Luxembourg this is the country !), which capitale is surely not as strong QRM generator as could be a megapole like New York, London, Paris, Melbourne or even Brussels (all the country gathers about 400000 inhabitants) but it could be if the QRM generator is one floor up ! For each frequency I displayed 2 values : the intensity of QRM and the one of a OM in QSO or the beacon. Signals were captured with the 35m longwire (located 60% indoor and 40% outdoor as a sloper) and with the magnetic loop placed in front of a window 3m long of the living room located at the second floor on my appartment:

At noon (12z) :
29.5 MHz ,QRM Longwire 57, Station signal, none, QRM ALA330, 54, Station signal 55
28.5 MHz ,QRM Longwire 56, Station signal, none, QRM ALA330, 51, Station signal 56+
24.9 MHz ,QRM Longwire 59, Station signal, 58-59, QRM ALA330, 57, Station signal 58
21.3 MHz ,QRM Longwire 58, Station signal, 57, QRM ALA330, 55, Station signal 57
18.1 MHz ,QRM Longwire 58, Station signal, none, QRM ALA330, 54, Station signal 56
14.2 MHz ,QRM Longwire 57, Station signal, 57-59+, QRM ALA330, 57+, Station signal 58-59+
10.1 MHz ,QRM Longwire 57/57, Station signal, 59+10, QRM ALA330, 54/56, Station signal 58
7.05 MHz ,QRM Longwire 57/58, Station signal, 59, QRM ALA330, 57/57+, Station signal 58
3.7 MHz ,QRM Longwire 57/55, Station signal, none/57, QRM ALA330, 55/55, Station signal none/59
1.9 MHz ,QRM Longwire 59+10/57, Station signal, none, QRM ALA330, 58/51, Station signal none

At night (32z):
29.5 MHz ,QRM Longwire 56-58, Station signal, none, QRM ALA330, 51-53, Station signal none
28.5 MHz ,QRM Longwire 57, Station signal, none, QRM ALA330, 51-53, Station

signal none
24.9 MHz ,QRM Longwire 58, Station signal, none, QRM ALA330, 56+, Station signal none
18.1 MHz ,QRM Longwire 57/58, Station signal, none, QRM ALA330, 55/51, Station signal 54/53
14.2 MHz ,QRM Longwire 57/55, Station signal, 57+/58, QRM ALA330, 56/55, Station signal 57/58
10.1 MHz ,QRM Longwire 58, Station signal, 58, QRM ALA330, 57, Station signal 59
7.05 MHz ,QRM Longwire 57/57, Station signal, 59/58+, QRM ALA330, 53/56, Station signal 55/58
3.7 MHz ,QRM Longwire 56, Station signal, 58, QRM ALA330, 57, Station signal 59
1.9 MHz ,QRM Longwire 59+, Station signal, none, QRM ALA330, 57, Station signal 53

During these quick tests I was able to hear KL7 and JA stations, even if the first arrived weakly. The result is thus positive.

By way of conclusion
Plus of ALA 330 :
- Reduces drastically QRM over 7 points in 17m to 10m bands, much less useful in the lower bands at night
- Sensible QRM reduction in 160m (QRM drop of 1 point).
- theoretically request no antenna tuner for matching impedances
- Very light antenna, not combersome compared to any passive antenna
- Quality of assembly kit
- Easy to assembly and installed indoor in a few minuts
- Not too expensive in regards of its performances
- Suited for LW and HF listenings
- Highly recommended when space is limited
- Good support from the manufacturer

Minus of ALA 330 :
- Add 1 more point of QRM in 40 m bands, no improvement in 20 m. - User manual unappropriated, lack of technical advices (on paper of on website) for the beginner
- For a novice user, basic accessories missing (BNC, power supply) with risk of errors when assembly the parts.

Should I place another order if needed ? Surely. But I should probably buy a more sensitive model if available. But more important I should change all cabling system and connectors with ham approved parts : BNC with PL connectors (or an adaptor BNC/PL) and the RG58C coax with a RG213U 50 ohms coax, in order to reduce the signals attenuation, losses in the cable and still a bit more QRM.
I could already change all these components in the current installation but let me rest a bit a few weeks after have worked hard to make this installation running ;-)
However this is not a joke. I seriously think that changing all parts with professional components - excepting the loop - I could still improve

quite a lot the reception.

At last a test will be performed in my second QTH to compare the performances of the loop vs my 40m longwire tied 3-5m high on tops of hills at W�pion, Belgium. I'm not sure that the loop will improve the signals. In the opposite case the magnetic loop will surprise me. To be followed in a future post (as an addendum to this one if it is always online at the time of this 2d test).

For more information
The ALA 330 as well as other loop antennas suited for emission can be obtained from Wellbrook Communications, Wellbrook House, Brookside Road, Bransgore, Christchurch, Dorset, BH23 8NA, U.K.
Phone: 01425 674 174, International : 44 1425 674 174
Website: http://www.wellbrook.uk.com/
The current configuration cost �112.5 or 178.04 euros. Cmpleted with all requested accessories (power supply, BNC and wire) it cost about 200 euros.

Hope this helps.

Thierry
ON5L183

5424. antenna diameter and broadband influence

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-21 11:00:42 UTC
From: Peter Tribout <peter.tribout@pandora.be>
Message-ID: <ujYi9.126232$8o4.18513@afrodite.telenet-ops.be>
Source record: 134365

Hi,

It seems that when the diameter of a dipole antenna (or any antenna) gets
thicker, the antenna becomes more broadband.

What is the explaination of this fenomena?
And can it be proven mathematicaly?

Or where can I find some explanation on the internet or books?

thanks Peter

5425. Free tower for removal

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-21 11:26:41 UTC
From: mark <skipperbrown3@cox.net.nospam>
Message-ID: <RHYi9.7778$IL6.436500@news2.east.cox.net>
Source record: 134366

I have a non ham friend who recently bought a house in McLean, Va. that has a 60' self supporting steel antenna that appears to be in excellent condition. He is will give away the tower if you will remove it. If you are interested, contact me for pics. kv4bb @ arrl.net.

mark

5426. Re: Can buried radials be insulated wire??

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-21 11:36:55 UTC
From: Reg Edwards <g4fgq.regp@btinternet.com>
Message-ID: <amhlknipe1@helle.btinternet.com>
Source record: 134367

If insulated radials are laid on the soil surface, no difference in loss resistance at all.

If insulated radials are buried then resistance DECREASES in series with a capacitance.

The series capacitance is of no consequence because it is tuned-out by the tuner along with the antenna reactance.

Reduction in resistance depends on thickness of insulation.

For enamel and thin plastic insulation the decrease in resistance is small and in practice is not noticeable.

For thick insulation, such as the inner conductor of a coaxial line plus 1-inch diameter polyethylene, the resistance increase might be considerable. It is calculable. No-one would actually do this of course. It's too expensive. Better to lay one or two ordinary extra wires.

From the number of times this question is asked, this little snippet of info could perhaps be mentioned in the handbooks.

========================
Regards from Reg G4FGQ
Free Radio Design Software
Go to http://www.g4fgq.com
========================

5427. Tower owner found-thanks nt

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-21 12:14:41 UTC
From: mark <skipperbrown3@cox.net.nospam>
Message-ID: <RoZi9.8080$IL6.442255@news2.east.cox.net>
Source record: 134368

[No readable article body recovered]

5428. Re: antenna diameter and broadband influence

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-21 12:17:07 UTC
From: JC <jacques.culot@skynet.be>
Message-ID: <3d8c6349$0$223$ba620e4c@news.skynet.be>
Source record: 134269

True.
I will find back the theoretical explanation and post it.

5429. Re: antenne magnetique circulaire

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-21 12:18:49 UTC
From: JC <jacques.culot@skynet.be>
Message-ID: <3d8c63aa$0$203$ba620e4c@news.skynet.be>
Source record: 134270

Cher ami, ceci est un NG anglophone.
73 de ON5MJ

Dear friend, this is an english speaking NG.
73 de ON5MJ

5430. Re: Review : ALA 330 active magnetic loop antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-21 13:05:36 UTC
From: Thierry Lombry <lombryt@hotmail.com>
Message-ID: <3d8c6e9d_1@news.vo.lu>
Source record: 134271

The URL where you can read a modified version of this review (with some figures about broadcasts) and some pictures is
http://www.astrosurf.com/lombry/qsl-ala330.htm

Thierry

5431. Re: antenna diameter and broadband influence

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-21 14:41:25 UTC
From: CAM <Cecil.A.Moore@ieee.org>
Message-ID: <3D8C8515.BDEC7881@ieee.org>
Source record: 134272

Peter Tribout wrote:
>
> Hi,
>
> It seems that when the diameter of a dipole antenna (or any antenna) gets
> thicker, the antenna becomes more broadband.
>
> What is the explaination of this fenomena?

From the ARRL Antenna Book, 15th edition: "... the reactance varies at
a different rate with frequency changes for different wavelength/diameter
(ratios for the) elements. In other words, looking at the two (different)
element (diameters), the Q's are different."

> And can it be proven mathematicaly?

If the reactance around resonance of two antennas changes at a different
rate with frequency, the bandwidths will be different. That is easily
proven mathematically.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

5432. Re: Follow-up Disk Skin Effect Experiment

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-21 15:59:20 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <gp4pougsic6iearm2brr2t604fv7pp5ajj@4ax.com>
Source record: 134273

On Fri, 20 Sep 2002 21:41:40 -0500 (CDT), richardharrison@webtv.net (Richard Harrison) wrote:

>Roger, W7WKB wrote:
>"Am I understanding correctly? The magnetic field would pass easily
>through metal except that an induced current is generated below the
>metal surface that cancels the field and prevents it from passing
>completely through at full strength."
>
>Yes, indubitably!! In a very good continuous conductor, the
>counteracting induced field is almost equal and opposite the field
>imposed on the conductor.
>
>Best regards, Richard Harrison, KB5WZI

Hi Richard,

I had an excellent demonstration of the physical equivalent to this yesterday at a local electronics vendor (Radar Electric in Seattle).

I was intrigued by their attempt to sell foot long aluminum pipes as magic wands. In looking over the merchandise (you can imagine how long that took), I was approached by the store manager who wanted to close a sale (I am sure he was dubious of this prospect however).

He asked if I knew what it was used for. I speculated "as a torque extender?" He smiled and lifted a spherical magnet off the nearby display and plunked it into one of the tubes. It should have dropped straight to the floor in a heartbeat (or so the first impression would have been), but he calmly lowered his hand to the bottom of the tube and waited for the sphere to emerge - quite slowly.

"See? Magic! And this is aluminum, not steel!"

"Bucking fields induced by the eddy current generated by the fall of the magnet." I quipped back.

He shrugged his shoulders and muttered good humoredly about engineers killing his wallet.

The skin effect experiment has similarly been a no-sale - and far less magic.

73's
Richard Clark, KB7QHC

5433. Re: small VLF/LF antennas

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-21 16:08:07 UTC
From: Kent Haase <ijeh99@mb.sympatico.ca>
Message-ID: <fQ0j9.6798$nU2.31569@news1.mts.net>
Source record: 134274

You can also build UNTUNED loops which, obviously, don't need any tuning.
Check out
http://www.lwca.org/ for links to some design and construction info on
tuned and untuned loops.

Kent VE4KEH

"Bill M" <"exray"@no spam-caribe.net> wrote in message
news:uoo5ere8t0kp92@corp.supernews.com...
> Ash wrote:
> >
> > G'day,
> > are there any 'small' (indoor/attic) VLF/LF antennas that are worth
building?
> > 10kHz-100kHz would be the most interesting band, I cant roll out several
km's
> > of wire and coupling to for instance the phonelines aren't an option
since we use
> > underground wires here.
> > Have you tried a design you can recommend?
> >
> > //Greg
>
> You can wind a ferrite rod antenna but a 10:1 frequency coverage range
> will involve some variable tuning components and/or compromises.
>
> -Bill

5434. Re: Can buried radials be insulated wire??

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-21 16:32:38 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <3D8C9F26.9010805@eznec.com>
Source record: 134275

Do you have any measured data that support this?

Roy Lewallen, W7EL

Reg Edwards wrote:
> If insulated radials are laid on the soil surface, no difference in loss
> resistance at all.
>
> If insulated radials are buried then resistance DECREASES in series with a
> capacitance.
>
> The series capacitance is of no consequence because it is tuned-out by the
> tuner along with the antenna reactance.
>
> Reduction in resistance depends on thickness of insulation.
>
> For enamel and thin plastic insulation the decrease in resistance is small
> and in practice is not noticeable.
>
> For thick insulation, such as the inner conductor of a coaxial line plus
> 1-inch diameter polyethylene, the resistance increase might be considerable.
> It is calculable. No-one would actually do this of course. It's too
> expensive. Better to lay one or two ordinary extra wires.
>
> From the number of times this question is asked, this little snippet of info
> could perhaps be mentioned in the handbooks.
> ---
> ========================
> Regards from Reg G4FGQ
> Free Radio Design Software
> Go to http://www.g4fgq.com
> ========================
>
>

5435. Re: antenna diameter and broadband influence

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-21 16:38:37 UTC
From: Reg Edwards <g4fgq.regp@btinternet.com>
Message-ID: <ami7ac$h7u$1@helle.btinternet.com>
Source record: 134276

> It seems that when the diameter of a dipole antenna (or any antenna) gets
> thicker, the antenna becomes more broadband.
>
> What is the explaination of this fenomena?
> And can it be proven mathematicaly?

==========

As the diameter of the antenna conductor increases so does the capacitance per unit length and the inductance decreases. It constitutes a tuned circuit with a damping resistance equal to the antenna's radiation resistance.

Fo a 1/4-wave vertical or a 1/2-wave dipole calculations simplify to -

Q = 1.29 * [Ln(Lambda / 2 / d) - 1]

where Lambda = free-space wavelength and d is conductor diameter, both in metres.

Naperian logs.

Bandwidth follows from elementary tuned circuit theory.

The formula is approximate (but adequate for anything) because radiation resistance varies somewhat in the vicinity of resonance and dependence on antenna height is ignored.

==========

The above shows antenna Q decreases VERY slowly with conductor diameter. At HF it needs a cage antenna to have an appreciable effect. And since system bandwidth may depend as much on transmission line and tuner characteristics (never considered in connection with system bandwidth but both are tuned circuits) by itself the formula is not of much value.

For calculating some characteristics of a dipole versus diameter, including bandwidth vs SWR, download program DIPCAGE1 from website below. Takes only a few seconds. Run imediately.

==========
Regards from Reg G4FGQ
Free Radio Design Software
Go to http://www.g4fgq.com
==========

5436. Re: Follow-up Disk Skin Effect Experiment

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-21 16:38:38 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <3D8CA08E.4050908@eznec.com>
Source record: 134277

Good quality mechanical laboratory balances use magnetic damping --
simply an aluminum plate on the balance arm that fits closely between
the poles of a magnet mounted on the fixed portion. Same principle.

Roy Lewallen, W7EL

Richard Clark wrote:
>
> Hi Richard,
>
> I had an excellent demonstration of the physical equivalent to this
> yesterday at a local electronics vendor (Radar Electric in Seattle).
>
> I was intrigued by their attempt to sell foot long aluminum pipes as
> magic wands. In looking over the merchandise (you can imagine how
> long that took), I was approached by the store manager who wanted to
> close a sale (I am sure he was dubious of this prospect however).
>
> He asked if I knew what it was used for. I speculated "as a torque
> extender?" He smiled and lifted a spherical magnet off the nearby
> display and plunked it into one of the tubes. It should have dropped
> straight to the floor in a heartbeat (or so the first impression would
> have been), but he calmly lowered his hand to the bottom of the tube
> and waited for the sphere to emerge - quite slowly.
>
> "See? Magic! And this is aluminum, not steel!"
>
> "Bucking fields induced by the eddy current generated by the fall of
> the magnet." I quipped back.
>
> He shrugged his shoulders and muttered good humoredly about engineers
> killing his wallet.
>
> The skin effect experiment has similarly been a no-sale - and far less
> magic.
>
> 73's
> Richard Clark, KB7QHC

5437. Re: antenna diameter and broadband influence

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-21 16:50:06 UTC
From: richardharrison@webtv.net
Message-ID: <27306-3D8CA33E-36@storefull-2315.public.lawson.webtv.net>
Source record: 134280

Peter Tribout wrote:
"What is the explanation (the thicker antenna is more broadband)---?"

The average surge impedance on a fat wire antenna is lower than on a thin wire. Voltage is lower on a fat conductor for a given power because charge is distributed over a larger area.

Radiation resistance and Q are lower for a fat wire, and at frequencies ABOVE first resonance, they oscillate around reasonable values at a dipole`s feedpoint. Excursions are much greater for the thin wire.

The details of proof and explanation are tedious, but they can be found in Arnold B. Bailey`s "TV And Other Receiving Antennas".

Best regards, Richard Harrison, KB5WZI

5438. Re: antenne magnetique circulaire

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-21 16:53:55 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <nj8pouk5gel5ush8ti8ct2qetu8hbfncuf@4ax.com>
Source record: 134278

On Sat, 21 Sep 2002 14:18:49 +0200, "JC" <jacques.culot@skynet.be>
wrote:

>Cher ami, ceci est un NG anglophone.
>73 de ON5MJ
>
>Dear friend, this is an english speaking NG.
>73 de ON5MJ
>

Hi OM,

That may well be, but there are many here who can manage foreign
traffic quite well.

For those less fluent there is always AltaVista:
http://babelfish.altavista.com/tr
which provides a simple resolution:

"I seek experiments of OM which emit with a magnetic circular antenna
of mark BABY LOOP manufactured by an Italian company. Apparently this
antenna compared to those described in the articles of "construction"
and those of MFJ (1786, 1788...) would have a directivity not only
before side of about 25 dB but also a directivity front compared to
the back of 7 dB. I will wish to have confirmation of that because
this directivity before back allows in theory a use starting from the
window without "irradiating" the dwelling. Moreover I would wish to be
informed of the experiments of the users of this antenna, namely: ï¿½les
installation requirements, ï¿½dans the case of a use on balcony
embarrassment TVI exists it for the neighbor of the lower part? Which
are the configurations to be avoided? ï¿½le adjustment of the antenna
using the CV ordered by engine is it easy with the case of basic
command or is worth it better from the start invest in the case of
order with automatic tuner? Can one with the case of basic command, to
establish according to the frequency used a curve position CV =
F(frï¿½quence). Is the automatic tuner it really a truth limps of
coupling? ï¿½ce standard of antenna really makes it possible it to
practise an activity of radio ham? Which are the most suitable
frequency bands? With the advance thank you of all this information"

Not having any experience with small loops, I had nothing to offer.

73's
Richard Clark, KB7QHC

5439. Re: Follow-up Disk Skin Effect Experiment

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-21 16:54:09 UTC
From: tdonaly@aol.com
Message-ID: <20020921125409.00805.00005437@mb-ct.aol.com>
Source record: 134279

Richard Clark wrote,
>
>On Fri, 20 Sep 2002 21:41:40 -0500 (CDT), richardharrison@webtv.net
>(Richard Harrison) wrote:
>
>>Roger, W7WKB wrote:
>>"Am I understanding correctly? The magnetic field would pass easily
>>through metal except that an induced current is generated below the
>>metal surface that cancels the field and prevents it from passing
>>completely through at full strength."
>>
>>Yes, indubitably!! In a very good continuous conductor, the
>>counteracting induced field is almost equal and opposite the field
>>imposed on the conductor.
>>
>>Best regards, Richard Harrison, KB5WZI
>
>Hi Richard,
>
>I had an excellent demonstration of the physical equivalent to this
>yesterday at a local electronics vendor (Radar Electric in Seattle).
>
>I was intrigued by their attempt to sell foot long aluminum pipes as
>magic wands. In looking over the merchandise (you can imagine how
>long that took), I was approached by the store manager who wanted to
>close a sale (I am sure he was dubious of this prospect however).
>
>He asked if I knew what it was used for. I speculated "as a torque
>extender?" He smiled and lifted a spherical magnet off the nearby
>display and plunked it into one of the tubes. It should have dropped
>straight to the floor in a heartbeat (or so the first impression would
>have been), but he calmly lowered his hand to the bottom of the tube
>and waited for the sphere to emerge - quite slowly.
>
>"See? Magic! And this is aluminum, not steel!"
>
>"Bucking fields induced by the eddy current generated by the fall of
>the magnet." I quipped back.
>
>He shrugged his shoulders and muttered good humoredly about engineers
>killing his wallet.
>
>The skin effect experiment has similarly been a no-sale - and far less
>magic.

>
>73's
>Richard Clark, KB7QHC
>
Hi Richard,
anyone interested in this can do a search on Lenz's law,
or,
better yet, read an undergraduate physics text, which, if any good, will go into more detail on how Lenz's law works. (If you read Feynman, he calls it Lenz's rule.)
73,
Tom Donaly, KA6RUH

5440. Re: Review : ALA 330 active magnetic loop antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-21 17:40:43 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <o8apouomqpfg67n337l3orrr9ed4c5qm5r@4ax.com>
Source record: 134281

On Sat, 21 Sep 2002 12:11:05 +0200, "Thierry Lombry"
<lombryt@hotmail.com> wrote a MAGNUM OPUS:

See some pics on
>http://www.astrosurf.com/lombry/qsl-330.htm
La page que vous avez demandï¿½e n'existe pas ...

>
>With its 1m of diameter the loop is rather cumbersome but as it is very
>light - it is made of aluminium - it was easy to place behind the veils or
>anywhere else, the manufacturer suggesting to place it at ground level. I
>switched on my Kenwood TS-570D anywhere in the bands where I could capture
>an emission. I also remembered the warning of the manufacturer : never use
>the ALA 330 in emission or I should experiment some hardware damage. But I
>didn't understand why I couldn't use it in emission until I questioned an OM
>: in fact the small transistors located in the interface will not support
>the 100 W emitted by the TX and will explode the system. OK, sworn, I will
>never use it for emission !

Hold that thought for a moment...

snip

>First the SWR. Wellbrook states the ALA 330 has no SWR. The impedance
>matching is not required but when I activated my TS-570D antenna tuner I
>heard the system selfs working a few seconds (no more than about 5 sec) and
>as switch from one band to another they matched successfully all bands,
>including WARC to 1:1, excepting the 40 m where I stopped the system at 1.5
>:1 as it seemed not be able to match that rate.

Does this antenna tuner require you be transmitting to measure SWR?

>
>By way of conclusion
>Plus of ALA 330 :
>- Reduces drastically QRM over 7 points in 17m to 10m bands, much less
>useful in the lower bands at night
>- Sensible QRM reduction in 160m (QRM drop of 1 point).
>- theoretically request no antenna tuner for matching impedances
>- Very light antenna, not combersome compared to any passive antenna
>- Quality of assembly kit
>- Easy to assembly and installed indoor in a few minuts
>- Not too expensive in regards of its performances
>- Suited for LW and HF listenings
>- Highly recommended when space is limited
>- Good support from the manufacturer

>
>Minus of ALA 330 :
>- Add 1 more point of QRM in 40 m bands, no improvement in 20 m. - User
>manual unappropriated, lack of technical advices (on paper of on website)
>for the beginner
>- For a novice user, basic accessories missing (BNC, power supply) with risk
>of errors when assembly the parts.
>
>
>Thierry
>ONL5183
>

Hi Thierry,

Looked hard for your page through other spellings and such - no luck.

73's
Richard Clark, KB7QHC

5441. Re: antenna diameter and broadband influence

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-21 17:50:49 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <1rbpou8ae1u9c263fqhg35b978niemd2ng@4ax.com>
Source record: 134282

On Sat, 21 Sep 2002 11:00:42 GMT, "Peter Tribout"
<peter.tribout@pandora.be> wrote:

>Hi,
>
>It seems that when the diameter of a dipole antenna (or any antenna) gets
>thicker, the antenna becomes more broadband.
>
>What is the explaination of this fenomena?
>And can it be proven mathematicaly?
>
>Or where can I find some explanation on the internet or books?
>
>thanks Peter
>

Hi Peter,

When you dig into the origins of the math for dipoles, you will find
they derived from the form known as the biconical dipole.

The biconical dipole appears as two cones whose tips are converging to
the feedpoint; and through their geometry present a radiator of
constant line properties. The flat characteristic translates into
broadbandedness and the "fatness" of the radiator is evident.

You can also think of a "fat" radiator as simply being a bloated
cylinder. That works too, but the biconical math is much simpler, and
is the basis of everything else. The cousin of the biconical dipole
is the conical monopole, or the more familiar discone.

73's
Richard Clark, KB7QHC

5442. Re: Bicycle mobile 2M antenna recommend??

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-21 18:02:03 UTC
From: Mark Keith <nm5k@wt.net>
Message-ID: <3D8CB41B.523B@wt.net>
Source record: 134283

Larry Gagnon wrote:
>
> Can anyone recommend a good, lightweight, unobtrusive 2M VHF antenna
> that could easily be mounted on a bicycle?? Homemade designs also
> welcome...
>
> Larry VE6MK

I'd get one of those halfwave rubber duck antennas for ht's, and mount it somewhere. Doesn't require a ground plane to function, and the rubber duck "should" be fairly safe if you wreck and stick one in your gizzard some way. MK

--
http://web.wt.net/~nm5k

5443. Re: Can buried radials be insulated wire??

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-21 18:03:28 UTC
From: Reg Edwards <g4fgq.regp@btinternet.com>
Message-ID: <amic9g$i2v$1@knossos.btinternet.com>
Source record: 134285

Roy Lewallen wrote -

> Do you have any measured data that support this?

==========

Dear Roy,

No measured data needed to support description of an effect which is intuitively rather obvious and can easily be estimated by calculation in a practical case.

I would have thought you would know how to perform the calculation. Can't you find how in your reference library ? How about Terman ?

Reg, G4FGQ

5444. Re: Carolina Windom, G5RV or convential dipole

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-21 18:09:29 UTC
From: Mark Keith <nm5k@wt.net>
Message-ID: <3D8CB5D9.5747@wt.net>
Source record: 134284

'Doc wrote:
>
> Rich,
> A multi-band antenna is always a compromise, and
> your friends on 80 meters are right, a conventional
> dipole (especially if fed with ladder line through a
> tuner) will do as well, if not better than the G5RV.
> 'Doc

A dipole fed with coax on 80m is pretty much unbeatable by any equal length wire antenna. But, alas, not very multibandable. I guess the ladder line/tuner the next best thing. Nothing wrong with the ladder line, but the tuner will add a little loss, and usually the antenna will slightly lose against the coax fed dipole. Myself, I'm too hard core to ever consider a windom or G5RV on 80m. I've tried both, and they were below par for my standards. Normally, nothing but coax fed dipoles for me on 80m. The only time I use my tuner is on the attic 40m dipole fed with twin lead. MK
--
http://web.wt.net/~nm5k

5445. Re: antenne magnetique circulaire

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-21 18:18:43 UTC
From: JC <jacques.culot@skynet.be>
Message-ID: <3d8cb80f$0$182$ba620e4c@news.skynet.be>
Source record: 134286

Hi Rich,

Nice to you for this translation. Nevertheless, it seems obvious to respect the etiquette otherwise this place will become a babel. The one who wants to post must also think about. I am sure I make plenty of mistakes in English as my vernacular is French - and proud of it- , but at least I try. He also posted the same message on French NGs.

73

5446. Re: ' FA Sony AN-1 Active Whip Antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-21 18:26:13 UTC
From: Jim <jbollit@ix.netcom.com>
Message-ID: <amidk4$6it$1@slb0.atl.mindspring.net>
Source record: 134288
Cross-posted to: alt.ham-radio.marketplace,rec.radio.amateur.equipment,rec.radio.shortwave,rec.radio.amateur.antenna

If interested, see:

http://cgi.ebay.com/ws/eBayISAPI.dll?ViewItem&item=1381573182&ssPageName=ADM
E:B:LC:US:1

It has not been used in the outside elements/weather and has never been
mounted to anything. The whip antenna is in perfect condition as it has
seen little use. I bought this antenna about three years ago and used it
in
the radio room (with the antenna module sitting on the floor) for one month
before putting up a dipole and buying a Kiwa MW Loop antenna. I just
tested
the unit with 6 AA batteries and it works perfectly. The unit comes in the
original box and has the original manual.

5447. Magloop question, repost

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-21 19:27:34 UTC
From: Mike Coslo <mcoslo@adelphia.net>
Message-ID: <3D8CF266.1000701@adelphia.net>
Source record: 134287

I don't think my last post on this made it to the list.

With the trombone cap I designed, it looks like my loop can just about make it to the bottom of the phone portion of 80 meters.

I was going to add just a little to the loop to get it the whole way there.

But I noticed that the BW was pretty narrow, 1.2 kHz @ 3.750 mHz.

Questions:

Just what is the effect on a SSB signal at such a BW? Will it freak out the transmitter?

Does the BW get a little wider with losses in the antenna system than predicted? In which case, I'm worried about nothing.

- Mike KB3EIA -

5448. To George Holubec. S-meter cal.

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-21 19:51:03 UTC
From: Reg Edwards <g4fgq.regp@btinternet.com>
Message-ID: <amiij6hc1@knossos.btinternet.com>
Source record: 134289

George, can't reply to your e-mail about S-meter calibration.
My replies bounce back. But not to waste my hard work I repeat it here.

It has no meaning to attempt to qualify S-meter indications with 0-Peak, Peak-to-Peak, RMS, etc.

The receiver-plus-S-meter is basically a watt-meter. It is a receiver input power meter. It could be scaled 0 to 1 milli-watts or in decibels relative to 1 milli-watt. This allows receiver input power to be compared directly with transmitter radiated output power.

If the transmitter output is described as peak power then the S-meter can only be assumed to indicate peak power. The receiver has no way of knowing what the Tx modulating waveform is and receiver gain does not change with the transmitter's modulating waveform.

It is conventional, of course, for the scale to marked in decibels relative to 50 micro-volts across 50 ohms (= 50 pico-watts = S9). That is if the receiver input is 50 ohms.

Each S-unit below S9 corresponds to a 6 dB reduction in input power.

It should be noted that some form of matching transformer to match a high impedance receiver to a low Z antenna has no effect on measured Rx input power or on the meter indication.

The ability of the S-meter and its de-modulating circuit to respond or not be responsive to voltage waveform is not relevant. THAT problem applies to SWR/Power meters and depends on how hard the operator screams into the mike, male or female voices, etc.

Reg, G4FGQ.

5449. Re: Magloop question, repost

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-21 20:16:25 UTC
From: Reg Edwards <g4fgq.regp@btinternet.com>
Message-ID: <amik2omdp1@paris.btinternet.com>
Source record: 134290

To reduce frequency just add a lump of high-voltage fixed capacitance across the variable C.

As frequency decreases radiation resistance gets smaller, Q gets higher and bandwith gets smaller.

So the transmitter behaves as when followed by a narrow band filter.

It has a similar effect on audio as a narrow band crystal IF filter does in the receiver.

The effect on the transmitter must be extremely complicated. But it would appear it is not severe enough to affect the life of PA transistors. I've run 160m magloops at max Tx output with no problems. Never had any reports of poor audio quality.

Presumably the SWR-controlled ALC looks after things in the normal manner.

Reg, G4FGQ
==========
"Mike Coslo" <mcoslo@adelphia.net> wrote in message
news:3D8CF266.1000701@adelphia.net...
> I don't think my last post on this made it to the list.
>
> With the trombone cap I designed, it looks like my loop can just about
> make it to the bottom of the phone portion of 80 meters.
>
> I was going to add just a little to the loop to get it the whole way
there.
>
> But I noticed that the BW was pretty narrow, 1.2 kHz @ 3.750 mHz.
>
> Questions:
>
> Just what is the effect on a SSB signal at such a BW? Will it freak out
> the transmitter?
>
> Does the BW get a little wider with losses in the antenna system than
> predicted? In which case, I'm worried about nothing.
>
> - Mike KB3EIA -
>

5450. Re: Follow-up Disk Skin Effect Experiment

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-21 20:42:14 UTC
From: rsparks <rsparks@elltel.net>
Message-ID: <3d8cd5b9_1@corp.newsgroups.com>
Source record: 134291

In both disk experiments, the measurements did not show that the disk added inductance to the circuit.

Could this be because in both cases the applied current flows radially from the center of the disk due to skin effect? However the induced current below the metal surface flows the opposite way so the induced current would have no place to go. In other words, the induced current would flow to the center from all radial directions but would not have a circular path within the conductor. Without a circular path, the induced current would stop and the applied field (causing the induced current) would not be fully canceled. In this respect the disk would be similar to the Faraday Shield.

If the applied field is not fully canceled, it will continue through the disk to the far side where conditions are again correct to allow an induced current to flow. The far side of the disk has another wire attached so the induced currents can flow radially to the center and away on the attached wire.

Now the induced current (now located on the far side of the disk) and the applied current (located on the near side of the disk) still must complete to have a continuous circuit. If the current went all the way around the edge of the disk, it would take wave travel time to fully complete, so we should have inductance.

On the other hand, if the electrical field passed through as easily as the magnetic field, then the current could encounter a capacity effect between surfaces. This would be a result of the slow travel rate of the charges through the metal. We could think of it as a situation where the presence of a charge on one surface would "bump" a charge loose on the other surface.

A combination of these two effects would result in the current passing through the disk as if the disk were a low impedance capacitor. That was the conclusion I reached from the data from the first disk antenna experiment. I did not understand how that could occur when I ran the experiment. Now I think I have a logical explanation.

In summary, when the time varying current arrives at one side of the disk, it spreads radially along the disk surface. The current makes it's 'presence' known by creating an electrical and magnetic field that generates an induced radial current deeper into the disk. The induced radial current all flows towards (or away) from the center which is bounded by more metal so it can not flow at the magnitude which is required to fully cancel the applied fields. The applied fields (which are only partially canceled by the restricted induced current) pass to the far surface where they are able to induce a current that will flow radially to the center and away on the attached wire. The applied fields are completely canceled by the fields

from the induced current on the far side of the disk.

So what do you think?

73, Roger, W7WKB

"Richard Harrison" <richardharrison@webtv.net> wrote in message
news:22080-3D8BDC64-112@storefull-2314.public.lawson.webtv.net...
> Roger, W7WKB wrote:
> "Am I understanding correctly? The magnetic field would pass easily
> through metal except that an induced current is generated below the
> metal surface that cancels the field and prevents it from passing
> completely through at full strength."
>
> Yes, indubitably!! In a very good continuous conductor, the
> counteracting induced field is almost equal and opposite the field
> imposed on the conductor.
>
> Best regards, Richard Harrison, KB5WZI
>

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
------== Over 80,000 Newsgroups - 16 Different Servers! =-----

5451. Re: Magloop question, repost

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-21 20:54:38 UTC
From: Mike Coslo <mcoslo@adelphia.net>
Message-ID: <3D8D06CB.9020100@adelphia.net>
Source record: 134292

Reg Edwards wrote:

> To reduce frequency just add a lump of high-voltage fixed capacitance across
> the variable C.

Um.. why yes! thanks Reg. I'm busy fretting about values, and making
things too complicated for myself. 8^)

And thanks for the loop design program while we're here. Been a great help.

> The effect on the transmitter must be extremely complicated. But it would
> appear it is not severe enough to affect the life of PA transistors. I've
> run 160m magloops at max Tx output with no problems. Never had any reports
> of poor audio quality.
>
> Presumably the SWR-controlled ALC looks after things in the normal manner.

Okay then. I'm out to the garage to start cutting pipe!

I'll update the group after all is done.

- Mike KB3EIA -

5452. FM suppression filter wanted

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-21 21:09:03 UTC
From: "Robert B." <robert.61@gmx.at>
Message-ID: <3d8cdf35$0$8780$3b214f66@news.univie.ac.at>
Source record: 134293

I am searching for a selective FM suppression filter for a mininum of
two different
frequencies. The best would be the HIRSCHMANN SPERR 24. Unfortunately
that model isnot available any more. The newer one SPERR 26 isnot good for
anything.
So please if someone has such a filter and want to sell it to me, send
me a mail.
Robert

http://www.geocities.com/robertosat/ukwscan.html

5453. What vertical and how to fix it : HF9V, R9,...

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-21 21:15:59 UTC
From: lombryt@hotmail.com
Message-ID: <db35a0c.0209211315.cc491a2@posting.google.com>
Source record: 134294

Hi,

I know that the question was partly asked many times but even after have read the reviews of ehams and several long post on this forum, I haven't found an complete answer as many post shift at the end to others considerations.

As SWL I'm currently using a 40m long wire in one QTH and an ALA 330 magnetic loop (see my review today) on another one.

With time I think seriously to replace my long wire tied 3-5m up in the garden - that give me however excellent results for what it cost and represents -, with a "true" antenna to gain some dB (not difficult vs a longwire !) and made more DX, my first activity.
I prefer to avoid beams as I will rotate it every minut to capture any interesting DX and I will probably finally burned its rotor, as heavy it could be. So a serious all HF bands vertical (at least 10 to 80 including WARC) will most than probably satisfy my needs. But what model of all bands vertical ?

For the moment (that could change) the price is not a concern, so I can pay up to $500 (I would not) if it is really necessary and if I decide to no more waste my money !

I think especially to a HF9V from Butternut (2d choice) of a R9 from crushcraft (there is no more R7 I think) or any other similar one. Is there another brand that sales top verticals ?

I'm however afraid of the potentiel trouble I could experiment in assemblying or "matching" Z and SWR of these verticals. I read e.g. that some OM were in trouble with the traps of the R9, or with the soil conductivity, etc.

So my questions are more practical.
Question 1: what vertical should be easy to install for an novice ? (I can always find an experimented OM if needed of course - I hope).
For a little handyman like me who can hardly read a multimeter (just to test my wires or components), has never build or assembly an antenna (my loop is nearly pre-assembled) or who doesn't take the time to read manuals !, is there a vertical easy to install, to troubleshoot, for which there is a true support from the manufacturer or dealers and that has exprimented very few trouble with its traps, radials or counterpoises and able to support quite strong winds, and endly that can survive some (dozen) years ?

NB. The vertical should be installed in the backyard near a group of trees, on top of hills where the winds may blow up to over 100 km/h a

few days a year and which soil is mainly rocky a few dozen cm deep.

Question 2 about the vertical itself :
The R9 looks more simple to assembly but some OM experimented problems, HF9V looks hard to assembly, looks more cumbersome and request optional kits to work properly (kit of radials, etc). About the others brands, no information. So what could be the simpliest installation (what model) requesting the less servicing and supporting the best any wind (I think specially to model in new material, carbon, etc, that are flexible).

Question 3 about the vertical attachment:
The vertical should be attached by its short base - 50cm to 1m long I hope - with 4 or more large "rings" (so much as necessary) to the small support mast currently supporting the linen wires as it is in metal and well burried deep into the ground (see a pic of the linen wire on my website, http://www.astrosurf.com/lombry/qsl-longwire.htm). This short mast in shape of "T" can bend a few cm if I push hardly on it with all my 65 kg (!) but seems able to support such "light" antenna....
Otherwhise I should attach it on the back of a cottage (made of wood) located at the end of the garden, but it is still 20m more far from the shack than the mast.
Is the concerned small green mast sufficiently robust or surely not to support a 6 kg vertical 7m high by soft or strong wind ? Do I absolutely need to reinforce the vertical by hardly attach it with cables tied in 3 or 4 points at ground level or it can bend slightly of a few cm without problems under bad weather conditions (they are no hurricane in that QTH) ?
Are the fixations to the walls of the cottage the only other solution to prevent any break of the vertical (I think it is, because it is more sheltered from strong winds influence due to nearby high trees), but here the distance to the shack request probably a RG213U coax and nearby high trees could maybe interfere with signals...

All your comments are welcome about the model of vertical to buy and its fixation in regards of what is currently available (small mast or cottage).

Thanks for comments.

73
Thierry
ONL5183
http://www.astrosurf.com/lombry/menu-qsl.htm

5454. Counterpoise??

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-21 21:51:32 UTC
From: Ian Pollard <tonyblair@theasylum.nut>
Message-ID: <bdqpoug4j0b842qtccuruf89asp3nicroj@4ax.com>
Source record: 134296

Can anyone please explain to me what a counterpoise is with respect to earthing of an antenna braid please.

Ian

--
Ian Pollard//Wooler//Northumberland//UK
ICQ#155271757<<<<>>>>pollard@bigfoot.com

5455. Re: W9INN antennas

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-21 22:31:52 UTC
From: Fred Hambrecht <w4jle@charter.net>
Message-ID: <uopsqsdjt4e71@corp.supernews.com>
Source record: 134295

Thank you Mr. Lewallen for your kind correction.

"Roy Lewallen" <w7el@eznec.com> wrote in message
news:3D8BE653.9030901@eznec.com...
> Fred Hambrecht wrote:
> > As Winston Churchill said "With that shit I will not up with put"
>
> According to Bartlett's _Familiar Quotations_, he said "This is the sort
> of English up with which I will not put."
>
> Many years ago in "Charlie Rice's Punchbowl" in the Sunday paper
> magazine, Rice ran a contest to see how many prepositions could be put
> at the end of a sentence. The winner, with six, took a little explanation:
>
> Father wanted to read little Johnny a story from a book, but Johnny
> wasn't interested. Angry, Father sent him up to bed without dinner.
> After dinner, Father decided to try again, so he went up to Johnny's
> room and offered again. Little Johnny said,
>
> "Why did you bring the book that before dinner I didn't want to be read
> to out of up for after?"
>
> Roy Lewallen, W7EL
>

5456. Re: W9INN antennas

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-21 22:50:00 UTC
From: Earth Wolf <"Earth Wolf"@telusplanet.net>
Message-ID: <3D8CF9B2.6090507@telusplanet.net>
Source record: 134297

According to the Guinness Book of Records, some years back, the record holder was based on this complaint:

"What did you bring that book I didn't want to be read to out of about Down Under up for?" (However, my late father, pedantic English teacher that he was, pointed out that "Down Under" is a noun, not two prepositions.)

(If you must spam me, replace "Earth Wolf" with 'aardwolf')

Fred Hambrecht wrote:

>Thank you Mr. Lewallen for your kind correction.
>
>
>"Roy Lewallen" <w7el@eznec.com> wrote in message
>news:3D8BE653.9030901@eznec.com...
>
>>Fred Hambrecht wrote:
>>
>>>As Winston Churchill said "With that shit I will not up with put"
>>>
>>According to Bartlett's _Familiar Quotations_, he said "This is the sort
>>of English up with which I will not put."
>>
>>Many years ago in "Charlie Rice's Punchbowl" in the Sunday paper
>>magazine, Rice ran a contest to see how many prepositions could be put
>>at the end of a sentence. The winner, with six, took a little explanation:
>>
>>Father wanted to read little Johnny a story from a book, but Johnny
>>wasn't interested. Angry, Father sent him up to bed without dinner.
>>After dinner, Father decided to try again, so he went up to Johnny's
>>room and offered again. Little Johnny said,
>>
>>"Why did you bring the book that before dinner I didn't want to be read
>>to out of up for after?"
>>
>>Roy Lewallen, W7EL
>>
>
>

--
In accordance with a first aspect of the present invention, there is provided a transportation facilitation device including a circular rim, a bearing in which a hollow cylindrical member is rotatable about a rod situated within the hollow cylindrical member, and a series of connecting members connecting the circular rim with the hollow cylindrical

member to maintain the circular rim and the hollow cylindrical member in substantially fixed relation, wherein the rod is positioned on an axis perpendicular to the plane of the circular rim, and substantially central of the circular rim.

Abstract from John Keogh's successful 2001 application for an Australian patent (Innovation Patent #2001100012) for the "Circular transportation facilitation device" aka "wheel".

5457. Re: Counterpoise??

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-21 22:53:15 UTC
From: rsparks <rsparks@elltel.net>
Message-ID: <3d8cf47b$1_3@corp.newsgroups.com>
Source record: 134298

Hi Ian,

The term is usually used to describe a structure made of wires arranged radially around the coax. The wires are usually 1/4 wave length long, but may be shorter if the structure is so close to ground that the wires are detuned by ground proximity.

The idea is that the structure is at very low RF voltage at the center for the design frequency.

73, Roger, W7WKB

"Ian Pollard" <tonyblair@theasylum.nut> wrote in message news:bdqpoug4j0b842qtccuruf89asp3nicroj@4ax.com...
> Can anyone please explain to me what a counterpoise is with respect to
> earthing of an antenna braid please.
>
> Ian
>
> --
> Ian Pollard//Wooler//Northumberland//UK
> ICQ#155271757<<<<>>>>pollard@bigfoot.com

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
------== Over 80,000 Newsgroups - 16 Different Servers! =-----

5458. Re: Carolina Windom, G5RV or convential dipole

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-21 23:23:00 UTC
From: CAM <Cecil.A.Moore@ieee.org>
Message-ID: <3D8CFF54.79B03C2E@ieee.org>
Source record: 134300

Mark Keith wrote:
> A dipole fed with coax on 80m is pretty much unbeatable by any equal
> length wire antenna. But, alas, not very multibandable. I guess the
> ladder line/tuner the next best thing. Nothing wrong with the ladder
> line, but the tuner will add a little loss, and usually the antenna will
> slightly lose against the coax fed dipole. Myself, I'm too hard core to
> ever consider a windom or G5RV on 80m. I've tried both, and they were
> below par for my standards. Normally, nothing but coax fed dipoles for
> me on 80m.

How about an 80m dipole fed with 1/2WL of ladder-line? That's what I use.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
------== Over 80,000 Newsgroups - 16 Different Servers! =-----

5459. Re: Bicycle mobile 2M antenna recommend??

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-21 23:26:17 UTC
From: W4WNT <w4wnt@carolina.rr.com>
Message-ID: <te7j9.35013$jF4.2644252@twister.southeast.rr.com>
Source record: 134299

Hi Larry,

We've had folks here use Larsen 5/8 wavelength 2m antennas on bike rides.
Depends on whether you can rig up a magnetic base to set it on.

Good luck,
Bill, W4WNT

"Larry Gagnon" <lagagnon@fakesprint.ca> wrote in message
news:3d8b58dc.1622910@news.sprint.ca...
> Can anyone recommend a good, lightweight, unobtrusive 2M VHF antenna
> that could easily be mounted on a bicycle?? Homemade designs also
> welcome...
>
> Larry VE6MK
> **********
> to send direct email remove "fake" from address

5460. Re: Stealth patio antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-21 23:47:51 UTC
From: Beans <beans@gate.net>
Message-ID: <3D8D0527.1BAD21E4@gate.net>
Source record: 134301

"Randy A. Hefner" wrote:

>
>
> If you agreed with the "cc&r's", why are you now wanting to violate them?
>
>

Randy, I can't speak for everyone, but where I live there are cc&r's that restrict antennas. I moved in
18 years ago. Got involved with amateur radio 16 months ago. When I moved in, I had no idea I would
ever want an antenna, so it didn't bother me. Hell, it could have said no hippopotamus's allowed,
because I don't expect to own one of those either.

I can't afford to move somewhere else. So, what should I do? I do what I can to be unobtrusive and
stealthy. so far,no problems. But, I do get tired of hearing "why did you move in there?" No offense
intended to you, but it does happen that way.

Jeff

5461. Re: Magloop question, repost

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-22 00:34:30 UTC
From: Reg Edwards <g4fgq.regp@btinternet.com>
Message-ID: <amj36khfr1@paris.btinternet.com>
Source record: 134302

"Mike Coslo" wrote
..
> Reg Edwards wrote:
>
> > To reduce frequency just add a lump of high-voltage fixed capacitance
across
> > the variable C.
>
> Um.. why yes! thanks Reg. I'm busy fretting about values, and making
> things too complicated for myself. 8^)
>
> And thanks for the loop design program while we're here. Been a great
help.
>
> > The effect on the transmitter must be extremely complicated. But it
would
> > appear it is not severe enough to affect the life of PA transistors.
I've
> > run 160m magloops at max Tx output with no problems. Never had any
reports
> > of poor audio quality.
> >
> > Presumably the SWR-controlled ALC looks after things in the normal
manner.
>
> Okay then. I'm out to the garage to start cutting pipe!
>
> I'll update the group after all is done.
>
> - Mike KB3EIA -
>
==========

Mike and other passers-by,

For given loop dimensions, the lump of extra fixed capacitance needed to decrease frequency to the next lower band is obtained immediately from program MAGLOOP4. (And the earlier loop programs.). As also is the loss in efficiency due to lower radiation resistance and the corresponding S-units. Unavailabilty of the highest frequency bands due to lumped C can also be deduced. Unfortuately, due to the very large loop current, lumped C cannot be connected/disconnected using alligator clips - a melt-down could occur in the clips. ;o) But when experimenting with extra capacitors temporary alligator clips are OK at reduced power. I have had my fingers burned when changing bands even when the transmitter is off. It takes time for the

clips to cool off.

While on the subject of joints in copper water-pipe magloops, the popular misconception plagiarised and propagated by old-wives' that soldered elbow joints are something to be avoided like the bubonic plague is a load of nonsense. Just don't smear the solder over the external copper surface any more than necessary to form a sound mechanical joint. Just re-heat joints and wipe off all surplus solder.

Bright, new, polished copper has an attractive appearance. Paint the finished loop with clear ship's varnish and it will stay that way. The next-door neighbors peering over the garden fence will love it.

A magloop has greater efficiency than any other form of antenna construction of the same greatest overall dimension when the dimension, eg., loop diameter, is only a small fraction of a wavelength. It is a several-band antenna.

A magloop also has the very useful property that the diameter of the small matching loop tends to be independent of operating frequency. It is not analytically proven so - it just so happens when height of the bottom of the loop above ground is as usually installed, one or diameters above ground level.

So very likely it may not need a tuner on all bands it is desired to be used with. Coupling to the feedline is effected by adjusting the diameter of the coupling loop which is best left as an unshielded length of self-supported of wire which may be of no greater wire diameter than the inner conductor of the coaxial line which feeds it. There should be as small as possible RF connection between the main and coupling loops. Delta-match and other feed arrangements should be avoided as these encourage radiation from the coaxial feedline. Radiation from the feedline upsets the null on receive. If the antenna is rotatable a sharp receiving null is a valuable asset.

The geatest disadvantage of small magloops is the cost of a slow-motion, motor-driven, high-voltage, high capacitance tuning capacitors. But for single-band working most of the tuning capacitance can be lumped and a hand-operated small trimming capacitor can be considered. Again, the various options can be studied by using program MAGLOOP4.

I've a feeling I have something else to say but the onset of Altzeimer's desease is having it's effects.

Oh yes - I have forced myself to recall. I have no shares or any other sort of interests in any manufacturing company, least of all in the manufacture of magloops, motor-driven capacitors or automatic antenna uners - or even copper-water-pipe sellers.

Good night to all.

==========
Regards from Reg G4FGQ
Free Radio Design Software

Go to http://www.g4fgq.com
==========

5462. Re: W9INN antennas

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-22 00:48:31 UTC
From: hsnyder@houston.rr.com
Message-ID: <zr8j9.317395$Yd.11913272@twister.austin.rr.com>
Source record: 134303

I prefer the Taco Bel

5463. Re: Review : ALA 330 active magnetic loop antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-22 00:57:19 UTC
From: "J. McLaughlin" <JCM@Power-Net.Net>
Message-ID: <uoq5a5g1tnk69a@corp.supernews.com>
Source record: 134304

Dear Thierry:
Well done. A useful contribution. Your review is also an example
of how well content is preserved when English is used by one who's first
language is not English.
Do report back as you gain more experience. But please do not
measure SWR of the receiving antenna by transmitting. If that is what
you did, it is a wonder that something in the interface box was not
injured.
Let us hear you on the air someday.
73 Mac N8TT

--
J. Mc Laughlin - Michigan USA
Home: JCM@Power-Net.Net
Office: JCM@McLMcL.Com

5464. Re: Stealth patio antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-22 01:06:16 UTC
From: Dick Carroll <dixie@townsqr.com>
Message-ID: <amj528hje0@208.206.142.112>
Source record: 134305

Beans wrote:
>
> "Randy A. Hefner" wrote:
>
> >
> >
> > If you agreed with the "cc&r's", why are you now wanting to violate them?
> >
> >
>
> Randy, I can't speak for everyone, but where I live there are cc&r's that restrict antennas. I moved in
> 18 years ago. Got involved with amateur radio 16 months ago. When I moved in, I had no idea I would
> ever want an antenna, so it didn't bother me. Hell, it could have said no hippopotamus's allowed,
> because I don't expect to own one of those either.
>
> I can't afford to move somewhere else. So, what should I do? I do what I can to be unobtrusive and
> stealthy. so far,no problems. But, I do get tired of hearing "why did you move in there?" No offense
> intended to you, but it does happen that way.
>

Bottom line is, if you learn about, and become involved in, ham radio only after you move into a CC&R property, you will be required to move in order to actively pursue it in an effective, unobstructed way. That clearly and seriously impedes your ability to use ham radio as an emergency communications asset, one of the primary purposes of its existence. That fact alone should be sufficient grounds to qualify for legislative relief.
No one suggests that all hams should be free to use whatever antenna they wish under those circumstances. But reasonable accommodation is clearly justified and in order.

Dick

5465. Re: W9INN antennas

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-22 01:08:23 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <gu5qoukjtd131ir41uj5kr50pgpdjpiud3@4ax.com>
Source record: 134306

On Sat, 21 Sep 2002 22:50:00 GMT, Earth Wolf <"Earth
Wolf"@telusplanet.net> wrote:

>According to the Guinness Book of Records, some years back, the record
>holder was based on this complaint:
>
>"What did you bring that book I didn't want to be read to out of about
>Down Under up for?" (However, my late father, pedantic English teacher
>that he was, pointed out that "Down Under" is a noun, not two prepositions.)

Hi OM,

Only if he thought the speaker was Australian.

73's
Richard Clark, KB7QHC

5466. Re: Magloop question, repost

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-22 01:29:10 UTC
From: Dick Carroll <dixie@townsqr.com>
Message-ID: <amj6d6$k3s$0@208.206.142.112>
Source record: 134307

Reg Edwards wrote:
>
the popular
> misconception plagiarised and propagated by old-wives' that soldered elbow
> joints are something to be avoided like the bubonic plague is a load of
> nonsense. Just don't smear the solder over the external copper surface any
> more than necessary to form a sound mechanical joint. Just re-heat joints
> and wipe off all surplus solder.

Having had a little experience at soldering copper plumbing when I plumbed my own new house many years ago, I think there may be some realistic basis for those high resistance tales. If one doesn't properly prepare a copper pipe joint before soldering, the solder won't adhere properly to both pieces of pipe, and you will get leaks in your plumbing, or higher joint resistances in your magloop.

What I learned from an experienced plumber before I took on the house plumbing job was to thoroughly clean both the inside of the pipe that the other piece will go into and the outside of it, as well. Use either fine emery cloth or fine grain sand paper, and scrub all surfaces bright. Then thoroughly away the residue with a clean soft cloth. Then, when the joint is properly prepared, use a good quality soldering flux on both pieces.

Your joints will not leak nor be of high resistance.

Dick W0EX

5467. Re: Follow-up Disk Skin Effect Experiment

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-22 01:35:53 UTC
From: richardharrison@webtv.net
Message-ID: <20855-3D8D1E79-67@storefull-2313.public.lawson.webtv.net>
Source record: 134308

Roger, W7WKB wrote:
"(the current) spreads radially along the disk surface."

Roger has it! The current is alternately being dispersed and collected by the wires on either side of the disk. The current, as one poster put it, is running as an ant would run (some ant moving nearly at the speed of light!). The ant takes the shortest distance between the wires via the surface of the disk.

Current between the two sides of the disk tends to srpread through the entire 360 degrees around the disk due to the homophobic nature of the charges. These creatures repel each other. At the edge of the disk, these charges just climb around the edge and maintain as much spread as they can while congregating toward the far wire terminal. At 1 Mhz, these fellows aren`t venturing deeply into the copper surface, for the most part. The higher the frequency the less venturesome these creatures are and the less they penetrate the copper. At 1 MHz, skin depth is between 2 and 3 thousandths of an inch in copper. The charges must travel in a length of only about 2 disk radii between wire terminals.

Recall that the cause of skin effect is supposed to be increasing inductive reactance deeper in the metal, so current flows on the path of less opposition and that is the surface.

Recall that the resistance per square on this surface is so low that it faces extinction.

Inductance tumbles as conductors get fat. It`s the skinny wire that raises inductive opposition to current flow. Roger`s disks are fat bumps in the wire.

Capacitance between sides of the disks is made irrelevant by the short circuits around the disk edges. Capacitive coupling doesn`t make an appearance between the inside and outside of a well shielded box, so it doesn`t allow escape of the energy contained within the box. It also keeps energy on the outside of the box excluded from the inside of the box.

Radial current on the disk does produce magnetic lines which engulf the disk, but the flux on one side of the disk tends to negate flux produced by the other siide. The currents which produce them are flowing in opposite directions. Also, counter-emf on both sides of the disk tends to cancel the imposed field on its own side.

Conclusion is that conduction provides the best coupling of the disk sides. Voltage drop is instantaneous and in sync with the current in a resistance (conductance). The only delay is the wave transit time from

one wire terminal on the disk to the other disk wire terminal. The wave is moving at almost the speed of light on the disk. The disk dimensions are small in terms of wavelength so that the effect of the disks is inconsequential. Roger`s experiment indicates that effects of the disks are inconsequential.

Best regards, Richard Harrison, KB5WZI

5468. Re: ham radio on a mountain bike

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-22 01:46:10 UTC
From: Dave <local_42remove@hotmail.com>
Message-ID: <Ch9j9.496034$me6.57403@sccrnsc01>
Source record: 134309

Don't the new electric and hybrid cars call it "Regenerative Breaking"?
Something to the effect of using generators to slow down the vehicle and the
energy generated is used to give the batteries a bit of a boost?

"Dick Hughes" <rhughes33@cableone.net> wrote in message
news:s59mou4bd0bvt9ln5ln6q4rd4cmm6a1842@4ax.com...
> Also some hybrid automobiles like the Honda Insight.
>
> Dick - W6CCD
> Remove 33 from address
>
> On Fri, 20 Sep 2002 09:10:55 -0400, Robert Spooner <rls19@psu.edu>
> wrote:
>
> >That's what railroad locomotives use. It's called dynamic breaking -
> >turn the traction motors into generators and dissipate the generated
> >power in high-wattage resistors cooled with fans as you go down hill.
> >
> >73,
> >Bob AD3K
> >
> >CW wrote:
> >> Good call. Drag brake.
> >> "CAM" <Cecil.A.Moore@ieee.org> wrote in message
> >> news:3D8A9D6A.916B63AC@ieee.org...
> >>
> >>>CW wrote:
> >>>
> >>>>I don't know what they produce as far as charge but they do produce
> >>>>substantial resistance. I wouldn't have one.
> >>>
> >>>Use one instead of brakes going downhill? :-)
> >>>--
> >>>cheers, CAM http://www.qsl.net/w5dxp
>

5469. Re: Magloop question, repost

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-22 01:59:58 UTC
From: Reg Edwards <g4fgq.regp@btinternet.com>
Message-ID: <amj86t$em6$1@helle.btinternet.com>
Source record: 134310

Mike Coslo also said -

> Um.. why yes! thanks Reg. I'm busy fretting about values, and making
> things too complicated for myself.)

==========

Mike, you have hit the nail right on the head ! I feel I can let myself loose

With the kindest of hopefully constructive criticism, and with the assistance of 3/4 bottle of Sicilian white, it is the handbooks and newsgroup contributions by Guru's which cause the unnecessary, confusing complications.

KISS

Contributing Guru's do not fully understand what it is people really want to know. In general, between them, they do not lack practical experience or theoretical knowledge. Rather that they do not have sufficient ability to express themselves unambiguously in terms which questioners understand. They are unable to put themselves into the minds of readers although in their earlier careers they probably passed through such learning stages.

There's too much dependence on references to somebody else's past work. Such references being similarly based, with nothing added in the propagation process except to ego's. Education suffers. After all, the purpose of amateur radio is to facilitate and promote self-education in the arts of radio communications. That's from where the pleasure, satisfaction and international social relationships are derived.

Over the last few years it has been suggested I am a Guru myself. Usually in the derogatory sense. But I always consider it to be a sort of back-handed compliment. On the other hand I consider myself not as a Guru but an Iconoclast - a cast-downer of unjustifiable idols !

Having got that partially guilty, public self-examination off my chest I can now finish the remaining quarter-bottle and retire to bed.

==========
Regards from Reg G4FGQ
Free Radio Design Software
Go to http://www.g4fgq.com
==========

5470. Re: Magloop question, repost

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-22 02:39:13 UTC
From: Mike Coslo <mcoslo@adelphia.net>
Message-ID: <3D8D5793.4090701@adelphia.net>
Source record: 134311

Dick Carroll wrote:

>
> Reg Edwards wrote:
>
> the popular
>
>>misconception plagiarised and propagated by old-wives' that soldered elbow
>>joints are something to be avoided like the bubonic plague is a load of
>>nonsense. Just don't smear the solder over the external copper surface any
>>more than necessary to form a sound mechanical joint. Just re-heat joints
>>and wipe off all surplus solder.
>>
>
>
>
> Having had a little experience at soldering copper plumbing when I
> plumbed my own new house many years ago, I think there may be some
> realistic basis for those high resistance tales. If one doesn't properly
> prepare a copper pipe joint before soldering, the solder won't adhere
> properly to both pieces of pipe, and you will get leaks in your
> plumbing, or higher joint resistances in your magloop.
>
> What I learned from an experienced plumber before I took on the house
> plumbing job was to thoroughly clean both the inside of the pipe that
> the other piece will go into and the outside of it, as well. Use either
> fine emery cloth or fine grain sand paper, and scrub all surfaces
> bright. Then thoroughly away the residue with a clean soft cloth. Then,
> when the joint is properly prepared, use a good quality soldering flux
> on both pieces.
>
> Your joints will not leak nor be of high resistance.

Very true, Dick. I've done a bit of homebrew plumbing, aside from my
electronics soldering experience. And I've made a few bad plumbing
solder joints. NOTHING like having to drain pipes and redo a bad joint
to teach you respect for doing it the right way.

Well, I cut the pipes and soldered the antenna together in my driveway
this evening. Everything went well, but I think my neighbors must think
I'm mad. Funny to watch them come home and watch me; trying to guess
what I'm up to now.

- Mike KB3EIA -

5471. Re: Magloop question, repost

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-22 02:39:22 UTC
From: tdonaly@aol.com
Message-ID: <20020921223922.15069.00006443@mb-fy.aol.com>
Source record: 134312

Reg wrote,
>
>Mike Coslo also said -
>
>> Um.. why yes! thanks Reg. I'm busy fretting about values, and making
>> things too complicated for myself.)
>
>==========
>
>Mike, you have hit the nail right on the head ! I feel I can let myself
>loose
>
>With the kindest of hopefully constructive criticism, and with the
>assistance of 3/4 bottle of Sicilian white, it is the handbooks and
>newsgroup contributions by Guru's which cause the unnecessary, confusing
>complications.
>
>KISS
>
>Contributing Guru's do not fully understand what it is people really want to
>know. In general, between them, they do not lack practical experience or
>theoretical knowledge. Rather that they do not have sufficient ability to
>express themselves unambiguously in terms which questioners understand. They
>are unable to put themselves into the minds of readers although in their
>earlier careers they probably passed through such learning stages.
>
>There's too much dependence on references to somebody else's past work. Such
>references being similarly based, with nothing added in the propagation
>process except to ego's. Education suffers. After all, the purpose of
>amateur radio is to facilitate and promote self-education in the arts of
>radio communications. That's from where the pleasure, satisfaction and
>international social relationships are derived.
>
>Over the last few years it has been suggested I am a Guru myself. Usually
>in the derogatory sense. But I always consider it to be a sort of
>back-handed compliment. On the other hand I consider myself not as a Guru
>but an Iconoclast - a cast-downer of unjustifiable idols !
>
>Having got that partially guilty, public self-examination off my chest I can
>now finish the remaining quarter-bottle and retire to bed.
>---
>==========
>Regards from Reg G4FGQ
>Free Radio Design Software

>Go to http://www.g4fgq.com
>=========

You might save some for the rest of us.

Tom Donaly, KA6RUH

5472. Re: Counterpoise??

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-22 03:14:01 UTC
From: k9sqg@aol.com
Message-ID: <20020921231401.19480.00005675@mb-fr.aol.com>
Source record: 134313

Posters with an invalid email address make it hard to respond in detail...

5473. Re: Counterpoise??

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-22 03:21:31 UTC
From: CAM <Cecil.A.Moore@ieee.org>
Message-ID: <3D8D373B.DF06729C@ieee.org>
Source record: 134314

Ian Pollard wrote:
> Can anyone please explain to me what a counterpoise is with respect to
> earthing of an antenna braid please.

A counterpoise gives the differential current a place to flow from/to.
When it is flowing into the antenna, it is flowing out of the counterpoise
and vice versa. A counterpoise can be as simple as an electrode in salt
water or a single 1/4WL "radial". It can be as complicated as 100+ radials
buried in the ground. Some have tried an 8 ft. ground rod as a counterpoise
when feeding a 1/4WL vertical monopole mostly with unsatisfactory results.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

5474. Re: Can buried radials be insulated wire??

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-22 03:24:20 UTC
From: richardharrison@webtv.net
Message-ID: <28150-3D8D37E4-136@storefull-2314.public.lawson.webtv.net>
Source record: 134318

Reg, G4FGQ wrote:
"How about Terman?"

Terman actually does have something to say about reactance and resistivity in the earth`s surface including the following:
"At broadcast and lower frequencies, the ratio of capacitive reactance to earth resistivity is considerably greater than unity so to a first approximation the earth can be regarded as purely resistive."

Also:
"conversely at frequencies of the order of 10 MHz and greater, the impedance represented by ground (but not sea water) is primarily capacitive---."

Terman says conductivity of the soil controls ground propagation at medium wave frequencies and lower but somewhere below 10 MHz, soil resistance is bypassed effectively by capacitance so we can forget resistivity in real earth at these higher frequencies.

For fun I estimated the capacitance to earth of a plastic insulated wire 250 ft. long as 0.001 microfarad. This would have a reactance at 1MHz of 160 ohms.

Over a half century ago we used 20 ohms as the resistance of the soil between any two points for many types of problems involving low and medium frequencies. It wasn`t important to get answers applicable or representative of anything. It was only for practice in using various methods.

But if 160 ohms for the reactance of the radial`s earth connection, and the resistivity per square of 20 ohms for the earth were representative, I would rather use a bare radial at 1 MHz. At 10 MHz, there would be very little advantage to using a bare wire.

Best regards, Richard Harrison, KB5WZI

5475. Re: Counterpoise??

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-22 03:26:43 UTC
From: Bill M <exray@no>
Message-ID: <uoqe3kj896702f@corp.supernews.com>
Source record: 134315

K9SQG wrote:
>
> Posters with an invalid email address make it hard to respond in detail...

Did you use the one at the end of his post?

5476. Hygain Antenna Identification ??

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-22 03:30:11 UTC
From: Charley Schwartz <charley@net1plus.com>
Message-ID: <3D8D38CF.9E4D9F9F@net1plus.com>
Source record: 134316

I have a three element hygain antenna with only 10 meter traps, boom is about 13 feet and elements are about 22 feet. Any idea what model this is? TIA Charley W1TE

5477. antenna design

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-22 03:39:46 UTC
From: CD <plsremoveme.guest@dionson.removeme.com.antispam>
Message-ID: <6Yaj9.12057$yB5.418024@twister.tampabay.rr.com>
Source record: 134317

Hi all,

I'm trying to construct an antenna for my transmitter / receiver system. I got a copper wire cut to about 31 inches. I'm planning on putting it on top of a base insulator that is about 2 inches high from the ground plane. My ground plane will have a diameter of about 8 inches.

I'm trying to figure out a way to measure the capacitance of the antenna. How would I do this? I'm operating at 15 MHz.

My problem is basically getting a clear understanding of physical antenna length versus electrical length. From what I've gathered, antenna length should be some multiple of the wavelength. However, physical length does not matter that much compared to electrical length.

The reason why I want to know the capacitance is so that I can find a value for my inductor that will enable me to create a resonance at 15 MHz. Thanks!

CD

5478. Re: Magloop question, repost

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-22 03:53:14 UTC
From: Dick Carroll <dixie@townsqr.com>
Message-ID: <amjera$58u$0@208.206.142.112>
Source record: 134169

Mike Coslo wrote:
>
> Well, I cut the pipes and soldered the antenna together in my driveway
> this evening. Everything went well, but I think my neighbors must think
> I'm mad. Funny to watch them come home and watch me; trying to guess
> what I'm up to now.
>

:-))) Welcome to the wunnerful world of Ham Radio, Mike!

5479. Re: Counterpoise??

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-22 04:01:54 UTC
From: Dick Carroll <dixie@townsqr.com>
Message-ID: <amjfbi$62v$0@208.206.142.112>
Source record: 134170

CAM wrote:
>
Some have tried an 8 ft. ground rod as a counterpoise
> when feeding a 1/4WL vertical monopole mostly with unsatisfactory results.

Sometimes, sometimes not. I've been surprised on a number of occasions
to find hams using just that scheme and making lots of contacts. Must be
the soil or its moisture content.

Dick

5480. Re: ham radio on a mountain bike

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-22 04:47:54 UTC
From: CW <clinton.magers@attbi.com>
Message-ID: <_Xbj9.30707$gA4.3376@sccrnsc02>
Source record: 134171

Yes. They are doing the same thing except routing the power through the
batteries instead of dissipating it as heat.
"Dave" <local_42remove@hotmail.com> wrote in message
news:Ch9j9.496034$me6.57403@sccrnsc01...
> Don't the new electric and hybrid cars call it "Regenerative Breaking"?
> Something to the effect of using generators to slow down the vehicle and
the
> energy generated is used to give the batteries a bit of a boost?
>
> "Dick Hughes" <rhughes33@cableone.net> wrote in message
> news:s59mou4bd0bvt9ln5ln6q4rd4cmm6a1842@4ax.com...
> > Also some hybrid automobiles like the Honda Insight.
> >
> > Dick - W6CCD
> > Remove 33 from address
> >
> > On Fri, 20 Sep 2002 09:10:55 -0400, Robert Spooner <rls19@psu.edu>
> > wrote:
> >
> > >That's what railroad locomotives use. It's called dynamic breaking -
> > >turn the traction motors into generators and dissipate the generated
> > >power in high-wattage resistors cooled with fans as you go down hill.
> > >
> > >73,
> > >Bob AD3K
> > >
> > >CW wrote:
> > >> Good call. Drag brake.
> > >> "CAM" <Cecil.A.Moore@ieee.org> wrote in message
> > >> news:3D8A9D6A.916B63AC@ieee.org...
> > >>
> > >>>CW wrote:
> > >>>
> > >>>>I don't know what they produce as far as charge but they do produce
> > >>>>substantial resistance. I wouldn't have one.
> > >>>
> > >>>Use one instead of brakes going downhill? :-)
> > >>>--
> > >>>cheers, CAM http://www.qsl.net/w5dxp
> > >
> >
>
>

5481. Re: Carolina Windom, G5RV or convential dipole

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-22 05:49:56 UTC
From: "C. R. Carlson" <iowadoc@earthlink.net>
Message-ID: <8Scj9.7727$k27.623616@newsread1.prod.itd.earthlink.net>
Source record: 134172

I would just add the observation that the maker of the Carolina Windowm 80
does NOT recommend using it in an inverted vee formation. If you need a
vee, it probably wouldn't be a good choice.
I have one myself. It's basically an 80 dipole, and it's feed arrangement
has been designed, as a compromise, to be easily fed on all bands. Unlike
my old (no longer up) 80 meter ladder line fed dipole, it easily matches
all bands.

Rich McMahon wrote:

> All
>
>
> I currently use a full sized G5RV with good results. I use it
> primarily for 80 meters although I have ventured down to 20 with good
> luck. I also have a Gap Titan DX which is very good for DX however at
> night the G5RV is clearly superior.
>
> Several guys n 80 are trying to persuade me to take down the G5RV in
> favor of a conventional 80 meter dipole or perhaps the carolina
> windom. I'm using the G5RV in an inverted V formation and due to space
> restrictions would have to use any other wire in the same manner.
>
> What is every ones thoughts on this? Which is a better multi band
> antenna? I know that sometimes a multipurpose antenna is a
> compromise.
>
> Thanks
>
> Rich KG5IF

--
--
C. R. Carlson
Philosopher & Curmudgeon

5482. 6 meter beam - why resonant at 52.3 AND 40.0

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-22 06:32:44 UTC
From: ehsjr@bellatlantic.net
Message-ID: <3D8D640E.A4E32B3C@bellatlantic.net>
Source record: 134173

I built a 6m 3 element beam: 3/4 dia. elements, no taper,
plumbers delight, gamma match; 112, 107, 100 spacing 48",
2" dia. boom, all aluminum.

I set up the gamma match for resonance (X = 0); R = 52
at 52.3 as measured with an MFJ 259B. The antenna was mounted
on a PVC mast in a tripod about 7' above my driveway, and aimed
at a house (through some light shrubbery) about 75' away.
The 1.7 swr points were 51.4 and 52.8.

I happened to "scan" other frequencies, and found another
resonance (X = 0); R = 50 at about 40.0 (can't remember
the exact frequency). (I found no other resonant point.)
In both cases, the SWR measured 1.0 on the analyzer, and
Xc & Xl were 0. In both cases, 50' of RG8 was used, much
of it coiled on the ground. I was standing about 10' away
off the ends of the antenna elements, and when I moved
around the analyzer readings stayed steady. When I waved
my hand about a foot in front of the director, the readings
jumped around as expected.

I'm trying to figure out why the thing has this
"double resonance" and haven't a clue.

Anyone know what's going on?

5483. Re: Counterpoise??

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-22 10:50:41 UTC
From: Ian Pollard <tonyblair@theasylum.nut>
Message-ID: <l28rou886ivjsel16e804fjn04t93oui9a@4ax.com>
Source record: 134208

Many thanks for the assistance, it is appreciated.

Ian

--
Ian Pollard//Wooler//Northumberland//UK
ICQ#155271757<<<<>>>>pollard@bigfoot.com

5484. Re: tower paint

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-22 12:55:13 UTC
From: Les Kramer <wa3sgz@mindspring.com>
Message-ID: <amkfesvhr1@slb4.atl.mindspring.net>
Source record: 134176

Hi Richard,

I'm a materials engineer/corrosion engineer with 32 years of professional experience so maybe I can help out the newsgroup on tower painting. Occasionally I give talks to my radio club on corrosion and the radio amateur.

First, let's remember what paint is - some kind of volatile organic binder (latex, alykd, acrylic, epoxy, etc.) with pigment (titanium oxide (white), carbon black, iron oxide (red), etc.) and proprietary compounds for corrosion resistance, rapid drying, etc.

There are two basic kinds of metal paint. Inert barrier paints that isolate the metal from the environment until scratched (i.e., Rustoleum and most other paints) and sacrificially corroding paints (Cold pack galvanize) that as previously noted is expensive. The deteriation mechanisms are different.

The single biggest reason for short paint life is surface cleanliness. As they say on the can, remove all rust and solvent clean If you really want to know if the surface is clean, take deionized or distilled water, and drop one drop with an eyedropper onto the surface to be painted. If the water drop "beads up" like on a well waxed car, then the surface is dirty even if you cannot see it. If the drop spreads, the surface is clean. Remove the water and paint after the surface has been found to be clean.

Assuming the surface is clean, then the most usual reason for paint failure is:

A.) Inert Barrier Paint (i.e., what you are most likely to buy at Home Depot)

Deterioration is most likely from UV damage alternated with moisture entrapment. If you don't believe me about UV damage, run your hand over the exterior of your house paint after a few years, and you will fine that it is chalked (in other words, the pigment is on the surface and the binder has deteriorated). The best way to stop this is to use black paint with lots of carbon black to block the UV. Obviously, this is a problem for your XYL, but for a tower it might be OK. A ham neighbor once ran clear jacket RG8X up his 100 ft. tower a few years ago and replaced it in 6 mos - same problem. Carbon black is the best thing commercially to delay UV damage.

With regard to the sand erosion claim, unless you live in a desert with high speed winds, my bet is that erosion is a third order effect in most places around the country unless the paint is really deteriorated prior to the erosion. Probably, chemical attack of the paint from air pollution is more likely. Corrosion resistant metal suppliers and paint vendors typically check their products for years in rural, marine, city, and industrial

exposure sites as well as using a bunch of accelerated anti-weathering, salt spray, and humidity cycling lab tests - usually to ASTM specs.

B.) Galvanize and Cold Pack Galvanize Paint (i.e., less good than the former) protect the underlying metal by corroding sacrificially to the steel benealth. That is why you see old galvanize with rust patches (i.e., local zinc exhaustion) rather than many rust spots - the zinc coating on the surface has a good "throwing power" to protect the underlying steel over a large area compared to an inert barrier paint will start corroding quickly at the damaged spot in the coating. Because zinc corrodes to protect the steel, it forms zinc oxide on the surface. This oxide needs to be typically removed with a mild acidic cleaner to make inert paint top coats stick to the zinc if you want to add color or a redundant coating. Cold pack galvanize on aluminum towers has the potential to be detrimental (accelerate corrosion) in some cases, so you might want to be cautious about this approach.

So--- the question is, what approach is best? Not surprisingly, the answer is "that depends". If you live by the sea, you may want to paint old galvanize with cold pack paint and the use redundant inert topcoat black paint. In a rural area without 60 MPH blowing sand, you may want to use black paint. By a fresh water lake in the midwest, you might want to us cold pack galvanize paint. In short, the answer depends on your location, typical weather, quality and quantity of the materials used, surface preparation, application methods, condition of the substrate, and a bunch of other factors that may have to be evaluated carefully first hand by a knowledgeable person in the art.

This is a long post, but I wanted to address a number of issues noted on prior messages.

73,

Les
WA3SGZ

"Richard Clark" <kb7qhc@attbi.com> wrote in message
news:j40koug9scg58lm2j4jnq4eec198e3tcgd@4ax.com...
> On Thu, 19 Sep 2002 09:15:01 -0500 (CDT), richardharrison@webtv.net
> (Richard Harrison) wrote:
>
> >brian Kelly, W3RV wrote:
> >"The other (tower paint degradation) is mechanical abrasion caused by
> >wind-borne particulate matter, i.e., a sandblasting effect."
> >
> >That is an interesting observation and I appreciate the revelation.
> >
> >Best regards, Richard Harrison, KB5WZI
>
>
> Hi Richard,
>

> I would raise that one offering another consideration: destructive
> flexing. If the paint can't stretch as much as what is painted,
> delamination results.
>
> I can't say I have much to offer in that regard, but when I helped a
> buddy replace a radomed collinear 10M antenna from the peak of his
> tower, I was shocked by its appearance.
>
> The surface had a fine haze of broken fiberglass strands - none more
> than a quarter inch in length. It had the appearance of peach fuzz
> covering nearly the entire surface of the radome. The initial glance
> at it caught my attention, with my hand exploring the surface before
> my mind engaged. Luckily I didn't draw my hand along the surface as
> the prickly sensation was immediate.
>
> The prospects of a mitt full of glass wasn't so worrying as finding
> that same fuzz busted loose and air borne....
>
> 73's
> Richard Clark, KB7QHC

5485. Re: Counterpoise??

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-22 13:07:38 UTC
From: k1bqt@aol.com
Message-ID: <20020922090738.22111.00005185@mb-dd.aol.com>
Source record: 134175

>A counterpoise can be as simple as an electrode in salt water or a single 1/4WL "radial".<

The more I experiment with counterpoise structures, the more complex and interesting their behavior appears--especially when a given structure is viewed over a span of frequencies. Anything but a "simple" topic!

Rick K1BQT

5486. Re: 40 m dipole near Beam Mast? A Problem??

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-22 13:21:44 UTC
From: ricknj10@hotmail.com
Message-ID: <3d8dc0b3.94360785@news.optonline.net>
Source record: 134177

I've had this problem with my 40 m inverted Vee mounted right under a
4 ele 20 meter monobander. Extreme interaction noticed on 40 m. I
couldn't get the 40 m antenna to resonate in the band. I'll skip all
the things I went through to finally determine that the 20 m beam was
detuning the 40 m antenna (new coax, connectors, etc.)
So here's what I did :
I made the 40 m antenna into a kind-of sloper. It slopes down from
the 40 ft height on the tower to a tree at 25ft. Since I had a pulley
on the tower I was able to move the dipole a little at a time away
from the tower till the interaction was eliminated (turning the beam
changed the SWR on the dipole). The end of the dipole had to be
clear of the beam before there was no interaction.

Rick K2XT

5487. Re: safety ground and antenna ground - tie together and connect to A/C ground?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-22 13:55:25 UTC
From: ricknj10@hotmail.com
Message-ID: <3d8dca70.96854224@news.optonline.net>
Source record: 134178

Mark said :

> I carefully looked at the tree, and I could see lots of real thin "etched" lines
>running down from the top of the tree.

I also had an oak hit here and there was only one "etched line" like
you described. It blew bark off all over the area around the tree but
there was no disturbance to the ground at all where the current
entered (exited ?) 2 years later the bark all around the tree
separated and the 80 ft tree died. The strike was 150 ft from my open
window and I was sure someone had just fired a shotgun at me from
directly under the window! That's why I am building a good ground
system for my tower now.

Rick K2XT

5488. Autek and MFJ antenna Analysers

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-22 14:12:27 UTC
From: don bryant <dba@yebo.co.za>
Message-ID: <amkj5csdv1@ctb-nnrp2.saix.net>
Source record: 134179

Any one had comparative experience, between the Autek VA 1 RX Analyser and the MFJ SWR Analyser? Many tnx. Don. ZS6BTP

5489. TA33 for sale

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-22 14:52:33 UTC
From: "R.A. &G.D Whiting" <gdwhiting@erols.com>
Message-ID: <amkask$e4c$1@bob.news.rcn.net>
Source record: 134174

I have a Mosley TA33 for sale. It is missing two of the plastic blocks and one of the metal blocks that mount the antenna elements. It is posible to make these blocks or buy them from Mosley. Price is $60 local pick up only Washington DC area.

Al

5490. Re: Follow-up Disk Skin Effect Experiment

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-22 14:52:53 UTC
From: Reg Edwards <g4fgq.regp@btinternet.com>
Message-ID: <amklg4gno1@helle.btinternet.com>
Source record: 134180

"Roy Lewallen" wrote

>Then connect the capacitor to another,
> completely discharged 1000uF capacitor. Use a direct, very low
> resistance connection. You'll find that you end up with 5 volts on each
> capacitor.
==========

Roy, you are the cheat. Any value of resistor can be used with the same result. The process just takes longer.

Whatever the resistor value the "missing" energy is dissipated in it. Or is partially converted to sound energy. Even radiated.

5491. HELP YAESU ATAS100

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-22 16:55:28 UTC
From: Al Cristaldi <megaman@cybernet1.com>
Message-ID: <amkskt01usq@enews3.newsguy.com>
Source record: 134182

Anyone have a pictorial of this antenna (THE GUTS INSIDE).

Intermittent problem with tuning. When vehicle is stationary it tunes fine and SWR stable; when vehicle in motion greater then 25 MPH tunes fine and stable; from 1-24 MPH the SWR is erratic. All ground straps are secure ... have heard that the there are two clips inside that push again the bearings of the loading coil, could be worn?

--
Al Cristaldi
kk7gv@arrl.net

5492. Re: Can buried radials be insulated wire??

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-22 17:04:24 UTC
From: gaschafer@attbi.com
Message-ID: <3d8df84c.1953926@netnews.attbi.com>
Source record: 134181

Also if you want to use the radial system as a lightning ground in
addition, bare wire buried
would be the choice. As most of the energy in lightning is at 1 mhz
and below a capacitive
ground would not be very effective.

73
Gary K4FMX

5493. how does power output increase affect S-Meter on the other side?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-22 19:08:43 UTC
From: Andreas Hofmann <andreash23@hotmail.com>
Message-ID: <aml4g9$1c0$1@feed.centurytel.net>
Source record: 134183

Hi,

I am trying to figure out how a 10 dB power increase (10 W --> 100W) will affect the S-Meter on the other side. I know that the S-Meter measures voltage, so I don't think the 10 dB can be applied to s-units? Any insight is appreciated.

Also, would 10 dB antenna gain have the same effect?

Thanks,

Andreas, KU7T

5494. Re: Carolina Windom, G5RV or convential dipole

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-22 19:32:06 UTC
From: Mark Keith <nm5k@wt.net>
Message-ID: <3D8E1AB6.4018@wt.net>
Source record: 134187

CAM wrote:
>
> Mark Keith wrote:
> > A dipole fed with coax on 80m is pretty much unbeatable by any equal
> > length wire antenna. But, alas, not very multibandable. I guess the
> > ladder line/tuner the next best thing. Nothing wrong with the ladder
> > line, but the tuner will add a little loss, and usually the antenna will
> > slightly lose against the coax fed dipole. Myself, I'm too hard core to
> > ever consider a windom or G5RV on 80m. I've tried both, and they were
> > below par for my standards. Normally, nothing but coax fed dipoles for
> > me on 80m.
>
> How about an 80m dipole fed with 1/2WL of ladder-line? That's what I use.

You don't use a tuner, so your loss should be very slightly less than
with the coax. But being the coax loss on 80m is very low, and close to
ladder line numbers, there should be no real difference between them in
the real world. MK
--
http://web.wt.net/~nm5k

5495. Re: how does power output increase affect S-Meter on the other side?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-22 19:39:19 UTC
From: CAM <Cecil.A.Moore@ieee.org>
Message-ID: <3D8E1C67.36598CA7@ieee.org>
Source record: 134184

Andreas Hofmann wrote:
> I am trying to figure out how a 10 dB power increase (10 W --> 100W) will
> affect the S-Meter on the other side. I know that the S-Meter measures
> voltage, so I don't think the 10 dB can be applied to s-units? Any insight
> is appreciated.

The number of dB's in an "S-unit" varies all over the place depending on the particular receiver. It's supposed to be 6dB per S-unit but rarely ever is.

> Also, would 10 dB antenna gain have the same effect?

The same effect as a 10 dB increase in power? Not exactly. A 10 dB increase in power results in a 10 dB increase in all directions. A 10 dB increase in antenna gain results in an increase in one direction or maybe in a plane, but *never* in all directions. Increasing the power into a vertical monopole by a factor of ten is obviously not the same thing as putting up a beam with 10 dB gain over a vertical monopole. Which choice one makes depends on what one is trying to accomplish.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

5496. Re: how does power output increase affect S-Meter on the other side?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-22 19:53:56 UTC
From: Andreas Hofmann <andreash23@hotmail.com>
Message-ID: <aml75q$1tp$1@feed.centurytel.net>
Source record: 134185

Let's simplify my question:

If I would turn the 10 dB beam into the receiver's direction, would the signal strength on the receiver be the same as with 10 dB power increase (I am not talking about S/N)? It should, right?

Andreas

"CAM" <Cecil.A.Moore@ieee.org> wrote in message news:3D8E1C67.36598CA7@ieee.org...
> Andreas Hofmann wrote:
> > I am trying to figure out how a 10 dB power increase (10 W --> 100W) will
> > affect the S-Meter on the other side. I know that the S-Meter measures
> > voltage, so I don't think the 10 dB can be applied to s-units? Any insight
> > is appreciated.
>
> The number of dB's in an "S-unit" varies all over the place depending on the
> particular receiver. It's supposed to be 6dB per S-unit but rarely ever is.
>
> > Also, would 10 dB antenna gain have the same effect?
>
> The same effect as a 10 dB increase in power? Not exactly. A 10 dB
> increase in power results in a 10 dB increase in all directions. A 10 dB
> increase in antenna gain results in an increase in one direction or maybe
> in a plane, but *never* in all directions. Increasing the power into a
> vertical monopole by a factor of ten is obviously not the same thing as
> putting up a beam with 10 dB gain over a vertical monopole. Which choice
> one makes depends on what one is trying to accomplish.
> --
> cheers, CAM http://www.qsl.net/w5dxp
>
>
> -----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
> http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
> -----== Over 80,000 Newsgroups - 16 Different Servers! =-----

5497. Re: how does power output increase affect S-Meter on the other side?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-22 19:55:34 UTC
From: Reg Edwards <g4fgq.regp@btinternet.com>
Message-ID: <aml77m$5ae$1@venus.btinternet.com>
Source record: 134186

An S-meter is a watt-meter. It is scaled in decibels relative to 50
pico-watts.

It indicates power input to the receiver. The receiver input resistance is
50 ohms.

S9 = 50 pico-watts, which is the same power as 50 micro-volts across 50
ohms.

One S-unit = 6 decibels.

For every S-unit less than S9 the receiver power input decreases by 6 dB.

Above S9 the meter is scaled directly in decibels relative to 50 pico-watts.

The foregoing is enough for you to work things out.

==========

"Andreas Hofmann" wrote
> Hi,
>
> I am trying to figure out how a 10 dB power increase (10 W --> 100W) will
> affect the S-Meter on the other side. I know that the S-Meter measures
> voltage, so I don't think the 10 dB can be applied to s-units? Any
insight
> is appreciated.
>
> Also, would 10 dB antenna gain have the same effect?
>
> Thanks,
>
> Andreas, KU7T
>
>

5498. Re: how does power output increase affect S-Meter on the other side?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-22 20:48:11 UTC
From: STARPOINT <iz5eep@libero.it>
Message-ID: <amlakfpou1@lacerta.tiscalinet.it>
Source record: 134188

Hi Andreas..
See: http://www.g4wif.fsnet.co.uk/q_spind.htm
Section: S Units (54k) by Paul NA5N

' 73
IZ5EEP Marco

"Andreas Hofmann" <andreash23@hotmail.com> ha scritto nel messaggio
news:aml4g9$1c0$1@feed.centurytel.net...
> Hi,
>
> I am trying to figure out how a 10 dB power increase (10 W --> 100W) will
> affect the S-Meter on the other side. I know that the S-Meter measures
> voltage, so I don't think the 10 dB can be applied to s-units? Any
insight
> is appreciated.
>
> Also, would 10 dB antenna gain have the same effect?
>
> Thanks,
>
> Andreas, KU7T
>
>

5499. Re: how does power output increase affect S-Meter on the other side?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-22 20:49:25 UTC
From: richardharrison@webtv.net
Message-ID: <22424-3D8E2CD5-77@storefull-2316.public.lawson.webtv.net>
Source record: 134191

Andreas Hoffman wrote:
"If I turn the 10 dB beam into the receiver`s direction, would the signal strength on the receiver be the same as with 10 dB power increase (I`m not talking about S/N)?"

The receiver has no way of knowing if a 10-dB increase comes from antenna gain or increased power to a non-directional antenna. The gain is fungible.

Best regards, Richard Harrison, KB5WZI

5500. Butternut as a replacement for trap verticals

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-22 20:59:49 UTC
From: Jim K <jkeller@cox.net>
Message-ID: <9bqj9.55704$S32.3631973@news2.west.cox.net>
Source record: 134189

I'm thinking of replacing my old but reliable ground mounted Hygain 14AVQ with a Butternut HF-9V. Just curious if anyone else has made a similar switch from a trap vertical such as a 14AVQ or a Hustler BTV to an HF-9V and if there was an improvement to performance. If you had an adequate ground system for the original, were any changes required for the Butternut.

Thanks,
Jim Keller
WB6YxY

Oceanside, Ca.

5501. Re: how does power output increase affect S-Meter on the other side?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-22 21:12:01 UTC
From: gaschafer@attbi.com
Message-ID: <3d8e325b.16819620@netnews.attbi.com>
Source record: 134190

I see a lot of people get confused about S meters. The S meter
measures the AGC voltage in
the receiver. A watt meter measures the voltage from a diode. What
matters is how it is
calibrated. Reg has a very good reply.

Any 10 DB change in the signal strength in the circuit anywhere will
cause a 10 DB change in
the S meter. If the power is increased by 10 DB or if the transmitter
antenna gain is increased
by 10 DB (in the direction of the receiver) or if the receiver antenna
gain is increased by 10 DB
(in the direction of the transmitter).

73
Gary K4FMX

On Sun, 22 Sep 2002 19:55:34 +0000 (UTC), "Reg Edwards"
<g4fgq.regp@btinternet.com> wrote:

>An S-meter is a watt-meter. It is scaled in decibels relative to 50
>pico-watts.
>
>It indicates power input to the receiver. The receiver input resistance is
>50 ohms.
>
>S9 = 50 pico-watts, which is the same power as 50 micro-volts across 50
>ohms.
>
>One S-unit = 6 decibels.
>
>For every S-unit less than S9 the receiver power input decreases by 6 dB.
>
>Above S9 the meter is scaled directly in decibels relative to 50 pico-watts.
>
>The foregoing is enough for you to work things out.
>
>==
>
>"Andreas Hofmann" wrote
>> Hi,
>>
>> I am trying to figure out how a 10 dB power increase (10 W --> 100W) will
>> affect the S-Meter on the other side. I know that the S-Meter measures
>> voltage, so I don't think the 10 dB can be applied to s-units? Any

>insight
>> is appreciated.
>>
>> Also, would 10 dB antenna gain have the same effect?
>>
>> Thanks,
>>
>> Andreas, KU7T
>>
>>
>
>

5502. Re: how does power output increase affect S-Meter on the other side?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-22 21:12:51 UTC
From: Steve <n4lq@iglou.com>
Message-ID: <3d8e3fe2_1@news.iglou.com>
Source record: 134195

No. Your beam could have a huge null off the side and turning a "10db" gain antenna toward a receiver could result in a 30db increase. Now maybe if you aimed a dipole at a station, measured the signal strength then replaced it with your 10db gain antenna aimed in the same direction, you would see a 10db increase but at the same time see a 10db decrease in some other direction. No magic gain, just concentration of the beam in one direction.

--
Steve
N4LQ

"Andreas Hofmann" <andreash23@hotmail.com> wrote in message news:aml75q$1tp$1@feed.centurytel.net...
> Let's simplify my question:
>
> If I would turn the 10 dB beam into the receiver's direction, would the
> signal strength on the receiver be the same as with 10 dB power increase (I
> am not talking about S/N)? It should, right?
>
> Andreas
>
> "CAM" <Cecil.A.Moore@ieee.org> wrote in message
> news:3D8E1C67.36598CA7@ieee.org...
> > Andreas Hofmann wrote:
> > > I am trying to figure out how a 10 dB power increase (10 W --> 100W) will
> > > affect the S-Meter on the other side. I know that the S-Meter measures
> > > voltage, so I don't think the 10 dB can be applied to s-units? Any insight
> > > is appreciated.
> >
> > The number of dB's in an "S-unit" varies all over the place depending on the
> > particular receiver. It's supposed to be 6dB per S-unit but rarely ever is.
> >
> > > Also, would 10 dB antenna gain have the same effect?
> >
> > The same effect as a 10 dB increase in power? Not exactly. A 10 dB
> > increase in power results in a 10 dB increase in all directions. A 10 dB
> > increase in antenna gain results in an increase in one direction or maybe
> > in a plane, but *never* in all directions. Increasing the power into a

> > vertical monopole by a factor of ten is obviously not the same thing as
> > putting up a beam with 10 dB gain over a vertical monopole. Which choice
> > one makes depends on what one is trying to accomplish.
> > --
> > cheers, CAM http://www.qsl.net/w5dxp
> >
> >
> > -----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
> > http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
> > -----== Over 80,000 Newsgroups - 16 Different Servers! =-----
>
>

5503. 5/8 vertical - VHF

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-22 21:18:41 UTC
From: Dez <dez@cytanet.com.cy>
Message-ID: <amlc2ahdm1@news.cytanet.com.cy>
Source record: 134192

Hi,

I want to homebrew a 5/8 wave vertical for 70 MHz

I've calculated the length of the vertical radiator to be about 2.54 mtrs,
however I do not have much idea what value of series inductance to
get a decent 50 ohm match.

Anyone suggest likely values of series L?

73

Dez

5504. Re: Bicycle mobile 2M antenna recommend??

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-22 21:39:50 UTC
From: richardharrison@webtv.net
Message-ID: <22426-3D8E38A6-40@storefull-2316.public.lawson.webtv.net>
Source record: 134193

CAM wrote:
"It supports a J-pole made out of 300-ohm twin-lead.

You can even buy the J-pole ready-made from MFJ. I did.

Best regards, Richard Harrison, KB5WZI

5505. Re: 5/8 vertical - VHF

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-22 22:02:09 UTC
From: Reg Edwards <g4fgq.regp@btinternet.com>
Message-ID: <amlel0nts1@knossos.btinternet.com>
Source record: 134194

Hi Dez,

Download in a few seconds program BOTLOAD from website below. Not zipped-up.
Run immediately. Easy to use.

It will tell you what you need to know including dimensions and number of
turns on the coil.

========================
Regards from Reg G4FGQ
Free Radio Design Software
Go to http://www.g4fgq.com
========================

============================

"Dez" <dez@cytanet.com.cy> wrote in message
news:amlc2ahdm1@news.cytanet.com.cy...
> Hi,
>
> I want to homebrew a 5/8 wave vertical for 70 MHz
>
> I've calculated the length of the vertical radiator to be about 2.54 mtrs,
> however I do not have much idea what value of series inductance to
> get a decent 50 ohm match.

5506. Re: how does power output increase affect S-Meter on the other side?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-22 22:06:42 UTC
From: "J. Harvey" <JM002.Harvey_ANTI*SPAM_@Sympatico.ca>
Message-ID: <R9rj9.255$2T6.165922@news20.bellglobal.com>
Source record: 134196

"Andreas Hofmann"
> Let's simplify my question:
> If I would turn the 10 dB beam into the receiver's direction,
> would the signal strength on the receiver be the same as
> with 10 dB power increase (I am not talking about S/N)?
> It should, right?

Not necessarily. A "10 dB beam" might well have a deep null in one or more directions. If you swing the beam so that the other guy goes from a null (-xx dBd) to the main beam (+10 dBd), then the improvement at the far end might be much greater than 10dB. On the other hand, the other guy might have started out fairly close to the main beam and the improvement might be much less than 10dB.

5507. Re: Carolina Windom, G5RV or convential dipole

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-22 22:30:03 UTC
From: CAM <Cecil.A.Moore@ieee.org>
Message-ID: <3D8E446B.7A9FE5AF@ieee.org>
Source record: 134197

Mark Keith wrote:
>
> CAM wrote:
> > How about an 80m dipole fed with 1/2WL of ladder-line? That's what I use.
>
> You don't use a tuner, so your loss should be very slightly less than
> with the coax. But being the coax loss on 80m is very low, and close to
> ladder line numbers, there should be no real difference between them in
> the real world. MK

The difference is my 80m dipole works well on all HF bands without a
tuner simply *because* I feed it with ladder-line.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

5508. Re: how does power output increase affect S-Meter on the other side?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-22 22:39:22 UTC
From: CAM <Cecil.A.Moore@ieee.org>
Message-ID: <3D8E469A.962B270D@ieee.org>
Source record: 134198

Andreas Hofmann wrote:
> If I would turn the 10 dB beam into the receiver's direction, would the
> signal strength on the receiver be the same as with 10 dB power increase (I
> am not talking about S/N)? It should, right?

Not necessarily as it depends on take-off angle as well as gain. Let's look at it from the receive standpoint. The receiver probably cannot tell the difference between 10 dB due to a power increase and 10 dB due to additional antenna gain. But obviously it is difficult to compare a vertical monopole with a maximum gain of 0 dB at a take-off angle of 15 degrees with a beam with a maximum gain of 10dB but with a take-off angle of 45 degrees. The vertical may still beat the beam at certain distances.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

5509. Re: how does power output increase affect S-Meter on the other side?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-22 22:56:51 UTC
From: CAM <Cecil.A.Moore@ieee.org>
Message-ID: <3D8E4AB3.A333A2E@ieee.org>
Source record: 134199

Gary Schafer wrote:
> Any 10 DB change in the signal strength in the circuit anywhere will
> cause a 10 DB change in the S meter.

That's like saying a 10 dB change in signal strength will cause a perfectly proportional change in the AGC voltage. I doubt that you can say that about most receivers. Some receivers have an S-unit equal to 2 dB. Some have an S-unit equal to 8 dB. Some receivers have a different number of dB's associated with one S-unit depending on where it is located on the S-unit meter. Roy, W7EL, has previously described a way to use an attenuator and a fixed point on a receiver S-meter to do valid measurements.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

5510. Re: 5/8 vertical - VHF

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-22 23:07:03 UTC
From: CAM <Cecil.A.Moore@ieee.org>
Message-ID: <3D8E4D17.C43F7D8@ieee.org>
Source record: 134201

Dez wrote:
> I want to homebrew a 5/8 wave vertical for 70 MHz
>
> I've calculated the length of the vertical radiator to be about 2.54 mtrs,
> however I do not have much idea what value of series inductance to
> get a decent 50 ohm match.
>
> Anyone suggest likely values of series L?

Just modeled it with EZNEC. Make XL approximately 150 ohms. EZNEC sez you
may have to increase the length to achieve 50 ohms.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
------== Over 80,000 Newsgroups - 16 Different Servers! =-----

5511. Re: how does power output increase affect S-Meter on the other side?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-22 23:07:57 UTC
From: "Ian White, G3SEK" <G3SEK@ifwtech.co.uk>
Message-ID: <W81$g6KN1kj9EAE1@ifwtech.co.uk>
Source record: 134200

Reg Edwards wrote:

>An S-meter is a watt-meter. It is scaled in decibels relative to 50
>pico-watts.
>
Maybe in an idealized specification - but in the real world, this and
almost all that follows is not true.

>It indicates power input to the receiver. The receiver input resistance is
>50 ohms.
>
The receiver input impedance is assumed to be 50 ohms, but rarely is.

>S9 = 50 pico-watts, which is the same power as 50 micro-volts across 50
>ohms.
>
Only in an obscure IARU specification, which no manufacturer follows.
S-meter calibrations vary between manufacturers, models and individual
samples of the same model.

>One S-unit = 6 decibels.
>
>For every S-unit less than S9 the receiver power input decreases by 6 dB.
>
But read the lab tests in the equipment reviews. In real receivers sold
to amateurs, an S-unit can be as little as 1-2dB at the bottom of the
scale, rising to as much as 7-8dB between S8 and S9.

>Above S9 the meter is scaled directly in decibels relative to 50 pico-watts.
>
No, it's just scaled in decibels relative to the S9 level, whatever that
may be. And the dB scale above S9 is no more accurate than the S-point
scale below.

If a station is S9 and cuts his power by 10dB, he may go down by 1-2
S-points. But if he's S5 and does the same, he'll probably go down by
3-4 S-points.

Also, the whole mess shifts up and down the meter scale, according to
whether you have a preamp or attenuator switched in, or according to
which way you're pointing your beam if you have one.

This raises another question: if *you* switch in the preamp and/or swing
your beam, has the other person's signal really become stronger? Easier
to copy, maybe... but stronger?

>The foregoing is enough for you to work things out.
>
The foregoing from Reg is enough to lure any newcomer into fantasy-land
for several years, until he gains enough experience to learn that
S-meters are not to be trusted unless you have calibrated them yourself.

--
73 from Ian G3SEK 'In Practice' columnist for RadCom (RSGB)
Editor, 'The VHF/UHF DX Book'
http://www.ifwtech.co.uk/g3sek

5512. design for VHF 1/2 wave for bicycle?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-22 23:15:34 UTC
From: lagagnon@fakesprint.ca
Message-ID: <3d8e4dfb.3862246@news.sprint.ca>
Source record: 134202

First of all thanks to all who responded to my recent post for recommendations for a VHF antenna for a bicycle. I have decided to go with a half wave design. Larsen appears to make the antenna I want, as do some marine antenna companies, but I would prefer to build my own. Any designs out there?

I do not want a J-pole, nor anything tied to a fiberglass flag. I want it to be as slim and trim as possible and thus something with simple base and slim flexible SS whip. The design I would need would be the base transformer section and overall length of the whip to resonate at 146MHz.

Any help appreciated....Larry VE6MK.
****
to send direct email remove "fake" from address

5513. Re: how does power output increase affect S-Meter on the other side?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-22 23:29:32 UTC
From: Fred Hambrecht <w4jle@charter.net>
Message-ID: <uoskiuni2pn654@corp.supernews.com>
Source record: 134203

The supposed standard is 1 S-unit equals 6dB, it rarely is in practice.

10dB is 10dB no matter what the source of the increase.

"Andreas Hofmann" <andreash23@hotmail.com> wrote in message
news:aml4g9$1c0$1@feed.centurytel.net...
> Hi,
>
> I am trying to figure out how a 10 dB power increase (10 W --> 100W) will
> affect the S-Meter on the other side. I know that the S-Meter measures
> voltage, so I don't think the 10 dB can be applied to s-units? Any
insight
> is appreciated.
>
> Also, would 10 dB antenna gain have the same effect?
>
> Thanks,
>
> Andreas, KU7T
>
>

5514. Re: how does power output increase affect S-Meter on the other side?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-23 00:25:52 UTC
From: Bill M <exray@no>
Message-ID: <uosnsg2p7amc2f@corp.supernews.com>
Source record: 134204

"Ian White, G3SEK" wrote:
>
> But read the lab tests in the equipment reviews. In real receivers sold
> to amateurs, an S-unit can be as little as 1-2dB at the bottom of the
> scale, rising to as much as 7-8dB between S8 and S9.
>
>
> If a station is S9 and cuts his power by 10dB, he may go down by 1-2
> S-points. But if he's S5 and does the same, he'll probably go down by
> 3-4 S-points.

I certainly won't disagree with this point given that it has been
repeatedly proven to be the case, but I would like to know why.
Obviously a radio manufacturer doesn't calibrate the s-meter poorly just
so all the numbers fit neatly...or do they?
Or is it that there is such a wide variation in the linearity of the
gain/avc circuits in a given model receiver?
Seems to me that deciding where to put the tics on a meter face
shouldn't become so full of error.
(Staying with a given receiver model of course, not comparing Model X vs
Model Y.)
Comments?

-Bill

5515. Re: Autek and MFJ antenna Analysers

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-23 00:53:58 UTC
From: Bill Aycock <baycock@hiwaay.net>
Message-ID: <3D8E6626.2070902@hiwaay.net>
Source record: 134205

Have used both. The MFJ is more verstile and easier to use
W4BSG

don bryant wrote:
> Any one had comparative experience, between the Autek VA 1 RX Analyser and
> the MFJ SWR Analyser? Many tnx. Don. ZS6BTP
>
>

5516. Re: Stealth patio antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-23 01:01:40 UTC
From: "Randy A. Hefner" <randy_NO_SPAM_PLEASE_@frs-usa.com>
Message-ID: <amlp5o$6snte$1@ID-160894.news.dfncis.de>
Source record: 134206

You asked what you should do. Live up to the terms of the contract you signed!

You say that you try to use stealthy antennas. That doesn't mask the signal you are sending throughout your neighbor's homes. They have a right to live in an antenna "un-friendly" environment...That is what they signed-up for...As you did.

--
Randy A. Hefner
http://www.frs-usa.com
http://www.murs-usa.com

"Beans" <beans@gate.net> wrote in message news:3D8D0527.1BAD21E4@gate.net...
> "Randy A. Hefner" wrote:
>
> >
> >
> > If you agreed with the "cc&r's", why are you now wanting to violate them?
> >
> >
>
> Randy, I can't speak for everyone, but where I live there are cc&r's that restrict antennas. I moved in
> 18 years ago. Got involved with amateur radio 16 months ago. When I moved in, I had no idea I would
> ever want an antenna, so it didn't bother me. Hell, it could have said no hippopotamus's allowed,
> because I don't expect to own one of those either.
>
> I can't afford to move somewhere else. So, what should I do? I do what I can to be unobtrusive and
> stealthy. so far,no problems. But, I do get tired of hearing "why did you move in there?" No offense
> intended to you, but it does happen that way.
>
> Jeff
>
>
>
>

5517. Re: how does power output increase affect S-Meter on the other side?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-23 01:42:43 UTC
From: gaschafer@attbi.com
Message-ID: <3d8e7133.32909196@netnews.attbi.com>
Source record: 134207

On Sun, 22 Sep 2002 17:56:51 -0500, CAM <Cecil.A.Moore@ieee.org>
wrote:

>Gary Schafer wrote:
>> Any 10 DB change in the signal strength in the circuit anywhere will
>> cause a 10 DB change in the S meter.
>
>That's like saying a 10 dB change in signal strength will cause a
>perfectly proportional change in the AGC voltage. I doubt that you
>can say that about most receivers. Some receivers have an S-unit
>equal to 2 dB. Some have an S-unit equal to 8 dB. Some receivers
>have a different number of dB's associated with one S-unit depending
>on where it is located on the S-unit meter. Roy, W7EL, has previously
>described a way to use an attenuator and a fixed point on a receiver
>S-meter to do valid measurements.
>--
>cheers, CAM http://www.qsl.net/w5dxp
>
>

I think what the original poster is trying to figure out is what an S
meter really reads.
What he is trying to get at is if the S meter reads voltage then he
is thinking that it should take
20 DB signal change to see 10 DB change in the S meter.

While it is very true that the calibration of most S meters on most
receivers leave something to
be desired, it is really power level differences that the meter is
loosely calibrated in.

In reading the following sentences of my previous post I am saying
that it does not matter where
the 10 db comes from. Transmitter antenna gain, transmitter power or
receiver antenna gain.
They all will give the same increase in S meter reading. If the meter
happens to be calibrated
right then it will show 10 DB change.

"Any 10 DB change in the signal strength in the circuit anywhere will
cause a 10 DB change in
the S meter. If the power is increased by 10 DB or if the transmitter
antenna gain is increased
by 10 DB (in the direction of the receiver) or if the receiver antenna
gain is increased by 10 DB
(in the direction of the transmitter)."

Nothing complicated. Not attesting to how accurate an S meter is or
isn't.
Of course using a calibrated attenuater ahead of the receiver and
setting the signal level to the
same point on the S meter takes the error out of the S meter circuit
when making actual
measurements.

73
Gary K4FMX

5518. Re: design for VHF 1/2 wave for bicycle?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-23 01:50:26 UTC
From: Bob Miller <bamiller@texas.net>
Message-ID: <MnCOPaffl8f4gXHfHoVc4AHyCPNN@4ax.com>
Source record: 134209

lagagnon@fakesprint.ca (Larry Gagnon) wrote:

>First of all thanks to all who responded to my recent post for
>recommendations for a VHF antenna for a bicycle. I have decided to go
>with a half wave design. Larsen appears to make the antenna I want, as
>do some marine antenna companies, but I would prefer to build my own.
>Any designs out there?

The base-fed Larsens are designed to work against the large metal surface of a
car or truck.

>
>I do not want a J-pole, nor anything tied to a fiberglass flag. I want
>it to be as slim and trim as possible and thus something with simple
>base and slim flexible SS whip. The design I would need would be the
>base transformer section and overall length of the whip to resonate at
>146MHz.

It's not precisely what you are asking for, but a vertical, center-fed 1/2-wave
dipole would eliminate the need for the ground plane which an auto provides, but
you're not going to get on a bicycle. I'll leave the construction details to
your imagination...

Bob
k5qwg

>
>Any help appreciated....Larry VE6MK.
>**********************
>to send direct email remove "fake" from address

5519. transverter design for 20 meters?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-23 01:58:26 UTC
From: AJ Sanderson <ajsand@nospam.com>
Message-ID: <amlsoc$s83$1@slb5.atl.mindspring.net>
Source record: 134210
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc,sci.electronics.design

I'd like to use a transverter with a 10 meter HTX-100 for 20 and maybe 80 meter operation. Is this possible and where can I find plans?

Thank you,
AJ

5520. Radials ?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-23 02:09:50 UTC
From: Dave <kaw1999@bellsouth.net>
Message-ID: <cFuj9.266358$2L.10458304@e3500-atl2.usenetserver.com>
Source record: 134211

With a ground mounted vertical using bare copper wires for the radials will it help, hinder, or make no deference to put 8 ft ground rods at the far end of the radials?

Thanks,
Dave (Klutz)
VROC # 1911
VRA # 1-0-69A-1500G1
WB5QMW
99 Nomad G/G
K&N
22200+ miles
Lynn Haven, FL

5521. Re: design for VHF 1/2 wave for bicycle?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-23 02:25:53 UTC
From: Dale Parfitt <parinc@verizon.net>
Message-ID: <3D8E752C.6A15B8EE@verizon.net>
Source record: 134212

Bob Miller wrote:

> lagagnon@fakesprint.ca (Larry Gagnon) wrote:
>
> >First of all thanks to all who responded to my recent post for
> >recommendations for a VHF antenna for a bicycle. I have decided to go
> >with a half wave design. Larsen appears to make the antenna I want, as
> >do some marine antenna companies, but I would prefer to build my own.
> >Any designs out there?
>
> The base-fed Larsens are designed to work against the large metal surface of a
> car or truck.
>

Larsen does, or at least used to, make ground independent half wave designs.

Dale W4OP

5522. Re: how does power output increase affect S-Meter on the other side?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-23 02:28:30 UTC
From: richardharrison@webtv.net
Message-ID: <16265-3D8E7C4E-362@storefull-2311.public.lawson.webtv.net>
Source record: 134213

Gary Schafer wrote:
"Any 10 DB change in the signal strength in the circuit anywhere will
cause a 10 DB change in the S meter."

True! the deflection change may be anything in indicated "S" units but
if caused by a 10-db change in received signal, the change in deflection
represents 10 db. Marks can be made on the meter face or glass to
provide calibration for these two known levels and the indication of
their difference is repeatable.

Best regards, Richard Harrison, KB5WZI

5523. Bad Guy

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-23 02:48:48 UTC
From: apollo2225@yahoo.com
Message-ID: <ec93ade5.0209221848.7c94e155@posting.google.com>
Source record: 134214

Group Warning

I would like you to know about a person who agreed to trade software with me his name is Tyron KF4DLA (IEDmaker) he lives in Florida I sent him two software programs and I only asked for one he received the programs I sent him but he never sent the software he promised me I emailed him and he kept saying he would send it out I have been waiting a month now he won't respond to my emails I would advise everyone not to trade any software with him he will take your's and give you nothing in return.

5524. Re: Bad Guy

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-23 03:06:15 UTC
From: Bill M <exray@no>
Message-ID: <uot195nhse4f89@corp.supernews.com>
Source record: 134215

qc wrote:
>
> Group Warning
>
> I would like you to know about a person who agreed to trade software
> with me his name is Tyron KF4DLA (IEDmaker) he lives in Florida I
> sent him two software programs and I only asked for one he received
> the programs I sent him but he never sent the software he promised
> me I emailed him and he kept saying he would send it out I have been
> waiting a month now he won't respond to my emails I would advise
> everyone not to trade any software with him he will take your's and
> give you nothing in return.

Here, use a few of mine - I have plenty.
. . . . . .

-Bill

5525. Re: Stealth patio antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-23 03:17:53 UTC
From: Beans <beans@gate.net>
Message-ID: <3D8E87E1.DC6E6A42@gate.net>
Source record: 134216

"Randy A. Hefner" wrote:

> You asked what you should do. Live up to the terms of the contract you
> signed!
>
> You say that you try to use stealthy antennas. That doesn't mask the signal
> you are sending throughout your neighbor's homes.

What?? Are you kidding me? We're talking 100 watts (maybe) with the nearest place 50 feet away. I can promise you that there is no RFI, CC&R's have nothing to do with signals, it is entirely about esthetics.

Jeff

5526. Re: Magloop question, repost

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-23 04:05:41 UTC
From: Mike Coslo <mcoslo@adelphia.net>
Message-ID: <3D8EBD56.3000207@adelphia.net>
Source record: 134217

Reg Edwards wrote:

> Over the last few years it has been suggested I am a Guru myself. Usually
> in the derogatory sense. But I always consider it to be a sort of
> back-handed compliment. On the other hand I consider myself not as a Guru
> but an Iconoclast - a cast-downer of unjustifiable idols !
>
> Having got that partially guilty, public self-examination off my chest I can
> now finish the remaining quarter-bottle and retire to bed.

There are many of us out there who are listening!

- Mike -

5527. Re: Radials ?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-23 04:27:13 UTC
From: JC <on5mjREMOVE@skynet.be>
Message-ID: <3d8e9825$0$204$ba620e4c@news.skynet.be>
Source record: 134218

Following me there is no difference. It's better to have 100+ radials of normal copper wire (> quarter wavelength). Ground rods will help for lightning if placed close to the antenna pole, with a protection hardware. I have used a grounded pole supplied with a gamma match.

73 de ON5MJ

5528. Re: Radials ?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-23 04:30:36 UTC
From: richardharrison@webtv.net
Message-ID: <22423-3D8E98EC-264@storefull-2316.public.lawson.webtv.net>
Source record: 134220

Dave wrote;
"with a ground mounted vertical using bare copper wires for radials will it help, hinder, or make no difference to put 8 ft ground rods at the far ends of the radials?"

Probably no difference.

Assuming you are using the vertical for h-f, the classic ground system studies were conducted at 3 MHz, Ed Laport has a report. It is found on page 118 of "Radio Antenna Engineering":

"The ground system performs solely as a circuital element with the shorter vertical radiators, serving to reduce ground losses. With a system of 120 radial wires buried near the surface of the soil to a length of 0.4 to 0.5 wavelength, almost all of the ground current is collected from the electric field above the ground system and current densities below the ground system are very small."

The conclusion is that the radials are so long that displacement current levels at the ends are insignificant so it makes no sense to use ground rods out there. Also the multitude of radials has collected displacement current from the tower so effectively at shorter radial distances that ground currents deeper than the radials is inconsequential. So, ground rods aren`t worth the effort. They are not usual in AM broadcast transmitting systems, but may be found in low frequency systems where skin depths are large and radials tend to be short in terms of wavelength.

Best regards, Richard Harrison, KB5WZI

5529. Re: transverter design for 20 meters?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-23 04:36:49 UTC
From: JC <on5mjREMOVE@skynet.be>
Message-ID: <3d8e9a65$0$213$ba620e4c@news.skynet.be>
Source record: 134219
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc,sci.electronics.design

I think transverters are used for increasing the working frequency not decreasing it, i.e. passing from HF to VHF. I never saw plans for passing from 10m to 20m or even 80m. The contrary would be easier as 10m is an harmonic of 20m or 80m.

73 de ON5MJ

5530. Re: ham radio on a mountain bike

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-23 06:00:02 UTC
From: KC8PMX <kc8pmx@NOSPAMdiamondcs.net>
Message-ID: <ammvd842am5@enews3.newsguy.com>
Source record: 134233

I do not know much about the bicycle generators either (never used 'em, but
have seen 'em).... was actually curious myself.

--
Ryan, KC8PMX
FF/MFR
REMOVE "NOSPAM" in email address to reply.

"CW" <clinton.magers@attbi.com> wrote in message
news:8%vi9.470457$me6.56643@sccrnsc01...
> I don't know what they produce as far as charge but they do produce
> substantial resistance. I wouldn't have one.
> --
>
> CW
> KC7NOD
>
>
> "KC8PMX" <kc8pmx@NOSPAMdiamondcs.net> wrote in message
> news:amcdmi622pe@enews4.newsguy.com...
> > I wonder how much those generators used to power lights on bicycles
> actually
> > create? They might be able to help to recharge those batteries too?
> >
> >
> > --
> > Ryan, KC8PMX
> > FF/MFR
> > REMOVE "NOSPAM" in email address to reply.
> >
> >
> > "Jesse" <jplummer@bluefrognet.net> wrote in message
> > news:3D88940E.4B15B19A@bluefrognet.net...
> > > Anyone ever mount a radio on a bike? I want to mount my Yaesu FT1500
on
> > > my bike. I have an ample rechargeable battery, a bag to mount it. What
> > > would be a good antenna that wouldn't be too heavy, to tall (get
busted
> > > on low hanging branches) and be able to handle 50 Watts? Any
> > > suggestions?
> >
> >
>
>

5531. When to use a Balun

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-23 06:01:47 UTC
From: rhmcus@yahoo.com
Message-ID: <3d8ead8d.7903084@news.us.dell.com>
Source record: 134221

All

With wire antennas when is it appropriate and necessary to use a balun.. I understand that basically its an impedance matching transformer. Does it also isolate RF and keep it off the feed line and out of the shack.. Oh i'm using a G5RV full size and a differential T turner from MFJ..

Are there some good links on this subject?

Many thanks

Rich KG5IF

5532. Re: transverter design for 20 meters?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-23 06:36:45 UTC
From: Paul Keinanen <keinanen@sci.fi>
Message-ID: <9ictou84e6eoeoej5gee4sm8jg4adijgdf@4ax.com>
Source record: 134222
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc,sci.electronics.design

On Mon, 23 Sep 2002 06:36:49 +0200, "JC" <on5mjREMOVE@skynet.be>
wrote:

>I think transverters are used for increasing the working frequency not
>decreasing it, i.e. passing from HF to VHF. I never saw plans for passing
>from 10m to 20m or even 80m.

At least in England, there has been kits for allowing 2 m multimodes
(such as FT-290) access to the HF bands using a transverter.

>The contrary would be easier as 10m is an
>harmonic of 20m or 80m.

This is just a situation you try to avoid.

For instance a transmitting converter from 28 Mhz to 144 MHz often
suffers from these harmonics. Assume you want to transmit on 145.100
MHz on a repeater input and you set the HF radio to 29.100 MHz. The
5th harmonic of that is 145.500 Mhz, which falls in the middle of the
FM calling channel :-).

Thus, you have to be very careful to filter out any 5th harmonic from
the HF signal and also take care that the mixer does not generate any
larger amounts of 5th harmonics of the input frequency.

In general you should design the frequencies in such a way that no
harmonics from the low frequency signal or the local oscillator signal
fall close to the desired output frequency band, since it would be
very hard to filter them out, once they have been created.

Paul OH3LWR

5533. Re: how does power output increase affect S-Meter on the other side?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-23 07:00:45 UTC
From: "Ian White, G3SEK" <G3SEK@ifwtech.co.uk>
Message-ID: <UxRvjnCdwrj9EAVY@ifwtech.co.uk>
Source record: 134236

Bill M wrote:
>"Ian White, G3SEK" wrote:
>>
>> But read the lab tests in the equipment reviews. In real receivers sold
>> to amateurs, an S-unit can be as little as 1-2dB at the bottom of the
>> scale, rising to as much as 7-8dB between S8 and S9.
>>
>>
>> If a station is S9 and cuts his power by 10dB, he may go down by 1-2
>> S-points. But if he's S5 and does the same, he'll probably go down by
>> 3-4 S-points.
>
>I certainly won't disagree with this point given that it has been
>repeatedly proven to be the case, but I would like to know why.
>Obviously a radio manufacturer doesn't calibrate the s-meter poorly just
>so all the numbers fit neatly...or do they?
>Or is it that there is such a wide variation in the linearity of the
>gain/avc circuits in a given model receiver?

Yup. The gain/bias characteristics of dual-gate MOSFETs and PIN
attenuators are not guaranteed to be accurately "log-linear". AFAIK,
only the Analog Devices AD600 amplifiers (as used in the Carver IF strip
for example) will guarantee an accurate S-meter response... and those
are much more expensive than the penny components that manufacturers
like to use.

>Seems to me that deciding where to put the tics on a meter face
>shouldn't become so full of error.

That's true for analog meters, but bar-graph digital meters are much
more restricted. On the other hand, there's no reason why a digital
S-meter shouldn't be linearized in software. Some professional receivers
are beginning to do this, and also to take account of preamp/attenuator
selections and the change of sensitivity with frequency. Only then do
you get a real measure of the available power or voltage at the input
terminals.

But with an amateur S-meter, the only two things you can reliably say
are "You got stronger" or "You got weaker".

--
73 from Ian G3SEK 'In Practice' columnist for RadCom (RSGB)
Editor, 'The VHF/UHF DX Book'
http://www.ifwtech.co.uk/g3sek

5534. Re: transverter design for 20 meters?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-23 07:31:27 UTC
From: mike@corn2.freeserve.co.uk
Message-ID: <3d8ec118.328201@news.freeserve.net>
Source record: 134223
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc,sci.electronics.design

On Sun, 22 Sep 2002 21:58:26 -0400, "AJ Sanderson" <ajsand@nospam.com>
wrote:

>I'd like to use a transverter with a 10 meter HTX-100 for 20 and maybe 80
>meter operation. Is this possible and where can I find plans?
>
Toko have these for I.F.'s of 6m or 2m. The difficulty of using 10m
I.F. is that of keeping mixing products out of the TX output. For
Example take IF of 28.000Mhz mixed with 31.5Mhz to give 3.5Mhz
(difference) and 59.5Mhz (sum). The Eighth harmonic of 3.5 is ?? what
?. Now work out other combinations for the n* sum +/- n*diff) etc etc.
And then do the same for all the other HF bands. Not a pretty sight.
The 2m I.F. version would be a lot easier to keep clean.
hth Mike W, G8NXD aka M3MSM qthr
--

5535. balun

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-23 08:57:30 UTC
From: mefis <stare_wilno@poczta.onet.pl>
Message-ID: <amml2dbmb1@korweta.task.gda.pl>
Source record: 134224

balun not only maches impedances but makes the current to go in this same direction in both arms of the wire antenna

mefis

5536. Re: Radials ?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-23 10:07:34 UTC
From: Reg Edwards <g4fgq.regp@btinternet.com>
Message-ID: <ammp55$d5k$1@paris.btinternet.com>
Source record: 134225

A ground rod at the end of a radial has about the same effect as increasing
the length of the radial by the depth of the rod.

==========
Regards from Reg G4FGQ
Free Radio Design Software
Go to http://www.g4fgq.com
==========
"Dave" <kaw1999@bellsouth.net> wrote in message
news:cFuj9.266358$2L.10458304@e3500-atl2.usenetserver.com...
> With a ground mounted vertical using bare copper wires for the radials
will
> it help, hinder, or make no deference to put 8 ft ground rods at the far
end
> of the radials?
>
> Thanks,
> Dave (Klutz)
> VROC # 1911
> VRA # 1-0-69A-1500G1
> WB5QMW
> 99 Nomad G/G
> K&N
> 22200+ miles
> Lynn Haven, FL
>
>
>

5537. Magnetic Loop 40m

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-23 10:10:45 UTC
From: Alex <alex.draper1@rogers.com>
Message-ID: <FMBj9.101416$U_.485@news04.bloor.is.net.cable.rogers.com>
Source record: 134226

I would like to build a magnetic loop for 40m using a trombone capacitor.
What i was wondering if anyone had a design for one? 73

5538. Re: Review : ALA 330 active magnetic loop antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-23 10:20:50 UTC
From: Thierry Lombry <lombryt@hotmail.com>
Message-ID: <3d8eeb18_1@news.vo.lu>
Source record: 134227

"J. McLaughlin" <JCM@Power-Net.Net> a crit dans le message news:
uoq5a5g1tnk69a@corp.supernews.com...
> Dear Thierry:
> Well done. A useful contribution. Your review is also an example
> of how well content is preserved when English is used by one who's first
> language is not English.
> Do report back as you gain more experience. But please do not
> measure SWR of the receiving antenna by transmitting. If that is what
> you did, it is a wonder that something in the interface box was not
> injured.

Hi,

You are right...

I was in contact with the designer of my RTX, Toshii Torii, JA6QXW which
website in linked to mine.
He told that when the antenna tuner is tuning about 10W comes to the antenna
terminal and this to the mag.loop interface.
But up to now I have always thought that antenna tunesr work with a fictive
charge and do not emit on the air.

The 10W of power when tuning explains also why a small stabilized power
supply of 13.8V/ 3A used in place of a more powerfull i.e 20 A shuts down a
fraction of second the RTX when tuning.

At last with the loop, when I swich off the AT tuner I receive much better
all AM broadcasts below 3 MHz (i.e signal 58 in place of 51).
With my new tests I observe that even without AT tuner (button AT tune off)
all HF bands are matched to my 50 ohm (but it is maybe normal as I tuned a
first time) and perform better than my long wire on all band from 20 m and
above (up to 10m) with much less QRM.
Between 40-160m, the loop attenuate a lot signals but remove QRM.
NB. the magnetic loop ALA-330 is always a bit sensitive to QRM generate by
my nearby computer or recharger. the level of QRM is hover more that 4 times
attenuated (1 to 3 points)
See details on my website.

We learn from our mistakes... !

Thierry
ONL5183
http://www.astrosurf.com/lombry/menu-qsl.htm

> Let us hear you on the air someday.
> 73 Mac N8TT

5539. Re: When to use a Balun

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-23 10:48:19 UTC
From: k1bqt@aol.com
Message-ID: <20020923064819.12881.00005358@mb-mf.aol.com>
Source record: 134228

Although some may disagree (I can hear the howls of protest already), but it is good engineering practice to use some form of feedline choke anytime an unbalanced coaxial line is used to feed a balanced element such as a dipole. This could be implemented in the form of a 1:1 balun installed at the feed point. It could also be implemented in the form of a current choke made with ferrite material -- or by simply looping a few turns of coax at the feedpoint (see the ARRL Handbook for specific applications) . The idea is to prevent the outer surface of the coax braid from becoming a third uncontrolled leg of the antenna--with the potential for introducing several problems including RF in the shack, unwanted noise pick-up, detuning of the dipole to a displaced frequency, and even--in some cases--significant alteration of the antenna pattern. In the case of the G5RV, the "choke" is normally installed at the junction between the balanced and unbalanced feed line rather than at the antenna's feed point.

Rick K1BQT

5540. Re: transverter design for 20 meters?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-23 10:54:41 UTC
From: JC <on5mjREMOVE@skynet.be>
Message-ID: <3d8ef2f5$0$177$ba620e4c@news.skynet.be>
Source record: 134229
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc,sci.electronics.design

Completely right. My post was only general.

And I didn't know there was rigs transverting VHF to HF. I thought it was too hard in terms of filtering. Sorry for making confusion.

5541. Re: Bad Guy

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-23 11:09:08 UTC
From: Max <ve3tmt@yahoo.ca>
Message-ID: <VDCj9.1656$ls3.310288@news20.bellglobal.com>
Source record: 134230

"qc" <apollo2225@yahoo.com> wrote in message
news:ec93ade5.0209221848.7c94e155@posting.google.com...
> Group Warning
>
> I would like you to know about a person who agreed to trade software
> with me his name is Tyron KF4DLA (IEDmaker) he lives in Florida I
> sent him two software programs and I only asked for one he received
> the programs I sent him but he never sent the software he promised
> me I emailed him and he kept saying he would send it out I have been
> waiting a month now he won't respond to my emails I would advise
> everyone not to trade any software with him he will take your's and
> give you nothing in return.

The guy probably works in the Microsoft Piracy Division. Better lock your doors and watch your back. Now the they have your address, you are not safe.

5542. Re: Stealth patio antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-23 11:52:42 UTC
From: "Randy A. Hefner" <randy_NO_SPAM_PLEASE_@frs-usa.com>
Message-ID: <ammvaj$70upn$1@ID-160894.news.dfncis.de>
Source record: 134231

Esthetics or signal...No matter! He signed the contract...LIVE UP TO IT or
your word is worthless!

--
Randy A. Hefner
http://www.frs-usa.com
http://www.murs-usa.com

"Beans" <beans@gate.net> wrote in message news:3D8E87E1.DC6E6A42@gate.net...
> "Randy A. Hefner" wrote:
>
> > You asked what you should do. Live up to the terms of the contract you
> > signed!
> >
> > You say that you try to use stealthy antennas. That doesn't mask the
signal
> > you are sending throughout your neighbor's homes.
>
> What?? Are you kidding me? We're talking 100 watts (maybe) with the
nearest
> place 50 feet away. I can promise you that there is no RFI, CC&R's have
nothing
> to do with signals, it is entirely about esthetics.
>
> Jeff
>

5543. How much does a metallic center support effect multiband dipole patterns?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-23 11:56:49 UTC
From: Bill Echols <b_echols@bellsouth.net>
Message-ID: <z6Dj9.2304$227.101213@e3500-atl1.usenetserver.com>
Source record: 134232

What effect does a metallic center support have on a multiband dipole patterns? Specifically, a 160-meter dipole is very long and requires some kind of center support when fed by ladder line or larger-diameter coaxial cables. How does this effect the pattern on each of the 160-meter through 10-meter amateur bands? Does the height of the support make a difference?

Bill, NI5F

5544. Re: W9INN antennas

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-23 12:14:58 UTC
From: Andy Cowley <andy.cowley@uwe.ac.uk>
Message-ID: <3D8F08FA.481887FC@uwe.ac.uk>
Source record: 134235

Uncle Peter wrote:
>
> "N4LQ" <N4LQ@igLou.com> wrote in message news:3d8a875e_1@news.iglou.com...
> >
> >
> > --
> > Steve Ellington N4LQ.
> > > > > On the air reports give me 1-2 s units over my old G5RV. The W9INN's
> > > > > are great antennas.
> > > > >
> > > >
> > > > I wonder what sort of engineering goes into making a simple wire dipole
> > > work
> > > > better than another...
> > >
> > > Obviously it's the age factor, the G5RV being "old" accounts for at least
> > > 8db. Then too, everyone knows that G (British) antennas are weaker by at
> > > least 8db compared to W antennas.
> > >
> > >
>
> No, the British are using a Metric dB.
>
> Pete

Nah, it's the metric kilowatt (26dBW) that does it. ;ï¿½)

vy 73
Andy,M3ABC

5545. Re: Radials ?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-23 12:24:19 UTC
From: Dave <kaw1999@bellsouth.net>
Message-ID: <fFDj9.7498$5M3.90681@e3500-atl2.usenetserver.com>
Source record: 134234

Thanks everyone for your replies.

Dave (Klutz)
VROC # 1911
VRA # 1-0-69A-1500G1
WB5QMW
99 Nomad G/G
K&N
22000+ miles
Lynn Haven, FL

5546. Re: Stealth patio antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-23 12:59:35 UTC
From: derswede@aol.comspam.com
Message-ID: <20020923085935.00915.00008295@mb-ch.aol.com>
Source record: 134237

A rather strange person wrote:

>Subject: Re: Stealth patio antenna
>From: "Randy A. Hefner" ><A
HREF="mailto:randy_NO_SPAM_PLEASE_@frs-usa.com">randy_NO_SPAM_PLEASE_@frs-usa.com</A>
>Date: Mon, Sep 23, 2002 7:52 AM

>Esthetics or signal...No matter! He signed the >contract...LIVE UP TO IT or
>your word is worthless!

and also generated the following foolish statement:

>You asked what you should do. Live up to the terms of the >contract you
signed!
>You say that you try to use stealthy antennas. That doesn't mask the signal
>you are sending throughout your neighbor's homes. They >have a right to live
>in an antenna "un-friendly" environment...That is what they signed-up
>for...As you did.

Silly boy....show me ANY contract that states that you cannot generate RF. The man is trying to comply with the limitations...he's not trying to stick a 100' tower in his back yard. "Mask the signal you are sending throughout your neighbor's (sic) homes"....hey, wake up, boy! Everytime your neighbor turns on a cell phone or cordless phone, the same thing happens! How about your bloody FRS radios? Woops, there goes one of those nasty RF signals! And, oh, my god, here come TV signals!!!!! AAARRRRGGGHHH!! (waving copy of CC&R's at radio waves)

Unless it is expressedly written that NO AMATEUR RADIO operation is allowed in the neighborhood (and that most likely would be unenforceable...any lawyers want to weigh in on this? I know the "no transmitters" clause is unenforceable), he can put a potted plant vertical out on his patio (assuming a back yard patio), or a dipole in the attic, or a vertical in his chimney, or a Force 12 Flagpole antenna up (tho some anal areas do regulate flagpoles...check the accursed CC&R's) and no one can do a bloody thing. Why? 'Cuz he lives in the States, and there are a few rights not yet infringed upon still in existance.

Heck , Randy, what do you want? I've read a lot of your posts...you're intelligent, even witty on occasion. What is the problem with finding a solution to a vexing problem (esp. one where he moved into the area and THEN gets involved in amateur radio? Note that he said he'd been there 18 YEARS, and only recently had gotten his ticket). This must be your personal chain to pull. Guess everyone has to have one. As for the original poster, go to town. String antennas in the attic, get a carpenter to mod some trusses in the attic

to allow enough space to turn a beam (friend has a tribander in his attic....big house, tho) and load the stovepipe they use in new fireplaces with a tuner! Enjoy!

Andrew
"...if one tolerates bad manners, they grow worse. I must find the oaf who did this thing, explain to him his offense, give him a chance to apologise, then kill him." (R.A. Heinlein, "The Cat Who Walks Through Walls")

5547. Re: design for VHF 1/2 wave for bicycle?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-23 13:04:18 UTC
From: Bob Miller <bamiller@texas.net>
Message-ID: <ZhCPPQ9G89TI6O5PUob0fFBrszcn@4ax.com>
Source record: 134238

Dale Parfitt <parinc@verizon.net> wrote:

>
>
>Bob Miller wrote:
>
>> lagagnon@fakesprint.ca (Larry Gagnon) wrote:
>>
>> >First of all thanks to all who responded to my recent post for
>> >recommendations for a VHF antenna for a bicycle. I have decided to go
>> >with a half wave design. Larsen appears to make the antenna I want, as
>> >do some marine antenna companies, but I would prefer to build my own.
>> >Any designs out there?
>>
>> The base-fed Larsens are designed to work against the large metal surface of a
>> car or truck.
>>
>
>Larsen does, or at least used to, make ground independent half wave designs.
>
>Dale W4OP

You're right, they currently have several 1/2 wave designs, all designed for
glass mounting. Might work on a bike.

Bob
k5wg

5548. Re: How much does a metallic center support effect multiband dipole patterns?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-23 13:21:49 UTC
From: John Passaneau <jxp16@psu.edu>
Message-ID: <amn4gp$13r8@r02n01.cac.psu.edu>
Source record: 134239

Hi Bill:

If the antenna is symmetrical about the metal support it will have no detectable effect on the dipole at all.
There is a region of almost zero field in the center of a dipole and if the dipole support is in that area, very little current will be induced into the support and it will have very little effect on a dipole. I modeled a 160m dipole, 160' up a 180' tower for a friend and this was one of the questions he asked. This was a very large diameter tower, larger than 10' across at the bottom. So with the power set to 1500 watts, the model showed less than 1microamp of current flowing in the tower, grounded or not. So metal supports are not a problem with dipoles. Remember if you use open line to keep it a minimum of several wire spacing away from metal and more is better. By the way the dipole I modeled came out within 6' of the length I predicted and the Z and SWR bandwidth were also as predicted.

Hope this helps..

73

--
John Passaneau
Penn State University, State College Pa.
W3JXP
w3jxp@arrl.net
"Bill Echols" <b_echols@bellsouth.net> wrote in message
news:z6Dj9.2304$227.101213@e3500-atl1.usenetserver.com...
> What effect does a metallic center support have on a multiband dipole
> patterns? Specifically, a 160-meter dipole is very long and requires some
> kind of center support when fed by ladder line or larger-diameter coaxial
> cables. How does this effect the pattern on each of the 160-meter through
> 10-meter amateur bands? Does the height of the support make a difference?
>
> Bill, NI5F
>
>
>

5549. Re: How much does a metallic center support effect multiband dipole...

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-23 13:54:37 UTC
From: richardharrison@webtv.net
Message-ID: <20855-3D8F1D1D-308@storefull-2313.public.lawson.webtv.net>
Source record: 134241

Bill, NI5F wrote:
"Speciffically, a 160-meter dipole is very long and requires some kind of center support when fed by ladder line or larger-diameter coaxial cables."

To work DX best, this antenna must be as high (1/2-wave) as it is long. For many hams, a good ground system and a vertical, an inverted-L, a Tee, or some other antenna with substantial vertical polarization are better bargains.

A metal supporting tower will be energized by vertically polarized energy in the vicinity. Borrow a copy of John Devoldere, ON4UN`s "Low-Band DXing", and study it, especially chapters 9 and 10, for your questions. These questions may require elaborate answers.

Best regards, Richard Harrison, KB5WZI

5550. Re: W9INN antennas

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-23 14:11:33 UTC
From: K7JEB <k7jeb@arrl.no_spam.net>
Message-ID: <piFj9.41355$1C2.2110033@bgtnsc04-news.ops.worldnet.att.net>
Source record: 134240

> Jim, don't you know that a preposition is not a good word
> to end a sentence with? :-)

Unfortunately, W9INN's expertise apparently doesn't extend
to creating a definitive website upon which the cyber-shoppers
among us may practice our specsmanship.

K7JEB

5551. Re: design for VHF 1/2 wave for bicycle?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-23 15:04:47 UTC
From: shutup_cartman@remove.hotmail.nospam.com.now
Message-ID: <3d8f2a2a.12112821@news.aei.ca>
Source record: 134242

On Sun, 22 Sep 2002 23:15:34 GMT, lagagnon@fakesprint.ca (Larry Gagnon) wrote:

>I do not want a J-pole, nor anything tied to a fiberglass flag. I want >it to be as slim and trim as possible and thus something with simple >base and slim flexible SS whip. The design I would need would be the >base transformer section and overall length of the whip to resonate at >146MHz.

Just comment here Larry... are you sure a steel whip would be safe on a mountain bike? The potential for injury would be quite high should you fall on it (or poke an eye out).

Given a choice I would "remote mount" one of those "extra long" rubber ducks on a far corner of the luggage rack on the back of the bike. I've seen plenty of 2M 1/4 wave units, I have no doubt some manufacturer must make a 1/2 wave version.

Result would be similar, but I assume it would be a little safer.

Allen

5552. Re: transverter design for 20 meters?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-23 16:48:35 UTC
From: kelly@dvol.com
Message-ID: <d22b54c3.0209230848.92d766e@posting.google.com>
Source record: 134243
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc,sci.electronics.design

"JC" <on5mjREMOVE@skynet.be> wrote in message
news:<3d8e9a65$0$213$ba620e4c@news.skynet.be>...
> I think transverters are used for increasing the working frequency not
> decreasing it, i.e. passing from HF to VHF. I never saw plans for passing
> from 10m to 20m or even 80m. The contrary would be easier as 10m is an
> harmonic of 20m or 80m.

Collins had an S-Line "downverter" to get on 160 from 80 or 40.

>
> 73 de ON5MJ

w3rv

5553. Re: design for VHF 1/2 wave for bicycle?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-23 16:54:04 UTC
From: KA9CAR <nospam@nospam.usa>
Message-ID: <amngpf$2adj$1@news1.tribune.com>
Source record: 134244

Larry
This is WAY to bulky for your bike, but it may give you some Ideas how to get a 1/2 wave antenna set up.
http://user.mc.net/~jdewey/sleeve_dipole/
John
KA9CAR

Larry Gagnon <lagagnon@fakesprint.ca> wrote in message news:3d8e4dfb.3862246@news.sprint.ca...
> First of all thanks to all who responded to my recent post for
> recommendations for a VHF antenna for a bicycle. I have decided to go
> with a half wave design. Larsen appears to make the antenna I want, as
> do some marine antenna companies, but I would prefer to build my own.
> Any designs out there?
>
> I do not want a J-pole, nor anything tied to a fiberglass flag. I want
> it to be as slim and trim as possible and thus something with simple
> base and slim flexible SS whip. The design I would need would be the
> base transformer section and overall length of the whip to resonate at
> 146MHz.
>
> Any help appreciated....Larry VE6MK.
> **********
> to send direct email remove "fake" from address

5554. Re: Autek and MFJ antenna Analysers

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-23 16:56:42 UTC
From: KA9CAR <nospam@nospam.usa>
Message-ID: <amnguc$2adk$1@news1.tribune.com>
Source record: 134246

I have had the VA-1 for a couple of years. The MFJ covers a wider frequency range, as it includes vhf.
The Autek VA-1 fits in my shirt pocket, and provides more information than the MFJ. If the added information is not of interest to you, the cheaper version of the acute is also fairly useful.
KA9CAR

don bryant <dba@yebo.co.za> wrote in message news:amkj5csdv1@ctb-nnrp2.saix.net...
> Any one had comparative experience, between the Autek VA 1 RX Analyser and
> the MFJ SWR Analyser? Many tnx. Don. ZS6BTP
>
>

5555. Re: Wire Help

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-23 17:00:49 UTC
From: KA9CAR <nospam@nospam.usa>
Message-ID: <amnh63$2aes$1@news1.tribune.com>
Source record: 134245

I used mine to feed 50 feet of 300 ohm line that went to my horizontal loop,
for several years.
KA9CAR

Dave <heilic@btconnect.com> wrote in message
news:amg6j5phs1@knossos.btinternet.com...
> Could anyong give me some information on using the Alinco EDX2 with a wire
> antenna, or can the EDX2 be used with other antennas, e.g the G5RV..
>
> Thanks..
> Dave..
>
>

5556. Re: Autek and MFJ antenna Analysers

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-23 17:46:33 UTC
From: "j. keith carter" <j.keith.carter@sympatico.ca>
Message-ID: <3D8F5379.E439AC7C@sympatico.ca>
Source record: 134248

Don; It all depends on what you want from the analyser. You can download the MFJ manual and read it through. The last time I looked (some time back), MFJ made it perfectly clear that their unit cannot differentiate between capacitive or inductive reactance. Based on this fact alone I selected the Autek which can and have had great success. Read their manual, you'll be amazed what it can do that the MFJ can't. Not as pretty and you can't use the counter separately but it's cheaper and does alot more very accurately. Good luck, Keith, VE3JKC.

don bryant wrote:

> Any one had comparative experience, between the Autek VA 1 RX Analyser and
> the MFJ SWR Analyser? Many tnx. Don. ZS6BTP

5557. Re: how does power output increase affect S-Meter on the other side?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-23 17:56:38 UTC
From: Greg Ordy <ordy@seed-solutions.com>
Message-ID: <amnkke$st1$1@slb7.atl.mindspring.net>
Source record: 134247

I accumulated some S Meter accuracy information several years ago.
The data can be found at:

http://www.seed-solutions.com/gregordy/Amateur%20Radio/Experimentation/SMeterBlues.htm

Greg Ordy, W8WWV
ordy@seed-solutions.com

5558. Re: How much does a metallic center support effect multiband dipole patterns?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-23 18:06:50 UTC
From: JC <on5mjREMOVE@skynet.be>
Message-ID: <3d8f583d$0$190$ba620e4c@news.skynet.be>
Source record: 134249

> There is a region of almost zero field in the center of a dipole and if
the
> dipole support is in that area, very little current will be induced into
the
> support and it will have very little effect on a dipole.

Hi John,

Can give more explanation about this sentence because I do find it
surprising.

73 de ON5MJ.

5559. Re: 5/8 vertical - VHF

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-23 18:38:02 UTC
From: Mark Keith <nm5k@wt.net>
Message-ID: <3D8F5F8A.122C@wt.net>
Source record: 134251

Dez wrote:
>
> Hi,
>
> I want to homebrew a 5/8 wave vertical for 70 MHz
>
> I've calculated the length of the vertical radiator to be about 2.54 mtrs,
> however I do not have much idea what value of series inductance to
> get a decent 50 ohm match.
>
> Anyone suggest likely values of series L?
>
> 73
>
> Dez

About 0.37 mh for an ungrounded coil, and about 0.69 mh for a grounded
base coil. I'd make the radiator 2.55 mtrs. "100.62 inches" But 2.54
would work. MK
--
http://web.wt.net/~nm5k

5560. Re: how does power output increase affect S-Meter on the other side?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-23 18:52:20 UTC
From: "Ian White, G3SEK" <G3SEK@ifwtech.co.uk>
Message-ID: <J+PYA8IkL2j9EAmr@ifwtech.co.uk>
Source record: 134250

Greg Ordy wrote:
> I accumulated some S Meter accuracy information several years ago.
>The data can be found at:
>
>
>http://www.seed-solutions.com/gregordy/Amateur%20Radio/Experimentation/S
>MeterBlues.htm

Excellent... and appalling. Read this, and you'll never believe a ham S-meter again!

--
73 from Ian G3SEK 'In Practice' columnist for RadCom (RSGB)
Editor, 'The VHF/UHF DX Book'
http://www.ifwtech.co.uk/g3sek

5561. Re: design for VHF 1/2 wave for bicycle?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-23 19:25:57 UTC
From: Vito <vito@crosslink.net>
Message-ID: <3D8F6AC5.7370A639@crosslink.net>
Source record: 134252

Allen the Magic Goose wrote:
>
> ...(Larry Gagnon) wrote:
>
> >I do not want a J-pole, nor anything tied to a fiberglass flag. I want
> >it to be as slim and trim as possible and thus something with simple
> >base and slim flexible SS whip....
>
> Just comment here Larry... are you sure a steel whip would be safe on
> a mountain bike? The potential for injury would be quite high....

Roger that, Allen!
>
> Given a choice I would "remote mount" one of those "extra long" rubber
> ducks ....

And that too, except maybe put the duck on a 1/4 wave sleeve to create a vertical dipole (Bicycle's a lousy ground plane). Also recommend stick with a 1/4 wave if you plan on talking while in motion. A half or 5/8 wave vertical achieves gain by flattening the field out toward the horizon - an excellent trade-off *IF* the vertical stays vertical - like on a house or car. Unfortunately, it does not on a bike or motorcycle so your transmit and receive signals fade as you lean the antenna's beam into the clouds then dirt (No need to ask how I know that ;o).
73, K3DWW

5562. Re: How much does a metallic center support effect multiband dipole patterns?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-23 20:23:39 UTC
From: John Passaneau <jxp16@psu.edu>
Message-ID: <amnt8b$kmm@r02n01.cac.psu.edu>
Source record: 134253

I was not a clear as I could have been. What I meant was that conductive objects that are in the plane of symmetry that bisects a balanced antenna, like a dipole, any current induced into that conductor by a field from one side of the dipole, will be canceled by a current induced into that conductor by the field of the opposite polarity from the other half of the dipole. Remember that the polarity of the currents in each half of a dipole are always opposite. This why there is the recommendation that feedlines comes off a dipole at right angles to the dipole for as long as possible. Dipoles are usually hung symmetrically from their center support, so there is little induced current in the masts. Of course the more un-symmetrical the dipole is, the greater the induced current.

--
John Passaneau
Penn State University, State College Pa.
W3JXP
w3jxp@arrl.net

"JC" <on5mjREMOVE@skynet.be> wrote in message
news:3d8f583d$0$190$ba620e4c@news.skynet.be...
> > There is a region of almost zero field in the center of a dipole and if
> the
> > dipole support is in that area, very little current will be induced into
> the
> > support and it will have very little effect on a dipole.
>
>
> Hi John,
>
> Can give more explanation about this sentence because I do find it
> surprising.
>
> 73 de ON5MJ.
>
>

5563. Re: How much does a metallic center support effect multiband dipole patterns?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-23 20:44:56 UTC
From: 'Doc <w5lz@icok.net>
Message-ID: <3D8F7D41.67F3CB88@icok.net>
Source record: 134254

Bill,
There will be no noticable degridation in performanc
no matter the band.
'Doc

5564. Re: Radials ?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-23 20:46:28 UTC
From: 'Doc <w5lz@icok.net>
Message-ID: <3D8F7D9C.49F6D9D0@icok.net>
Source record: 134255

Dave,
Don't bother. Doesn't do much good at all.
'Doc

5565. Re: When to use a Balun

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-23 21:05:52 UTC
From: Ralph Mowery <rmowery@ctc.net>
Message-ID: <QmLj9.247314$AR1.10246256@bin2.nnrp.aus1.giganews.com>
Source record: 134256

Baluns are for mating balanced devices to unbalanced devices. They can be made either 1 to 1 or they can be made to not only act as a balanced to unbalanced but at the same time to change the impedance to another vlue. If you don't need to change the impedance then the baluns are mostly to make more mney for the seller.

Many times a few turns of coax will do as much to keep the RF off the feedline as a balun/

"Rich McMahon" <rhmcus@yahoo.com> wrote in message
news:3d8ead8d.7903084@news.us.dell.com...
> All
>
> With wire antennas when is it appropriate and necessary to use a
> balun.. I understand that basically its an impedance matching
> transformer. Does it also isolate RF and keep it off the feed line and
> out of the shack.. Oh i'm using a G5RV full size and a differential T
> turner from MFJ..
>
> Are there some good links on this subject?
>
> Many thanks
>
> Rich KG5IF
>

5566. Diamond HF50CX antenna?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-23 21:11:24 UTC
From: Andy KC2SSB <vhfradiobuff@yahoo.com>
Message-ID: <iq0vouk1s5t3a3ub7holctv33s3fa9bemm@4ax.com>
Source record: 134258

Has anyone here used the Diamond HF50CX antenna? I was thinking of
buying one and was wondering about the performance. I am sure it would
be a step up from the 1/4 wave I am currently using.
=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-
73! de Andy KC2SSB (ex: KF4KHC/HL9HCT)
Beachwood, NJ USA Grid FM29vw
http://vhfradiobuff.tripod.com

5567. Re: Radials ?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-23 21:13:19 UTC
From: Mark Keith <nm5k@wt.net>
Message-ID: <3D8F83EF.5F69@wt.net>
Source record: 134257

Dave wrote:
>
> With a ground mounted vertical using bare copper wires for the radials will
> it help, hinder, or make no deference to put 8 ft ground rods at the far end
> of the radials?
>
> Thanks,
> Dave (Klutz)

I think it would be a waste of rods for the most part. Wouldn't be too much different than just adding an extra 8 ft to the radials, which would also be a waste of time, I think. Most of the currents are at the base of the antenna. Thats where you want the most metal. I would think at the ends of the radials, the current has dwindled down to a point where the rods would be fairly useless. I'd stick the rods at the base, to make a better lightning return. As far as radials themselves for rf purposes, I don't think ANY rods are needed, as long as you have enough radials spread out. But they are a good idea if you take lightning strikes. Rods are semi useless as an rf return. Radials are much better per pound of metal, rf wise. Or thats my view anyway... MK

--
http://web.wt.net/~nm5k

5568. Re: design for VHF 1/2 wave for bicycle?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-23 21:27:13 UTC
From: Mark Keith <nm5k@wt.net>
Message-ID: <3D8F8731.645@wt.net>
Source record: 134259

Larry Gagnon wrote:
>
> First of all thanks to all who responded to my recent post for
> recommendations for a VHF antenna for a bicycle. I have decided to go
> with a half wave design. Larsen appears to make the antenna I want, as
> do some marine antenna companies, but I would prefer to build my own.
> Any designs out there?
>
> I do not want a J-pole, nor anything tied to a fiberglass flag. I want
> it to be as slim and trim as possible and thus something with simple
> base and slim flexible SS whip. The design I would need would be the
> base transformer section and overall length of the whip to resonate at
> 146MHz.
>
> Any help appreciated....Larry VE6MK.

Dunno...When I make halfwaves, I use a single turn loop that is tapped for best match. A cap can get a closer match if needed. But this may be sort of bulky on a bike. The coil wouldn't have to be too big though for 2m use. I use about 9-10 inches on 10m, so I'm guessing a 2-3 inch coil would be about right for 2m. Normally about 50 pf is needed as a cap on 10m, so I would try about 10 pf for 2m use. These can be made from a short length of coax. Check the cushcraft web page for a PDF file "manual" on the 2m ringo. This is what you would be making. Heck, you could probably buy or make one of those, and then use the thin whip instead of the tubing they normally use. I'm not sure what mobile 1/2 wave antennas are available. All I hear about are mainly the "stick on the window" type with capacitive coupling to the feedline. About 38.5 inches tall would be about right for 145 mhz. MK
--
http://web.wt.net/~nm5k

5569. Re: What type of simple HF antenna to use for DX for this location?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-23 21:32:08 UTC
From: WA6LZH <tangeram@lucent.com>
Message-ID: <3D8F8858.60105@lucent.com>
Source record: 134260

Dick,

My case may be a little more exagerated of a hillside location. I
can drive up a cross street and view my antenna from the side of the
hill. A little guesstimation with a protractor shows me that at a
takeoff angle of 20-30 degrees most of my signal goes into the side of
the hill. At times I do receive the East Coast but I attribute that to a
multiple hop condition where the takeoff/arrival angle is much steeper.

Tony

Dick Carroll wrote:

>
> KJ COFFEE wrote:
>
>>My home is on the east side of a hill about 2 miles from the Pacific Ocean, and
>>the lot has 3 very large cypress trees on the West side. Most of the hams
>>around here have beams pointing West, but I can't do that, because I'm blocked
>

5570. Re: how does power output increase affect S-Meter on the other side?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-23 22:01:38 UTC
From: "Stephen C. Robbins" <srobbinsNoSPaMDUDES@netacc.net>
Message-ID: <3d8f8f41$1@news.netacc.net>
Source record: 134261

"Ian White, G3SEK" <G3SEK@ifwtech.co.uk> wrote in message
news:J+PYA8IkL2j9EAmr@ifwtech.co.uk...
> Excellent... and appalling. Read this, and you'll never believe a ham
> S-meter again!
>

Not really what I would call appalling. Amateur radio operators are technically savy and not merely appliance operators... Right???

As such, they realize that S-Meters are nothing more than a sampling of a signal in a stage of the receiver, rectified, and displayed visually on a meter, led, etc etc. They also know that the meter only offers minimal information on relative signal strength (Joe's signal is slightly higher on the S Meter than Fred's).

But then again, I have heard 2 Meter operators on repeaters saying that someone is "S-9" on their meter, "same as Fred, but for some reason he is noisy." Now that scares me that someone could get a license without knowing that the S Meter reflected the strength of the repeater signal into their receiver and had nothing to do with the transmitting station's signal whatsoever. Bet if they had a rotatable beam, they would try pointing to the transmitting stations QTH :-)

Steve

5571. Re: Radials ?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-23 22:46:51 UTC
From: David Robbins <k1ttt@arrl.net>
Message-ID: <amo5kk0221@enews1.newsguy.com>
Source record: 134262

the antenna won't care, but your back will.

"Dave" <kaw1999@bellsouth.net> wrote in message
news:cFuj9.266358$2L.10458304@e3500-atl2.usenetserver.com...
> With a ground mounted vertical using bare copper wires for the radials
will
> it help, hinder, or make no deference to put 8 ft ground rods at the far
end
> of the radials?
>
> Thanks,
> Dave (Klutz)
> VROC # 1911
> VRA # 1-0-69A-1500G1
> WB5QMW
> 99 Nomad G/G
> K&N
> 22200+ miles
> Lynn Haven, FL
>
>
>

5572. Re: how does power output increase affect S-Meter on the other side?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-23 23:22:46 UTC
From: Fred Hambrecht <w4jle@charter.net>
Message-ID: <uov8iaef4rkaf4@corp.supernews.com>
Source record: 134263

Thanks for the nice piece. I had a buddy that used to turn up the S-meter on his HQ-170 because he didn't like to give bad signal reports.

"Greg Ordy" <ordy@seed-solutions.com> wrote in message news:amnkke$st1$1@slb7.atl.mindspring.net...
> I accumulated some S Meter accuracy information several years ago.
> The data can be found at:
>
>
>
http://www.seed-solutions.com/gregordy/Amateur%20Radio/Experimentation/SMeterBlues.htm
>
>
> Greg Ordy, W8WWV
> ordy@seed-solutions.com
>
>

5573. Re: Stealth patio antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-23 23:27:38 UTC
From: Fred Hambrecht <w4jle@charter.net>
Message-ID: <uov8rf1j3a7g5a@corp.supernews.com>
Source record: 134264

I always wondered who the butt head was that ran exactly at the speed limit
in the fast lane, now I know and will wave at you the next time I go around
you in the slow lane Randy...

"Randy A. Hefner" <randy_NO_SPAM_PLEASE_@frs-usa.com> wrote in message
news:ammvaj$70upn$1@ID-160894.news.dfncis.de...
> Esthetics or signal...No matter! He signed the contract...LIVE UP TO IT
or
> your word is worthless!
>
>
>
> --
> Randy A. Hefner
> http://www.frs-usa.com
> http://www.murs-usa.com
>
>
>
>
> "Beans" <beans@gate.net> wrote in message
news:3D8E87E1.DC6E6A42@gate.net...
> > "Randy A. Hefner" wrote:
> >
> > > You asked what you should do. Live up to the terms of the contract
you
> > > signed!
> > >
> > > You say that you try to use stealthy antennas. That doesn't mask the
> signal
> > > you are sending throughout your neighbor's homes.
> >
> > What?? Are you kidding me? We're talking 100 watts (maybe) with the
> nearest
> > place 50 feet away. I can promise you that there is no RFI, CC&R's have
> nothing
> > to do with signals, it is entirely about esthetics.
> >
> > Jeff
> >
>
>

5574. Re: how does power output increase affect S-Meter on the other side?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-24 00:07:43 UTC
From: n7ws@nowhere.com
Message-ID: <3d8fa9ab.22274627@news.triconet.org>
Source record: 134265

On Mon, 23 Sep 2002 00:07:57 +0100, "Ian White, G3SEK"
<G3SEK@ifwtech.co.uk> wrote:

|Reg Edwards wrote:
|
|>An S-meter is a watt-meter. It is scaled in decibels relative to 50
|>pico-watts.
|>
|Maybe in an idealized specification - but in the real world, this and
|almost all that follows is not true.
|
|>It indicates power input to the receiver. The receiver input resistance is
|>50 ohms.
|>
|The receiver input impedance is assumed to be 50 ohms, but rarely is.

Yep and depending on the configuration, it isn't even constant with
varying signal level. Many years ago, I calibrated the input
impedance of a Collins 51S-1 receiver as a function of agc voltage.
We were using it to measure some parameters on an air-to-air missile
and needed to account for the mismatch loss. I don't recall the
numbers, but there was quite a variation.

|
|>S9 = 50 pico-watts, which is the same power as 50 micro-volts across 50
|>ohms.

Unless it's 100 uV = S9 or whatever else the manufacturer says it is.

"S" meters should be labeled "relative signal strength", with no
values whatsoever.

"You're five by nine here old man, but could you repeat your name,
location and my signal report."

5575. Re: Radials ?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-24 00:10:08 UTC
From: Reg Edwards <g4fgq.regp@btinternet.com>
Message-ID: <amoagv$o6i$1@knossos.btinternet.com>
Source record: 134266

But they (rods) are a good idea if you take lightning
> strikes.

==========

If radials are increased in length by the depth of the rods why are rods a better idea at the end of radials if you take lightning strikes ?

The radials burn out anyway. If you are worried about burning-out radials then make the radials as thick as rods !

The antenna radial system should be arranged with only the radiating system in mind.

The lightning protection system should be considered as a separate matter.

The two cannot destructively interfere with each other. They can only provide mutual enhancement.

To protect the tuner make the roller-inductor from 1" diameter, silver-plated copper pipe.

In the UK I have never seen lightning actually strike anything although once in a while I have heard thunder.

But last night I was at the epicenter of the strongest earthquake in the UK for 20 years. I distinctly observed the level of the port wine in my glass wobble just as I was about to take a sip. Very frightening ! Did it make the international newspapers ?

The BBC sent out a warning that it occured 7 miles right underneath my house and follow-ups could be expected. So tonght I've re-inserted the cork in the bottle.

Hic !

==========
Regards from Reg G4FGQ
Free Radio Design Software
Go to http://www.g4fgq.com
==========

5576. Re: 5/8 vertical - VHF

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-24 00:10:10 UTC
From: Reg Edwards <g4fgq.regp@btinternet.com>
Message-ID: <amoah1$o6i$3@knossos.btinternet.com>
Source record: 134267

Why not try a 3/8-wave with a series capacitor.

The trick is to vary antenna height until the feedpoint resistance is 50 ohms (or 75 ohms depending on what the coax Zo is) and then tune out the residual reactance with L or C. The end result may not be an exact height of 3/8ths or 5/8ths wvelenghts. But that is immaterial.

========================
Regards from Reg G4FGQ
Free Radio Design Software
Go to http://www.g4fgq.com
========================

5577. Using a Lowes paint-roller handle for light antenna use

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-24 00:37:04 UTC
From: KD4ADV <nohooch@nospam.com>
Message-ID: <WtOj9.19509$u7.964100@news.direcpc.com>
Source record: 134268

I have this concept and innovative mounting scheme that might work for single antenna users.

Going on vacation, camping or live in a condo or those subdivisions that frown on antennas on someone's back yard?

Go to Lowe's and to the paint section.
Look for these handles that are yellow with the "DANGER" stickers on them.
They have a button so you can extend the inside section to the length you want.(locks into place)
The section goes all the way out without coming completely out the handle!

They have sizes ranging from small to medium to long!

There is a part on top that would need to be sawed off with a pipe saw. (for the roller attachment)

After that, you can mount -for example, an MFJ 5/8 - 2meter groundplane antenna.
And check the SWRs.

A ground base can be constructed to put the bottom end into to keep the pole upright.
OR, better yet- mount it on a building near or on the rooftop for the groundplanes to have room!

Ideal for a scanner antenna, too ;)

If you mount it on the side you might need a stand-off that will support it.
It's not Heavy.

I haven't the money at this time to buy one.
I just had that idea come into mind while cleaning out the garage.

If anyone has ever tried similar attempts,
please reply and let me know before I waste money. ;)
It just sounds like a good idea!
Of course, gotta watch out for the RF coming off the antenna.
I will be running low power at least from my mobile.

There was a long pole that got sort of wobbly when gravity started taking over.
But, that's where guy-wires would come into play!

--- REMEMBER ---
This is for single antennas ONLY!
Either Vertical or a small directional -commercial or homebrew.

(Not for the antennas that belong on the towers with 5 or more Elements!!)

73s,
Tnx in advance :)

Sean,
KD4ADV

5578. CobWebb Antenna?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-24 01:03:31 UTC
From: perge <jmperge@attglobal.net>
Message-ID: <3d8fbd49_1@news1.prserv.net>
Source record: 134069

Anybody use G3TPW CobWebb antenna?
Thanks,Joe,WB8HWF

5579. Re: Radials ?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-24 01:20:09 UTC
From: gaschafer@attbi.com
Message-ID: <3d8fbdd6.15851272@netnews.attbi.com>
Source record: 134070

On Tue, 24 Sep 2002 00:10:08 +0000 (UTC), "Reg Edwards"
<g4fgq.regp@btinternet.com> wrote:

> But they (rods) are a good idea if you take lightning
>> strikes.
>
>============================
>
>If radials are increased in length by the depth of the rods why are rods a
>better idea at the end of radials if you take lightning strikes ?
>
>The radials burn out anyway. If you are worried about burning-out radials
>then make the radials as thick as rods !
>
>The antenna radial system should be arranged with only the radiating system
>in mind.
>
>The lightning protection system should be considered as a separate matter.
>
>The two cannot destructively interfere with each other. They can only
>provide mutual enhancement.
>

Ground rods on radials can dissipate more lightning energy than just
radials. There is more earth
around a ground rod than there is around a radial. The earth in the
vicinity of the radial or rod
can only get rid of so much energy as the soil becomes saturated
around it. Thus the reason for
multiple ground rods spaced apart from one another and tied together
with radials in a good
lightning ground system. However placing ground rods at the ends of
long radials will probably
do little as the inductance of the radial will be too high for most of
the lightning to see the ground
rod fully. It would be much better to place the ground rods closer to
the antenna along the
radials. Rule of thumb is to place ground rods apart by the sum of
their lengths.

A good lightning ground system usually makes a good RF ground system
too.

73
Gary K4FMX

5580. Re: ham radio on a mountain bike

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-24 01:30:48 UTC
From: KC5CQW <kc5cqw@excite.com>
Message-ID: <uovg2af3bkis05@corp.supernews.com>
Source record: 134071

I use a hamstick for 20m mounted on a pair of visegrips that I welded an L shaped 1/8" thick piece of steel on top with a 1/2" hole for the 3/8" x24tpi to so-239 connector. This thing works really good with my IC-730 and an 11 A/h gelcel on the rack. Do keep your power down, it might fry your hair going down the road!
"KC8PMX" <kc8pmx@NOSPAMdiamondcs.net> wrote in message
news:amcdmi622pe@enews4.newsguy.com...
> I wonder how much those generators used to power lights on bicycles
actually
> create? They might be able to help to recharge those batteries too?
>
>
> --
> Ryan, KC8PMX
> FF/MFR
> REMOVE "NOSPAM" in email address to reply.
>
>
> "Jesse" <jplummer@bluefrognet.net> wrote in message
> news:3D88940E.4B15B19A@bluefrognet.net...
> > Anyone ever mount a radio on a bike? I want to mount my Yaesu FT1500 on
> > my bike. I have an ample rechargeable battery, a bag to mount it. What
> > would be a good antenna that wouldn't be too heavy, to tall (get busted
> > on low hanging branches) and be able to handle 50 Watts? Any
> > suggestions?
>
>

5581. Re: CobWebb Antenna?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-24 01:41:58 UTC
From: dplatt@radagast.org
Message-ID: <uovgn6gsq4qf04@corp.supernews.com>
Source record: 134072

>Anybody use G3TPW CobWebb antenna?

http://www.eham.net/reviews/detail/1671

Five reviews - several short-term owners, one from somebody who says he's been using it for more than five years. People seem to be pretty happy with the antenna, not so happy with the manufacturer's responsiveness. Haven't used one myself.

Another option, vaguely similar, might be the Traffie Hexbeam (http://www.eham.net/reviews/review/9579). The Hexbeam is physically larger, I believe, and is rather directional, where the CobWebb is largely omnidirectional.

--
Dave Platt <dplatt@radagast.org> AE6EO
Hosting the Jade Warrior home page: http://www.radagast.org/jade-warrior
I do _not_ wish to receive unsolicited commercial email, and I will boycott any company which has the gall to send me such ads!

5582. Re: Using a Lowes paint-roller handle for light antenna use

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-24 02:49:47 UTC
From: k9sqg@aol.com
Message-ID: <20020923224947.14190.00004225@mb-bj.aol.com>
Source record: 134073

Sean,

I've done this very thing. However, I use the ones from Sherwin Williams paint stores since they are dark blue and don't attract as much attention as the yellow poles. I've even painted them in camoflage colors, and they are hard to see in the trees.

73s,

Evan

5583. Re: When to use a Balun

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-24 03:05:51 UTC
From: rsparks <rsparks@elltel.net>
Message-ID: <3d8fd286_2@corp.newsgroups.com>
Source record: 134074

When the two sides of your dipole begin behaving like two L antennas set back to back, and the resulting pattern is not what you want, then it is time to use a balun.

You will get the "two L" pattern if both sides of the dipole do not have identical electrical characteristics. This will happen if one side is closer to trees, ground, other antennas, feed line, or any conductor, than the other side is. Many people also feel that the braid of a coax feed line unbalances a dipole so much that a balun should be used.

The balun will act like a RF transformer transferring the impedance of one side of the L to the other side, making both L antennas equal in impedance. The feed line "sees" none of this, but sees only that it is feeding two L antennas 180 degrees out of phase. The vertical portions of the L's are transmission line, the out of phase currents cancel all radiation. The horizontal portion of the L's make a dipole with equal currents (thanks to the balun) so the antenna feed impedance is the impedance of the dipole, and the pattern will be the pattern of a dipole.

Can you still have common mode currents on the transmission line when using a balun? Yes, they
are unavoidable but can be minimized. This occurs because the unbalanced dipole is not fed at the electrical center of the antenna. As a result, the sum of the voltages on the two feed point sides (when measured to ground) will not be zero. If
the sum of the two voltages (measured to ground at the feed point) is not zero, a common mode current will be forced onto the transmission line.

The addition of a balun will change the tuning of the common mode system, but can not 'block' the current like a switch. Instead it will move the high current point to a new location which can be predicted by considering where the current would be moved in each of the two L's with the addition of the intrinsic impedance of the balun to each side.

I know that the description I just offered is not the same as the description found in the ARRL Antenna Handbook. Never-the-less it works for me, it should work for you.

73's, Roger, W7WKB

"Rich McMahon" <rhmcus@yahoo.com> wrote in message
news:3d8ead8d.7903084@news.us.dell.com...
> All
>
> With wire antennas when is it appropriate and necessary to use a
> balun.. I understand that basically its an impedance matching

> transformer. Does it also isolate RF and keep it off the feed line and
> out of the shack.. Oh i'm using a G5RV full size and a differential T
> turner from MFJ..
>
> Are there some good links on this subject?
>
> Many thanks
>
> Rich KG5IF
>

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

5584. What is the minimum size for antenna radials??

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-24 03:30:53 UTC
From: StarGazer <pti@capnet.com>
Message-ID: <3D8FDC6C.745F5497@capnet.com>
Source record: 134075

Would 10 or 12 gauge insulated stranded copper wire be as
good as 20 gauge.

5585. Re: What is the minimum size for antenna radials??

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-24 04:24:36 UTC
From: George Kinzer <horseflygk@worldnet.att.net>
Message-ID: <8ORj9.58110$jG2.3371982@bgtnsc05-news.ops.worldnet.att.net>
Source record: 134076

NO

--
If first you don't succeed, do the same thing again...see what happens

5586. Re: Horizontal Loops for HF - anyone using?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-24 05:10:56 UTC
From: nc6k@NOSPAMarrl.net
Message-ID: <3d8ff1f4.7499023@news.newsfeeds.com>
Source record: 134077

Funny that you should ask. After using Cushcraft verticals for the past 10 years, I decided to put up a "crazy loop". Construction details: approximately 300 feet of 16 gauge speaker wire (unzipped into single strand) purchased at home depot and fed with 450 Ohm window line (about 50 feet). The shape is a very distorted triangle: Feed point is eave of house (about 22' up), fans out to palm trees (both @ about 30') that are about 40 feet apart and 50 feet away. Then both converge at a 45 foot high tree on a 25' hill about 100' back and not really at the midpoint between the palms in the other axis.

I listed all the details to point out that anything goes as long as you have a decent antenna tuner. My MFJ-989C can tune the loop from 160 to 6 meters with no problem. In every case since I put it up a few days ago, the loop is as loud or louder than my R-8 vertical. On 160 and 80, using the vertical isn't even an option. I had one station in Minnesota ask me how many hundreds of kW I was using on 12M. I didn't think it was such a big deal until I switched to the vertical - she said I was about a 57! I've gotten similar comparison reports from South Korea, Kenya, Indiana, etc. In fairness to the vertical, I'm feeding it with about 150' of 9913 coax, so there's a few dB lost there.

Anyway, hope my experience is of some use. Give it a try, you never know what will happen, and best of all - IT'S CHEAP!

73 de NC6K

----------== Posted via Newsfeed.Com - Uncensored Usenet News ==----------
http://www.newsfeed.com The #1 Newsgroup Service in the World!
-----= Over 100,000 Newsgroups - Unlimited Fast Downloads - 19 Servers =-----

5587. Proper/ideal choice of T-tuner settings

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-24 05:17:14 UTC
From: Will White <googlyelmo@earthlink.net>
Message-ID: <3D8FF578.BF1DF082@earthlink.net>
Source record: 134078

I find that I can get virtually the same match (especially on 30 and 10 meters) between my rig and LL fed 67' inverted V, at *more* than two settings with a T-tuner . My question is this: granted that in choosing between hi-L/low-C and hi-C/low-L, the latter is preferable for efficiency's sake, but given the *same* amount of L, if one cap is set near max, and the other set near minimum, which should input and which output?

--
Will White, KD7BFX
Seattle WA US
King County, Grid CN87tq
ITU Zone 6, CQ Zone 3
****
"The wireless telegraph is not difficult to understand.
The ordinary telegraph is like a very long cat.
You pull the tail in New York, and it meows in Los Angeles.
The wireless is the same, only without the cat."
- Albert Einstein
****

5588. Correct ratio for design of loading coil

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-24 05:29:04 UTC
From: Will White <googlyelmo@earthlink.net>
Message-ID: <3D8FF83F.251811B7@earthlink.net>
Source record: 134079

I understand that the textbook correct length to diameter ratio for a loading coil is 2:1. Can't some gain in Q/efficiency be realized by making a coil much wider than it is long, say reversing the above so that it is 1:2, length to diameter?

--
Will White, KD7BFX
Seattle WA US
King County, Grid CN87tq
ITU Zone 6, CQ Zone 3
****
"The wireless telegraph is not difficult to understand.
The ordinary telegraph is like a very long cat.
You pull the tail in New York, and it meows in Los Angeles.
The wireless is the same, only without the cat."
- Albert Einstein
****

5589. Re: Proper/ideal choice of T-tuner settings

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-24 06:37:20 UTC
From: n7ws@nowhere.com
Message-ID: <3d900536.45712748@news.triconet.org>
Source record: 134080

On Tue, 24 Sep 2002 05:17:14 GMT, Will White
<googlyelmo@earthlink.net> wrote:

|I find that I can get virtually the same match (especially on 30 and 10
|meters) between my rig and LL fed 67' inverted V, at *more* than two
|settings with a T-tuner . My question is this: granted that in choosing
|between hi-L/low-C and hi-C/low-L, the latter is preferable for
|efficiency's sake, but given the *same* amount of L, if one cap is set
|near max, and the other set near minimum, which should input and which
|output?

As you have observed, there is (in theory) an infinite number of
combinations of three variables that can effect a match; only one of
which offers the best efficiency. This assumes that the variables are
variable enough.

However, once you've fixed one of them (the L in your example), there
is one unique setting of each of the other two (the capacitors) that
will give you a match.

5590. Re: What is the minimum size for antenna radials??

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-24 06:46:28 UTC
From: n7ws@nowhere.com
Message-ID: <3d900a2d.46984005@news.triconet.org>
Source record: 134081

On Tue, 24 Sep 2002 04:24:36 GMT, "George Kinzer"
<horseflygk@worldnet.att.net> wrote:

|NO

They would be better.

5591. Re: When to use a Balun

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-24 07:16:18 UTC
From: n7ws@nowhere.com
Message-ID: <3d900af1.47179871@news.triconet.org>
Source record: 134082

On Mon, 23 Sep 2002 20:05:51 -0700, "rsparks" <rsparks@elltel.net>
wrote:

[bafflegab deleted]

Please ignore all of what Roger posted.

|> All
|>
|> With wire antennas when is it appropriate and necessary to use a
|> balun..

It is always appropriate, if the transmission line is coax. Is it
absolutely necessary, no... but it is still good practice to use one.

|> I understand that basically its an impedance matching
|> transformer.

It may or may not be an impedance transformer, but its primary
function is to present a high impedance to common-mode current on the
transmission line.

|> Does it also isolate RF and keep it off the feed line and
|> out of the shack..

In common ham jargon, yes, but that isn't the best way of looking at
it.

|> Oh i'm using a G5RV full size and a differential T
|> turner from MFJ..
|>
|> Are there some good links on this subject?

Yes. Required reading is:

1) "Baluns: What They Do and How They Do It", by Roy Lewallen, ARRL
Antenna Compendium, Volume 1, pp 157-164.

2) "Some Aspects of the Balun Problem" by Walt Maxwell, QST, March,
1983, pp 38-40.

3) ftp://eznec.com/pub/ibalun.txt

4) http://fermi.la.asu.edu/w9cf/

|

5592. VHF and UHF yagi spacing

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-24 10:07:38 UTC
From: rbarrios@gmx.net
Message-ID: <ab7385fd.0209240207.1e0399ea@posting.google.com>
Source record: 134083

Hi all again,

I'm going to install a pair of yagis:
- VHF TONNA 20809 (1.65wl=3.47m) (www.f9ft.com)
- UHF TONNA 20919 (4.02wl=2.82m) (www.f9ft.com)

I will use vertical polarization and I wonder what spacing between them should I use. I plan to use a diplexer on top of the mast to feed both antennas with a single feedline (unless someone gives me a reason not to do it...).

As far as I know, the interaction between both antennas won't be as dramatical as it would be if they were feed with the same signal (the diplexer should work as a pretty big isolation), but sure they won't work if I put them too close.

How close is too close ???

Thank you very much

EB4EQA, Roberto
Madrid, Spain

5593. Re: transverter design for 20 meters?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-24 10:43:16 UTC
From: Deos <lineoffiretoday@yahoo.com>
Message-ID: <amppof$79e$1@nic.grnet.gr>
Source record: 134089
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc,sci.electronics.design

HI JC
i have used transverter for years (made some as well) from 10M to 40M it can be done!
"JC" <on5mjREMOVE@skynet.be> wrote in message news:3d8e9a65$0$213$ba620e4c@news.skynet.be...
> I think transverters are used for increasing the working frequency not
> decreasing it, i.e. passing from HF to VHF.

5594. Re: What is the minimum size for antenna radials??

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-24 11:00:23 UTC
From: richardharrison@webtv.net
Message-ID: <16265-3D9053D7-568@storefull-2311.public.lawson.webtv.net>
Source record: 134085

Stargazer wrote:
"Would 10 or 12 gauge insulated stranded copper be as good as 20 gauge."

10 AWG is larger than 12 AWG which is substantially larger than 20 AWG.

An insulated wire radial is completing a displacement current path with an antenna. So, it is a capacitor plate, the other being the antenna. Capacitance depends on plate size.

If capacitance between an antenna and its radials is too small, the antenna displacement current will connect with other conductors (often the earth) which make a lossier connection with the radio.

The displacement current loss in the radial depends on its resistance which is higher in a smaller wire.

Larger wire makes more efficient radials.

Best regards, Richard Harrison, KB5WZI

5595. Re: What is the minimum size for antenna radials??

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-24 11:49:47 UTC
From: K4SQR@juno.com
Message-ID: <7c8be5b4.0209240349.6ecbe418@posting.google.com>
Source record: 134084

#16-#20 AWG size copper is fine IF, (and only IF) 30-60 radials are
being installed. Small wire size is immaterial when a large number are
used.
If only 4-8 radials are considered (at a great return loss) then
larger #12 should be used.

Comtek Systems recommends 60 radials for each of the 4 verticals in a
4-Square phased array, with a minimum wire size of #16.
www.comteksystems.com

Good luck,
Jim, K4SQR

StarGazer <pti@capnet.com> wrote in message news:<3D8FDC6C.745F5497@capnet.com>...
> Would 10 or 12 gauge insulated stranded copper wire be as
> good as 20 gauge.

5596. Re: VHF and UHF yagi spacing

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-24 12:12:12 UTC
From: richardharrison@webtv.net
Message-ID: <16267-3D90569C-246@storefull-2311.public.lawson.webtv.net>
Source record: 134086

Roberto, EB4EQA wrote:
"How close is too close?"

General rule is a minimum spacing of 2 wavelengths. This is too much for some people, and their antennas work anyway.

Best regards, Richard Harrison, KB5WZI

5597. Re: VHF and UHF yagi spacing

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-24 13:03:20 UTC
From: "Ian White, G3SEK" <G3SEK@ifwtech.co.uk>
Message-ID: <LMn4MyAYKGk9EA8T@ifwtech.co.uk>
Source record: 134087

EB4EQA wrote:
>Hi all again,
>
>I'm going to install a pair of yagis:
> - VHF TONNA 20809 (1.65wl=3.47m) (www.f9ft.com)
> - UHF TONNA 20919 (4.02wl=2.82m) (www.f9ft.com)
>
>I will use vertical polarization and I wonder what spacing between
>them should I use. I plan to use a diplexer on top of the mast to feed
>both antennas with a single feedline (unless someone gives me a reason
>not to do it...).
>
>As far as I know, the interaction between both antennas won't be as
>dramatical as it would be if they were feed with the same signal (the
>diplexer should work as a pretty big isolation), but sure they won't
>work if I put them too close.
>
>How close is too close ???

There is information on my web site, based on 'capture area'.

Minimum stacking distance would be one-half of Tonna's recommended stacking distance for two 20919 yagis. This is 0.5*1.25m = 0.6m approximately. For vertical polarization, that should be the closest distance between the ends of the elements.

That arrangement will place the 2m yagi outside of the capture area of the 70cm yagi, so the 70cm yagi should be OK.

The 70cm yagi will still be *inside* the capture area of the 2m yagi, but the interaction should be small.

--
73 from Ian G3SEK 'In Practice' columnist for RadCom (RSGB)
Editor, 'The VHF/UHF DX Book'
http://www.ifwtech.co.uk/g3sek

5598. Re: When to use a Balun

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-24 13:07:10 UTC
From: richardharrison@webtv.net
Message-ID: <5080-3D90637E-61@storefull-2312.public.lawson.webtv.net>
Source record: 134088

Rich, KC5IF wrote:
"With wire antennas when is it appropriate and necessary to use a balun."

When you want the directivity predictable for a dipole, or when too much r-f returns to the shack via the coax, a balun may be your friend.

Plenty of very satisfactory dipoles have been directly fed from coax with no balun. I`ve put them up myself around the world commercially. The r-f on the coax may have been beneficial in vertically polarized radiation reaching contact points the dipole itself wouldn`t reach. A good ground on the radio helps vertical radiation and helps reduce r-f in the shack.

Best regards, Richard Harrison, KB5WZI

5599. Re: Using a Lowes paint-roller handle for light antenna use

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-24 13:46:04 UTC
From: Alex Flinsch <alex@localhost.localdomain>
Message-ID: <slrnap0r6c.bmn.alex@homer.linux1.lan>
Source record: 134090

On <nohooch@nospam.com> wrote:
> Look for these handles that are yellow with the "DANGER" stickers on them.
> They have a button so you can extend the inside section to the length you
> want.(locks into place)
> The section goes all the way out without coming completely out the handle!
>

I did not get mine at Lowes, but rather at the other HomeMegaImprovmentDepot
store.

> They have sizes ranging from small to medium to long!

I am using the gray one that has 3 sections that extend to 23 feet. IIRC it
was about 30$

>
> There is a part on top that would need to be sawed off with a pipe saw. (for
> the roller attachment)

Don't cut it off. Instead, get one of the small 3 piece wooden extensions
that come with the plastic couplers to connect them together. Use one
coupler and 1 section of the wooden extension on top. This way you can still
use the extension pole for painting.

>
> A ground base can be constructed to put the bottom end into to keep the pole
> upright.

While at the store, get a 2 inch pipe flange, a short length of threaded
iron pipe and a few nuts and bolts. Mount the pipe flange to the center of a
2x2 ft plywood square and thread in the pipe. Youy can just slip the
extension rod into the pipe and it is rather steady. I also drilled some
small holes about 2 inches in from each corner of the board, and use long
gutter spikes to nail it into the ground. It is extremely solid that way.

>
> Ideal for a scanner antenna, too ;)
>

Funny you should mention that. I also use the cheap 20$ RS scanner antenna
mounted on top of the extension pole. It works great as a 1/4 wave 2m
groundplane, it also works well on 440.

> If anyone has ever tried similar attempts,
> please reply and let me know before I waste money. ;)
> It just sounds like a good idea!

it is a good idea, and works fairly well, in fact I had the same one myself.

--
Alex / KC2IVL
Yaesu FT100 software for Linux
http://www.qsl.net/kc2ivl

5600. Re: transverter design for 20 meters?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-24 14:11:17 UTC
From: JB <ac6tk@nospamcybertime.net>
Message-ID: <ampup3$1uaq$1@madmax.keyway.net>
Source record: 134092
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc,sci.electronics.design

Actually, up-conversion has the advantage of fewer potential for birdies
from harmonics of the oscillators. Most of the better transceivers use
an IF higher than the Fo.

I have no experience with the 10m radio you mentioned, but it sounds
like your project has potential. Additional circuitry could be built into a
housing extension, replacing the bottom cover? The down side, It
could cost more than buying a used HF multi-band rig, but that idea
never scared any hot rodders from building. Sounds like a neat
project.

Jim, ac6tk
"Deos" <lineoffiretoday@yahoo.com> wrote in message news:amppof$79e$1@nic.grnet.gr...
: HI JC
: i have used transverter for years (made some as well) from 10M to 40M it can
: be done!
: "JC" <on5mjREMOVE@skynet.be> wrote in message
: news:3d8e9a65$0$213$ba620e4c@news.skynet.be...
: > I think transverters are used for increasing the working frequency not
: > decreasing it, i.e. passing from HF to VHF.
:
:

5601. Re: Unusual half sloper -- second try

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-24 14:24:57 UTC
From: George McCouch <geomac@hopkinsville.net>
Message-ID: <geomac-1D6FA7.09245724092002@news.uswest.net>
Source record: 134091

In article <3D872D14.1DE3AA9E@us.ibm.com>,
Bill Ogden <ogden@us.ibm.com> wrote:

> (I posted the following last week, with no response. Has anyone tried
> one of these?)
>
> QST (some years ago) and the second Wire Antennas book briefly discuss a
>
> wide-band 80 meter antenna, with two examples described. It consists of
>
> a "half sloper" attached to a tower, with two more wires connected
> directly to the tower (at a lower point) and horizontally fanned out
> into a "V". The half-sloper is routed down between the the legs of the
> V. An almost flat SWR across 75/80 meters is shown.
>
> In one of the examples the tower is 50', the half sloper (78' long) is
> attached at the 45' level, and the two V legs (each 53' long) are
> attached at the 13' level.
>
> 1. This antenna seems too good to be true ---- absolutely flat across
> the whole band and with reportedly excellent results. It was originally
>
> in an April issue, and some April articles are too good to be true.
> Comments?
>
> 2. Little is said about how dimensions are calculated. I would like to
> use it on my little 40' tower (with a quad on top). I would attach the
> sloper at about the 30' level and the V at about 8'. Is this
> unreasonably small/low?
>
> 3. Has anyone tried a two-band version? It would be nice to connect a
> second sloper to the same feed point, but for 40 meters. Would the same
>
> V section work for both?
>
> I realize that most of the effective radiation is from the tower and
> ground/radials are important. (I also realize that a dipole at 60' (or
> higher), or an inverted V might be a better answer, but I do not have
> that option.)
>
> Bill
> W2WO

Bill,

I have not seen that particular antenna in the literature I have, but have seen a 2 wire wideband 75 meter design in either the W1FB antenna notebook or the ARRL antenna handbook. This consisted of two slopers 55 feet long fanned from a common point to about 8 - 10 feet of seperation at the low ends. The SWR was suppossed to be flat for most of the band. I built this some years ago and hung it at about 35 feet on my tower which has a very large tribander and VHF antenna at the top. The best SWR I could get was about 3/1 and it was flat at that point for about 250 khz. Although I use half slopers extensively on 160, 75, 40 and 30 meters, I have always had problems getting better than a 3-4/1 SWR on 75. The antennas always perform well even if a tuner is needed on 75.

73
George
K3UD

5602. best spectrum analyzer kit?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-24 15:33:56 UTC
From: AJ Sanderson <asands44550@nospaml.com>
Message-ID: <amq0mj$rk0$1@slb0.atl.mindspring.net>
Source record: 134093
Cross-posted to: alt.ham-radio.mods,rec.radio.amateur.antenna,rec.radio.amateur.homebrew,rec.radio.amateur.misc,sci.electronics.basics,sci.electronics.design

With the numerous spectrum analyzer kits on the web, which one is the best?
I'm interested in ones covering from 1-500 Mhz. Should have reasonable
accuracy and not cost a fortune to assemble.

Thanks, in advance, for your opinions.

AJ

5603. Wide band HF vertical

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-24 16:29:18 UTC
From: trees <info@standardtrees.co.uk>
Message-ID: <amq3st$9rc$1@helle.btinternet.com>
Source record: 134094

Flat frequency response across 3:1 frequency range
i.e. from 7 to 21 Mhz

For those who are interested it's on
www.standardtrees.co.uk/RXO-Unitenna.pdf

5604. Wide band HF vertical

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-24 16:56:58 UTC
From: trees <info@standardtrees.co.uk>
Message-ID: <amq5gq$32k$1@venus.btinternet.com>
Source record: 134095

Flat frequency response across 3:1 frequency range
i.e. from 7 to 21 Mhz

For those who are interested it's on
www.standardtrees.co.uk/RXO-Unitenna.pdf

5605. Re: Unusual half sloper -- second try

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-24 17:30:52 UTC
From: Bill Ogden <ogden@us.ibm.com>
Message-ID: <3D90A14B.BDCDEFFE@us.ibm.com>
Source record: 134096

Thank you for the note. I guess a large metal mass is needed above the half-sloper ----- my 2 element quad is probably not large enough. (And my 40' tower is not very high.) They sound like great antennas for the low bands, provided the user has an appropriate tower/antenna combination to start with. From the few writeups available, they sound better than a shunt-fed tower because the power curve starts from the top (or near the top) of the tower rather than at the bottom of the tower.

Thanks for the note,

Bill
W2WO

George McCouch wrote:

> In article <3D872D14.1DE3AA9E@us.ibm.com>,
> Bill Ogden <ogden@us.ibm.com> wrote:
>
> > (I posted the following last week, with no response. Has anyone tried
> > one of these?)
> >
> > QST (some years ago) and the second Wire Antennas book briefly discuss a
> >
> > wide-band 80 meter antenna, with two examples described. It consists of
> >
> > a "half sloper" attached to a tower, with two more wires connected
> > directly to the tower (at a lower point) and horizontally fanned out
> > into a "V". The half-sloper is routed down between the the legs of the
> > V. An almost flat SWR across 75/80 meters is shown.
> >
> > In one of the examples the tower is 50', the half sloper (78' long) is
> > attached at the 45' level, and the two V legs (each 53' long) are
> > attached at the 13' level.
> >
> > 1. This antenna seems too good to be true ---- absolutely flat across
> > the whole band and with reportedly excellent results. It was originally
> >
> > in an April issue, and some April articles are too good to be true.
> > Comments?
> >
> > 2. Little is said about how dimensions are calculated. I would like to
> > use it on my little 40' tower (with a quad on top). I would attach the
> > sloper at about the 30' level and the V at about 8'. Is this
> > unreasonably small/low?
> >

> > 3. Has anyone tried a two-band version? It would be nice to connect a
> > second sloper to the same feed point, but for 40 meters. Would the same
> >
> > V section work for both?
> >
> > I realize that most of the effective radiation is from the tower and
> > ground/radials are important. (I also realize that a dipole at 60' (or
> > higher), or an inverted V might be a better answer, but I do not have
> > that option.)
> >
> > Bill
> > W2WO
>
> Bill,
>
> I have not seen that particular antenna in the literature I have, but
> have seen a 2 wire wideband 75 meter design in either the W1FB antenna
> notebook or the ARRL antenna handbook. This consisted of two slopers 55
> feet long fanned from a common point to about 8 - 10 feet of seperation
> at the low ends. The SWR was suppossed to be flat for most of the band.
> I built this some years ago and hung it at about 35 feet on my tower
> which has a very large tribander and VHF antenna at the top. The best
> SWR I could get was about 3/1 and it was flat at that point for about
> 250 khz. Although I use half slopers extensively on 160, 75, 40 and 30
> meters, I have always had problems getting better than a 3-4/1 SWR on
> 75. The antennas always perform well even if a tuner is needed on 75.
>
> 73
> George
> K3UD

5606. Re: Radials ?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-24 18:00:04 UTC
From: 'Doc <w5lz@icok.net>
Message-ID: <3D90A819.BE7DD7E1@icok.net>
Source record: 134097

Reg,
Forget the cork. Place wine in flexible container.
I keep my flexible container just behind my belt buckle.
'Doc

5607. Re: how does power output increase affect S-Meter on the other side?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-24 18:01:51 UTC
From: 'Doc <w5lz@icok.net>
Message-ID: <3D90A884.C7DE7E8F@icok.net>
Source record: 134098

Cecil,
In most cases, higher output makes the 'S' meter
read higher, but not always...
'Doc

5608. Re: Wide band HF vertical

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-24 18:14:07 UTC
From: Jake Brodsky <frussle@erols.com>
Message-ID: <ria1pu4easels5ela63rai9fdr5pc4k4e5@4ax.com>
Source record: 134099

It's wide band, alright, as long as you don't mind the impedance changes and the matching network you'll need to use it :-)

I really doubt this article can do what they claim. There is nothing special about a vertical folded dipole, off-center fed. But I have to wonder if the antenna pattern diagrams are accurate.

73,

Jake Brodsky, AB3A mailto:frussle@erols.com
"Beware of the massive impossible!"

5609. Re: Wide band HF vertical

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-24 18:42:57 UTC
From: trees <info@standardtrees.co.uk>
Message-ID: <amqbngigf1@knossos.btinternet.com>
Source record: 134100

It works well in practice.
The polar diagrams are entirely logical.
Test diagrams have been produced at Christchurch University, New Zealand.

The pertinent question may be; whether you have any instant reason to
dispute them, other than natural flare.

"Jake Brodsky" <frussle@erols.com> wrote in message
news:ria1pu4easels5ela63rai9fdr5pc4k4e5@4ax.com...
> It's wide band, alright, as long as you don't mind the impedance
> changes and the matching network you'll need to use it :-)
>
> I really doubt this article can do what they claim. There is nothing
> special about a vertical folded dipole, off-center fed. But I have to
> wonder if the antenna pattern diagrams are accurate.
>
> 73,
>
>
> Jake Brodsky, AB3A mailto:frussle@erols.com
> "Beware of the massive impossible!"

5610. Re: Follow-up Disk Skin Effect Experiment

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-24 18:44:52 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <3D90B2A4.7030306@eznec.com>
Source record: 134101

rsparks wrote:
> . . .
> So what do you think?

As I said before, there's a great deal of interaction among the fields from the currents on the sides of the disk and with the wires. This is why your experiment failed.

Not only do the fields from the currents interact with the wires, but the currents on the two sides of the disk interact with each other. The field from the current on one side of the disk doesn't just abruptly end at the edge of the disk -- it fringes around the disk. This induces a current in the other side of the disk. And that induced current's field fringes around and modifies the original current. These modify the conducted currents that you're concentrating on.

Until you include in your explanations the total interaction that's going on, any conclusion you reach, whether it happens to be the correct one or not, is bogus. You're wasting your time coming up with explanations for why the conducted currents behave as they do or as you presume they do, while simply ignoring the very significant and complex interaction that's going on. And, rest assured, that if you do find a way to include all the interactions (it won't be easy, if it's possible at all without a good and very expensive field modeling program), it'll have to include skin effect in order to explain what you've observed.

Roy Lewallen, W7EL

5611. Re: Follow-up Disk Skin Effect Experiment

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-24 18:47:54 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <3D90B35A.5090502@eznec.com>
Source record: 134102

Ah, shucky-darn, you mean that the law of conservation of energy isn't just an amateur myth after all? Next thing I know, you'll be saying that skin effect is real, too.

Roy Lewallen, W7EL

Reg Edwards wrote:
> "Roy Lewallen" wrote
>
>
>>Then connect the capacitor to another,
>>completely discharged 1000uF capacitor. Use a direct, very low
>>resistance connection. You'll find that you end up with 5 volts on each
>>capacitor.
>
> ==========
>
> Roy, you are the cheat. Any value of resistor can be used with the same
> result. The process just takes longer.
>
> Whatever the resistor value the "missing" energy is dissipated in it. Or is
> partially converted to sound energy. Even radiated.
>
>

5612. Re: To George Holubec. S-meter cal.

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-24 19:08:31 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <3D90B82F.9090702@eznec.com>
Source record: 134103

Reg Edwards wrote:
> . . .
> The receiver-plus-S-meter is basically a watt-meter. It is a receiver input
> power meter. It could be scaled 0 to 1 milli-watts or in decibels relative
> to 1 milli-watt. This allows receiver input power to be compared directly
> with transmitter radiated output power.
>
> If the transmitter output is described as peak power then the S-meter can
> only be assumed to indicate peak power. The receiver has no way of knowing
> what the Tx modulating waveform is and receiver gain does not change with
> the transmitter's modulating waveform.
>
> It is conventional, of course, for the scale to marked in decibels relative
> to 50 micro-volts across 50 ohms (= 50 pico-watts = S9). That is if the
> receiver input is 50 ohms.
>
> Each S-unit below S9 corresponds to a 6 dB reduction in input power.
>. . .

This is an unfortunate myth that some old wives and Gurus -- even
iconoclastic ones -- keep perpetuating.

The fact is that the S meter is nothing more than a voltmeter connected
to the receiver's AGC line. The AGC voltage is approximately logarithmic
with respect to the incoming signal level, so the S-meter indicates the
incoming signal level in a more-or-less logarithmic fashion. On almost
no commercial amateur receiver meter is an S unit equal to 6 dB. It can
be anywhere from less than 2 to 5 or more, and can vary a great deal
over the dial. On my Icom 730, for example, preamp out, 7 MHz band, one
S unit varies from 1.3 dB near the bottom of the scale to 4.0 near the
top. The "10 dB" over nine increments are 5.6 to 13.5 dB. Switching from
a dipole to a rather poor 3 element beam would move my receiver's S
meter from S2 to S5 (S2 to S5 is 5.2 dB). If I believed that my S meter
was 6 dB per unit, I'd conclude that the beam's gain was 18 dB better
than the dipole. And that amount of gain would require a boom length of
about 25 wavelengths, or about a quarter mile on 20 meters. Mistaking
the gain of a 3 element beam for one with a quarter mile boom is the
kind of mistake you can make if you simply assume that your S meter is 6
dB per unit.

Roy Lewallen, W7EL

5613. Which is better?? Inverted-L or Loop

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-24 19:23:44 UTC
From: StarGazer <pti@capnet.com>
Message-ID: <3D90BBC0.25471667@capnet.com>
Source record: 134106

xfgh

5614. Re: how does power output increase affect S-Meter on the other side?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-24 19:32:30 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <3D90BDCE.4020006@eznec.com>
Source record: 134104

Bill M wrote:
> "Ian White, G3SEK" wrote:
>
>>But read the lab tests in the equipment reviews. In real receivers sold
>>to amateurs, an S-unit can be as little as 1-2dB at the bottom of the
>>scale, rising to as much as 7-8dB between S8 and S9.
>>
>>
>>If a station is S9 and cuts his power by 10dB, he may go down by 1-2
>>S-points. But if he's S5 and does the same, he'll probably go down by
>>3-4 S-points.
>
>
> I certainly won't disagree with this point given that it has been
> repeatedly proven to be the case, but I would like to know why.
> Obviously a radio manufacturer doesn't calibrate the s-meter poorly just
> so all the numbers fit neatly...or do they?
> Or is it that there is such a wide variation in the linearity of the
> gain/avc circuits in a given model receiver?
> Seems to me that deciding where to put the tics on a meter face
> shouldn't become so full of error.
> (Staying with a given receiver model of course, not comparing Model X vs
> Model Y.)
> Comments?
>
> -Bill

Until the fairly recent availability of some good Analog Devices chips, it's been very difficult to make a circuit that has a truly logarithmic response over a wide range -- especially if the temperature can vary. There's no reason for an AGC circuit to have this level of precision. The S meter is really just a convenience, but many naive hams ascribe to it a quantitative measurement capability that it simply doesn't have, nor was it intended to have. It's not the S-meter's fault that the units aren't any particular number of dB and that they're not the same everywhere on the scale. It's solely a faulty assumption by hams that it is. No amateur receiver manufacturer that I'm aware of makes any claim at all about the quantitative value of the S meter readings except. It's like assuming that each turn of a water faucet handle will increase the water flow by some fixed amount, then complaining that the faucet manufacturers don't calibrate them.

The fact is that it would be quite costly for receiver manufacturers to include a truly calibrated and linear signal strength meter. Most amateurs simply wouldn't pay for it, so it would be foolish for the

manufacturers to bother. And, ironically, if you put a 6 dB per unit S meter on a ham receiver, you'd undoubtedly get a bagful of complaints about how "dead" the S meter is.

Roy Lewallen, W7EL

5615. Re: Using a Lowes paint-roller handle for light antenna use

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-24 19:36:24 UTC
From: Randy Ott <randy@iscdata.com>
Message-ID: <Y83k9.1536$bg3.482725955@newssvr11.news.prodigy.com>
Source record: 134105

> And check the SWRs.

What are SWRs?

K5HJ

5616. Re: Radials ?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-24 20:18:53 UTC
From: WA6LZH <tangeram@lucent.com>
Message-ID: <3D90C8AD.7090100@lucent.com>
Source record: 134107

I noticed a manufacturer or two selling a "Ground Coupling Base" for a vertical antenna. The idea expressed as a large sheet of metal acting as a capacitor plate to Mother Earth.

Is it true that a large number of radials is closer to the plate area than a small number of them? Maybe what we should be going for in a ground plane or radial field is total area not length? What is the resonant frequency of a square or a ractangle?

Tony

Mark Keith wrote:

> Dave wrote:
>
>>With a ground mounted vertical using bare copper wires for the radials will
>>it help, hinder, or make no deference to put 8 ft ground rods at the far end
>>of the radials?
>>
>>Thanks,
>>Dave (Klutz)
>>
>
>

5617. Re: how does power output increase affect S-Meter on the other side?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-24 20:22:28 UTC
From: CAM <Cecil.A.Moore@ieee.org>
Message-ID: <3D90C984.C7BD0D9B@ieee.org>
Source record: 134108

'Doc wrote:
> In most cases, higher output makes the 'S' meter
> read higher, but not always...

Egads, on top of gross nonlinearity, are you saying that the 'S' meter is
not single-valued in both dimensions? (I forget the technical term for such).
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
------== Over 80,000 Newsgroups - 16 Different Servers! =-----

5618. Re: Wide band HF vertical

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-24 20:27:09 UTC
From: CAM <Cecil.A.Moore@ieee.org>
Message-ID: <3D90CA9D.DDB79A19@ieee.org>
Source record: 134110

trees wrote:
>
> It works well in practice.
> The polar diagrams are entirely logical.
> Test diagrams have been produced at Christchurch University, New Zealand.
>
> The pertinent question may be; whether you have any instant reason to
> dispute them, other than natural flare.

Is this something like a Windom? There is a feedpoint position on a
Windom-type antenna where the ratio of voltage to current is somewhat
stable for harmonically related bands. Perhaps this is the vertical
version of the clothesline antenna, a Windom-like version of the folded
dipole?
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
------== Over 80,000 Newsgroups - 16 Different Servers! =-----

5619. Re: Counterpoise??

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-24 20:33:30 UTC
From: WA6LZH <tangeram@lucent.com>
Message-ID: <3D90CC1A.7070501@lucent.com>
Source record: 134109

Rick,

Have you done anything with geometric shapes? i.e. squares,
rectangles or circles? Several manufacturers are marketing portable
vertical antennas with a mount that is a square(MFJ) or rectangles(Alpha
Delta). They work as a capacitor plate. Perhaps this might make an
efficient way of coupling to ground if it were know what the resonant
area for a given frequency or range was? I'm wondering if a particular
area would result in a higher current in the ground path. Maybe the
"Ideal" radial field below a vertical antenna is not a radial field at
all but a galvanized steel plate? There certainly is some anecdotal
evidence with hams I've contacted with a vertical atop a trailer or
aluminum building. They're almost always stronger than you'd expect
(Admittedly unscientific). Also sheet metal is cheap.

Tony

Rick Littlefield wrote:

>>A counterpoise can be as simple as an electrode in salt water or a single
>>
> 1/4WL "radial".<
>
> The more I experiment with counterpoise structures, the more complex and
> interesting their behavior appears--especially when a given structure is viewed
> over a span of frequencies. Anything but a "simple" topic!
>
> Rick K1BQT
>

5620. Re: Stealth patio antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-24 20:39:39 UTC
From: WA6LZH <tangeram@lucent.com>
Message-ID: <3D90CD8B.2060601@lucent.com>
Source record: 134111

Well said. I'm always in favor of accommodating the general good and welfare of us all. Many of the convenants are a good thing. It's up to us to see a good thing isn't carried too far. Life, Liberty and a dipole at forty feet.

Tony

> But reasonable accommodation is
> clearly justified and in order.
>
> Dick
>

5621. Re: Counterpoise??

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-24 20:49:27 UTC
From: WA6LZH <tangeram@lucent.com>
Message-ID: <3D90CFD7.4000906@lucent.com>
Source record: 134112

Hmmmmm....wonder what a 33 foot length of 24 inch aluminum foil would do as a counterpoise? Cheap, easy to lay down just roll it out. Staple a wire to it and connect to the coax. Put a St. Louis vertical on top and see what happens. I think I might. Now, how to deal with the Park Ranger..........

5622. Re: Counterpoise??

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-24 21:22:56 UTC
From: Uncle Peter <radioconnectionNO@cox.netSPAM>
Message-ID: <QI4k9.94744$TX5.3721241@news1.east.cox.net>
Source record: 134113

"WA6LZH" <tangeram@lucent.com> wrote in message
news:3D90CFD7.4000906@lucent.com...
> Hmmmmm....wonder what a 33 foot length of 24 inch aluminum foil would do
> as a counterpoise? Cheap, easy to lay down just roll it out. Staple a
> wire to it and connect to the coax. Put a St. Louis vertical on top and
> see what happens. I think I might. Now, how to deal with the Park
> Ranger..........
>

Galvanized chicken wire... For as long as it lasts, anyways.

Pete

5623. Re: When to use a Balun

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-24 21:28:12 UTC
From: rhmcus@yahoo.com
Message-ID: <3d90d424.3181554@news-server.austin.rr.com>
Source record: 134114

All

Thanks for the pointer and information on baluns.. Im using a G5RV
and what Ive read is a few turns after the matching section of the
G5RV should be the place to wind 3 or 4 loops of feedline to act as an
rf choke for helping with unwanted currents floating around..

This may or may not be a balun in the true sense of the word just an
rf choke. Are 1 to 1 baluns indicated for use on the G5RV?

Thanks

Rich

On Mon, 23 Sep 2002 06:01:47 GMT, rhmcus@yahoo.com (Rich McMahon)
wrote:

>All
>
>With wire antennas when is it appropriate and necessary to use a
>balun.. I understand that basically its an impedance matching
>transformer. Does it also isolate RF and keep it off the feed line and
>out of the shack.. Oh i'm using a G5RV full size and a differential T
>turner from MFJ..
>
>Are there some good links on this subject?
>
>Many thanks
>
>Rich KG5IF

5624. Re: How much does a metallic center support effect multiband dipole patterns?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-24 21:45:44 UTC
From: JC <on5mjREMOVE@skynet.be>
Message-ID: <3d90dde0$0$213$ba620e4c@news.skynet.be>
Source record: 134115

I never paid much attention to this physical explanation, but it's true for symetricaly fed antennas.

5625. Re: Counterpoise??

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-24 21:54:45 UTC
From: k1bqt@aol.com
Message-ID: <20020924175445.10377.00005971@mb-fx.aol.com>
Source record: 134116

Hi Peter--

Chicken wire works great--I know a chicken farmer in Maine who got a killer signal by burying all his old chicken wire and tin roofing in the back yard with his bucket loader. Metal plates aren't especially useful unless they're v-e-r-y large. Tinfoil is a good idea. Take up all of the sod from your lawn, cover the entire surface with strips of foil, then put the sod back down again. Now THAT will improve your ground conductivity!

Rick K1BQT

5626. Re: What is the minimum size for antenna radials??

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-24 23:17:03 UTC
From: Reg Edwards <g4fgq.regp@btinternet.com>
Message-ID: <amqrpe$gb4$1@venus.btinternet.com>
Source record: 134117

> Would 10 or 12 gauge insulated stranded copper wire be as
> good as 20 gauge.

==========

For buried radials tt depends on number of radials, on radial length, on operating frequency, on soil conductivity, on soil permittivity and on what you mean by "good". But these are theoretical considerations.

As a very crude but quite sufficient guide, the loss resistance of a radial system of 10 gauge wires is about 75 percent or more of the loss resistance of a 20 gauge system. (Sorry Roy I have no measurements to support this factual statement).

It is sufficient because hardly anybody knows what the soil loss resistance in THEIR back yard actually is. This in itself makes discussion hardly worth while. It's a fruitless passtime. Punching numbers into computer programs purporting to give answers with an accuracy of centi-bels but calling for soil resistivity is meaningless for the same reason.

Returning to the subject matter - In ordinary soils switching from one wire gauge to the other will make no observable difference when in the midst of many more uncertainties. The amount of installation labour is the same for both. Dig in whatever you have available. If buying new then you may choose the less expensive. (Good or bad ?) I just keep a stock of enameled 20-gauge all-purpose bell wire.

If you hope to have a long-lived installation then choose the thicker wire. Stranded stuff will corrode more rapidly than solid wire. But if you already have stranded wire doing nothing then by all means use it. In general, amateur installations are short lived. After a few weeks or months amateurs are eager to try something else. My own time span is about 10 minutes. Durability is of little consequence. Alligator clips are the vogue for antennas and radials.

Stranded wire makes no electrical difference. Neither does ordinary thin insulation.

For elevated radials use whatever is available and economical for you. Only its weight, tensile strength and cost need be considered.

==========
Regards from Reg G4FGQ
Free Radio Design Software
Go to http://www.g4fgq.com
==========

5627. Re: To George Holubec. S-meter cal.

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-24 23:17:05 UTC
From: Reg Edwards <g4fgq.regp@btinternet.com>
Message-ID: <amqrpg$gb4$2@venus.btinternet.com>
Source record: 134118

Dear Roy,

We've been through all this before.

The S-meter is a power (watt) meter.

As I've previously suggested to you and you have yourself described how to do it. Calibrate your meter according to the generally accepted de-facto standard. All your worries will then fade into the sunset.

You have a signal generator and an attenuator. Replace the existing meter scale with a blank and use a fine pen with black ink.

May I repeat - at HF, the common or garden S-meter is primarily intended to indicate dB relative to 50 pico-watts power collected by the antenna. The antenna tuner, adjusted in the transmit mode to match 50 ohms, automatically produces a *conjugate* match between antenna and the receiver. So there is no power loss between antenna and Rx.

It is conventional in amateur receivers to mark the meter scale at 0 dB as S9. We have become accustomed to it. There's no need to change it. Almost without thinking about it we make allowances for the known scale-shape errors.

BUT WE ALL KNOW THE METER INDICATES RECEIVED SIGNAL *S*T*R*E*N*G*T*H*.

STRENGTH MEANS POWER.

AND POWER = WATTS.

If the receiver has an input resistance of 50 ohms then, according to Ohm et al, at S9 the receiver input is 50 micro-volts. But we don't want to know that except for calibration purposes. We are really interested in signal strength. In principle the meter can be calibrated to indicate received signal strength correctly whatever its input resistance may be.

Take a look at modern transceiver maintenance handbooks. Calibration at the low end of the scale is not perfect. But that's the fault of the meter/receiver manufacurers - for obvious reasons they are reluctant to make minor modifications to the conventionally long-accepted meter scale-shape. A more accurate S-meter has to be paid for. But it is accurate enough as it is.

If you have a vintage 1939 model with a bent needle which refuses to be calibrated it is not fair to blame either the standard or the unfortuate news-bearer. ;o)

And yes, I know what AGC is. It is that circuit which fortuitously produces an approximately logarithmic scale shape needed for S-meters. It costs only money to improve it.

Reg, G4FGQ

5628. Re: Using a Lowes paint-roller handle for light antenna use

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-24 23:21:58 UTC
From: Cerebral Assasin <hla@xyz.com>
Message-ID: <qs6k9.255066$z91.11078541@bin3.nnrp.aus1.giganews.com>
Source record: 134119

"Randy Ott" <randy@iscdata.com> wrote in message
news:Y83k9.1536$bg3.482725955@newssvr11.news.prodigy.com...
> > And check the SWRs.
>
> What are SWRs?
>
> K5HJ

They are a form of complex Swr readings taken at different times of day and
nite then averaged togther to give multiple SWR's. LOL
>
>
>

5629. Re: To George Holubec. S-meter cal.

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-24 23:44:33 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <3D90F8E1.7060409@eznec.com>
Source record: 134120

Out of curiosity, who besides Reg has an amateur receiver that allows adjusting an S-meter to 6 dB per division? (And I don't mean a single point adjustment for S9, which has nothing to do with dB per S unit -- most receivers have this capability.)

Roy Lewallen, W7EL

Reg Edwards wrote:

> . . .
> Take a look at modern transceiver maintenance handbooks. Calibration at the
> low end of the scale is not perfect. But that's the fault of the
> meter/receiver manufacurers - for obvious reasons they are reluctant to
> make minor modifications to the conventionally long-accepted meter
> scale-shape. A more accurate S-meter has to be paid for. But it is accurate
> enough as it is.
>
> If you have a vintage 1939 model with a bent needle which refuses to be
> calibrated it is not fair to blame either the standard or the unfortuate
> news-bearer. ;o)
> . . .

5630. How much room do I need for a rohn h50

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-25 00:15:03 UTC
From: Recordking@Hotmail.com
Message-ID: <e8d89b3f.0209241615.7e59e02f@posting.google.com>
Source record: 134121

How much room do I need for a rohn h50 and all the guy wires. I have a 30x60 or a 40x70 maybe a little bigger back yard, will that be big enough. Could I go with only using 8 guy wires on the top and bottom sections of the antenna mast and would it still be stable, or should I use more guy wires. Where can I get info on how to guy a antenna mast.

5631. Re: How much room do I need for a rohn h50

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-25 01:04:43 UTC
From: Dennis Kaylor <k4oxg@tampabay.rr.com>
Message-ID: <3D910BA7.991862AB@tampabay.rr.com>
Source record: 134122

i would check rohns website not sure what it is right off hand but they
have a site with all the info you could possibly want
now on my rohn 25g tower i had only one set of wires at about 30 feet and
it worked well i had a tilt over base on it and 4 11 ele yagis stacked
for 2 meter SSB and 2 4 ele yagis stacked for 2 meters FM
and there was no problems
also becareful some areas of the country you have to get a permit to
install the tower and in order to get the permit you need to get the
installation engineered which is pricey
good luck

DJboutit wrote:

> How much room do I need for a rohn h50 and all the guy wires. I have a
> 30x60 or a 40x70 maybe a little bigger back yard, will that be big
> enough. Could I go with only using 8 guy wires on the top and bottom
> sections of the antenna mast and would it still be stable, or should I
> use more guy wires. Where can I get info on how to guy a antenna
> mast.

5632. Re: To George Holubec. S-meter cal.

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-25 02:08:34 UTC
From: gaschafer@attbi.com
Message-ID: <3d911ad7.43221775@netnews.attbi.com>
Source record: 134123

I have several Collins S line receivers that do not fair to bad in the S meter department. It has
been awhile (years) since I ran calibration curves on them but from what I remember they
tracked pretty well over about 3/4 of the scale. With S9 being 100 microvolts as the starting
point each S unit is pretty close to 6 DB as advertised. Over S9 the 10 DB marks fall pretty
much in line until getting up to around 50 over. The low end S1, S2 are, if I remember, deviated
from the 6 DB a little..
I used to use those receivers with calibrated attenuates ahead of them to make rough antenna
measurements. Once I ran a calibration curve on the meter I kept a sheet of paper with the
actual verses meter reading chart (a correction chart). I made one for each band as gain was a
little different on each. If trying to make a meaningful signal measurement, keeping a few DB of
attenuation switched in helped the antenna match.

There are no calibration adjustments other than meter zero and IF gain in those receivers. But
they do track as well as any receiver that I have seen.

6 DB per S unit used to be the standard years ago I think. Then somebody got the idea that if
dumb hams saw the meter kick up higher with a weak signal they would think that receiver was
"hotter" than the others and buy it! I guess it worked. How many times have you heard
comments about the "dead S meter" on some receivers or "boy is my new receiver ever hot"
"you guys are 15 DB stronger on the new one than you were on the old one". "This thing is
really sensitive".

O well, we did it to ourselves again.

73
Gary K4FMX

On Tue, 24 Sep 2002 16:44:33 -0700, Roy Lewallen <w7el@eznec.com> wrote:

>Out of curiosity, who besides Reg has an amateur receiver that allows
>adjusting an S-meter to 6 dB per division? (And I don't mean a single
>point adjustment for S9, which has nothing to do with dB per S unit --
>most receivers have this capability.)
>
>Roy Lewallen, W7EL
>
>Reg Edwards wrote:
>
>> . . .
>> Take a look at modern transceiver maintenance handbooks. Calibration at the
>> low end of the scale is not perfect. But that's the fault of the
>> meter/receiver manufacurers - for obvious reasons they are reluctant to
>> make minor modifications to the conventionally long-accepted meter
>> scale-shape. A more accurate S-meter has to be paid for. But it is accurate
>> enough as it is.
>>
>> If you have a vintage 1939 model with a bent needle which refuses to be
>> calibrated it is not fair to blame either the standard or the unfortuate
>> news-bearer. ;o)
>> . . .
>

5633. Re: Which is better?? Inverted-L or Loop

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-25 02:38:24 UTC
From: richardharrison@webtv.net
Message-ID: <22424-3D9121A0-229@storefull-2316.public.lawson.webtv.net>
Source record: 134124

StarGazer wrote:
"xfgh"

Do you want to transmit, receive, or do both? What frequency do you want to use? How much antenna space do you have? What are the specifics of your site?

Best regards, Richard Harrison, KB5WZI

5634. Re: When to use a Balun

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-25 03:06:01 UTC
From: CAM <Cecil.A.Moore@ieee.org>
Message-ID: <3D912819.6B808534@ieee.org>
Source record: 134125

Rich McMahon wrote:
> Thanks for the pointer and information on baluns.. Im using a G5RV
> and what Ive read is a few turns after the matching section of the
> G5RV should be the place to wind 3 or 4 loops of feedline to act as an
> rf choke for helping with unwanted currents floating around..
>
> This may or may not be a balun in the true sense of the word just an
> rf choke. Are 1 to 1 baluns indicated for use on the G5RV?

My store-bought G5RV came with six FB-77-5621 toroids in a 1:1 choke
configuration.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
------== Over 80,000 Newsgroups - 16 Different Servers! =-----

5635. Re: Using a Lowes paint-roller handle for light antenna use

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-25 03:20:27 UTC
From: Fred Hambrecht <w4jle@charter.net>
Message-ID: <up2as1qk980m04@corp.supernews.com>
Source record: 134126

Keying a transmitter and determining the reflected Vs forward power allows one to calculate a SWR.

When you key the transmitter the second time and recalculate, you now have SWR's. I heard it on CH 19 so it has to be right.

"Randy Ott" <randy@iscdata.com> wrote in message news:Y83k9.1536$bg3.482725955@newssvr11.news.prodigy.com...
> > And check the SWRs.
>
> What are SWRs?
>
> K5HJ
>
>
>

5636. Re: Magnetic Loop 40m

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-25 04:27:54 UTC
From: Mike Coslo <mcoslo@adelphia.net>
Message-ID: <3D91658A.3020308@adelphia.net>
Source record: 134127

Alex wrote:

> I would like to build a magnetic loop for 40m using a trombone capacitor.
> What i was wondering if anyone had a design for one? 73

Hi Alex,

I'm building one now, but the design isn't quite ready for prime-time yet. This antenna should tune well below 40 meters, so might be a little overkill for you. But it will be fairly efficient on 40.

I can tell you it is around 7 meters in circumfrence. I have made a four pronged trombone capacitor (two prongs in series-two in parallel) using 19 mm copper pipe for the loop and outer part of the cap, and 13mm pipe and mylar dielectric for the other part. The cap has around 300 mm travel.

The shape is octagonal. The pipe is soldered together.

The motor to adjust the cap hasn't been chosen yet. HOpe this helps a little.

- Mike KB3EIA -

5637. Re: Which is better?? Inverted-L or Loop

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-25 04:47:22 UTC
From: 'Doc <w5lz@icok.net>
Message-ID: <3D913FCD.5754BFC9@icok.net>
Source record: 134128

StarGazer,
That depends...
'Doc

5638. Re: Wide band HF vertical

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-25 04:58:12 UTC
From: 'Doc <w5lz@icok.net>
Message-ID: <3D914250.1DE95C84@icok.net>
Source record: 134129

Trees,
Don't believe everything you read...
'Doc

5639. Re: Radials ?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-25 05:04:02 UTC
From: 'Doc <w5lz@icok.net>
Message-ID: <3D9143B5.1DF129D2@icok.net>
Source record: 134130

Tony,
I wonder how many of those 'ground coupling'
bases they've managed to sell? Sort of like the
old saying, "copper plate your yard", for a good
ground. Second question, do you swap your lawn-
mower for a floor buffer and metal polish??
'Doc

5640. Re: design for VHF 1/2 wave for bicycle?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-25 05:07:48 UTC
From: 'Doc <w5lz@icok.net>
Message-ID: <3D914498.6B401155@icok.net>
Source record: 134131

Larry,
Why not mount a 2 meter antenna on your helmet?
If it works for those guys at hamfests, I don't
see why it wouldn't work on a bike. I mean, you
wear a helmet, don't you?
'Doc

5641. Re: Wide band HF vertical

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-25 07:16:17 UTC
From: trees <info@standardtrees.co.uk>
Message-ID: <amrns1$15u$1@knossos.btinternet.com>
Source record: 134132

The principle is nothing like that of a Windom
It's feed point impedance varies continuously with frequency
Harmonic relationships are not involved
We would be most grateful if you could please direct us to data on the
'Clothesline' antenna quoted
Thanks

"CAM" <Cecil.A.Moore@ieee.org> wrote in message
news:3D90CA9D.DDB79A19@ieee.org...
>
> Is this something like a Windom? There is a feedpoint position on a
> Windom-type antenna where the ratio of voltage to current is somewhat
> stable for harmonically related bands. Perhaps this is the vertical
> version of the clothesline antenna, a Windom-like version of the folded
> dipole?
> --
> cheers, CAM http://www.qsl.net/w5dxp
>
>
> -----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
> http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
> -----== Over 80,000 Newsgroups - 16 Different Servers! =-----

5642. Re: Wide band HF vertical

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-25 07:16:18 UTC
From: trees <info@standardtrees.co.uk>
Message-ID: <amrns2$15u$2@knossos.btinternet.com>
Source record: 134133

Especially if it has no content

"'Doc" <w5lz@icok.net> wrote in message news:3D914250.1DE95C84@icok.net...
> Trees,
> Don't believe everything you read...
> 'Doc

5643. Re: Wide band HF vertical

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-25 07:44:09 UTC
From: OE1MWW <no.mail@please.com>
Message-ID: <40q2puctaf1c0a8bu249mq5asmgsps04p8@4ax.com>
Source record: 134134

Good that people publish their experiences, but in this artice he says
in Figure 1. ' 3/4 lambda' in size. On the other hand G3RXO says he
used a 9.2 m high dipole. This ends up in a max. wave length of 12m.
Later he mentioned he used it for 7 - 21 Mhz (?)

If he would used a simple wire of any reasonable length with a tuner
it would most probably end up with the same results.

73's Wolfgang OE1MWW

On Tue, 24 Sep 2002 16:29:18 +0000 (UTC), "trees"
<info@standardtrees.co.uk> wrote:

>Flat frequency response across 3:1 frequency range
>i.e. from 7 to 21 Mhz
>
>For those who are interested it's on
>www.standardtrees.co.uk/RXO-Unitenna.pdf
>

5644. Re: antenne magnetique circulaire

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-25 07:54:21 UTC
From: Fabio Morsani <fabio.morsani@pi.infn.it>
Message-ID: <3D916BAD.70306@pi.infn.it>
Source record: 134135

Harald Blaise wrote:
> Bonjour,
> Je recherche expï¿½riences d'OM qui ï¿½mettent avec une antenne circulaire
> magnï¿½tique de marque BABY LOOP fabriquï¿½e par une entreprise italienne.
> Apparemment cette antenne par rapport ï¿½ celles dï¿½crites dans les articles de
> "construction" et celles de MFJ (1786, 1788...) aurait une directivitï¿½ non
> seulement avant cï¿½tï¿½ de l'ordre de 25 dB mais ï¿½galement une directivitï¿½
> avant par rapport ï¿½ l'arriï¿½re de 7 dB. Je souhaiterai avoir confirmation de
> cela car cette directivitï¿½ avant arriï¿½re permet en thï¿½orie une utilisation ï¿½
> partir de la fenï¿½tre sans pour autant "irradier" l'habitation.
>
Bonjour Harald.
You should contact directly the "father", I3VHF. You can find the
contact address on its site http://www.ciromazzoni.com/

> De plus je souhaiterais avoir connaissance des expï¿½riences des utilisateurs
> de cette antenne, ï¿½ savoir :
> ï¿½les conditions d'installations,
> ï¿½dans le cas d'une utilisation sur balcon la gï¿½ne TVI existe elle pour les
> voisin du dessous? Quelles sont les configurations ï¿½ ï¿½viter?
>
I3VHF can also provide his suggestions about the recommended and not
recommended installation sites, based on the extensive tests he
performed in the past years.
I used the BABY for a year at 1 m over ground, in a very poor location,
but it worked reasonably well, from 40 to 10 meters (here SWR was more
than 1.5, but a lot of iron wires were in the environment).

> ï¿½le rï¿½glage de l'antenne ï¿½ l'aide du CV commandï¿½ par moteur est elle aisï¿½e
> avec le boï¿½tier de commande de base ou vaut il mieux d'emblï¿½e investir dans
> le boï¿½tier de commande avec tuner automatique? Peut on avec le boï¿½tier de
> commande de base , ï¿½tablir selon la frï¿½quence utilisï¿½e une courbe position
> CV = F(frï¿½quence). Le tuner automatique est il rï¿½ellement une vrai boite de
> couplage?
>
The basic control box displays an indication of the capacitor position,
but you cannot take for sure such a number. A simple humidity variation
change the resonance point from the evening to the following morning,
but the displayed number isn't changed and you don't know in what
direction the resonance point has moved.
The automatic tuner ATU do automatically what you have to do manually
using your TX at low power out and the manual control box.
The great advantages are:
- the TX isn't needed anymore
- you don't have to ask yourself "where is tuned now the loop?"

in order to know in what direction you have to start the motor.
You simply have to digit the frequency and another key to start
the tuner
- the emitted signal during the tuning is 12dBm max, which is
completely irradiated only when the loop is tuned, for a few seconds
in the worst case
- the tuning process takes the minimum time allowed by the loop
electrical/mechanical characteristics
- future version will be directly interfaced to the computer port of
(CAT) the currently commercial available RTX, and will have a direct
input to read the LO frequency for the homebrew or older RTX
- once you will try it, you will not go back to the manual controller
anymore

BTW, the commercial ATU is derived from the loop ATU I have build
a few years ago for my homebrew antenna.

> ï¿½ce type d'antenne permet il rï¿½ellement de pratiquer une activitï¿½ de
> radioamateur? Quelles sont les bandes de frï¿½quences les plus appropriï¿½es?
>
it depends on what you need. I have my homebrew loop since 1995 and I
contacted all the world. Obviously I cannot compete with yagis ... but
I cannot install a yagi, unfortunately.

Ciao
Fabio - I5LHY

5645. Re: VHF and UHF yagi spacing

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-25 09:23:24 UTC
From: rbarrios@gmx.net
Message-ID: <ab7385fd.0209250123.2fae1265@posting.google.com>
Source record: 134136

"Ian White, G3SEK" <G3SEK@ifwtech.co.uk> wrote in message
news:<LMn4MyAYKGk9EA8T@ifwtech.co.uk>...
> EB4EQA wrote:
> >Hi all again,
> >
> >I'm going to install a pair of yagis:
> > - VHF TONNA 20809 (1.65wl=3.47m) (www.f9ft.com)
> > - UHF TONNA 20919 (4.02wl=2.82m) (www.f9ft.com)
> >
> >I will use vertical polarization and I wonder what spacing between
> >them should I use. I plan to use a diplexer on top of the mast to feed
> >both antennas with a single feedline (unless someone gives me a reason
> >not to do it...).
> >
> >As far as I know, the interaction between both antennas won't be as
> >dramatical as it would be if they were feed with the same signal (the
> >diplexer should work as a pretty big isolation), but sure they won't
> >work if I put them too close.
> >
> >How close is too close ???
>
> There is information on my web site, based on 'capture area'.
>
> Minimum stacking distance would be one-half of Tonna's recommended
> stacking distance for two 20919 yagis. This is 0.5*1.25m = 0.6m
> approximately. For vertical polarization, that should be the closest
> distance between the ends of the elements.
>
> That arrangement will place the 2m yagi outside of the capture area of
> the 70cm yagi, so the 70cm yagi should be OK.
>
> The 70cm yagi will still be *inside* the capture area of the 2m yagi,
> but the interaction should be small.

Two wavelengths is far too much for me (unless we're talking about UHF
wavelengths...).

The .06m distance seems much more practical to me. I can use a bigger
one, but its great to hear that this is the recomended minimum.

Thanks Ian and the rest !!!

Roberto

5646. Re: Wide band HF vertical

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-25 09:51:43 UTC
From: rhmcus@yahoo.com
Message-ID: <3d91870f.194671783@news.us.dell.com>
Source record: 134137

We used a discone discage in the service which worked well for
wideband operation...

Rich

On Tue, 24 Sep 2002 16:29:18 +0000 (UTC), "trees"
<info@standardtrees.co.uk> wrote:

>Flat frequency response across 3:1 frequency range
>i.e. from 7 to 21 Mhz
>
>For those who are interested it's on
>www.standardtrees.co.uk/RXO-Unitenna.pdf
>
>

5647. Re: transverter design for 20 meters?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-25 10:01:17 UTC
From: Deos <lineoffiretoday@yahoo.com>
Message-ID: <ams175djb1@nic.grnet.gr>
Source record: 134138
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc,sci.electronics.design

actually it dose not cost more than 40$ ......
but in the long run I would have to agree that the time and the effort may
drive you to buy a nice new RIG :)
a lot of Italian used their multimode cb to go 'down' to 6.500 Mhz....

"JB" <ac6tk@nospamcybertime.net> wrote in message
news:ampup3$1uaq$1@madmax.keyway.net...
> Actually, up-conversion has the advantage of fewer potential for birdies
> from harmonics of the oscillators. Most of the better transceivers use
> an IF higher than the Fo.
>
> I have no experience with the 10m radio you mentioned, but it sounds
> like your project has potential. Additional circuitry could be built into
a
> housing extension, replacing the bottom cover? The down side, It
> could cost more than buying a used HF multi-band rig, but that idea
> never scared any hot rodders from building. Sounds like a neat
> project.
>
> Jim, ac6tk
> "Deos" <lineoffiretoday@yahoo.com> wrote in message
news:amppof$79e$1@nic.grnet.gr...
> : HI JC
> : i have used transverter for years (made some as well) from 10M to 40M it
can
> : be done!
> : "JC" <on5mjREMOVE@skynet.be> wrote in message
> : news:3d8e9a65$0$213$ba620e4c@news.skynet.be...
> : > I think transverters are used for increasing the working frequency not
> : > decreasing it, i.e. passing from HF to VHF.
> :
> :
>

5648. Re: How much room do I need for a rohn h50

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-25 13:05:16 UTC
From: 'Doc <w5lz@icok.net>
Message-ID: <3D91B47B.BF210A5F@icok.net>
Source record: 134139

DJ,
Give Rohn a call. Their engineers will be
happy to tell you more than you ever wanted to
know about towers...
'Doc

5649. Re: Wide band HF vertical

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-25 13:07:14 UTC
From: 'Doc <w5lz@icok.net>
Message-ID: <3D91B4F2.1AA1CAB4@icok.net>
Source record: 134140

trees,
Here's another one of those 'no content' things.
If it sounds too good to be true, it usually is...
'Doc

5650. Re: Wide band HF vertical

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-25 13:17:24 UTC
From: trees <info@standardtrees.co.uk>
Message-ID: <amsd13$2hq$1@venus.btinternet.com>
Source record: 134141

So put your money where your mouth is - and try it

"'Doc" <w5lz@icok.net> wrote in message news:3D91B4F2.1AA1CAB4@icok.net...
>
>
> trees,
> Here's another one of those 'no content' things.
> If it sounds too good to be true, it usually is...
> 'Doc

5651. Re: VHF and UHF yagi spacing

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-25 13:54:34 UTC
From: richardharrison@webtv.net
Message-ID: <9137-3D91C01A-8@storefull-2314.public.lawson.webtv.net>
Source record: 134142

Roberto, EB4EQA wrote:
"Two wavelengths is far too much for me (unless we`re talking about UHF wavelengths...)."

The UHF antenna has little effect on the VHF antenna, so you are talking UHF wavelength, which is about 70 centimeters. So, two wavelengths is 1.4 meters. As I said, amateurs are known to get away with smaller spacing.

Best regards, Richard Harrison, KB5WZI

5652. Discone Antenna Design

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-25 14:44:24 UTC
From: JEEPMON <JEEPMON@HOTMAIL.COM>
Message-ID: <cZjk9.399015$kp.1185627@rwcrnsc52.ops.asp.att.net>
Source record: 134143

Does anyone have any specs. or software to help me design a discone antenna. I want to experiment with a discone that will operate from the 12 meter band up to 10GHz. I prefer specs or a design program the uses radials not solid cones or discs.

Thanks!
KC9BNY

5653. Re: Wide band HF vertical

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-25 14:57:11 UTC
From: CAM <Cecil.A.Moore@ieee.org>
Message-ID: <3D91CEC7.70A19A89@ieee.org>
Source record: 134144

trees wrote:
> The principle is nothing like that of a Windom
> It's feed point impedance varies continuously with frequency
> Harmonic relationships are not involved
> We would be most grateful if you could please direct us to data on the
> 'Clothesline' antenna quoted

If I remember correctly, the Clothesline antenna was in "CQ" a few
years ago. Picture a folded dipole with pulleys at each end so it
can be moved like a clothesline. The feedpoint will move off-center
and therefore the feedpoint impedance will change. The author claimed
that a resonant point could be found for each band by re-positioning
the feedpoint. It's a cute idea, but I like my tuning method better.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

5654. Re: Discone Antenna Design

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-25 15:10:08 UTC
From: Jim Pennino <jimp@specsol.com>
Message-ID: <amsjkg$1u9$1@mail.specsol.com>
Source record: 134145

JEEPMON <JEEPMON@hotmail.com> wrote:
> Does anyone have any specs. or software to help me design a discone antenna.
> I want to experiment with a discone that will operate from the 12 meter band
> up to 10GHz. I prefer specs or a design program the uses radials not solid
> cones or discs.

> Thanks!
> KC9BNY

All the equations can be found in the ARRL Antenna Book (and other places).

The equations are simple.

However, since discones only work over a frequency ratio of about 5:1 and
you are asking for over 400:1, first you must get a good supply of
unobtainium with which to build it.

--
Jim Pennino

5655. Fast Antenna positioning system

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-25 15:12:45 UTC
From: Stefan Moscibroda <stefan.moscibroda@gr.admin.ch>
Message-ID: <3d91d271@news.admin.ch>
Source record: 134146

I'm currently looking for a antenna positioning system. The idea is to compensate multipath influence on antenna pattern measurements by spatial averaging at the receiver. I'm thinking of somehting rotation or a x-y positioning system. Positioning should be performed fast. Does anybody know a good EMC product which could perform this task? Also a list of companies doing such products is very welcome. Thanks!

5656. Re: Proper/ideal choice of T-tuner settings

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-25 15:27:47 UTC
From: Andy Cowley <andy.cowley@uwe.ac.uk>
Message-ID: <3D91D92A.4BFA5190@uwe.ac.uk>
Source record: 134147

Will White wrote:
>
> I find that I can get virtually the same match (especially on 30 and 10
> meters) between my rig and LL fed 67' inverted V, at *more* than two
> settings with a T-tuner . My question is this: granted that in choosing
> between hi-L/low-C and hi-C/low-L, the latter is preferable for
> efficiency's sake, but given the *same* amount of L, if one cap is set
> near max, and the other set near minimum, which should input and which
> output?
>
>

One of the capacitors should be set to MAX C, i.e. minimum impedance. There will only be one solution then and it will be the best you can achieve with that tuner. Which capacitor it is that is set to max will depend on whether the reactance of your antenna is capacitive or inductive at the frequency of operation. Even better if you can bypass the 'unused' cap altogether.

vy 73

Andy, M3ABC

5657. Re: Fast Antenna positioning system

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-25 16:08:35 UTC
From: richardharrison@webtv.net
Message-ID: <5426-3D91DF83-7@storefull-2317.public.lawson.webtv.net>
Source record: 134148

Stephan Moscibroda wrote:
"The idea is to compensate multipath influence---."

Just search on "diversity combiner". I got 1034 responses for everything
from wireless microphones to satellites.

Best regards, Richard Harrison, KB5WZI

5658. Re: Radials ?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-25 16:35:14 UTC
From: WA6LZH <tangeram@lucent.com>
Message-ID: <3D91E5C2.90501@lucent.com>
Source record: 134149

No, but out here on the left coast we like to use those bark pieces or Redwood Chips to cover an area and keep weeds out. In fact I have one outside my shack that's a pretty big area. I think there must be a way to calculate the optimum size of such a "Ground Screen" or at least measure it's efficiency. How about the good ole RF Ammeter between the coax shield and the screen?

'Doc wrote:

> Tony,
> I wonder how many of those 'ground coupling'
> bases they've managed to sell? Sort of like the
> old saying, "copper plate your yard", for a good
> ground. Second question, do you swap your lawn-
> mower for a floor buffer and metal polish??
> 'Doc
>

5659. Re: Discone Antenna Design

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-25 16:39:20 UTC
From: richardharrison@webtv.net
Message-ID: <9136-3D91E6B8-70@storefull-2314.public.lawson.webtv.net>
Source record: 134150

JEEPMON wrote:
"---a discone ehat will operate from the 12-meter band up to 10-GHz."

Why bother when all you need is a 0.6-in dipole and a versatile tuner?
Or bend the leads of a resistor matching your feedline into a
folded-dipole, including the resistor, and forget the tuner.

Best regards, Richard Harrison, KB5WZI

5660. Re: How much room do I need for a rohn h50

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-25 17:18:57 UTC
From: richardharrison@webtv.net
Message-ID: <9136-3D91F001-77@storefull-2314.public.lawson.webtv.net>
Source record: 134151

DJboutit wrote:
"How much room do I need for a Rohn h50 and all the guy wires?"

The original home of Collins Radio, Cedar Rapids, Lynn County, Iowa has a tower ordinance:
"Guy supported towers shall be located so that the distance from the base of the tower to any adjoining property line is a minimum of seventy percent (70%) of the proposed effective tower height."

You can search on "percent guying" and find a lot of these requirements for yourself.

Best regards, Richard Harrison, KB5WZI

5661. Re: Radials ?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-25 17:56:22 UTC
From: Mark Keith <nm5k@wt.net>
Message-ID: <3D91F8C5.731F@wt.net>
Source record: 134162

Reg Edwards wrote:
>
> But they (rods) are a good idea if you take lightning
> > strikes.
>
> ============================
>
> If radials are increased in length by the depth of the rods why are rods a
> better idea at the end of radials if you take lightning strikes ?

I meant installing them at the base of the antenna. Having them at the
ends would be a waste. MK
--
http://web.wt.net/~nm5k

5662. Kenwood MA-700 VHF/UHF antenna dimensions?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-25 18:47:02 UTC
From: Mark Wunderman <markwunderman@sprintmail.com>
Message-ID: <3D9204B0.80907@sprintmail.com>
Source record: 134152

The top portion of my Kenwood MA-700 antenna fell off and I want to replace the missing section. The dimension I need is for the straight piece that fits into the top of the coil and is fastened there with a set screw. If anyone can tell me the length of the top portion, from the top of the coil to the ball on the tip, it will save me a lot of effort trying to home in on the right length with a SWR meter.

Thanks in advance for any assistance.

Mark, KE6QCT

5663. Re: Proper/ideal choice of T-tuner settings

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-25 19:10:23 UTC
From: n7ws@nowhere.com
Message-ID: <3d91f242.11004294@news.triconet.org>
Source record: 134153

On Wed, 25 Sep 2002 15:27:47 GMT, Andy Cowley <andy.cowley@uwe.ac.uk>
wrote:

|Will White wrote:
|>
|> I find that I can get virtually the same match (especially on 30 and 10
|> meters) between my rig and LL fed 67' inverted V, at *more* than two
|> settings with a T-tuner . My question is this: granted that in choosing
|> between hi-L/low-C and hi-C/low-L, the latter is preferable for
|> efficiency's sake, but given the *same* amount of L, if one cap is set
|> near max, and the other set near minimum, which should input and which
|> output?
|>
|>
|
|One of the capacitors should be set to MAX C, i.e. minimum impedance. There
|will only be one solution then and it will be the best you can achieve with
|that tuner. Which capacitor it is that is set to max will depend on whether
|the reactance of your antenna is capacitive or inductive at the frequency
|of operation.

Not quite. Which capacitor is set to the greater capacitance will
also depend on whether the load Z is higher or lower than the input Z
(typically 50). Furthermore, max capacitance at either end is not
always the optimum solution.

|Even better if you can bypass the 'unused' cap altogether.

No, then you have an L network, over which you have no control of the
loaded Q, which is determined entirely by the two impedances and which
might well require completely impractical component values.

For example, consider a C-L-C tee network with C1 and C2 = 10 to 300pF
(Q=500) and L = 1 to 100 uH (Q=100).

CASE 1.

The frequency is 3.7 MHz and the load Z = 100 +j0.

A nearly optimum solution (minimum insertion loss and SWR<=1.02) is
thus:

C1 = 297.5pF, C2 = 219pF, L = 4.21 uH. The SWR = 1.02 and the
insertion loss = 0.25 dB.

We got lucky here since the max value of C1 is just about optimum.

Setting C1 = 300pF (max), the results are:

C1 = 300pF, C2 = 221.3pF, L = 4.19uH.

Now let's short out C2. The best we can do is:

C1 = 300pf, L = 6.94uH, SWR = 4.6 and insertion loss = 2.4 dB.

To get an optimum match, we need C1 = 872pF, L = 4.38uH.

CASE 2.

The frequency is 3.7 MHz and the load Z = 25 +j0

An optimum solution is:

C1 = 224.5pF, C2 = 297.8pf, L = 3.7uH. The SWR is 1.02 and the insertion loss is 0.49 dB.

Once again we were "lucky" and setting C2 to max is nearly optimum.

Now let's short out C1. The best we can do is:

C2 = 300pf l = 6.64uH, SWR = 16 and insertion loss = 6.8 dB.

To get an optimum match, we need C2 = 1730pF, L = 2.18uH.

So in both cases of turning the tee network into an L network, impractical capacitor values are required. And another thing...if you think that shorting out the capacitor set to the higher value is correct, you are mistaken.

Note:

I used ARRL Radio Designer software to do these calculations. This is no longer available, however Ansoft has a student version of their Serenade program available as freeware at:

http://www.ansoft.com/about/academics/sersv/index.cfm

It is even more powerful, albeit with a steeper learning curve.

If you have MS Excel, an even better way to play with this stuff is to download Dan's program XLZIZL.xls at:

http://www.qsl.net/ac6la/XLZIZL.zip

Wes N7WS

5664. Re: Proper/ideal choice of T-tuner settings

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-25 20:17:37 UTC
From: Reg Edwards <g4fgq.regp@btinternet.com>
Message-ID: <amt5l0$f8p$1@venus.btinternet.com>
Source record: 134154

Hello Will,

In principle no more than two variable tuner components are needed to match the antenna to the transmitter.

But to avoid inconvenient component values and to avoid having to interchange component circuit locations in the middle of tuning operations, three components may be used used in the form of a T or Pi network, high-pass or low-pass confuration.

The C-L-C high-pass T-network is the most common configuration.

Whenever there are 3 or more variable components there is an infinite number of alternative settings to produce an impedance match. The only difference between them is power transmission efficiency.

Since, for practical purposes, tuner loss occurs only in the inductance then highest efficiency occurs when the inductance is set to the lowest value which allows a match to be achieved by varying the two capacitors.

Similarly, in other configurations least loss occurs when inductors are set to the lowest values which will allow an impedance match. Very often the efficiency limitation is due to the maximum available settings of capacitors.

(PS : An L-network always has higher efficiency than its corresponding T-network. But in most circumstances the difference is very small.)

Download in a few seconds programs T_TUNER and L_TUNER from website below.

==========
Regards from Reg G4FGQ
Free Radio Design Software
Go to http://www.g4fgq.com
==========

"Will White" wrote> I find that I can get virtually the same match (especially on 30 and 10
> meters) between my rig and LL fed 67' inverted V, at *more* than two
> settings with a T-tuner . My question is this: granted that in choosing
> between hi-L/low-C and hi-C/low-L, the latter is preferable for
> efficiency's sake, but given the *same* amount of L, if one cap is set
> near max, and the other set near minimum, which should input and which
> output?

5665. Correct Ladder Line Length for 88 ft Doublet?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-25 21:19:06 UTC
From: Dave Alden <dalden@comcast.net>
Message-ID: <m294pug9m3bcmdqvomprmds5qu2ef0nau5@4ax.com>
Source record: 134155

Hello!

I just built an 88 ft. Doublet (44 ft. each leg) center fed with 450 ohm ladder line. The center of the antenna is at 30 ft., with one legs end at 12 ft and the others at 6 ft off the ground. I had no way to make it a flat top so it is like an inverted V. The ladder line is about 40 feet long and goes directly into the shack and connects to a 4:1 Balun on the back of my AT-11MP Auto tuner which feeds my Icom 706mkIIg.

The antenna is almost a flat match on 20M and auto tunes pretty easy on the other bands from 80-10M.

The problem is that with the ladder line coming into the shack, I get RF into my computer speakers and any other radios that happen to be on when I transmit.

The solution would seem to be to move the balun outside, as for away from the shack as possible (in a tupperware container) and run coax from the balun into the shack.

The question is: Is there an optimum length for the ladder line? How much shorter can I make it and not affect the performance of the antenna? Ideally, shortening the ladder line to about 25 feet would work well from an installation standpoint but I don't know how this would affect the antenna.

By the way, this antenna receives MUCH better than my old Gap Challenger DX vertical. I have not had much chance to evaluate how it works on the transmit side but I expect it will probably be pretty good.

Any comments would be appreciated!

Dave Alden WK8F dalden@comcast.net

5666. Re: Proper/ideal choice of T-tuner settings

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-25 22:01:25 UTC
From: n7ws@nowhere.com
Message-ID: <3d92297c.25144281@news.triconet.org>
Source record: 134156

On Wed, 25 Sep 2002 20:17:37 +0000 (UTC), "Reg Edwards"
<g4fgq.regp@btinternet.com> wrote:

|Hello Will,
|
|In principle no more than two variable tuner components are needed to match
|the antenna to the transmitter.
|
|But to avoid inconvenient component values and to avoid having to
|interchange component circuit locations in the middle of tuning operations,
|three components may be used used in the form of a T or Pi network,
|high-pass or low-pass confuration.
|
|The C-L-C high-pass T-network is the most common configuration.
|
|Whenever there are 3 or more variable components there is an infinite number
|of alternative settings to produce an impedance match. The only difference
|between them is power transmission efficiency.
|
|Since, for practical purposes, tuner loss occurs only in the inductance then
|highest efficiency occurs when the inductance is set to the lowest value
|which allows a match to be achieved by varying the two capacitors.

One caveat. This is true only when the Q of the inductor does not
change with value. In the usual case of a roller inductor or
switched-tap inductor this will not be true. In particular, roller
inductors generally have greatly reduced Q at the lower inductance
settings.

Since the operational solution to this problem can be complex, no pun
intended, my oft repeated suggestion that a relative output indicator,
as well as the input SWR meter, be used during adjustment is repeated
once again.

5667. Re: Proper/ideal choice of T-tuner settings

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-25 22:15:34 UTC
From: n7ws@nowhere.com
Message-ID: <3d923250.27403962@news.triconet.org>
Source record: 134157

On Wed, 25 Sep 2002 19:10:23 GMT, I wrote:

[snip]
|
|Now let's short out C2. The best we can do is:
|
|C1 = 300pf, L = 6.94uH, SWR = 4.6 and insertion loss = 2.4 dB.
|

and:

|
|C2 = 300pf l = 6.64uH, SWR = 16 and insertion loss = 6.8 dB.

A clarification.

The above insertion loss figures are not the loss in the components per se, which are actually quite small, but the total loss which includes the effects of mismatch.

Before someone squawks that mismatch loss isn't "real" and that we use conjugately matched sources, blah, blah... a usual reason for using a tuner is that the transmitter is not adjustable and will deliver lower power into a non-fifty ohm load.

It is possible that a particular transmitter might love a 16:1 SWR and put out full power into it, thus negating the 6.8 dB mismatch loss, but I doubt it.

5668. Re: VHF and UHF yagi spacing

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-25 22:20:50 UTC
From: rbarrios@gmx.net
Message-ID: <ab7385fd.0209251420.b154549@posting.google.com>
Source record: 134158

richardharrison@webtv.net (Richard Harrison) wrote in message
news:<9137-3D91C01A-8@storefull-2314.public.lawson.webtv.net>...
> Roberto, EB4EQA wrote:
> "Two wavelengths is far too much for me (unless we`re talking about UHF
> wavelengths...)."
>
> The UHF antenna has little effect on the VHF antenna, so you are talking
> UHF wavelength, which is about 70 centimeters. So, two wavelengths is
> 1.4 meters. As I said, amateurs are known to get away with smaller
> spacing.
>
> Best regards, Richard Harrison, KB5WZI

OK.

Something I don't quite understand is why the UHF antenna has little
effect on the VHF one and not vice-versa, since they are similar in
length.

Does the UHF antenna have a smaller capture area while being almost as
big as the VHF yagi ?

Thanks Richard

Roberto, EB4EQA

5669. Re: Correct ratio for design of loading coil

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-25 22:25:14 UTC
From: n7ws@nowhere.com
Message-ID: <3d923742.28670114@news.triconet.org>
Source record: 134159

On Tue, 24 Sep 2002 05:29:04 GMT, Will White
<googlyelmo@earthlink.net> wrote:

|I understand that the textbook correct length to diameter ratio for a
|loading coil is 2:1. Can't some gain in Q/efficiency be realized by
|making a coil much wider than it is long, say reversing the above so
|that it is 1:2, length to diameter?

I suggest you obtain a copy of "Loading Coils for 160-Meter Antennas",
by Charles Michaels, QST, April 1990, pp 28-31.

5670. Re: Fast Antenna positioning system

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-25 22:26:57 UTC
From: David Robbins <k1ttt@arrl.net>
Message-ID: <amtd7n01evc@enews4.newsguy.com>
Source record: 134161

there are lots of companies that make linear actuators and all sorts of positioning systems. check the thomas registry or just search the web for actuators or positioning systems. you will have to know how heavy an object you want to move, range of motion, and just how fast is 'fast' to make a choice. also the operating environment would be important.

"Stefan Moscibroda" <stefan.moscibroda@gr.admin.ch> wrote in message news:3d91d271@news.admin.ch...
> I'm currently looking for a antenna positioning system. The idea is to
> compensate multipath influence on antenna pattern measurements by spatial
> averaging at the receiver. I'm thinking of somehting rotation or a x-y
> positioning system. Positioning should be performed fast. Does anybody know
> a good EMC product which could perform this task? Also a list of companies
> doing such products is very welcome. Thanks!
>
>

5671. Re: Discone Antenna Design

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-25 22:50:45 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <gpe4pus7n24v9irshdm56a279fnuvu95l2@4ax.com>
Source record: 134160

On Wed, 25 Sep 2002 14:44:24 GMT, "JEEPMON" <JEEPMON@HOTMAIL.COM>
wrote:

>Does anyone have any specs. or software to help me design a discone antenna.
>I want to experiment with a discone that will operate from the 12 meter band
>up to 10GHz. I prefer specs or a design program the uses radials not solid
>cones or discs.
>
>Thanks!
>KC9BNY
>

Hi OM,

The single greatest point of significance lost to all is that your
proposed antenna will be deaf to terrestrial signals over 98% of its
proposed bandwidth. Same is true for the offered dipole - except in
two exceedingly favored directions.

If you build for a match at the lowest end of the service range, the
size of the antenna at the high end (for extremely wide banded
designs), in terms of wavelength, almost guarantee end-fire
properties. For the discone this is straight up even by the time you
are bringing it online for a 2M contact.

73's
Richard Clark, KB7QHC

5672. Experiences

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-26 01:02:35 UTC
From: N2NUP <questions@vhf-uhf.com>
Message-ID: <L0tk9.32750$Kj4.8321988@twister.nyroc.rr.com>
Source record: 134163

Anyone have first-hand experience with the KB6KQ horizontal loop antennas?
Would like to hear how they work as base station antennas.
http://www.kb6kq.com

Also, looking to see if anyone has installed a 6/8 dB dual band collinear
antenna from Antenna Warehouse?
http://www.cis.net/~kingpop/Amateur/6db_dual_band.htm

Thanks for any input.

Kris -- N2NUP

5673. Re: VHF and UHF yagi spacing

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-26 01:04:50 UTC
From: richardharrison@webtv.net
Message-ID: <23350-3D925D32-141@storefull-2312.public.lawson.webtv.net>
Source record: 134164

Roberto, EB4EQA wrote:
"Does the UHF antenna have a smaller capture area while being almost as big as the VHF Yagi?"

I am ignorant of the antennas being discussed. My remark that the smaller antenna is a smaller disturbance to the larger antenna than vice versa is based solely on common sense and my experience with multifrequency items having a mutual impedance.

The reason you may need 2 wavelengths separation is in part due to dissimilarity between antennas. Identical antennas might have their elements aligned for axis sharing between antennas. Radiating elements sharing the same axis have nulls at their ends which reduces the coupling between the elements. Some writers estimate the difference in coupling between antenna elements sharing the same axis and those having parallel elements at the same distance as 10x as great for the parallel elements.

Since dissimilar antennas can`t have all elements in one antenna sharing an axis with a corresponding element in a similar antenna, some elemennts have a component of coupling from a partial broadside or parallel presentation to each other between antennas. This increases coupling, and this can be offset by wider spacing.

Interaction won`t keep antennas from working. It means impedance and directionality are affected in each antenna by the presence of the other antenna. Many multifrequency antennas are really several antennas sharing the same boom.

Best regards, Richard Harrison, KB5WZI

5674. Re: Correct ratio for design of loading coil

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-26 01:15:59 UTC
From: Reg Edwards <g4fgq.regp@btinternet.com>
Message-ID: <amtn4d$q9f$2@helle.btinternet.com>
Source record: 134165

There's no such thing as the 'correct length' of a loading coil.

In an antenna, if you are looking for maximum loading coil Q you will notice no difference between Length over Diameter ratios. It's an overated and over-discussed topic. Ignore your antenna 'text books' written by OW's.

There is one aspect which might make some small difference. The capacitance between the antenna wire on one side of the coil and the wire on the other side of the coil is in parallel with coil's self-capacitance. It is desirable to minimise the sum of these two capacitances. They have the effect of 'detuning' the coil, increasing its effective inductance, unnecessarily increasing the local circulating current and so increasing losses in coil RF resistance.

It is much better for the current flowing along the wire into the coil to be nearly equal to the current flowing along the other wire out of the coil. This common current then flows where it is wanted - through the radiation resistance of the antenna wires. (It should not be forgotten the coil itself has a radiation resistance proportional to ts length.)

So the longer the coil, the smaller is the capacitance across the coil, the smaller is the circulating current around the coil and the more efficient is the radiating system.

It is difficult to calculate and estimate the overall effect in a particular situation. It depends on the overall dimensions of the antenna and on the ratio of overall wire length to coil length rather than on the conventional coil length to coil diameter ratio. Allow your thoughts to stray to what happens along a helically-wound antenna.

But intuition indicates you won't go far wrong by making the (Coil Length) / (Coil Diameter) ratio between 3 and 4, and using a large diameter coil with fewer turns of thicker wire. It's very non-critical. It won't win you many contests.

Sorry to use the word 'coil' so many times in order to make matters less ambiguous and more clear.

========================
Regards from Reg, G4FGQ
Free Radio Design Software
Go to http://www.g4fgq.com
========================
"Will White" <googlyelmo@earthlink.net> wrote in message
news:3D8FF83F.251811B7@earthlink.net...
> I understand that the textbook correct length to diameter ratio for a

> loading coil is 2:1. Can't some gain in Q/efficiency be realized by
> making a coil much wider than it is long, say reversing the above so
> that it is 1:2, length to diameter?
>
> --
> Will White, KD7BFX
> Seattle WA US
> King County, Grid CN87tq
> ITU Zone 6, CQ Zone 3
> **********
> "The wireless telegraph is not difficult to understand.
> The ordinary telegraph is like a very long cat.
> You pull the tail in New York, and it meows in Los Angeles.
> The wireless is the same, only without the cat."
> - Albert Einstein
> **********
>
>

5675. Re: What is the minimum size for antenna radials??

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-26 01:24:31 UTC
From: k9sqg@aol.com
Message-ID: <20020925212431.00731.00007129@mb-fk.aol.com>
Source record: 134166

Depends on whether the antenna is in the air or ground mounted.

5676. Re: Fast Antenna positioning system

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-26 01:30:14 UTC
From: "J. Harvey" <JM002.Harvey_ANTI*SPAM_@Sympatico.ca>
Message-ID: <Fqtk9.5327$wj3.995897@news20.bellglobal.com>
Source record: 134168

"Stefan Moscibroda"
> I'm currently looking for a antenna positioning system.
> The idea is to compensate multipath influence on antenna
> pattern measurements by spatial averaging at the receiver.

One obvious problem with your suggested approach is that you're unintentionally assuming that the troublesome reflections don't follow you, and your antenna positioning system, around the room. Will your antenna positioning system be RF transparent (or at least wrapped in RF absorbing material) ?

I thought that the favoured approach to ultimately solving this problem was to use a pulse waveform, sample rapidly and catch the direct wave before the reflected wave(s) arrive (via a longer path - by definition) to screw up your measurements. With suitable algorithms, it should be fully automatic and self checking. You could add a Barker code and amplitude correlation to make it even better.

If you're in the EMC field, you must have heard of the Item journal. Here is their webpage - perhaps it will help you to find some further info.

http://www.rbitem.com/home.asp

Good luck.

5677. Re: Discone Antenna Design

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-26 01:40:17 UTC
From: kelly@dvol.com
Message-ID: <d22b54c3.0209251740.564439c@posting.google.com>
Source record: 134167

richardharrison@webtv.net (Richard Harrison) wrote in message
news:<9136-3D91E6B8-70@storefull-2314.public.lawson.webtv.net>...
> JEEPMON wrote:
> "---a discone ehat will operate from the 12-meter band up to 10-GHz."
>
> Why bother when all you need is a 0.6-in dipole and a versatile tuner?
> Or bend the leads of a resistor matching your feedline into a
> folded-dipole, including the resistor, and forget the tuner.
>

Can't do that, B&W would slap him with an infringement complaint.

> Best regards, Richard Harrison, KB5WZI

w3rv

5678. Re: What vertical and how to fix it : HF9V, R9,...

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-26 02:18:57 UTC
From: Mark Keith <nm5k@wt.net>
Message-ID: <3D926E91.6026@wt.net>
Source record: 134019

Thierry wrote:

> All your comments are welcome about the model of vertical to buy and
> its fixation in regards of what is currently available (small mast or
> cottage).
>
> Thanks for comments.
>
> 73
> Thierry
> ONL5183
> http://www.astrosurf.com/lombry/menu-qsl.htm

If all you are doing is SWL, I think a ham vertical will be a waste of time and money.
Your random wire will likely be as good or better in most cases. The only reason I could think of to use a vertical, would be to have an antenna that is maybe better for long haul dx on the lower bands. And in that case, any vertical piece of wire would probably do as good as a tuned vertical. You don't really need gain, and as you state, you don't want to turn it anyway, even if you had a gain antenna. A short vertical sure won't have any gain compared to a 40m random wire. As for SWL verticals, any old piece of radiator would do in your case. Wire hung from a tree, or tubing supported from the ground. There is no real need to tune it to resonance unless you want to pump up the S meter. The S/N ratio will likely be about the same. If I did want to tune it, I would just stick a coil at the base, and have clips to change bands. A 40m meter long ramdom wire is a fairly "real" antenna for SWL use. It's going to outdo an appx 8-9 meter tall vertical most of the time I bet.
MK
--
http://web.wt.net/~nm5k

5679. Re: TGM Antennas

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-26 02:21:46 UTC
From: ehsjr@bellatlantic.net
Message-ID: <3D926F1C.6733213@bellatlantic.net>
Source record: 134020

Joe Perge wrote:
>
> Any comments from users of the TGM hybrid 2 element antennas would be
> appreciated. I read the Eham reviews. Thanks,Joe,WB8HWF

Mine works great. I have a full wave 80 meter loop with
a tuner and can work all bands with it. Most of the time,
the MQ2 outperforms the loop on 20 through 10. There are
some locations that the loop hears as well as, and sometimes
better than, the MQ2.

Would I buy it again? Absolutely - in a heartbeat.

5680. Re: What is the minimum size for antenna radials??

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-26 03:24:39 UTC
From: George Kinzer <horseflygk@worldnet.att.net>
Message-ID: <X5vk9.65297$jG2.3599474@bgtnsc05-news.ops.worldnet.att.net>
Source record: 134021

are you going to use peanut butter on the connectors?

--
If first you don't succeed, do the same thing again...see what happens

5681. Re: Discone Antenna Design

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-26 04:26:19 UTC
From: artie <silli_artie@hotmail.com>
Message-ID: <2509200221261965 72%silli_artie@hotmail.com>
Source record: 134022

[[This message was both posted and mailed: see
the "To," "Cc," and "Newsgroups" headers for details.]]

In article <cZjk9.399015$kp.1185627@rwcrnsc52.ops.asp.att.net>, JEEPMON
<JEEPMON@HOTMAIL.COM> wrote:

>Does anyone have any specs. or software to help me design a discone antenna.
>I want to experiment with a discone that will operate from the 12 meter band
>up to 10GHz. I prefer specs or a design program the uses radials not solid
>cones or discs.
>
>Thanks!
>KC9BNY

Check the RSGB VHF/UHF Manual. They give design equations for
discones. As others have pointed out, you won't get the coverage you
want with one antenna, and in the upper half of a discone's frequency
range, the take-off angle is very high. A Google or Teoma search on
the net will also turn up a lot of sites with info, including a couple
for building discones for the 800MHz - 2.4 GHz range. These are small
and easy to make.

In general (from the RSGB VHF/UHF Manual, 4th ed, pp 8.39 - 8.40)

A is the length of the cone elements, a quarter wavelength at the
lowest operating frequency

B is the overall disc diameter, 70% of a quarter wavelength

C is the diameter of the top of the cone. This will be decided to some
extent by the diameter of the coaxial cable. 0.5 inches is commonly
used.

D is the spacing of the centre of the top disc to the cone top, 20% of
C, or 0.1 inches for 50 ohms.

This assumes a 60 degree angle of the cone.

You can make good discones for higher frequencies (1.2G - 3G or so)
using 0.141 semirigid line and attaching a cone made of copper foil to
that. The spacing between the cone top and the disc gets a bit touchy
to keep a 50 ohm impedance. Cut-and-try with a signal source and a
coupler or network analyzer helps if you're going to be using the
antenna to transmit.

You can make pretty good log periodic antennas with fairly wide
coverage using material such as duroid (low dielectric printed circuit
board material used at microwave frequencies). There are usually

people selling small pieces of duriod on eBay.

have fun--

5682. Re: Experiences

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-26 04:56:02 UTC
From: ON5MJ <on5mjREMOVE@skynet.be>
Message-ID: <3d929364$0$214$ba620e4c@news.skynet.be>
Source record: 134023

> Anyone have first-hand experience with the KB6KQ horizontal loop antennas?
> Would like to hear how they work as base station antennas.

Maybe a basketball player ? :-))

5683. Re: VHF and UHF yagi spacing

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-26 06:37:18 UTC
From: "Ian White, G3SEK" <G3SEK@ifwtech.co.uk>
Message-ID: <4AW0fmBesqk9EA7n@ifwtech.co.uk>
Source record: 134024

EB4EQA wrote:
>
>Something I don't quite understand is why the UHF antenna has little
>effect on the VHF one and not vice-versa, since they are similar in
>length.
>
>Does the UHF antenna have a smaller capture area while being almost as
>big as the VHF yagi ?
>
Yes. The width and height of the capture area are each measured in wavelengths. This scaling factor is larger than the effect of electrical boom length on capture area.

The objective of stacking at half the recommended stacking distance for two of the 432MHz yagis (as a minimum) is to place the 144MHz yagi outside of the capture area of the 432MHz yagi. This avoids disturbance by the elements of the 144MHz yagi, which are electrically quite large at 432MHz.

However, the 432MHz yagi will still be *inside* the physically larger capture area of the 144MHz yagi. This matters much less because the elements of the 432MHz yagi are electrically small at 144MHz.

That's the short version. Full details are on my web site.

--
73 from Ian G3SEK 'In Practice' columnist for RadCom (RSGB)
Editor, 'The VHF/UHF DX Book'
http://www.ifwtech.co.uk/g3sek

5684. Re: Proper/ideal choice of T-tuner settings

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-26 08:33:12 UTC
From: "Peter O. Brackett" <ab4bc@ix.netcom.com>
Message-ID: <amugo4omg1@slb6.atl.mindspring.net>
Source record: 134025

Will:

[snip]
"Will White" <googlyelmo@earthlink.net> wrote in message
news:3D8FF578.BF1DF082@earthlink.net...
> I find that I can get virtually the same match (especially on 30 and 10
> meters) between my rig and LL fed 67' inverted V, at *more* than two
> settings with a T-tuner . My question is this: granted that in choosing
> between hi-L/low-C and hi-C/low-L, the latter is preferable for
> efficiency's sake, but given the *same* amount of L, if one cap is set
> near max, and the other set near minimum, which should input and which
> output?
>
> --
> Will White, KD7BFX
[snip]

Have a look at Kevin W9CF's on-line tuner.

"A T-Network Tuner Simulator", Kevin Schmidt, W9CF:
http://fermi.la.asu.edu/w9cf/tuner/tuner.html

Everything you would wish to know about the T-tuner is there. And you will
find the applet is realistic and "fun".

--Peter K1PO
Indialantic By-the-Sea, FL.

5685. How many people have insulted radials??

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-26 09:35:40 UTC
From: StarGazer <pti@capnet.com>
Message-ID: <3D92D4EC.CF60F84A@capnet.com>
Source record: 134028

.asd

5686. Re: Want a Good Tuner??

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-26 09:41:21 UTC
From: mike c <md_removeunderscores_cola@evenlink.com>
Message-ID: <MPG.17fca04bdfb6cde8989686@news.evenlink.com>
Source record: 134026

In article <am5j3n$bc8$4@paris.btinternet.com>,
g4fgq.regp@btinternet.com says...
>
> "JC" wrote -
> > Putting the tuner at the antenna isn't worth it. Just have
> > a look at "Reflections (I or II)" written by W2DU.
> ==========
>
> What does that have to do with conjugal matches ?
>
conjugal matches ... when a married couple gets it on anywhere,
anytime, and has a good time.

oh. conjugate matches? complex conjugates?

--
Best Regards,
Mike Colasono

5687. Re: Damn the CC&Rs!

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-26 09:54:05 UTC
From: mike c <md_removeunderscores_cola@evenlink.com>
Message-ID: <MPG.17fca345492614989687@news.evenlink.com>
Source record: 134027

In article <uZ7i9.87405$AY5.37128933@e3500-atl1.usenetserver.com>,
chuck_hawks@hotmailnospamorama.com says...
> That's telling him, Sylvan.
>
> Personally, I took the original post as a joke, some people have no sense of
> humor.

no &$#*, me too. IIRC, that's the first time i've seen Jim wax
assinine
>
> --
> Chuck
> KE4ETH
>
> "Sylvan Butler" <Znospam+noZs_0209@hpb13799Z.Zboi.hpZ.com.invalid> wrote in
> message
> news:slrnaohoqd.qnj.Znospam+noZs_0209@hpb13799Z.Zboi.hpZ.com.invalid...
> > On Mon, 16 Sep 2002 22:23:23 -0700, Jim Weir <jim@rst-engr.com> wrote:
> > > Also president of a homeowner's association with CC&Rs and elected to
> the county
> >
> > Well whoopee. Aren't you special.
> >
> > > Don't hand me that "private property" bushwa. You signed away your
> rights to an
> > > admittedtly prejudiced homeowners' association group at the same time
> you bought
> >
> > Yup.
> >
> > > You don't like it? Run for the board. Get ten of your fellow ham
> residents who
> >
> > Better idea...
> >
> > Sell your place for a real lowball price "because of the %@^#
> > homeowner's association". Make sure everyone knows it. That will
> > show up as a 'comparable' for real estate transactions in the
> > neighborhood for a few years. Cost you some bucks, but a lot less
> > time.
> >
> > Or time and no bucks? Just wait. Compile a list of violations not
> > enforced. Once precedent is established they cannot selectively
> > enforce against one violator but not another.

> >
> > Or change the law. Not the CCRs, change the law that allows such crap.
> >
> > > feel the same way to run for the board. Change the law. But don't tell
> us how
> > > you think you are going to rub your neighbor's noses in it. That ain't
> gonna
> > > work. You're a fool if you think it will.
> >
> > Define "work"? Annoy the pricks? It will work. It already got
> > you.
> >
> > > it from.." ... all the way back to "they fought the Indians for it.".
> Good.
> >
> > How about, "nobody was using it so we moved in." If you don't like
> > that, ask where did the Indians get it? They either fought someone
> > else for it, or "nobody was using it so we moved in."
> >
> > > My grandmother was Mary Crow. I'll fight YOU for it right here and now,
> knives,
> >
> > Idiot. That fight was settled a long time ago. Indians lost. Get
> > over it.
> >
> > sdb
> > --
> > | Sylvan Butler | Not speaking for Hewlett-Packard | sbutler-boi.hp.com |
> > | Watch out for my e-mail address. Thank UCE. >>>> change ^ to @ <<<< |
> > They that can give up essential liberty to obtain a little temporary
> > safety deserve neither liberty nor safety. --Benjamin Franklin, 1759
> > Stop Senator Fritz Hollings-S2048, Palladium, and TCPA, NOW!
> >
> http://investor.cnet.com/investor/news/newsitem/0-9900-1028-20173919-0.html
> > http://zdnet.com.com/2100-1106-945976.html
>
>
>
>

--
Best Regards,
Mike Colasono

5688. late follow up to "Damn the CC&Rs" and that cool tower

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-26 10:37:11 UTC
From: mike c <md_removeunderscores_cola@evenlink.com>
Message-ID: <MPG.17fcad64f2280662989688@news.evenlink.com>
Source record: 134029

from sub: Damn the CC&Rs! Date: 9-17 thru 9-18

http://hirshhorn.si.edu/collection/gardens/snelson.html

In article <3d8749f9.62131819@news.ga.comcast.giganews.com>,
SeeSignature@below.com says...
> Hmmm. I wonder if a clever designer could somehow work up a plan for a
> lightweight field day tower from the "wire plus tubes" idea. I can't
> see enough detail from the picture, but the description suggests that
> maybe you can pull a wire and up it goes.

That is one excellent structure.

but not THAT clever a designer, though i gotta hand it to him. it's semi-copied. it's a Buckminster Fullerism. it's like a cross between the tensegrity octahedron and the octet truss with a fractal concept applied. Beautiful!

http://www.bfi.org

i bet you could pull it up with the wire. it's called ... oh, hell ... ah, "tensegrity" or "tensegrity integrity" - "tens" as in tension. Buckminster Fuller started all this. They didn't tell you about him in school? do a search. he was a freakin' genius. where do you think geodesic domes come from? yup. Bucky. I can't find the design, but he did design a dome home from aircraft tubing that set up in 5 min. with a hydraulic system pulling on a wire. move your home with a helicopter or truck.

this design is true art, practicality, and economy. jim weird pissed me off.

--
Best Regards,
Mike Colasono

5689. Re: Damn the CC&Rs!

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-26 10:37:52 UTC
From: mike c <md_removeunderscores_cola@evenlink.com>
Message-ID: <MPG.17fcad8a964fd240989689@news.evenlink.com>
Source record: 134030

In article <3d8749f9.62131819@news.ga.comcast.giganews.com>,
SeeSignature@below.com says...
> Hmmm. I wonder if a clever designer could somehow work up a plan for a
> lightweight field day tower from the "wire plus tubes" idea. I can't
> see enough detail from the picture, but the description suggests that
> maybe you can pull a wire and up it goes.

That is one excellent structure.

but not THAT clever a designer, though i gotta hand it to him. it's semi-copied. it's a Buckminster Fullerism. it's like a cross between the tensegrity octahedron and the octet truss with a fractal concept applied.

http://www.bfi.org

i bet you could pull it up with the wire. it's called ... oh, hell ... ah, "tensegrity" or "tensegrity integrity" - "tens" as in tension. Buckminster Fuller started all this. They didn't tell you about him in school? do a search. he was a freakin' genius. where do you think geodesic domes come from? yup. Bucky. I can't find the design, but he did design a dome home from aircraft tubing that set up in 5 min. with a hydraulic system pulling on a wire. move your home with a helicopter or truck.

this design is true art, practicality, and economy. jim weird pissed me off.

--
Best Regards,
Mike Colasono

5690. Re: How many people have insulted radials??

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-26 10:52:25 UTC
From: "M.J.Powell" <mike@pickmere.demon.co.uk>
Message-ID: <gbyqsDApbuk9Ewok@pickmere.demon.co.uk>
Source record: 134047

In article <3D92D4EC.CF60F84A@capnet.com>, StarGazer <pti@capnet.com>
writes
>.asd

I swear I have never insulted my radials in my life, not one harsh word.
I look after them and treat them kindly. I even wipe the raindrops off
them.

Mike
--
M.J.Powell

5691. Re: How many people have insulted radials??

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-26 10:56:50 UTC
From: David Robbins <k1ttt@arrl.net>
Message-ID: <amup5j0pm9@enews1.newsguy.com>
Source record: 134033

insulated how? i use bare wire but it is raised about 8' off the ground and insulated at the ends.

"StarGazer" <pti@capnet.com> wrote in message news:3D92D4EC.CF60F84A@capnet.com...
> .asd
>

5692. Ideas on copper wire stretching and sagging

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-26 11:01:24 UTC
From: mike c <md_removeunderscores_cola@evenlink.com>
Message-ID: <MPG.17fcb310f1a6bcd498968a@news.evenlink.com>
Source record: 134031

Hi:

i was lurking around prior to posting a question and saw the stretching subject.

here's what i'd do and not worry about tension.

why not just tension a length of poly rope and suspend your wire underneath with just enough tension to make it look nice? when i pull cable wire, the more rollers i put out on the strand, the less tension i'm pulling when i'm 2500 ft out. so the more suspension points, the better.

hint: loose lash the wire to the rope on the ground and tension the rope.

how's that for bandwidth efficiency? ok, i'll use some more...

In CATV construction, I once encountered a manual which prescribed pre-tensioning strand so that when sagged in, it wouldn't stretch much more in service. now done incorrectly, that could lead to fatigue and premature failure.

the mere act of lashing cable to the strand sometimes stretches it plenty and it should have been tensioned by the strand crew so that the cable weight would leave it sagged right. This method is called experience.

one thing not mentioned in the OP was that when it gets cold out, the wire contracts, the sag is lessened, and the tension increases. now add ice. in peoria illinois, a strand crew sagged in a road crossing one winter and a fiber crew cabled it. come summertime, the span sagged and an 18 wheeler took it out :-) TCI was pissed off. They also had a great day in Ft. Worth Tx when two guys had a shoot-out and hit an aerial trunk amp. texas can be fun. TCI? Telecommunications International (or Inc - i forgot) actually it's Things Change Instantly - like your contract or the job specs.

TCI had a drop wire running to a house that was so tight, when i climed the pole (imagine the pole swaying back and forth as I get higher) it set off the vibration detector for the alarm. no monitoring - no cops. hell, the neighbors didn't even come out.

another way would be to just attach the wire at one end to a fixed point, attach the other end to a rope. run the rope through a pully (i saw one attached to a pole i was on once, but the rope was tied off at the base of the pole. luckily the op kept it out of my

climbing space.) hang just enough weight to get your sag (accounting for ice and wind) and leave it like that. when the wind blows, the weight rises, the sag increases, and tension is the same except for the initial impulse of the wind force. once equilibirum is reached, the tension is still that of the weight. when ice forms, same deal, the wire tension is reduced by virtue of the increased sag and replaced with tension caused by the weight of the ice.

is all of this too simple?

--
Best Regards,
Mike Colasono

5693. Re: Proper/ideal choice of T-tuner settings

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-26 11:15:33 UTC
From: Andy Cowley <andy.cowley@uwe.ac.uk>
Message-ID: <3D92EF8D.9286EECD@uwe.ac.uk>
Source record: 134034

Wes Stewart wrote:
>

> Not quite. Which capacitor is set to the greater capacitance will
> also depend on whether the load Z is higher or lower than the input Z
> (typically 50). Furthermore, max capacitance at either end is not
> always the optimum solution.
>
> |Even better if you can bypass the 'unused' cap altogether.
>
> No, then you have an L network, over which you have no control of the
> loaded Q, which is determined entirely by the two impedances and which
> might well require completely impractical component values.
>
> For example, consider a C-L-C tee network with C1 and C2 = 10 to 300pF
> (Q=500) and L = 1 to 100 uH (Q=100).
>
> CASE 1.
>
> The frequency is 3.7 MHz and the load Z = 100 +j0.
>
> A nearly optimum solution (minimum insertion loss and SWR<=1.02) is
> thus:
>
> C1 = 297.5pF, C2 = 219pF, L = 4.21 uH. The SWR = 1.02 and the
> insertion loss = 0.25 dB.
>
> We got lucky here since the max value of C1 is just about optimum.
>
> Setting C1 = 300pF (max), the results are:
>
> C1 = 300pF, C2 = 221.3pF, L = 4.19uH.
>
> Now let's short out C2. The best we can do is:

WRONG CAP SHORTED !!!!!!!!!!! SHORT C1 AND RECALCULATE With C1 = infinity.

>
> C1 = 300pf, L = 6.94uH, SWR = 4.6 and insertion loss = 2.4 dB.
>
> To get an optimum match, we need C1 = 872pF, L = 4.38uH.
>
> CASE 2.
>
> The frequency is 3.7 MHz and the load Z = 25 +j0

>
> An optimum solution is:
>
> C1 = 224.5pF, C2 = 297.8pf, L = 3.7uH. The SWR is 1.02 and the
> insertion loss is 0.49 dB.
>
> Once again we were "lucky" and setting C2 to max is nearly optimum.
>
> Now let's short out C1. The best we can do is:

WRONG CAP SHORTED !!!!!!!!!!! SHORT C2 AND RECALCULATE.

>
> C2 = 300pf l = 6.64uH, SWR = 16 and insertion loss = 6.8 dB.
>
> To get an optimum match, we need C2 = 1730pF, L = 2.18uH.
>
> So in both cases of turning the tee network into an L network,
> impractical capacitor values are required. And another thing...if you
> think that shorting out the capacitor set to the higher value is
> correct, you are mistaken.
>
> Note:
>
> I used ARRL Radio Designer software to do these calculations. This is
> no longer available, however Ansoft has a student version of their
> Serenade program available as freeware at:
>
> http://www.ansoft.com/about/academics/sersv/index.cfm
>
> It is even more powerful, albeit with a steeper learning curve.
>
> If you have MS Excel, an even better way to play with this stuff is to
> download Dan's program XLZIZL.xls at:
>
> http://www.qsl.net/ac6la/XLZIZL.zip
>
> Wes N7WS

I stand corrected, I think, but a couple of points.

1. I have never yet seen a variable inductor with constant Q. Inductance varies with N^2, loss resistance with N, approximately, so your models are incorrect. Q at low L will be _much_ less than Q at high L.

2. In both cases you have shorted the wrong cap. A shorted cap is the equivalent of an infinite cap. I.e. impedance is zero.

I'd be very interested in your results with these corrections, Wes. I don't have the software.

vy 73

Andy, M3ABC

5694. Re: tower paint

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-26 11:19:45 UTC
From: mike c <md_removeunderscores_cola@evenlink.com>
Message-ID: <MPG.17fcb760a68fe4c198968b@news.evenlink.com>
Source record: 134032

In article <d22b54c3.0209201149.1436abb7@posting.google.com>,
kelly@dvol.com says...
> Richard Clark <kb7qhc@attbi.com> wrote in message
news:<j40koug9scg58lm2j4jnq4eec198e3tcgd@4ax.com>...
> > On Thu, 19 Sep 2002 09:15:01 -0500 (CDT), richardharrison@webtv.net
> > (Richard Harrison) wrote:
> >
> > >brian Kelly, W3RV wrote:
> > >"The other (tower paint degradation) is mechanical abrasion caused by
> > >wind-borne particulate matter, i.e., a sandblasting effect."
> > >
> > >That is an interesting observation and I appreciate the revelation.
> > >
> > >Best regards, Richard Harrison, KB5WZI
> >
> >
> > Hi Richard,
> >
> > I would raise that one offering another consideration: destructive
> > flexing. If the paint can't stretch as much as what is painted,
> > delamination results.
> >
> > I can't say I have much to offer in that regard, but when I helped a
> > buddy replace a radomed collinear 10M antenna from the peak of his
> > tower, I was shocked by its appearance.
> >
> > The surface had a fine haze of broken fiberglass strands - none more
> > than a quarter inch in length. It had the appearance of peach fuzz
> > covering nearly the entire surface of the radome. The initial glance
> > at it caught my attention, with my hand exploring the surface before
> > my mind engaged. Luckily I didn't draw my hand along the surface as
> > the prickly sensation was immediate.
> >
> > The prospects of a mitt full of glass wasn't so worrying as finding
> > that same fuzz busted loose and air borne....
>
> Glad you brought this up because I had another example of the general
> problem right under my nose which didn't click with me.
>
> I was involved with moving a 224Mhz repeater. The antenna is a big,
> maybe 20 foot long commercial fiberglass stick which had been up for
> many years at some low elevation like 40 feet at the base. It was in
> really bad shape. The damage was exactly as you (QHC) describe, a sort
> of "peach fuzz" which could do a real number on your hands.

>
> Again the damage was progressively worse from the bottom up the stick
> which coincides with my experience with the Rohn 45 tower. I can't say
> I particularly noticed any damange which could have been attributed to
> flexing but I wasn't looking for it. Obviously makes sense that it
> could happen if the coating is too hard/inflexible.

but the flexing would be greater at the bottom of the stick which is
why a mobile spring base is at the base, not the top. the paint we
used in army basic training seemed to have a rubbery feel when dry.
it was water resistant an d i got the impression that it would stand
up to expansion/contraction well.

mike c
>
> I sanded the stick and almost choked myself in the cloud of dust that
> billowed off the thing. I coated it with clear marine epoxy resin and
> it went back up. We'll see how long it lasts this time.
>
> The folks who engrave tombstones for instance do it by cutting a sheet
> rubber stencil which is laid over the face of the stone. Then they
> sandblast the stone. The sand etches the exposed stone but the sand
> simply bounces off the rubber. Maybe the solution is to apply a rubber
> coating on towers and sticks.
>
> . . . but then why were my 4el 20m and 3el 15/10 aluminum yagis just
> about as good as new after 30 years up and the tower had gotten
> pounded? . . .
>
>
> >
> > 73's
> > Richard Clark, KB7QHC
>
> w3rv
>

--
Best Regards,
Mike Colasono

5695. Re: 2m homebrew antenna tuner schematic

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-26 11:24:17 UTC
From: mike c <md_removeunderscores_cola@evenlink.com>
Message-ID: <MPG.17fcb870b59c2b8e98968c@news.evenlink.com>
Source record: 134035
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.homebrew

In article <3D89D780.4243E908@ieee.org>, Cecil.A.Moore@ieee.org
says...
> JC wrote:
> >
> > > If you really need an antenna tuner, which I doubt, it should be
> > > mounted at the antenna and be remotely controlled, unless you want to
> > > climb the tower each time it needs to be readjusted. By this
> > > arrangement only the antenna is tuned and the feedline is not
> > > resonated, thus keeping the feedline losses down.
> >
> > I don't understand this. Why not putting the tuner between transmitter and
> > line ?
>
> If your 2m SWR is high enough to require an antenna tuner, it is so
> high that you will lose a lot of your transmitted signal unless you
> are using very expensive coax or unless you put the tuner at the antenna.
>
and the prob i had getting the swr down on 2m with a 5/8 vert was due
to poor ground plane.
--
Best Regards,
Mike Colasono

5696. Re: How many people have insulted radials??

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-26 11:48:14 UTC
From: k9sqg@aol.com
Message-ID: <20020926074814.29816.00006997@mb-fl.aol.com>
Source record: 134036

I try not to insult radials or people...

5697. Re: How many people have insulted radials??

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-26 12:01:10 UTC
From: fractenna@aol.com
Message-ID: <20020926080110.15371.00005022@mb-mn.aol.com>
Source record: 134037

Darn radials....

If you mean insulated...well, most ham installations END UP with insulated radials as it's hard to stop oxidation of copper and aluminum wire.

The main benefit to using insulated wire is that it let's you control the 'insulation' without letting the wire totally oxidized and thus become a very poor conductor. It loads a small bit too.

Of course, over time, water finds itself inside the plastic and we all return to dust;-)

73
Chip N1IR

5698. Re: Counterpoise??

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-26 12:04:52 UTC
From: mike c <md_removeunderscores_cola@evenlink.com>
Message-ID: <MPG.17fcc1f35e991f2e98968d@news.evenlink.com>
Source record: 134039

In article <20020921231401.19480.00005675@mb-fr.aol.com>,
k9sqg@aol.com says...
> Posters with an invalid email address make it hard to respond in detail...
>
responding to email only is not beneficial to the group.
--
Best Regards,
Mike Colasono

5699. Re: How many people have insulted radials??

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-26 12:05:23 UTC
From: Alan Beagley <abeagley@optonline.net>
Message-ID: <3D92F803.3060007@optonline.net>
Source record: 134038

I insulted my radials once, but they didn't work too well for months after that, so I've always been careful not to insult them again.

You don't by any chance mean "insulAted," do you?

-=-
Alan. AB2OS

StarGazer wrote:
> .asd
>

5700. Re: Proper/ideal choice of T-tuner settings

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-26 12:15:35 UTC
From: Andy Cowley <andy.cowley@uwe.ac.uk>
Message-ID: <3D92FD9F.7162E053@uwe.ac.uk>
Source record: 134041

I've been playing with this using the T match emulator at

http://fermi.la.asu.edu/w9cf/tuner/tuner.html

as posted by Peter O. Brackett. Thanks Peter.

It auto tunes to set one cap to max. whatever value
it is given for antenna impedance or max cap value.
So its autotune function agrees with me. I've fiddled
a bit and I can't improve on its settings. As written
it doesn't do L matches so I emulated it with infeasibly
large capacitor values and lo and behold it still set
one cap to max for all the antenna impedances I tried.
So I think my advice was good. Maybe there are some
residuals causing errors in the s/w you are using?

I'm not enough of a mathematician to do this from first
principles but I still think my advice was correct. Can
you show an example of a real world antenna impedance
(r >= 10 ohms <= 1000 ohms, and |reactance| <= 2000 ohms)
where both caps are set more than 10% away from their
max value? (10% to allow for the possible errors in one
of the software models). I can't find one.

Maybe there are places where this is needed due to the
limitations on the ranges of the coil and caps, but in
general I'm right.

We are after all trying to solve a transformation of
only two independent variables, so the minimal solution
must involve only two variable components.

vy 73 and waiting to be enlightened

Andy, M3ABC

5701. hey CAM aka JC

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-26 12:17:53 UTC
From: mike c <md_removeunderscores_cola@evenlink.com>
Message-ID: <MPG.17fcc4f7e0417e7298968e@news.evenlink.com>
Source record: 134040

hi:

what's up here?

thread says:
CAM Re: whatever

header says:
From: CAM <Cecil.A.Moore@ieee.org>

body:
JC wrote:
>
> quotes you reply to from JC
>

blah, blah ...
cheers, CAM http://www.qsl.net/w5dxp

i can't find the JC post was in the 2m tuner thread. i searched the group articles. makes it hard to follow the thread.

one thing it seems you're doing - sometimes your replies are to the OP or someone other than who the quoted post applies to, confusing things further.

i just saw a JC post elsewhere in the antenna group. there were multiple cases of this in the 2m tuner thread. maybe the Newsfeeds.com is responsible for losing it. or theres a crossposting prob from rec.radio.amateur.homebrew the OP seems to have cross posted ok. maybe JC isn't crossposting properly for some reason. i see my reader requires me to manually add crossposts.

--
Best Regards,
Mike Colasono

5702. Re: Want a Good Tuner??

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-26 12:25:22 UTC
From: richardharrison@webtv.net
Message-ID: <9878-3D92FCB2-154@storefull-2311.public.lawson.webtv.net>
Source record: 134045

Mike Colasono wrote:
"Oh, conjugate matches? Complex conjugates?"

Sure, as Walter Maxwell, W2DU has always said, to get the most from a transmitter, the load must be the conjugate of the transmitter`s internal impedance. Also, in an ideal system, the impedance looking in opposite directions anywhere you might break the transmission system are conjugates of each other.

See: King, Mimno, and Wing, "Transmission Lines, Antennas, and Waveguides",page 43. All three authors were Ph.D.`s at Harvard in 1945 when this was published by McGraw-Hill.

Best regards, Richard Harrison, KB5WZI

5703. Re: hey CAM aka JC

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-26 12:25:53 UTC
From: mike c <md_removeunderscores_cola@evenlink.com>
Message-ID: <MPG.17fcc6d87ada216098968f@news.evenlink.com>
Source record: 134042

>

> posted ok. maybe JC isn't crossposting properly for some reason. i
> see my reader requires me to manually add crossposts.

correction. it does crosspost replies properly.
>
Best Regards,
Mike Colasono

5704. Re: Counterpoise??

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-26 12:35:45 UTC
From: mike c <md_removeunderscores_cola@evenlink.com>
Message-ID: <MPG.17fcc92a8067b894989690@news.evenlink.com>
Source record: 134043

>
> Galvanized chicken wire... For as long as it lasts, anyways.
>
> Pete

ha! that's what i suggested for a demo that had to be transported via airline with the presenter. he would've had to pack two radios mounted in cases with demo circuitry, a scope, 2 2m 5/8 verts, and the ground planes.

poor ground plane was messing up my propagation and swr, as mentioned in that 2m tuner post. i had one unit in my van for testing, but the one at the lab wasn't doing squat. or bench press for that matter :-)

it's great to run into people that think along the same lines as i do.
>

--
Best Regards,
Mike Colasono

5705. Re: Counterpoise??

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-26 12:39:36 UTC
From: mike c <md_removeunderscores_cola@evenlink.com>
Message-ID: <MPG.17fcca14b68f9a09989691@news.evenlink.com>
Source record: 134044

BTW, remember that a 1/4 wave or 5/8 wave vert's impedance is based on a theoretical mirror image underground. so if your ground conductivity is poor or the ground rod is not acting under the radiator (as in the case at the lab i mentioned,) then yer screwed.

who cares about what came 1st - the chicken or the egg as long as we have the wire.

--
Best Regards,
Mike Colasono

5706. hey CAM and JC

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-26 12:49:06 UTC
From: mike c <md_removeunderscores_cola@evenlink.com>
Message-ID: <MPG.17fccc43153e8265989692@news.evenlink.com>
Source record: 134046

hi:

what's up here?

thread says:
CAM Re: whatever

header says:
From: CAM <Cecil.A.Moore@ieee.org>

body:
JC wrote:
>
> quotes you reply to from JC
>

blah, blah ...
cheers, CAM http://www.qsl.net/w5dxp

i can't find the JC post in the 2m tuner thread. i searched the group articles. makes it hard to follow the thread.

one thing it seems you're (CAM) doing - sometimes your replies are to the OP or someone other than who the quoted post applies to, confusing things further.

i just saw a JC post elsewhere in the antenna group. there were multiple cases of this (no JC) in the 2m tuner thread. maybe the Newsfeeds.com is responsible for losing it. or theres a crossposting prob from rec.radio.amateur.homebrew the OP seems to have cross posted ok. maybe JC isn't crossposting properly for some reason.

--
Best Regards,
Mike Colasono

5707. Re: Damn the CC&Rs!

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-26 14:20:47 UTC
From: "Stephen C. Robbins" <srobbinsNoSPaMDUDES@netacc.net>
Message-ID: <3d9317b6$1@news.netacc.net>
Source record: 134048

> In article <uZ7i9.87405$AY5.37128933@e3500-atl1.usenetserver.com>,
> chuck_hawks@hotmailnospamorama.com says...
> > That's telling him, Sylvan.
> >
> > Personally, I took the original post as a joke, some people have no
sense of
> > humor.
>
> no &$#*, me too. IIRC, that's the first time i've seen Jim wax
> assinine
> >

Quite the contrary, Jim's posts border on the assinine 90% of the time. The only reason I havn't kill filed him is that the other 10% of the time he has some really great information or suggestions. What the heck, I'm willing to wade in some shit to find an occasional pearl :-)

All in all, Jim is a great guy, just very passionate about his beliefs.

Steve

5708. Re: Correct Ladder Line Length for 88 ft Doublet?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-26 14:48:16 UTC
From: richardharrison@webtv.net
Message-ID: <5424-3D931E30-226@storefull-2317.public.lawson.webtv.net>
Source record: 134049

Dave, WK8F wrote:
"Is there an optimum length for the ladder line?"

Yes, as the ladder line is often transforming an antenna impedance which is too high to something more compatible with your radio.

See:
http://www.qsl.net/w5dxp
These are Cecil A. Moore`s web pages which include a method which may eliminate a tuner and replace it with specific lengths of ladder line.

For a similar approach which never the less retains the tuner, see Figure 20 on page 486 of the 18th edition of the "Radio Handbook" from Editors and Engineers, Ltd., William I. ORR, W^SAI, Editor. The Figure 20 title is: "Dimensions for Center-Fed Multiband Antenna".

With an in-between dipole length and a lower than anticipated antenna height, your results will vary, but you will get a picture of what is happening.

5709. Re: hey CAM aka JC

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-26 15:45:11 UTC
From: ON5MJ <on5mjREMOVE@skynet.be>
Message-ID: <3d932b90$0$209$ba620e4c@news.skynet.be>
Source record: 134050

Hello all of you,

I used to sign with JC up to a few days ago but I changed because of spam.

Regards. Jacques.

--
on5mjREMOVE@skynet.be - please remove "REMOVE" from e-mail address

5710. Re: Damn the CC&Rs!

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-26 15:49:11 UTC
From: Jim Weir <jim@rst-engr.com>
Message-ID: <j2b6puo6jvig1oddobuauouak6tcmkfr4g@4ax.com>
Source record: 134051

When I get to 20%, I'm going to sell.

{;-)

Jim

"Stephen C. Robbins" <srobbinsNoSPaMDUDES@netacc.net>
shared these priceless pearls of wisdom:

->Quite the contrary, Jim's posts border on the assinine 90% of the time. The
->only reason I havn't kill filed him is that the other 10% of the time he has
->some really great information or suggestions.
Jim Weir, VP Eng. RST Eng. WX6RST
A&P, CFI, and other good alphabet soup

5711. Re: Proper/ideal choice of T-tuner settings

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-26 15:49:40 UTC
From: "Ian White, G3SEK" <G3SEK@ifwtech.co.uk>
Message-ID: <e50txGGUyyk9EA9K@ifwtech.co.uk>
Source record: 134054

Andy Cowley wrote:
>
>
>I've been playing with this using the T match emulator at
>
>http://fermi.la.asu.edu/w9cf/tuner/tuner.html
>
>as posted by Peter O. Brackett. Thanks Peter.
>
>It auto tunes to set one cap to max. whatever value
>it is given for antenna impedance or max cap value.
>So its autotune function agrees with me. I've fiddled
>a bit and I can't improve on its settings. As written
>it doesn't do L matches so I emulated it with infeasibly
>large capacitor values and lo and behold it still set
>one cap to max for all the antenna impedances I tried.
>So I think my advice was good. Maybe there are some
>residuals causing errors in the s/w you are using?
>
>I'm not enough of a mathematician to do this from first
>principles but I still think my advice was correct. Can
>you show an example of a real world antenna impedance
>(r >= 10 ohms <= 1000 ohms, and |reactance| <= 2000 ohms)
>where both caps are set more than 10% away from their
>max value? (10% to allow for the possible errors in one
>of the software models). I can't find one.
>
In theory there are no impedances that cannot be matched by shorting either C1 and C2, and using the inductor and the other capacitor as an L-network.

It's also true that the L-network will always have the lowest possible loaded Q for transforming between two impedances. Regardless of the network used, there is a minimum necessary loaded Q to match Z1 to Z2. The L-network can only operate at one loaded Q, and it's that minimum necessary value.

The CLC T-network will always operate at a higher loaded Q than a plain L-network, because it is effectively two step-up L-networks back-to-back. To get from Z1 to Z2, you have to step up through a notional intermediate impedance Z3 which is higher than both, so the loaded Q is higher than the minimum that is possible with an L-network.

>Maybe there are places where this is needed due to the
>limitations on the ranges of the coil and caps, but in

>general I'm right.
>
>We are after all trying to solve a transformation of
>only two independent variables, so the minimal solution
>must involve only two variable components.

In theory, yes, but there are lots of *practical* limitations. The assumption of constant Q with a variable L has already been called into question.

Another practical limitation is that L networks are quite poor at matching impedances that are already close to the target, at the centre of the Smith chart. This is partly because the L and C values become unachievable, but there's another even more important reason - the matching ranges of the two different kinds of L networks (CL and LC) do not overlap. When you cross that boundary, the wrong kind of network will not match with *any* values of L and C.

The big problem is that the boundary passes right through the centre of the Smith chart! This means that some antennas can require different kinds of L-network for matching at opposite ends of a band, especially if the antenna has been adjusted to give a good 'natural' match in the center of the band.

In contrast, the CLC T-match will handle such situations smoothly... but at the expense of loaded Q and efficiency.

G3LNP published a nice practical solution in Radcom a few years ago. When either C reaches its maximum value, it operates a switch that shorts it out completely - the T-network becomes an L-network, of the right kind. The downside is that it has to be used with a roller L, or one with a lot of switched taps.

--
73 from Ian G3SEK 'In Practice' columnist for RadCom (RSGB)
Editor, 'The VHF/UHF DX Book'
http://www.ifwtech.co.uk/g3sek

5712. Re: Ideas on copper wire stretching and sagging

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-26 15:51:03 UTC
From: ON5MJ <on5mjREMOVE@skynet.be>
Message-ID: <3d932dd8$0$193$ba620e4c@news.skynet.be>
Source record: 134052

I had the same idea but in my case I have thought about using a nylon rope
instead. I am wondering about the influence of rain in this case,
particularly because the rope woud be much longer than the dipole itself.

Have an idea or experience ?

73 de ON5MJ.
--
on5mjREMOVE@skynet.be - please remove "REMOVE" from e-mail address

5713. Re: Correct Ladder Line Length for 88 ft Doublet?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-26 16:09:18 UTC
From: "Ian White, G3SEK" <G3SEK@ifwtech.co.uk>
Message-ID: <jYqyZpGuEzk9EAon@ifwtech.co.uk>
Source record: 134053

Dave Alden wrote:

>I just built an 88 ft. Doublet (44 ft. each leg) center fed with 450
>ohm ladder line. The center of the antenna is at 30 ft., with one
>legs end at 12 ft and the others at 6 ft off the ground. I had no way
>to make it a flat top so it is like an inverted V. The ladder line is
>about 40 feet long and goes directly into the shack and connects to a
>4:1 Balun on the back of my AT-11MP Auto tuner which feeds my Icom
>706mkIIg.
>
>The antenna is almost a flat match on 20M and auto tunes pretty easy
>on the other bands from 80-10M.
>
>The problem is that with the ladder line coming into the shack, I get
>RF into my computer speakers and any other radios that happen to be on
>when I transmit.
>
This is not surprising, because your doublet is very asymmetrical with respect to ground, and therefore common-mode currents flow down the ladder line and into the shack.

A good first step would be to raise the 6ft end to 12ft... it's not a good idea anyway to leave the hot end within such easy reach.

>The solution would seem to be to move the balun outside, as for away
>from the shack as possible (in a tupperware container) and run coax
>from the balun into the shack.
>
You have the right idea... but possibly the wrong balun. You don't need a 9:1 balun with 450-ohm ladder line and a doublet, because the load impedance at the bottom of the line is never 450 ohms. Try a simple 1:1 "current" or "choke" balun made by coiling the coax out there into a flat coil (much cheaper than ferrite), and connect the ladder line directly to the far end of the coiled coax.

If the tuner will handle the new set of load impedances, you're flying. The SWR on the coax will be pretty fierce on some bands, so you should use at least RG213 to keep the losses down. Since the coax length will only be about 15ft (plus what's in the coil) the losses won't be too bad.

Alternatively, since it's an auto-tuner and doesn't need you around, the best solution is to move that out to the Tupperware box, and put the 1:1 choke balun on the output side.

If you still have RF in the shack, try another coil choke just behind
the rig.

>The question is: Is there an optimum length for the ladder line? How
>much shorter can I make it and not affect the performance of the
>antenna? Ideally, shortening the ladder line to about 25 feet would
>work well from an installation standpoint but I don't know how this
>would affect the antenna.
>
It can all be calculated, but try it and see...

--
73 from Ian G3SEK 'In Practice' columnist for RadCom (RSGB)
Editor, 'The VHF/UHF DX Book'
http://www.ifwtech.co.uk/g3sek

5714. Re: Proper/ideal choice of T-tuner settings

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-26 16:22:31 UTC
From: Andy Cowley <andy.cowley@uwe.ac.uk>
Message-ID: <3D93377E.9E812D1C@uwe.ac.uk>
Source record: 134056

"Ian White, G3SEK" wrote:
>
> Andy Cowley wrote:
> >
> >
> >I've been playing with this using the T match emulator at
> >
> >http://fermi.la.asu.edu/w9cf/tuner/tuner.html
> >
> >as posted by Peter O. Brackett. Thanks Peter.
> >
> >It auto tunes to set one cap to max. whatever value
> >it is given for antenna impedance or max cap value.
> >So its autotune function agrees with me. I've fiddled
> >a bit and I can't improve on its settings. As written
> >it doesn't do L matches so I emulated it with infeasibly
> >large capacitor values and lo and behold it still set
> >one cap to max for all the antenna impedances I tried.
> >So I think my advice was good. Maybe there are some
> >residuals causing errors in the s/w you are using?
> >
> >I'm not enough of a mathematician to do this from first
> >principles but I still think my advice was correct. Can
> >you show an example of a real world antenna impedance
> >(r >= 10 ohms <= 1000 ohms, and |reactance| <= 2000 ohms)
> >where both caps are set more than 10% away from their
> >max value? (10% to allow for the possible errors in one
> >of the software models). I can't find one.
> >
> In theory there are no impedances that cannot be matched by shorting
> either C1 and C2, and using the inductor and the other capacitor as an
> L-network.
>
> It's also true that the L-network will always have the lowest possible
> loaded Q for transforming between two impedances. Regardless of the
> network used, there is a minimum necessary loaded Q to match Z1 to Z2.
> The L-network can only operate at one loaded Q, and it's that minimum
> necessary value.
>
> The CLC T-network will always operate at a higher loaded Q than a plain
> L-network, because it is effectively two step-up L-networks
> back-to-back. To get from Z1 to Z2, you have to step up through a
> notional intermediate impedance Z3 which is higher than both, so the
> loaded Q is higher than the minimum that is possible with an L-network.

>
> >Maybe there are places where this is needed due to the
> >limitations on the ranges of the coil and caps, but in
> >general I'm right.
> >
> >We are after all trying to solve a transformation of
> >only two independent variables, so the minimal solution
> >must involve only two variable components.
>
> In theory, yes, but there are lots of *practical* limitations. The
> assumption of constant Q with a variable L has already been called into
> question.
>
> Another practical limitation is that L networks are quite poor at
> matching impedances that are already close to the target, at the centre
> of the Smith chart. This is partly because the L and C values become
> unachievable, but there's another even more important reason - the
> matching ranges of the two different kinds of L networks (CL and LC) do
> not overlap. When you cross that boundary, the wrong kind of network
> will not match with *any* values of L and C.
>
> The big problem is that the boundary passes right through the centre of
> the Smith chart! This means that some antennas can require different
> kinds of L-network for matching at opposite ends of a band, especially
> if the antenna has been adjusted to give a good 'natural' match in the
> center of the band.
>
> In contrast, the CLC T-match will handle such situations smoothly... but
> at the expense of loaded Q and efficiency.
>
> G3LNP published a nice practical solution in Radcom a few years ago.
> When either C reaches its maximum value, it operates a switch that
> shorts it out completely - the T-network becomes an L-network, of the
> right kind. The downside is that it has to be used with a roller L, or
> one with a lot of switched taps.
>
> --
> 73 from Ian G3SEK 'In Practice' columnist for RadCom (RSGB)
> Editor, 'The VHF/UHF DX Book'
> http://www.ifwtech.co.uk/g3sek

Many thanks for that Ian. No time for a considered reply now, but glad
I was at least partly right. Were Wes's calculations wrong or what?

vy 73

Andy, M3ABC

5715. Re: tower paint

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-26 16:24:47 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <o0d6pusr9eu48hftgki4r4aashea33icbr@4ax.com>
Source record: 134055

On Thu, 26 Sep 2002 07:19:45 -0400, mike c
<md_removeunderscores_cola@evenlink.com> wrote:

>
>but the flexing would be greater at the bottom of the stick which is
>why a mobile spring base is at the base, not the top. the paint we
>used in army basic training seemed to have a rubbery feel when dry.
>it was water resistant an d i got the impression that it would stand
>up to expansion/contraction well.
>
>mike c

Hi Mike,

The tension of the flex is greater at the base, but the flex itself is
an indication of the resolution of stress into deformation, and that
occurs well above the base with a vengence - otherwise the structure
would tip, or break. The spring at the base is a method to overcome
tip or break (i.e. the base does not flex well at all without it).

73's
Richard Clark, KB7QHC

5716. Re: Counterpoise??

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-26 16:27:33 UTC
From: richardharrison@webtv.net
Message-ID: <5350-3D933575-195@storefull-2316.public.lawson.webtv.net>
Source record: 134057

Tony, WA6LZH wrote:
"Have you done anything with geometric shapes?"

All this was sorted out about 70 years ago by RCA researchers Brown, Lewis, and Epstein, theoretically and experimentally. Their results have withstood the challenges and have been codified by the FCC. If you would like more information on grounds, counterpoises, etc,. try to find Ed Laport (also an RCA colleague of B.L.&E.) in "Radio Antenna Engineering".

Good luck in discovery , The obvious ideas have probably already been tried, but something may have been overlooked.

Best regards, Richard Harrison, KB5WZI

5717. Re: Counterpoise??

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-26 17:11:38 UTC
From: WA6LZH <tangeram@lucent.com>
Message-ID: <3D933FCA.4000706@lucent.com>
Source record: 134058

Thank you Richard for the references. I'll indeed have a look. For me sometimes "Discovery" is a more direct path to knowledge.

Tony

Richard Harrison wrote:

> Tony, WA6LZH wrote:
> "Have you done anything with geometric shapes?"
>
> All this was sorted out about 70 years ago by RCA researchers Brown,
> Lewis, and Epstein, theoretically and experimentally. Their results
> have withstood the challenges and have been codified by the FCC. If you
> would like more information on grounds, counterpoises, etc,. try to
> find Ed Laport (also an RCA colleague of B.L.&E.) in "Radio Antenna
> Engineering".
>
> Good luck in discovery , The obvious ideas have probably already been
> tried, but something may have been overlooked.
>
> Best regards, Richard Harrison, KB5WZI
>
>

5718. Re: Proper/ideal choice of T-tuner settings

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-26 18:04:25 UTC
From: n7ws@nowhere.com
Message-ID: <3d933149.2789249@news.triconet.org>
Source record: 134059

On Thu, 26 Sep 2002 11:15:33 GMT, Andy Cowley <andy.cowley@uwe.ac.uk>
wrote:

|Wes Stewart wrote:
|>
|
|> Not quite. Which capacitor is set to the greater capacitance will
|> also depend on whether the load Z is higher or lower than the input Z
|> (typically 50). Furthermore, max capacitance at either end is not
|> always the optimum solution.
|>
|> |Even better if you can bypass the 'unused' cap altogether.
|>
|> No, then you have an L network, over which you have no control of the
|> loaded Q, which is determined entirely by the two impedances and which
|> might well require completely impractical component values.
|>
|> For example, consider a C-L-C tee network with C1 and C2 = 10 to 300pF
|> (Q=500) and L = 1 to 100 uH (Q=100).
|>
|> CASE 1.
|>
|> The frequency is 3.7 MHz and the load Z = 100 +j0.
|>
|> A nearly optimum solution (minimum insertion loss and SWR<=1.02) is
|> thus:
|>
|> C1 = 297.5pF, C2 = 219pF, L = 4.21 uH. The SWR = 1.02 and the
|> insertion loss = 0.25 dB.
|>
|> We got lucky here since the max value of C1 is just about optimum.
|>
|> Setting C1 = 300pF (max), the results are:
|>
|> C1 = 300pF, C2 = 221.3pF, L = 4.19uH.
|>
|> Now let's short out C2. The best we can do is:
|
|WRONG CAP SHORTED !!!!!!!!!!! SHORT C1 AND RECALCULATE With C1 = infinity.

Nope. See my earlier comment below.

In this case, the load Zl (100+j0) > Zin (50). Therefore, the first
matching element must be in parallel with Zl. Shorting out C2 places
L (~4.3 uH) in parallel with Zl, and neglecting Q for a moment to keep

the numbers easy, the result is 100||j100 (Which should properly be
dealt with as an admittance, but we'll leave it this way for now).
This combination has a series equivalent of 50 + j50. Adding 50 ohm
of capacitive reactance (~860 pF) yields the desired 50 +j0.

[snip]

|> So in both cases of turning the tee network into an L network,
|> impractical capacitor values are required. And another thing...if you
|> think that shorting out the capacitor set to the higher value is
|> correct, you are mistaken.

|I stand corrected, I think, but a couple of points.
|
|1. I have never yet seen a variable inductor with constant Q. Inductance
|varies with N^2, loss resistance with N, approximately, so your models are
|incorrect. Q at low L will be _much_ less than Q at high L.

I agree with your first statement. In fact, I said earlier in this
thread:

"One caveat. This is true only when the Q of the inductor does not
change with value. In the usual case of a roller inductor or
switched-tap inductor this will not be true. In particular, roller
inductors generally have greatly reduced Q at the lower inductance
settings."

However, the models are not incorrect. Changing the inductor Q will
affect the values of the elements and the network loss; however, it
will not change the required topology.

|
|2. In both cases you have shorted the wrong cap. A shorted cap is the
|equivalent of an infinite cap. I.e. impedance is zero.

Answered above.

|
|I'd be very interested in your results with these corrections, Wes. I
|don't have the software.

There are no corrections to be made, so the results are unchanged.

5719. Re: Correct Ladder Line Length for 88 ft Doublet?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-26 18:25:59 UTC
From: richardharrison@webtv.net
Message-ID: <5425-3D935137-117@storefull-2317.public.lawson.webtv.net>
Source record: 134060

I wrote: W^SAI. Wrong! Bill ORR`s call was W6SAI. Sorry.
Best regards, Richard Harrison, KB5WZI

5720. Re: Proper/ideal choice of T-tuner settings

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-26 18:43:21 UTC
From: "j. keith carter" <j.keith.carter@sympatico.ca>
Message-ID: <3D935549.9F0A22D9@sympatico.ca>
Source record: 134061

Sorry Will; I intended my original post for the group as well, Keith, VE3JKC

Hi Will; I don't think I've seen any mention of the program that comes with

the ARRL Antenna Book. It's called AAT for Advanced Antenna Tuner and will

allow one to analyse two configurations of "L" the "PI" as well as the "T".

You can change any parameter including "Q" of components and it will allow you to set component values and look at loss, component stress etc. However

you do need to know the termination complex impedance of your antenna system. I have found it very useful in both designing tuners as well as setting them for minimum insertion loss. Good luck. Keith, VE3JKC.

Will White wrote:

> I find that I can get virtually the same match (especially on 30 and 10
> meters) between my rig and LL fed 67' inverted V, at *more* than two
> settings with a T-tuner . My question is this: granted that in choosing
> between hi-L/low-C and hi-C/low-L, the latter is preferable for
> efficiency's sake, but given the *same* amount of L, if one cap is set
> near max, and the other set near minimum, which should input and which
> output?
>

5721. Re: Proper/ideal choice of T-tuner settings

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-26 19:12:42 UTC
From: "j. keith carter" <j.keith.carter@sympatico.ca>
Message-ID: <3D935C2A.461F9EDE@sympatico.ca>
Source record: 134062

Hi again Will; Forgot to mention in my posting that there is another excellent program on the Antenna Book CD called TLW for Transmission Lines Windows. It May be a little easier to use to answer your initial question. It does however start at the antenna and work through the transmission line and then allows you to design your tuner or at least assign values to the three components of the "T" tuner. It also will give overall tuner loss with various component values and component stress. ie; coil dissipation and capacitor voltages. These programs are written by Dean Straw N6BV and if you get the 19th edition of the book it is the latest version of the software. Again, have fun, Keith, VE3JKC.

"j. keith carter" wrote:

> Sorry Will; I intended my original post for the group as well, Keith,
> VE3JKC
>
> Hi Will; I don't think I've seen any mention of the program that comes with
>
> the ARRL Antenna Book. It's called AAT for Advanced Antenna Tuner and will
>
> allow one to analyse two configurations of "L" the "PI" as well as the "T".
>
> You can change any parameter including "Q" of components and it will allow
> you to set component values and look at loss, component stress etc. However
>
> you do need to know the termination complex impedance of your antenna
> system. I have found it very useful in both designing tuners as well as
> setting them for minimum insertion loss. Good luck. Keith, VE3JKC.
>
> Will White wrote:
>
> > I find that I can get virtually the same match (especially on 30 and 10
> > meters) between my rig and LL fed 67' inverted V, at *more* than two
> > settings with a T-tuner . My question is this: granted that in choosing
> > between hi-L/low-C and hi-C/low-L, the latter is preferable for
> > efficiency's sake, but given the *same* amount of L, if one cap is set
> > near max, and the other set near minimum, which should input and which
> > output?
> >

5722. Re: How many people have insulted radials??

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-26 19:59:07 UTC
From: jim.bolinger@lintek.aeroflex.com
Message-ID: <8d5ec8a2.0209261159.2d4f440c@posting.google.com>
Source record: 134063

StarGazer <pti@capnet.com> wrote in message news:<3D92D4EC.CF60F84A@capnet.com>...
> .asd

Can't say that I ever have.

I've always tried to be polite to them ;-)

Jim
N8EE

5723. Imax-2000:

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-26 20:24:28 UTC
From: jackinariz@webtv.net
Message-ID: <14802-3D936CFC-162@storefull-2135.public.lawson.webtv.net>
Source record: 134064

Awhile back a kind person listed a site about an analysis of the Imax-2000. I have lost that site..Can you post that site again?...Thanks..Jack D.

5724. Balanced Line input of a MFJ Versa Tuner II

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-26 21:01:36 UTC
From: Alex <alex.draper1@rogers.com>
Message-ID: <QAKk9.119312$8b1.21406@news01.bloor.is.net.cable.rogers.com>
Source record: 134065

Hello, I bought a MFJ-941E Versa Antenna tuner and didn't receive a manual.
I did however receive a paper with some instructions typed onto it. I want
to connect a 300 ohm twin-lead to it. Here's the back MFJ941E :

http://members.rogers.com/alexsradio/mfj941e.jpg

The paper say "A jumper wire from the WIRE binding post, as indicated by a
dotted line on the MFJ941E, should be connected to one of the posts of the
BALANCED LINE. This couples the MFJ941E to the balanced line through a 4:1
balun."
Without a diagram showing the dotted line i'm stuck. Does anyone have a
Versa Tuner that could help me?

Thanks!

5725. Re: Ideas on copper wire stretching and sagging

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-26 21:11:05 UTC
From: Owen Duffy <owen@oda.com.au>
Message-ID: <3D9377E9.8DA1A502@oda.com.au>
Source record: 134066

ON5MJ wrote:
>
> I had the same idea but in my case I have thought about using a nylon rope
> instead. I am wondering about the influence of rain in this case,
> particularly because the rope woud be much longer than the dipole itself.
>
> Have an idea or experience ?

Just a thought

My preference for ham wire antennas is 2mm HDC (bare). If you compare say 6mm diameter polyester cable laid rope alone, it has a tensile strength about 30% greater than the copper and a wind resistance of 300% higher than the copper, so its wind survival speed might be around half of the 2mm HDC.

Use of a synthetic fibre rope as a catenary to support a thinner conductor might have more application if you were using very thin wire... but then you are probably doing that for stealth reasons and don't want to draw attention to it with a very visible fibre rope.

Owen

5726. Re: Ideas on copper wire stretching and sagging

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-26 21:26:17 UTC
From: Owen Duffy <owen@oda.com.au>
Message-ID: <3D937B79.A1562E46@oda.com.au>
Source record: 134067

ON5MJ wrote:
>
> I had the same idea but in my case I have thought about using a nylon rope
> instead. I am wondering about the influence of rain in this case,
> particularly because the rope woud be much longer than the dipole itself.
>
> Have an idea or experience ?

Just a thought

My preference for ham wire antennas is 3mm HDC (bare). If you compare say 6mm diameter polyester cable laid rope alone, it has a tensile strength about 30% greater than the copper and a wind resistance of 100% higher than the copper, so its wind survival speed might be just a little less than the 3mm HDC.

The synthetic fibre rope will deteriorate and quickly become inferior to the copper, so is less suitable for long term installation.

The different stretch of the rope and copper might raise some challenges for supporting the wire without breaking it when the rope stretches.

Use of a synthetic fibre rope as a catenary to support a thinner conductor might have more application if you were using very thin wire... but then you are probably doing that for stealth reasons and don't want to draw attention to it with a very visible fibre rope.

Owen

5727. Daiwa CNW-419 Tuner Manual

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-26 21:30:20 UTC
From: "R. Scott" <washingtonham@yahoo.com>
Message-ID: <3D937C6C.DA9063B@yahoo.com>
Source record: 133969

You know, Ive had this tuner neigh on to 20 years and never had a manual (I bought it used at AES in Orlando).

SOOO, I wonder if some intrepid ham has one (I know how to use it, Im looking for schematic to see if I can modify it for 6mtrs)

Thanks

Scotty N7HJ

5728. Re: Balanced Line input of a MFJ Versa Tuner II

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-26 21:45:29 UTC
From: Bob Miller <bamiller@texas.net>
Message-ID: <w36TPRm5hbYffJ8WjNaJEpXl5Z4S@4ax.com>
Source record: 134068

"Alex" <alex.draper1@rogers.com> wrote:

>Hello, I bought a MFJ-941E Versa Antenna tuner and didn't receive a manual.
>I did however receive a paper with some instructions typed onto it. I want
>to connect a 300 ohm twin-lead to it. Here's the back MFJ941E :
>
>http://members.rogers.com/alexsradio/mfj941e.jpg
>
>The paper say "A jumper wire from the WIRE binding post, as indicated by a
>dotted line on the MFJ941E, should be connected to one of the posts of the
>BALANCED LINE. This couples the MFJ941E to the balanced line through a 4:1
>balun."
>Without a diagram showing the dotted line i'm stuck. Does anyone have a
>Versa Tuner that could help me?
>
>Thanks!
>

At the MFJ web site, I believe it is www.mfjenterprises.com
you can download manuals for most all of the tuners they make.

Bob
k5qwg

5729. Re: Want a Good Tuner??

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-26 23:27:02 UTC
From: nm5k@wt.net
Message-ID: <25eb70d7.0209261527.7af832fc@posting.google.com>
Source record: 133970

CAM <Cecil.A.Moore@ieee.org> wrote in message news:<3D86A118.1BB0AB4C@ieee.org>...
> StarGazer wrote:
> > Why is 5/16 wavelength such a magically length?
>
> Not magical, just convenient. A 1/4WL monopole has a feedpoint
> impedance of about 35+j0 ohms. A 5/16WL monopole has a feedpoint
> impedance of about 50+j80 ohms. For a perfect 50 ohm match, use
> a series cap with a reactance of -j80 ohms. But 35 ohms is an
> acceptable feedpoint impedance without an antenna tuner.

I've never needed a tuner for a normal 1/4 wave inv L. I have one up now, and it's fed with coax and no tuner at all. Has a good match. The only time I've used a cap in series was with an "extended" inv L of 185-190 ft long. I guess the length he wants to use will depend on the pattern he wants. A 1/4 wave has less overhead radiation than the extended version. Better for dx usually. But the longer antennas radiate more at higher angles, and many times are better for regional work. Usually a bit less ground losses also, as the point of maximum current is raised up off the ground with the 185 ft inv L. My present version is only a 1/4 wave. 125-135 ft??? or so..I also use a T vertical at times on 160m. It's actually my parallel 80-40-20 dipoles fed as a vertical. It has an overhead null like a straight 1/4 wave monopole would. MK

5730. Re: Proper/ideal choice of T-tuner settings

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-26 23:48:14 UTC
From: nm5k@wt.net
Message-ID: <25eb70d7.0209261548.1c302eb6@posting.google.com>
Source record: 133971

n7ws@nowhere.com (Wes Stewart) wrote in message
news:<3d92297c.25144281@news.triconet.org>...
> On Wed, 25 Sep 2002 20:17:37 +0000 (UTC), "Reg Edwards"
> <g4fgq.regp@btinternet.com> wrote:
>
> |Hello Will,
> |
> |In principle no more than two variable tuner components are needed to match
> |the antenna to the transmitter.
> |
> |But to avoid inconvenient component values and to avoid having to
> |interchange component circuit locations in the middle of tuning operations,
> |three components may be used used in the form of a T or Pi network,
> |high-pass or low-pass confuration.
> |
> |The C-L-C high-pass T-network is the most common configuration.
> |
> |Whenever there are 3 or more variable components there is an infinite number
> |of alternative settings to produce an impedance match. The only difference
> |between them is power transmission efficiency.
> |
> |Since, for practical purposes, tuner loss occurs only in the inductance then
> |highest efficiency occurs when the inductance is set to the lowest value
> |which allows a match to be achieved by varying the two capacitors.
>
> One caveat. This is true only when the Q of the inductor does not
> change with value. In the usual case of a roller inductor or
> switched-tap inductor this will not be true. In particular, roller
> inductors generally have greatly reduced Q at the lower inductance
> settings.
>
> Since the operational solution to this problem can be complex, no pun
> intended, my oft repeated suggestion that a relative output indicator,
> as well as the input SWR meter, be used during adjustment is repeated
> once again.

That can come in handy. I did a test once with my 989c tuner. I used
meters on both ends, etc. I found in my case, the lowest inductance
always gave the least loss, even with the possible lowering of the Q.
Didn't seem to matter much. I never did see an exception to this when
I tested it. So I always use the least inductance no matter what. I
found on the 989c, it's usually the "ant" cap that will be at max C.
Only in rare cases will it not be at max. On the other hand, the
"xmtr" cap, can be about anywhere. Usually about 1/4 to 1/2 range is

where it ends up. I don't worry about that. My method of tuning is to set the caps about 1/3 to 1/2 scale, and peak the noise with the coil. That gets in the ballpark at first. And then roll the inductance back bit by bit, retuning, until I can't get a decent match. Then I roll back to the point where I have just enough coil to match. Most of the time, at this point, the ant cap will be at max. I consider that the best setting, and according to my tests, always gave the least loss. I found using too much coil can cause up to 20% loss in the tuner. I found that using the least inductance, and "usually" max ant cap, gave a loss almost unnoticable on an average watt meter. Very low..There may be strange exceptions, but so far, I've never seen one with the 989c. MK

5731. Re: How many people have insulted radials??

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-27 00:00:26 UTC
From: Dan <email@no.com>
Message-ID: <8977pu4a6u8dk7fi0hrg6m04rnmi9s9cer@4ax.com>
Source record: 133972

I once insulted my radials by hitting them with a weed-whacker where they connect to my vertical.

After many apologies (and some first aid), we eventually made up. The good news was that they didn't seem to hold a grudge for very long.

On Thu, 26 Sep 2002 02:35:40 -0700, StarGazer <pti@capnet.com> wrote:

>.asd

5732. Re: Balanced Line input of a MFJ Versa Tuner II

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-27 00:37:37 UTC
From: Alex <alex.draper1@rogers.com>
Message-ID: <lLNk9.121307$U_.78917@news04.bloor.is.net.cable.rogers.com>
Source record: 133973

Thanks Bob i'll go download it!

"Bob Miller" <bamiller@texas.net> wrote in message
news:w36TPRm5hbYffJ8WjNaJEpXl5Z4S@4ax.com...
> "Alex" <alex.draper1@rogers.com> wrote:
>
> >Hello, I bought a MFJ-941E Versa Antenna tuner and didn't receive a
manual.
> >I did however receive a paper with some instructions typed onto it. I
want
> >to connect a 300 ohm twin-lead to it. Here's the back MFJ941E :
> >
> >http://members.rogers.com/alexsradio/mfj941e.jpg
> >
> >The paper say "A jumper wire from the WIRE binding post, as indicated by
a
> >dotted line on the MFJ941E, should be connected to one of the posts of
the
> >BALANCED LINE. This couples the MFJ941E to the balanced line through a
4:1
> >balun."
> >Without a diagram showing the dotted line i'm stuck. Does anyone have a
> >Versa Tuner that could help me?
> >
> >Thanks!
> >
>
> At the MFJ web site, I believe it is www.mfjenterprises.com
> you can download manuals for most all of the tuners they make.
>
> Bob
> k5qwg
>

5733. Wire parasitic array

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-27 01:09:37 UTC
From: lc <larryc@northwest.com>
Message-ID: <3D93AFD1.3B29E998@northwest.com>
Source record: 133974

I hv an old HR mag article regarding wire LP yagis .

Does anyone hv references to 40M or 80m wire directive arrays?

My interest is an in-vee, two or three element parasitic array.

thanx.

5734. Hy-Gain HG-37SS tower FS

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-27 02:49:19 UTC
From: wb4una@aol.com
Message-ID: <20020926224919.12717.00006867@mb-fa.aol.com>
Source record: 133975

this is a crank-up..tilt over tower...I have the gin pole for tilting the tower over ..also have the winches which are a positive clutch design.. this tower sells for 1600.00 and the gin pole for another 300.00 so that is 1900.00 . it is 12 years old and looks like new. I will sell it all for 800.00..NO SHIPPING unless you want to pay..it weighs around 300#..I would meet someone with in a 150 miles of Columbia,South Carolina..

thanks for reading Randy

ARS: WB4UNA
Randy Chavis
247 Goff Court
West Columbia
S.C. 29172

5735. Re: tower paint

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-27 02:56:44 UTC
From: kelly@dvol.com
Message-ID: <d22b54c3.0209261856.57d73883@posting.google.com>
Source record: 133976

"Les Kramer" <wa3sgz@mindspring.com> wrote in message
news:<amkfesvhr1@slb4.atl.mindspring.net>...
> Hi Richard,
>
> I'm a materials engineer/corrosion engineer with 32 years of professional
> experience so maybe I can help out the newsgroup on tower painting.
> Occasionally I give talks to my radio club on corrosion and the radio
> amateur.

It's always nice to have a pro in the biz pop in here once in awhile .
. whatever the biz is beyond EE.

> This is a long post, but I wanted to address a number of issues noted on
> prior messages.

Nice post, duly noted, tnx.

>
> 73,
>
> Les
> WA3SGZ

w3rv

5736. Re: Hy-Gain HG-37SS tower FS

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-27 05:14:04 UTC
From: Fred Hambrecht <w4jle@charter.net>
Message-ID: <up7q8vftv9891a@corp.supernews.com>
Source record: 133977

Who made it, and what is the extended height?

"Randy Chavis" <wb4una@aol.com> wrote in message
news:20020926224919.12717.00006867@mb-fa.aol.com...
> this is a crank-up..tilt over tower...I have the gin pole for tilting the
tower
> over ..also have the winches which are a positive clutch design.. this
tower
> sells for 1600.00 and the gin pole for another 300.00 so that is 1900.00 .
it
> is 12 years old and looks like new. I will sell it all for 800.00..NO
SHIPPING
> unless you want to pay..it weighs around 300#..I would meet someone with
in a
> 150 miles of Columbia,South Carolina..
>
> thanks for reading Randy
>
> ARS: WB4UNA
> Randy Chavis
> 247 Goff Court
> West Columbia
> S.C. 29172
>

5737. Re: Hy-Gain HG-37SS tower FS

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-27 05:15:01 UTC
From: Fred Hambrecht <w4jle@charter.net>
Message-ID: <up7qaon95t523b@corp.supernews.com>
Source record: 133979

Whoops! Guess I should have read the subjectline... Sorry

"Randy Chavis" <wb4una@aol.com> wrote in message
news:20020926224919.12717.00006867@mb-fa.aol.com...
> this is a crank-up..tilt over tower...I have the gin pole for tilting the
tower
> over ..also have the winches which are a positive clutch design.. this
tower
> sells for 1600.00 and the gin pole for another 300.00 so that is 1900.00 .
it
> is 12 years old and looks like new. I will sell it all for 800.00..NO
SHIPPING
> unless you want to pay..it weighs around 300#..I would meet someone with
in a
> 150 miles of Columbia,South Carolina..
>
> thanks for reading Randy
>
> ARS: WB4UNA
> Randy Chavis
> 247 Goff Court
> West Columbia
> S.C. 29172
>

5738. Re: HELP YAESU ATAS100

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-27 05:17:08 UTC
From: khowel1@aol.comnospam
Message-ID: <20020927011708.19045.00007202@mb-fz.aol.com>
Source record: 133978

I did a search on google.com's group search engine and came up with some results about a month ago, if you do a search for it there, I know that someone has the diagrams online, a little fuzzy but you may be able to make them out. I was having trouble with my ATAS100 going up or down with out having to take it off and tap the base on the ground a coupel of times, but has been ok for a while now.

Kevin
W0KLH

5739. Re: Ideas on copper wire stretching and sagging

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-27 10:39:21 UTC
From: ON5MJ <on5mjREMOVE@skynet.be>
Message-ID: <3d94355c$0$207$ba620e4c@news.skynet.be>
Source record: 133980

Thank you for advise. I will check with my suppliers.

Jacques.

5740. Where to get aluminium tubing???

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-27 11:10:50 UTC
From: M3SEM <ff@vv.vv>
Message-ID: <%0Xk9.1165$hS4.8997@newsfep3-gui.server.ntli.net>
Source record: 133981
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.equipment,rec.radio.amateur.misc,uk.radio.amateur

Wondering if anyone can point me in the direction of a supplier of aluminium tubing in the UK, for some antenna projects??

Thanks in advance :)

5741. Antennas And The Alinco EDX2

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-27 11:34:09 UTC
From: Dave <heilic@btconnect.com>
Message-ID: <an1fng$in0$1@helle.btinternet.com>
Source record: 133982

Could anyong give me some information on using the Alinco EDX2 with a wire antenna, or can the EDX2 be used with other antennas, e.g the G5RV, the information sheets dont come with much information at all...

Thanks..

Dave

5742. Re: Where to get aluminium tubing???

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-27 12:02:40 UTC
From: HRH <gi4uiv@ntlworld.com>
Message-ID: <3D9448E0.1020205@ntlworld.com>
Source record: 133983
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.equipment,rec.radio.amateur.misc,uk.radio.amateur

try

www.aalco.co.uk

M3SEM wrote:

> Wondering if anyone can point me in the direction of a supplier of aluminium
> tubing in the UK, for some antenna projects??
>
> Thanks in advance :)
>
>
>

5743. Re: Where to get aluminium tubing???

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-27 12:16:33 UTC
From: Gordon Hudson <usenet@hostroute.com>
Message-ID: <an1i72$n8n$1$8302bc10@news.demon.co.uk>
Source record: 133984
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.equipment,rec.radio.amateur.misc,uk.radio.amateur

"M3SEM" <ff@vv.vv> wrote in message
news:%0Xk9.1165$hS4.8997@newsfep3-gui.server.ntli.net...
> Wondering if anyone can point me in the direction of a supplier of
aluminium
> tubing in the UK, for some antenna projects??
>
> Thanks in advance :)

Sandpiper used to have the stuff they use to make their own antennas
available quite
cheaply.

Sandpiper is one if those businesses that could benefit from a web site.
Even just a facsimile of their print catalogue would be useful.

Gordon
GM4SVM

www.gm4svm.org

5744. Re: Where to get aluminium tubing???

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-27 12:23:25 UTC
From: Brian Reay <brian.reay@bigfoot.com>
Message-ID: <A4Yk9.319$XC6.26727@newsfep1-win.server.ntli.net>
Source record: 133985
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.equipment,rec.radio.amateur.misc,uk.radio.amateur

"M3SEM" <ff@vv.vv> wrote in message
news:%0Xk9.1165$hS4.8997@newsfep3-gui.server.ntli.net...
> Wondering if anyone can point me in the direction of a supplier of
aluminium
> tubing in the UK, for some antenna projects??
>
> Thanks in advance :)
>
>

If you just want small amounts you will probably find your local B&Q stock it- mine does. It isn't the cheapest way to buy it but it is convenient!

If you want more just try Yellow Pages under Aluminium Stock Holders- they will usually supply in small quantities or off cuts for cash.

73

Brian
G8OSN

--
Brian Reay
www.g8osn.org.uk

5745. Re: Where to get aluminium tubing???

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-27 12:25:03 UTC
From: Ken Ashcroft <ken@g3msw.demon.co.uk>
Message-ID: <TiL5UBEf4EI9EwkZ@g3msw.demon.co.uk>
Source record: 133994
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.equipment,rec.radio.amateur.misc,uk.radio.amateur

Surprisingly, I found 1 meter length of aluminium tubing in B & Q's
bigger shed north of Luton. Ken
In article <%0Xk9.1165$hS4.8997@newsfep3-gui.server.ntli.net>, M3SEM
<ff@vv.vv> writes
>Wondering if anyone can point me in the direction of a supplier of aluminium
>tubing in the UK, for some antenna projects??
>
>Thanks in advance :)
>
>

--
Ken Ashcroft

5746. Re: VHF and UHF yagi spacing

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-27 13:06:29 UTC
From: rbarrios@gmx.net
Message-ID: <ab7385fd.0209270506.425e244e@posting.google.com>
Source record: 133986

"Ian White, G3SEK" <G3SEK@ifwtech.co.uk> wrote in message
news:<4AW0fmBesqk9EA7n@ifwtech.co.uk>...
> EB4EQA wrote:
> >
> >Something I don't quite understand is why the UHF antenna has little
> >effect on the VHF one and not vice-versa, since they are similar in
> >length.
> >
> >Does the UHF antenna have a smaller capture area while being almost as
> >big as the VHF yagi ?
> >
> Yes. The width and height of the capture area are each measured in
> wavelengths. This scaling factor is larger than the effect of electrical
> boom length on capture area.
>
> The objective of stacking at half the recommended stacking distance for
> two of the 432MHz yagis (as a minimum) is to place the 144MHz yagi
> outside of the capture area of the 432MHz yagi. This avoids disturbance
> by the elements of the 144MHz yagi, which are electrically quite large
> at 432MHz.
>
> However, the 432MHz yagi will still be *inside* the physically larger
> capture area of the 144MHz yagi. This matters much less because the
> elements of the 432MHz yagi are electrically small at 144MHz.
>
> That's the short version. Full details are on my web site.

Now I see it much clear.

I will read the documents in your web site.

Thanks a lot Ian !!!!!!

Roberto, EB4EQA
Madrid

5747. Re: Where to get aluminium tubing???

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-27 14:15:04 UTC
From: Howard Long <howard@howardlongxxx.com>
Message-ID: <an1p58$2qo$1@venus.btinternet.com>
Source record: 133987
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.equipment,rec.radio.amateur.misc,uk.radio.amateur

Hello Brian

> If you just want small amounts you will probably find your local B&Q stock
> it- mine does. It isn't the cheapest way to buy it but it is convenient!

I've only ever found Al rod and that's only at the B&Q Warehouse stores (not the smaller ones).

If this is the stuff you're talking about, they are appallingly bad at re-stocking. I emptied out all the B&Q's in the London area about 18 months ago :-(

73 Howard G6LVB

5748. Re: Balanced Line input of a MFJ Versa Tuner II

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-27 15:00:53 UTC
From: 'Doc <w5lz@icok.net>
Message-ID: <3D94728E.7A491651@icok.net>
Source record: 133988

Alex,
MFJ has online manuals for their equipment. I don't
have the URL handy, but it shouldn't be too hard to
find by doing a 'search'.
Another option is to remove the cover of the tuner and
trace the connections. Not as easy, but more satisfying.
(I never could resist taking a look 'inside' at least once!)
'Doc

5749. Re: Imax-2000:

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-27 15:03:44 UTC
From: 'Doc <w5lz@icok.net>
Message-ID: <3D94733A.467427A5@icok.net>
Source record: 133989

Jack,
Try this:
<http://www.qsl.net/kg6aoh/imax2000/>

'Doc

5750. Re: Experiences

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-27 15:12:56 UTC
From: 'Doc <w5lz@icok.net>
Message-ID: <3D947560.3E9E239F@icok.net>
Source record: 133990

Kris,
After looking at the advertisements, it seems like
the 'biggest' difference is in polarization. Do you
want horizontal, or vertical polarization? I didn't
take a look at prices for the 'loops', so that may be
a bigger consideration than I think(?).
'Doc

5751. Re: Where to get aluminium tubing???

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-27 15:20:33 UTC
From: Brian Reay <brian.reay@bigfoot.com>
Message-ID: <EG_k9.1022$XC6.37366@newsfep1-win.server.ntli.net>
Source record: 133991
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.equipment,rec.radio.amateur.misc,uk.radio.amateur

"Howard Long" <howard@howardlongxxx.com> wrote in message
news:an1p58$2qo$1@venus.btinternet.com...
> Hello Brian
>
> > If you just want small amounts you will probably find your local B&Q
stock
> > it- mine does. It isn't the cheapest way to buy it but it is convenient!
>
> I've only ever found Al rod and that's only at the B&Q Warehouse stores
(not
> the smaller ones).
>
> If this is the stuff you're talking about, they are appallingly bad at
> re-stocking. I emptied out all the B&Q's in the London area about 18
months
> ago :-(

Well my local 'normal' B&Q does rod, tube, and strip in Al, brass, and some composite material (plus others not so interesting to hams). The local radio club did 'clean them out' of the 6mm tube when a load of them built the "BRAT Hunt DF Antenna" but they did recover ;-). Poetic really, the club DF hunts always start in the local B&Q car park.

73
Brian
G8OSN

5752. Re: Wide band HF vertical

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-27 15:27:52 UTC
From: 'Doc <w5lz@icok.net>
Message-ID: <3D9478DF.C15C7C03@icok.net>
Source record: 133992

Trees,
Okay, I tried it in an antenna modeling program,
don't have any place to 'hang' a vertical. After
going through several hundred 'runs' with demensions
from the given length, to well over a 1/4 wave length
at 7 Mhz, 'NEC' just doesn't agree with your findings.
Input SWR ranged from a low of 2.9 to totally rediculous
values.
I realize that the 'testing' that I've done isn't
exactly 'definitive', but it does lead me to believe
what I said once before, "If it seems too good to be
true, it usually is.".
'Doc

5753. Info. needed: Two-Element 75m Phased Vertical Wire Beam by Cecil Moore, W6RCA

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-27 16:34:45 UTC
From: golfradio@yahoo.com
Message-ID: <21b5602c.0209270834.658350c3@posting.google.com>
Source record: 133993

Hello,

I'm looking on information regarding the above antenna. The link from the ARRL website appears to be dead (http://people.delphi.com/cecilmoore/75m2elvp.htm)and I've surfed around and still could not come up with the article or information as to where it can now be found. Does anyone out there have a copy of it or a good URL where it can be found? Any help is appreciated.

73, Mark

5754. Re: Imax-2000:<Earl-Doc>

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-27 17:43:51 UTC
From: jackinariz@webtv.net
Message-ID: <19662-3D9498D7-286@storefull-2133.public.lawson.webtv.net>
Source record: 133997

Thanks guys, that is the site I wanted...This time I will make sure I have the site saved..Jack D.

5755. Re: Info. needed: Two-Element 75m Phased Vertical Wire Beam by Cecil Moore, W6RCA

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-27 17:54:16 UTC
From: KA9CAR <nospam@nospam.usa>
Message-ID: <an25qqhrh1@news1.tribune.com>
Source record: 133995

I don't see that antenna, but Cecil is now at
http://www.qsl.net/w5dxp/

KA9CAR

Mark <golfradio@yahoo.com> wrote in message
news:21b5602c.0209270834.658350c3@posting.google.com...
> Hello,
>
> I'm looking on information regarding the above antenna. The link from
> the ARRL website appears to be dead
> (http://people.delphi.com/cecilmoore/75m2elvp.htm)and I've surfed
> around and still could not come up with the article or information as
> to where it can now be found. Does anyone out there have a copy of it
> or a good URL where it can be found? Any help is appreciated.
>
> 73, Mark

5756. Re: Antennas And The Alinco EDX2

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-27 18:03:31 UTC
From: KA9CAR <nospam@nospam.usa>
Message-ID: <an26c5ieq1@news1.tribune.com>
Source record: 133996

I used an EDX-2 with my DX-77T for 3 years.

The tuner is an unbalanced L network tuner, that can change its configuration for high or low impedance.

I never used it to feed an end fed wire, which is what it is sold for.

I used it to feed 300 ohm balanced line to a dipole, and a loop. I did NOT use my home brew 1:1 Balun as I found it just added losses.

In one configuration I found I had some ground currents, so I used a few ferrite tube chokes on the control line and the feed line to control that.

In an A/ B comparison, I found that my Johnson Matchbox was noticeably better in received signal strength on one band, I don't recall which one. This was probably due to losses in the tuner at some matching configurations.

For "straight through" you power down the radio, then power it back up, with out using the tune feature. This often works better for out ob band listening than trying to tune the nearest Amateur band.

Dave <heilic@btconnect.com> wrote in message
news:an1fng$in0$1@helle.btinternet.com...
> Could anyong give me some information on using the Alinco EDX2 with a wire
> antenna, or can the EDX2 be used with other antennas, e.g the G5RV, the
> information sheets dont come with much information at all...
>
> Thanks..
>
> Dave
>
>

5757. Re: Ideas on copper wire stretching and sagging

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-27 19:58:09 UTC
From: mike c <md_removeunderscores_cola@evenlink.com>
Message-ID: <MPG.17fe825b905e8231989693@news.evenlink.com>
Source record: 133998

In article <3d932dd8$0$193$ba620e4c@news.skynet.be>,
on5mjREMOVE@skynet.be says...
> I had the same idea but in my case I have thought about using a nylon rope
> instead. I am wondering about the influence of rain in this case,
> particularly because the rope woud be much longer than the dipole itself.
>
> Have an idea or experience ?
>

yes. nylon rope may stretch more. my step dad used a 1" nylon rope as a safety when lowering his 32' trimaran down his steep boat ramp. he had it tied off holding the boat on the ramp (stuck) and let off the winch. we pushed on the trailer and it went. the rope stretched (probably would be worse if rope were wet - my old partner had some and it performed poorly one rainy day) and the boat ended up travelling way too far for comfort and ended up slightly cocked on the trailer.

when i get a new poly rope, i always pretension it over night. i'll pull on the middle and tighten it as much as i can. this gets rid of the memory (espescially with the 1/4" stuff that comes in a bag) so i can coil it up neatly. i use the stuff for a throw line. i just put a CATV eyenut on the end, hold the coil in my left hand and swing the weight in a circle pointing at the tree. then i release it toward the branches i'm trying to get through. with practice, you'll amaze those who use crossbows or regular bows and you'll have a good strong line for pulling bigger stuff through.

i suppose nylon could be pretensioned also. if we'd done that with the safety rope, it might have stopped the boat sooner. in fact, the mule tape i use for fiber optic cable is nylon and eventually looses it's stretch.

Best Regards,
Mike Colasono

5758. Re: hey CAM aka JC

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-27 20:25:14 UTC
From: mike c <md_removeunderscores_cola@evenlink.com>
Message-ID: <MPG.17fe88b68d093fd4989694@news.evenlink.com>
Source record: 133999

In article <3d932b90$0$209$ba620e4c@news.skynet.be>,
on5mjREMOVE@skynet.be says...
> Hello all of you,
>
> I used to sign with JC up to a few days ago but I changed because of spam.
>

you didn't have to change your name, just your "reply to" address.

i doubt it was you. JC never appeared in my thread view, just in the
body of the article as "JC Wrote:"

it's strange.

BTW if you click reply and type "RE: ..." in the subject line, you
start a new thread, which appears to have happened here. of course,
i've caught my news client doing strange things when i use the follow
up button, so ... who knows.

--
Best Regards,
Mike Colasono

5759. Re: Ideas on copper wire stretching and sagging

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-27 20:26:56 UTC
From: mike c <md_removeunderscores_cola@evenlink.com>
Message-ID: <MPG.17fe891df591272c989695@news.evenlink.com>
Source record: 134000

In article <3D937B79.A1562E46@oda.com.au>, owen@oda.com.au says...
>
>
> ON5MJ wrote:
> >
> > I had the same idea but in my case I have thought about using a nylon rope
> > instead. I am wondering about the influence of rain in this case,
> > particularly because the rope woud be much longer than the dipole itself.
> >
> > Have an idea or experience ?
>
> Just a thought
>
>
> My preference for ham wire antennas is 3mm HDC (bare). If you compare
> say 6mm diameter polyester cable laid rope alone, it has a tensile
> strength about 30% greater than the copper and a wind resistance of 100%
> higher than the copper, so its wind survival speed might be just a
> little less than the 3mm HDC.

what happened to 2mm and 300%?

>
> The synthetic fibre rope will deteriorate and quickly become inferior to
> the copper, so is less suitable for long term installation.
>
> The different stretch of the rope and copper might raise some challenges
> for supporting the wire without breaking it when the rope stretches.

uh, if you re-read my post, i suggested loosly lashing the wire to
the rope. the wire and rope will slide relative to each other. a
little slack in the wire ...

same situation with coax lashed to 1/4" galvanized steel strand. in
the winter, Comscope Qauntum Reach contracts so much that you need
expansion loops on BOTH end of spans greater than 100 - 150 ft
depending on the climate. the loops get almost totally sucked out in
the cold. if the cable becomes more tensioned than the strand, it
will oscillate. literally flops up and down on it's own. you can see
the standing wave on it.

add some springs (insulated from the wire, of course) to the ends of
the wire or something.

>
> Use of a synthetic fibre rope as a catenary to support a thinner

> conductor might have more application if you were using very thin
> wire... but then you are probably doing that for stealth reasons and
> don't want to draw attention to it with a very visible fibre rope.
>
>

yeah. that thin wire windom on the pole i mentioned was real stealthy
with the spreaders and all. freakin' aerial cluster #&#@% was more
like it. the guy had a lot of stuff up there. it could all be seen
from the road to his back yard.

and if it's a center-fed, how invisible will the feed line be?

--
Best Regards,
Mike Colasono

5760. Re: Ideas on copper wire stretching and sagging

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-27 20:32:15 UTC
From: mike c <md_removeunderscores_cola@evenlink.com>
Message-ID: <MPG.17fe8a5aea69e51f989696@news.evenlink.com>
Source record: 134001

check out the thread on copper wire stretching on
rec.radio.amateur.homebrew

--
Best Regards,
Mike Colasono

5761. Re: Info. needed: Two-Element 75m Phased Vertical Wire Beam by Cecil Moore, W6RCA

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-27 21:44:44 UTC
From: CAM <Cecil.A.Moore@ieee.org>
Message-ID: <3D94D14C.A5543A4B@ieee.org>
Source record: 134002

Mark wrote:
> I'm looking on information regarding the above antenna. The link from
> the ARRL website appears to be dead
> (http://people.delphi.com/cecilmoore/75m2elvp.htm)and I've surfed
> around and still could not come up with the article or information as
> to where it can now be found. Does anyone out there have a copy of it
> or a good URL where it can be found? Any help is appreciated.

Hi Mark, I can't seem to find a copy of that EZNEC file. I once sent it
to Roy, W7EL. Perhaps he still has it.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
------== Over 80,000 Newsgroups - 16 Different Servers! =-----

5762. Re: Antennas And The Alinco EDX2

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-27 22:36:59 UTC
From: Owen Duffy <owen@oda.com.au>
Message-ID: <3D94DD8B.336BC028@oda.com.au>
Source record: 134003

Dave wrote:
>
> Could anyong give me some information on using the Alinco EDX2 with a wire
> antenna, or can the EDX2 be used with other antennas, e.g the G5RV, the
> information sheets dont come with much information at all...

Although the information supplied with mine is scant, it does show its application for end feeding a vertical or wire (including advice on selection of radiator length). It does not show how to feed a balanced line.

You could use a balun to transition from the unbalanced EDX2 to a balanced load, but given that the EDX2 is designed to match a very wide range of impedances, the design of a balun that is not unduly lossy and does not restrict the impedance and frequency range of the tuner would be a challenge.

If you look at the circuit diagram, you might reasonably form the opinion that the earth terminal is meant to be earthed rather than connected to one side of a balanced load. Nevertheless, you will find plenty of OMs who will assure you that it (and others like the AHx and SGCxxxx) works just fine used on balanced loads, and that some have had to eliminate RF conducted into the shack on the feedline and control cable. I would not operate it in that way.

In my experience, the lack of information on the EDX2, especially alignment information, and the patent lack of interest in support of Alinco products by Alinco and their dealers is the worst aspect of the tuner. When I properly calibrated the detectors in mine, and rebuilt in in a new box when the original enclosure cracked up within a few months of purchase (http://u01.owenduffy.com.au/~owen/edx201.jpg), it works real well.

I use it frequently in a portable situation and it almost always achieves a match better than 1.2 (enabling full output power from the DX70TH) on any HF band on a 26m sloper that is 15m above ground at the high end and ground level at the EDX2 end. Whilst the sloper loads up on any band, it lacks the low angle radiation that is generally desired for 20m and up, but the high angle radiation is just what is needed for local contacts on 160, 80 and 40m. The 26m was chosen to not be within 5% of an odd or even quarter wave resonance on any HF band so as to avoid very high voltages impressed on the tuner at even multiples, or excessive influence of earth system loss at odd multiples.

Owen

>
> Thanks..
>
> Dave

5763. Re: Ideas on copper wire stretching and sagging

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-27 23:00:45 UTC
From: Owen Duffy <owen@oda.com.au>
Message-ID: <3D94E31D.70E8E60@oda.com.au>
Source record: 134004

mike c wrote:
>

> what happened to 2mm and 300%?

Mike,

I use both 2mm and 3mm depending on the application and availability.

You are probably referring to the first draft of the message which I cancelled because it had a typo and calc error in it... seems not all news servers process the cancels correctly!

>
for supporting the wire without breaking it when the rope stretches.
>
> uh, if you re-read my post, i suggested loosly lashing the wire to
> the rope. the wire and rope will slide relative to each other. a
> little slack in the wire ...
>

Yes, I saw your words... however my thought was that sometimes things that we set up to slide freely wind up binding and causing grief... so they are a challenge, though not impossible at all!

The rope idea is a good one for prototyping or portable work, no doubt about that, and I use it frequently. I am less inclined to use it as much in long term installations.

I do have a "semi-permanent" installation at a holiday cottage where a sloper attached to a substantial tree bough is tensioned by a weight suspended on a fibre rope running through a sheave block to the low end of the wire... always a concern and subject to frequent inspection to see that the sheave still runs free and that the rope hasn't developed too permanent a kink. In very strong winds, I have observed the wire pull 2m of rope out to allow more belly in the wire (which was almost horizontal). One day it will blow down - hence the "semi-permanant" status.

Cheers... Owen

5764. Would MININEC do this simple job accurately??

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-28 00:23:48 UTC
From: kelly@dvol.com
Message-ID: <d22b54c3.0209271623.da20e58@posting.google.com>
Source record: 134005

I'd like to model a simple flattop duoband dipole for 20 & 15. The dipoles would consist of parallel wires spaced six inches apart and fed in the center with a single 50 ohm coax line. Would a MININEC-based modeler be able to handle this scenario reasonably accurately or is this one of those situations MININEC does not handle well?

w3rv

5765. Re: Would MININEC do this simple job accurately??

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-28 00:40:10 UTC
From: n7ws@nowhere.com
Message-ID: <3d94f9a0.3367269@news.triconet.org>
Source record: 134006

On 27 Sep 2002 17:23:48 -0700, kelly@dvol.com (Brian Kelly) wrote:

|I'd like to model a simple flattop duoband dipole for 20 & 15. The
|dipoles would consist of parallel wires spaced six inches apart and
|fed in the center with a single 50 ohm coax line. Would a
|MININEC-based modeler be able to handle this scenario reasonably
|accurately or is this one of those situations MININEC does not handle
|well?
|
|w3rv

A simple google search finds among other things:

http://www.cebik.com/amod/amod2.html

http://www.cebik.com/sp.html

5766. Re: Would MININEC do this simple job accurately??

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-28 02:05:27 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <3D950E67.8090101@eznec.com>
Source record: 134007

Standard MININEC has trouble with close spaced parallel wires. I don't recall if the spacing you mention is close enough to cause a problem with an unmodified MININEC program, but it might be. MININEC can be modified to handle closer wire spacing than the original, so if the program you're using has this modification, it should be ok. You'll also need to make sure the segment length is no longer than about twice the wire spacing. And accurate modeling with MININEC will require that the antenna be at least about 0.2 wavelength above ground. If your model satisfies these requirements, the results should be quite accurate.

For more information about MININEC limitations, see "Mininec: The Other Edge of the Sword", QST, Feb. 1991.

Roy Lewallen, W7EL

Brian Kelly wrote:
> I'd like to model a simple flattop duoband dipole for 20 & 15. The
> dipoles would consist of parallel wires spaced six inches apart and
> fed in the center with a single 50 ohm coax line. Would a
> MININEC-based modeler be able to handle this scenario reasonably
> accurately or is this one of those situations MININEC does not handle
> well?
>
> w3rv

5767. Mil Sat Antennas etc.

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-28 03:14:12 UTC
From: The Freak <scanner_freakSPAM@hotmail.com>
Message-ID: <d79l9.9725$Sr6.321290@ozemail.com.au>
Source record: 134008

I know this isn't the Scanner NG, however my question was posed to those NGs that are supposed to house the subject matter experts, however, no one has replied. I am hoping that you, the Amateur Radio experts can answer my questions.

With all the activity building up in the Gulf I am looking for some expert advice and someone to share the secrets regarding how to scan Mil satellite and,
HF/VHF/UHF traffic using your typical all mode type scanners, such as the AOR type scanners and dedicated HF/VHF/UHF rigs. Here are a few questions regarding the topic that I'd love to have answered.

What type of antenna is best suited to receive the Mil Satellite transmissions?

Will a discone with a pre-amp suffice? if so, what type of pre-amp is best suited to scanner use?, baring in mind front-end overload and the like

What are the best frequencies to listen to during times of increased Military presence in the Gulf and Afghanistan region? Apparently the 260Mhz region is best for this!

Has anyone got a full freq list for the Airforce/Navy/Army/Marines and the like to cover the above modes, incl AM/FM/SSB transmissions

Has anyone got a how to home make (homebrew) a scanner antenna best suited to scanning Mil satellites in the 260Mhz area, if so may I have a copy of the plans or a link?

Any tips/hints comments regarding this subject are very much appreciated. Seems that there already has been an increase in traffic and has got to be the best indicator that things are hotting up Mil wise over there. So with this in mind, we the arm chair warriors would love to be able to listen to the
action, as it were. Although, I understand that some, if not all, transmissions that are sensitive in nature will be encrypted, I know from past experience that human error has caused the odd message or two to be transmitted 'in the clear', these are the transmissions I hope to capture and get excited over...

To give you a little insight into the equipment I am currently using, I have an Alinco DR605T, a Yaesu FT757GX2, AOR8000 all mode H/H, a Yaesu FT290R and a Radio Shack 2006. These radios are for receive only and as I am currently studying for my Licence hope that sometime soon I will be able to use them to transmit. I am an avid radio buff, and love everything from packet, HF, CW and just about every mode of radio including Spread Spectrum, but for the life of me, have had no joy with satellite reception. Can someone please

assist or point me in the right direction!

To reply direct please remove SPAM from my email address.

Regards and take care my fellow radio enthusiasts

The Freak (from Oz - Downunder)

5768. Re: Mil Sat Antennas etc.

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-28 03:48:09 UTC
From: Bill M <exray@no>
Message-ID: <upa9j8o8ahnmae@corp.supernews.com>
Source record: 134009

My comments...
As far as satellite comms I think you would be very unique to find
anything receiveable and unencrypted.
260 MHz range local comms are not going to be relayed via satellite (to
my knowledge)and are most likely inaccessible at your QTH in VK.
Your best bet for eavesdropping would be the standard Air Force SW freqs
like 11.175 where insensitive traffic is always active and you can get a
'feel' of the activity. There's about a half dozen freqs like 11.175 in
use around the world and they are readily found on the web.

Lest I get Wouff Hounged about divulging National Secrets, I feel
compelled to add that the ever increasing tensions in the Middle East
are not a game where a hapless SWL is somehow going to be privy to the
odd unencrypted message that the rest of the World doesn't know about.
Your inference about a "buildup in the gulf" belies your sources of
information. Sallying about with random pieces of out of context data
is just as bad as divulging real data.
I wouldn't want to see a single serviceman die because some 'Freak
monitor station' posted info on the internet about what he had heard.
I hope you will take that into account. Three thousand dead in an
attack on your country might lend you to think twice.

-BM

The Freak wrote:
>
> I know this isn't the Scanner NG, however my question was posed to those NGs
> that are supposed to house the subject matter experts, however, no one has
> replied. I am hoping that you, the Amateur Radio experts can answer my
> questions.
>
> With all the activity building up in the Gulf I am looking for some expert
> advice and someone to share the secrets regarding how to scan Mil satellite
> and,
> HF/VHF/UHF traffic using your typical all mode type scanners, such as the
> AOR type scanners and dedicated HF/VHF/UHF rigs. Here are a few questions
> regarding the topic that I'd love to have answered.
>
> What type of antenna is best suited to receive the Mil Satellite
> transmissions?
>
> Will a discone with a pre-amp suffice? if so, what type of pre-amp is best
> suited to scanner use?, baring in mind front-end overload and the like
>
> What are the best frequencies to listen to during times of increased

> Military presence in the Gulf and Afghanistan region? Apparently the 260Mhz
> region is best for this!
>
> Has anyone got a full freq list for the Airforce/Navy/Army/Marines and the
> like to cover the above modes, incl AM/FM/SSB transmissions
>
> Has anyone got a how to home make (homebrew) a scanner antenna best suited
> to scanning Mil satellites in the 260Mhz area, if so may I have a copy of
> the plans or a link?
>
> Any tips/hints comments regarding this subject are very much appreciated.
> Seems that there already has been an increase in traffic and has got to be
> the best indicator that things are hotting up Mil wise over there. So with
> this in mind, we the arm chair warriors would love to be able to listen to
> the
> action, as it were. Although, I understand that some, if not all,
> transmissions that are sensitive in nature will be encrypted, I know from
> past experience that human error has caused the odd message or two to be
> transmitted 'in the clear', these are the transmissions I hope to capture
> and get excited over...
>
> To give you a little insight into the equipment I am currently using, I have
> an Alinco DR605T, a Yaesu FT757GX2, AOR8000 all mode H/H, a Yaesu FT290R and
> a Radio Shack 2006. These radios are for receive only and as I am currently
> studying for my Licence hope that sometime soon I will be able to use them
> to transmit. I am an avid radio buff, and love everything from packet, HF,
> CW and just about every mode of radio including Spread Spectrum, but for the
> life of me, have had no joy with satellite reception. Can someone please
> assist or point me in the right direction!
>
> To reply direct please remove SPAM from my email address.
>
> Regards and take care my fellow radio enthusiasts
>
> The Freak (from Oz - Downunder)

5769. Re: Ideas on copper wire stretching and sagging

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-28 04:34:13 UTC
From: mike c <md_removeunderscores_cola@evenlink.com>
Message-ID: <MPG.17fefa84a75c80259896a2@news.evenlink.com>
Source record: 134010

>
> You are probably referring to the first draft of the message which I
> cancelled because it had a typo and calc error in it... seems not all
> news servers process the cancels correctly!

i had that happen once. may be the server. my deletes are working and
my ISP's news server is pretty lame. I'm using MicroPlanet Gravity
for a reader. I'm an anti MS type. Pegasus Mail is a good deal, too.

>
> I do have a "semi-permanent" installation at a holiday cottage where a
> sloper attached to a substantial tree bough is tensioned by a weight
> suspended on a fibre rope running through a sheave block to the low end
> of the wire... always a concern and subject to frequent inspection to
> see that the sheave still runs free and that the rope hasn't developed
> too permanent a kink. In very strong winds, I have observed the wire
> pull 2m of rope out to allow more belly in the wire (which was almost
> horizontal). One day it will blow down - hence the "semi-permanant"
> status.
>

wow, 2m. i'm curious. what's the diameter of this rope that raises
what weight that high in approx what mph wind?

sheave and block. good terms. we never say pulley in CATV. roller. 90
deg and 45 deg block. sheave is reserevd for those who know more than
the average cable dog.

it would be nice if you could thread your 2 or 3mm wire inside that
hollow braid poly line. leave enough rope on the ends for tying off.
too bad it doesn't come with a pull string inside. the 1/4" stuff is
good to IIRC 150 lbs. haven't really weather tested it though.

--
Best Regards,
Mike Colasono

5770. Re: hey CAM aka JC

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-28 04:50:46 UTC
From: mike c <md_removeunderscores_cola@evenlink.com>
Message-ID: <MPG.17feff353820fa0e9896a3@news.evenlink.com>
Source record: 134011

hmm... i cancelled the "hey CAM aka JC" and reposted using "and"
instead of "aka" when i realized what was happenning. yet you caught
the original thread and replied to that and that's why there's a
separate thread. sorry.

BTW, if you want a good anti-spam tool, try http://www.mailwasher.com

tha app really is good and it's free.

--
Best Regards,
Mike Colasono

5771. Re: Mil Sat Antennas etc.

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-28 05:07:43 UTC
From: "W.G Ewald" <wgewald@att.net>
Message-ID: <1feapug4eo4j4n9tl8flb4chikh9b46un3@4ax.com>
Source record: 134012

On Fri, 27 Sep 2002 23:48:09 -0400, Bill M <"exray"@no
spam-caribe.net> wrote:

>I wouldn't want to see a single serviceman die because some 'Freak
>monitor station' posted info on the internet about what he had heard.
>I hope you will take that into account.

That is what OPSEC is for.

5772. Re: Mil Sat Antennas etc.

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-28 05:24:51 UTC
From: Bill M <exray@no>
Message-ID: <upaf8gh9t3ji69@corp.supernews.com>
Source record: 134013

"W.G Ewald" wrote:
>
> On Fri, 27 Sep 2002 23:48:09 -0400, Bill M <"exray"@no
> spam-caribe.net> wrote:
>
> >I wouldn't want to see a single serviceman die because some 'Freak
> >monitor station' posted info on the internet about what he had heard.
> >I hope you will take that into account.
>
> That is what OPSEC is for.

I'd have to be a lot more net savvy than you to know what your laconic acronym OPSEC is. A Google search reveals another wanky security scheme and if that is your answer to protecting servicemen, well then you might as well bugger off lest you become a buggeree of the "savage arab hordes" which seems to be your inclination given your treatment of my comment.
Geezus, get off the freaking internet if it does that to you.
-WX4A

5773. Re: Mil Sat Antennas etc.

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-28 05:41:08 UTC
From: The Freak <scanner_freakSPAM@hotmail.com>
Message-ID: <Rgbl9.9744$Sr6.321786@ozemail.com.au>
Source record: 134014

Gentlemen please, I just asked a question regarding reception of Mil Sat transmissions. The basis of my comments are merely assumptions made by things called indicators, nothing new. There is increased radio comms traffic and in relation to OPSEC these indicators or lack thereof are how we gauge how well we are protecting operations and exercises and the like. Now I am not wishing to get political here and I don't want to offer comments with respect to how people died and the like. I wish to get back onto the subject of Mil Comms.

Secondly Sir, I tend to disagree with your assumption that nothing may be heard on that or any other UHF frequency in VK. There are others successfully receiving transmissions here in VK, my post was to gauge the experts opinion on how best to construct antenna and the like.

Am I wrong here, let's not get emotive about things.

Sorry to have asked the question! If I knew that I would have this type of impact I wouldn't have bothered. Oh and by the way, I can asure you that the OPSEC concept is NOT 'wanky' as you so freely call it. OPSEC will save lives if conducted properly and I assure you that the US does it best!

All the warmest regards and condolences re your losses, can we now get back to the topic?

The Freak (downunder, Australia)

"Bill M" <"exray"@no spam-caribe.net> wrote in message
news:upaf8gh9t3ji69@corp.supernews.com...
> "W.G Ewald" wrote:
> >
> > On Fri, 27 Sep 2002 23:48:09 -0400, Bill M <"exray"@no
> > spam-caribe.net> wrote:
> >
> > >I wouldn't want to see a single serviceman die because some 'Freak
> > >monitor station' posted info on the internet about what he had heard.
> > >I hope you will take that into account.
> >
> > That is what OPSEC is for.
>
> I'd have to be a lot more net savvy than you to know what your laconic
> acronym OPSEC is. A Google search reveals another wanky security scheme
> and if that is your answer to protecting servicemen, well then you might
> as well bugger off lest you become a buggeree of the "savage arab
> hordes" which seems to be your inclination given your treatment of my
> comment.
> Geezus, get off the freaking internet if it does that to you.

> -WX4A

5774. Re: Where to get aluminium tubing???

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-28 06:51:15 UTC
From: blank@removespamntlworld.com
Message-ID: <3d954f5e.1526579@news.cable.ntlworld.com>
Source record: 134015
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.equipment,rec.radio.amateur.misc,uk.radio.amateur

On Fri, 27 Sep 2002 12:10:50 +0100, "M3SEM" <ff@vv.vv> wrote:

>Wondering if anyone can point me in the direction of a supplier of aluminium
>tubing in the UK, for some antenna projects??
>
>Thanks in advance :)
>
>
I contacted a local engineering company. They were able to supply,
plus anything he hadn't got he was willing to order. Try Yellow Pages.

Chris

5775. info needed- 160/80m loop

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-28 07:01:40 UTC
From: rckchp@comcast.net
Message-ID: <6dc33f40.0209272301.1e88e98f@posting.google.com>
Source record: 134016

I thinking of trying a horizontal loop for 160/80m. Advice appreciated. Thanks.

Rich K2CPE

5776. Re: Mil Sat Antennas etc.

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-28 07:14:12 UTC
From: Bill M <exray@no>
Message-ID: <upalljab6c6v58@corp.supernews.com>
Source record: 134017

Mr. Freak,
I don't take issue with your enthusiasm to intercept the transmissions eminating from the Middle East, and don't call me Sir.
If there are others receiving 'the' transmissions in VK maybe they would be a better source for concise tips rather than from a nation that feels itself under siege. That may have a political slant but if there's guys in Perth who are logging satellite or 260 MHz stuff from the Middle East then so be it.
As far as the OPSEC whatever....I'd like to think that the US Mils are doing something beyond that although I could well be wrong about our capability.
I can't speak with any authority on the subject of how you can receive secret traffic in VK-land other than following the CNN vans around and see how they do it.
My closing point was that it IS an EMOTIVE subject and its impossible to arbitrarily exclude that as qualification to your question in such times as we are experiencing now.
Now if you speak Arabic or Farsi or whatever and would like to put your SW sleuthing talents to good work...

-BM

5777. Dimensions Quadrifilar helix 2m

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-28 08:19:01 UTC
From: eric <F1ISJ@wanadoo.fr>
Message-ID: <an3oq0$du5$1@news-reader10.wanadoo.fr>
Source record: 134018

Hello,

I'm looking for the dimensions of a Quadrifilar helix antenna on the 2m band
(145.500 mHz).

Thanks.

--
73'

Eric
F1ISJ@wanadoo.fr

5778. Re: Mil Sat Antennas etc.

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-28 08:38:46 UTC
From: Dave <heilic@btconnect.com>
Message-ID: <an3pql$30g$1@paris.btinternet.com>
Source record: 133919

Mr Bill, I think you lost the thread somewhere along the line here, the guy was asking for general information regarding building an antenna irrespective of the purposes for which it would be used for, i didnt realise political issues were involved in such practises, maybe we should take a look at what political issues are involved in owning and using any type of amateur/radio equipment...

"Bill M" <"exray"@no spam-caribe.net> wrote in message news:upalljab6c6v58@corp.supernews.com...
> Mr. Freak,
> I don't take issue with your enthusiasm to intercept the transmissions
> eminating from the Middle East, and don't call me Sir.
> If there are others receiving 'the' transmissions in VK maybe they would
> be a better source for concise tips rather than from a nation that feels
> itself under siege. That may have a political slant but if there's guys
> in Perth who are logging satellite or 260 MHz stuff from the Middle East
> then so be it.
> As far as the OPSEC whatever....I'd like to think that the US Mils are
> doing something beyond that although I could well be wrong about our
> capability.
> I can't speak with any authority on the subject of how you can receive
> secret traffic in VK-land other than following the CNN vans around and
> see how they do it.
> My closing point was that it IS an EMOTIVE subject and its impossible to
> arbitrarily exclude that as qualification to your question in such times
> as we are experiencing now.
> Now if you speak Arabic or Farsi or whatever and would like to put your
> SW sleuthing talents to good work...
>
> -BM

5779. Re: Where to get aluminium tubing???

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-28 09:07:36 UTC
From: Howard Long <howard@howardlongxxx.com>
Message-ID: <an3rgo$n3j$1@venus.btinternet.com>
Source record: 133920
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.equipment,rec.radio.amateur.misc,uk.radio.amateur

Hello Brian

> Well my local 'normal' B&Q does rod, tube, and strip in Al, brass, and
some
> composite material (plus others not so interesting to hams).

Any chance you could point me in the area of the store I should be looking?
I've been in the hardware area, generally nearby where the screws and nuts &
bolts are.

My experience is that your average B&Q employee responds with a grunt if
you're lucky, and then if you're really lucky points you vaguely to nowhere
because they really don't know. :-(

BTW, here's one of my creations, courtesy of B&Q
http://www.g6lvb.com/dayton_demo_2002.htm made of 4mm Al rod from B&Q. 70cm
RHCP yagi, 8+8 elements, tunes to better than 1.1:1 VSWR in the satellite
portion of 70cm, under 1.4:1 across the entire band. Plans at
http://www.clarc.org/Articles/uhf.htm. I can recommend these antennas if you
have a history of antenna failure like I do.

73 Howard G6LVB

5780. Re: info needed- 160/80m loop

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-28 10:06:03 UTC
From: KC1DI <elbc2@gwi.net>
Message-ID: <4cvapuk014qdpiu2mdduhjqag1b5ed1mlv@4ax.com>
Source record: 133921

On 28 Sep 2002 00:01:40 -0700, rckchp@comcast.net (rich a.) wrote:

>I thinking of trying a horizontal loop for 160/80m. Advice appreciated. Thanks.
>
>Rich K2CPE

Hi Rich-- Go for it, Make it as big as possible and put it up as High as possible.. feed it with balanced line and it will work well on all bands. Mine is 520 long (or should I say around) and up 35 feet on average. It is the best all round antenna I have here. on 160 it will work more or less out to about 2000 miles at night Have wrked some dx with it.. on 80 and above it makes a good all round antenna.. on the higher bands say 20 and above you may also want a vertical or dipole to fill in the nulls in the radiation pattern.. there is a good discussion on Cebik's site about large Horizontal loops. take a look at that.

http://www.cebik.com/atl1.html

Happy Hamming 73 Dave kc1di

5781. Re: Where to get aluminium tubing???

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-28 10:09:00 UTC
From: Brian Reay <brian.reay@bigfoot.com>
Message-ID: <ycfl9.1705$YE1.25775@newsfep1-win.server.ntli.net>
Source record: 133923
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.equipment,rec.radio.amateur.misc,uk.radio.amateur

"Howard Long" <howard@howardlongxxx.com> wrote in message
news:an3rgo$n3j$1@venus.btinternet.com...
> Hello Brian
>
> > Well my local 'normal' B&Q does rod, tube, and strip in Al, brass, and
> some
> > composite material (plus others not so interesting to hams).
>
> Any chance you could point me in the area of the store I should be
looking?
> I've been in the hardware area, generally nearby where the screws and nuts
&
> bolts are.

Well in my local store (Gillingham, Kent) it is right next to the items you
list, along with Al and mesh sheets.

I found the 6mm O/D Al tube pretty good and hard enough for my needs- I was
even able to tap it sucessfully for one experiment.
There are 2 tubes- a plain finish @ £1.46 a 1m length and an anodised finish
which is more expensive.

I think it is too hard not to be an alloy- for 'quick lashups' I sometimes
us Al welding rod- that is much softer.

>
> My experience is that your average B&Q employee responds with a grunt if
> you're lucky, and then if you're really lucky points you vaguely to
nowhere
> because they really don't know. :-(

The older ones are OK but the real problem is the stock control- no concept
of ordering things that seem to be selling out but pack the floor space
with stuff that never seems to move until the next sale.
>
> BTW, here's one of my creations, courtesy of B&Q
> http://www.g6lvb.com/dayton_demo_2002.htm made of 4mm Al rod from B&Q.
70cm
> RHCP yagi, 8+8 elements, tunes to better than 1.1:1 VSWR in the satellite
> portion of 70cm, under 1.4:1 across the entire band. Plans at
> http://www.clarc.org/Articles/uhf.htm. I can recommend these antennas if
you
> have a history of antenna failure like I do.

I'll have a look. I plan to build a 2m and 70cm handheld Yagi like the Arrow one- if I ever I get time for my own projects ;-)

Check out my download page for the 'BRAT Hunt DF antenna' - it has proved very popular and I've yet to have an adverse comment as regards its working.

73

Brian
--
Brian Reay
www.g8osn.org.uk

5782. Re: 26MHz CB antenna: OK for 6M?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-28 10:10:29 UTC
From: rhmcus@yahoo.com
Message-ID: <3d957b0c.46582862@news-server.austin.rr.com>
Source record: 133922

Chirs

Normally an antenna such as this is cut to resonance for the 11 meter band. It may have loading coils for that freq and not work reliably on 6 meters.. If you want to try it id suggest a swr bridge and trying very low power first to see if the antenna will even present a correct load to the transmitter. The old saying nothing ventured nothing gained. MFJ makes some good antenna analyzers which would paint a good picture for you but they are not cheap.

I built a J antenna for 6 which worked quite well. Mechanically it was a challange but very cheap to build.

Best of luck in your venture.

Rich KG5IF

On Sat, 28 Sep 2002 19:30:26 +1200, Chris <xyl56@hotmail.com> wrote:

>I've been offered an unused unwanted base station CB antenna (26-27
>MHz).
>Could this be safely used to transmit on 6m given the harmonic would
>take it up to around 6m?
>

5783. Re: Wide band HF vertical

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-28 10:45:47 UTC
From: trees <info@standardtrees.co.uk>
Message-ID: <an418rej1@knossos.btinternet.com>
Source record: 133924

What do you mean 'input SWR' ?
It's input impedeance is meant to range from minima to maxima
It's a tuned line - for heavens sake !!!
Oh, go back and read your ARRL antenna handbook basics, please
Why on earth do you call yourself 'Doc'

"'Doc" <w5lz@icok.net> wrote in message news:3D9478DF.C15C7C03@icok.net...
> Trees,
> Okay, I tried it in an antenna modeling program,
> don't have any place to 'hang' a vertical. After
> going through several hundred 'runs' with demensions
> from the given length, to well over a 1/4 wave length
> at 7 Mhz, 'NEC' just doesn't agree with your findings.
> Input SWR ranged from a low of 2.9 to totally rediculous
> values.
> I realize that the 'testing' that I've done isn't
> exactly 'definitive', but it does lead me to believe
> what I said once before, "If it seems too good to be
> true, it usually is.".
> 'Doc

5784. Re: 26MHz CB antenna: OK for 6M?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-28 11:01:22 UTC
From: ON5MJ <on5mjREMOVE@skynet.be>
Message-ID: <3d958c05$0$195$ba620e4c@news.skynet.be>
Source record: 133925

Autek Research currently sells also aerial analysers. Generally cheaper than
MFJ. Some give more vectorial information than MFJ but don't extend to VHF.
At this frequency, it could be a better choice.

--
on5mjREMOVE@skynet.be - please remove "REMOVE" from e-mail address

5785. Re: Wide band HF vertical

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-28 11:31:54 UTC
From: Bill Echols <b_echols@bellsouth.net>
Message-ID: <pmgl9.55099$5M3.2867751@e3500-atl2.usenetserver.com>
Source record: 133926

Please don't be so harsh with someone calling themselves 'Doc'; he very well may be a 'Doc' but in an unrelated field. For example, my neighbor is a medical doctor and very knowledgeable in his field; but now that he is interested in amateur radio, he is a great student though his knowledge is minimal in radio theory.

Most of we Ph.D. type doctors having specialized into a quite narrow field are undoubtedly expert in our field; however, I can speak for myself in readily admitting that the more I know the more I am impressed by how little I really know.

I was amazed how stupid my Dad was when I was in high school; now I am truly astonished at how intelligent and diplomatic he (and was!). I was just to inexperienced, or ego-centric, to know.

Tact and gentleness are not signs of weakness or lack of masculinity. They are signs of maturity.

Regards,
Bill, NI5F

"trees" <info@standardtrees.co.uk> wrote in message
news:an418rej1@knossos.btinternet.com...
> What do you mean 'input SWR' ?
> It's input impedeance is meant to range from minima to maxima
> It's a tuned line - for heavens sake !!!
> Oh, go back and read your ARRL antenna handbook basics, please
> Why on earth do you call yourself 'Doc'
>
>
>
> "'Doc" <w5lz@icok.net> wrote in message news:3D9478DF.C15C7C03@icok.net...
> > Trees,
> > Okay, I tried it in an antenna modeling program,
> > don't have any place to 'hang' a vertical. After
> > going through several hundred 'runs' with demensions
> > from the given length, to well over a 1/4 wave length
> > at 7 Mhz, 'NEC' just doesn't agree with your findings.
> > Input SWR ranged from a low of 2.9 to totally rediculous
> > values.
> > I realize that the 'testing' that I've done isn't
> > exactly 'definitive', but it does lead me to believe
> > what I said once before, "If it seems too good to be
> > true, it usually is.".
> > 'Doc
>

>

5786. 603 Tower for sale

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-28 12:25:20 UTC
From: Me <j.dauphinais@worldnet.att.net>
Message-ID: <Qchl9.72138$jG2.3881575@bgtnsc05-news.ops.worldnet.att.net>
Source record: 133927
Cross-posted to: rec.radio.amateur.digital.misc,rec.radio.amateur.antenna,rec.radio.amateur.dx,rec.radio.amateur.equipment,rec.radio.amateur.homebrew

I have a steel tower totaling 25'. this is in 3 sections 1 10 foot st8 and 1 5foot st8 and 1 10 foot top section. I don't not have a rotator. $50.00. pickup only from Nashua,NewHampshire. 73's Jeff AA1GR

5787. Re: Dimensions Quadrifilar helix 2m

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-28 12:42:44 UTC
From: Dan Richardson <k6mhe@mendolink.com>
Message-ID: <ds8bpugaso6j61ls716c4o5mcgs8p76ucb@4ax.com>
Source record: 133929

August 1996 QST has a construction article on this.

On Sat, 28 Sep 2002 10:19:01 +0200, "eric" <F1ISJ@wanadoo.fr> wrote:

>Hello,
>
>I'm looking for the dimensions of a Quadrifilar helix antenna on the 2m band
>(145.500 mHz).
>
>Thanks.

5788. Re: 26MHz CB antenna: OK for 6M?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-28 12:45:27 UTC
From: k9sqg@aol.com
Message-ID: <20020928084527.20989.00006659@mb-mo.aol.com>
Source record: 133928

Depends on the design of the antenna. For example, it might have a base loading coil that would not function properly on 6m. Using an antenna tuner might help but, in any case, you might have fun experimenting.

73s,

Evan

5789. Re: Mil Sat Antennas etc.

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-28 12:56:21 UTC
From: "J. Harvey" <JM002.Harvey_ANTI*SPAM_@Sympatico.ca>
Message-ID: <PFhl9.8275$wj3.1800285@news20.bellglobal.com>
Source record: 133930

"The Freak" asked...

Freak, meet Google.com.
http://www.google.com/
http://www.google.com/search?q=UHF+SatCom
(you can try other search terms of course)

Some selected results...
http://www.uhf-satcom.com/
http://www.uhf-satcom.com/uhfsatcom/
http://www.ute-monitor.org/satcom/
http://www.pjmarsh.co.uk/satcom1.htm
etc. etc. etc.

5790. Re: 26MHz CB antenna: OK for 6M?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-28 12:58:32 UTC
From: "J. Harvey" <JM002.Harvey_ANTI*SPAM_@Sympatico.ca>
Message-ID: <SHhl9.8281$wj3.1800594@news20.bellglobal.com>
Source record: 133931

"Chris"
> I've been offered an unused unwanted base station
> antenna (26-27 MHz). Could this be safely used to
> transmit on 6m given the harmonic would take it up
> to around 6m?

Trim with a hacksaw.

5791. Re: Where to get aluminium tubing???

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-28 13:09:22 UTC
From: andy <music@soon.com>
Message-ID: <an49uh$5tf$1@news6.svr.pol.co.uk>
Source record: 133933
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.equipment,rec.radio.amateur.misc,uk.radio.amateur

"Howard Long" <howard@howardlongxxx.com> wrote in message
news:an3rgo$n3j$1@venus.btinternet.com...
> Hello Brian
>
> > Well my local 'normal' B&Q does rod, tube, and strip in Al, brass, and
> some
> > composite material (plus others not so interesting to hams).
>
> Any chance you could point me in the area of the store I should be
looking?
> I've been in the hardware area, generally nearby where the screws and nuts
&
> bolts are.

In the B&Q here it's at the end of the aisle that has things like castors
and wheels and other misc hardware bits.

5792. Re: Wide band HF vertical

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-28 13:10:16 UTC
From: Dick Carroll <dixie@townsqr.com>
Message-ID: <3D95AA07.CC6762A4@townsqr.com>
Source record: 133932

'Doc wrote:

> trees,
> Here's another one of those 'no content' things.
> If it sounds too good to be true, it usually is...
> 'Doc

Doc, someone once said that a wet noodle will radiate RF.
Then someone else invented the 2 meter "rubber duck" and
proved it.

Dick

5793. Re: Mil Sat Antennas etc.

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-28 13:22:23 UTC
From: Bill M <exray@no>
Message-ID: <upbb7m3q19qc31@corp.supernews.com>
Source record: 133934

Dave wrote:
>
> Mr Bill, I think you lost the thread somewhere along the line here, the guy
> was asking for general information regarding building an antenna
> irrespective of the purposes for which it would be used for, i didnt realise
> political issues were involved in such practises, maybe we should take a
> look at what political issues are involved in owning and using any type of
> amateur/radio equipment...

Yes, you're right and I apologize for looking at the question in the way
I did.
-BM

5794. Re: hey CAM aka JC

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-28 13:32:47 UTC
From: Dick Carroll <dixie@townsqr.com>
Message-ID: <3D95AF4C.B0C604E4@townsqr.com>
Source record: 133935

mike c wrote:

if you want a good anti-spam tool, try http://www.mailwasher.com

> tha app really is good and it's free.

Mike, I carefully searched that website and could find no hint of that software. Where did I go wrong?

Dick

5795. Re: hey CAM aka JC

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-28 13:47:27 UTC
From: Dan Richardson <k6mhe@mendolink.com>
Message-ID: <3mcbpusr2qgkk4b93vs11hcinsvc0pn9f5@4ax.com>
Source record: 133936

That should be: http://www.mailwasher.net/

Great software. I've been using for some time and wouldn't be without
it.

Danny

On Sat, 28 Sep 2002 13:32:47 GMT, Dick Carroll <dixie@townsqr.com>
wrote:

>mike c wrote:
>
>
> if you want a good anti-spam tool, try http://www.mailwasher.com
>
>>
>> tha app really is good and it's free.
>>
>> --
>
> Mike, I carefully searched that website and could find no hint of that
>software. Where did I go wrong?
>
>Dick

5796. Re: Dimensions Quadrifilar helix 2m

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-28 14:16:49 UTC
From: roscoe <roscoe@roscoe.net>
Message-ID: <3D95B9A8.1FA2B19F@roscoe.net>
Source record: 133937

This link has the info you want.

http://www.pilotltd.net/qha.htm

73 ros

eric wrote:

> Hello,
>
> I'm looking for the dimensions of a Quadrifilar helix antenna on the 2m band
> (145.500 mHz).
>
> Thanks.
>
> --
> 73'
>
> Eric
> F1ISJ@wanadoo.fr

5797. Re: Wide band HF vertical

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-28 14:18:48 UTC
From: richardharrison@webtv.net
Message-ID: <29957-3D95BA48-2@storefull-2318.public.lawson.webtv.net>
Source record: 133939

Trees wrote:
"What do you mean "input SWR" ?"

SWR is a function of mismatch. It is a useful expression though the transmission line may be short.

An antenna of the standing wave variety is a resonant system with distributed inductance, capacitance, and resistance. In resonant antennas, the feedpoint is a resistive load. Impedance is low when the antenna element is an odd number of quarter wavelengths. Impedance is high when the element is an even number of quarter wavelengths. In between resonant lengths, the antenna element is capacitive or inductive in addition to having a resistive component which also varies with frequency.

So, the bandwidth of an antenna may be defined by the frequency range over which it presents an acceptable impedance to the radio.

Antenna radiation pattern is a function of current distribution in an antenna and this varies with frequency. So, the bandwidth of an antenna may also be defined as the frequency range over which its pattern is acceptable.

Best regards, Richard Harrison, KB5WZI

5798. Re: Where to get aluminium tubing???

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-28 14:44:48 UTC
From: scott <acepilot@bloomer.net>
Message-ID: <3D95C060.30840894@bloomer.net>
Source record: 133938
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.equipment,rec.radio.amateur.misc,uk.radio.amateur

Aircraft Spruce Europe
9 Cam Cntr.
Wilbury wy, Hitchin
Hertfordshire SG4 OTW

Email: acseurope@cwcom.net
Phone: 1462-441995
Fax: 1462-442228

They are geared toward amateur aircraft builders but offer many grades of aluminum.

Scott
N0EDV

M3SEM wrote:

> Wondering if anyone can point me in the direction of a supplier of aluminium
> tubing in the UK, for some antenna projects??
>
> Thanks in advance :)

--

Scott
http://corbenflyer.tripod.com
http://groups.yahoo.com/group/ParasolAirplanes
Building RV-4
Gotta Fly or Gonna Die!

5799. Re: Imax-2000:<Earl-Doc>

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-28 15:15:41 UTC
From: Bert Craig <wa2si@arrl.netNOSPAM>
Message-ID: <yLjl9.433$9d3.25212@news4.srv.hcvlny.cv.net>
Source record: 133940

You might also want to save it as 'offline content' so if the author loses
or switches from his provider, you'll still have the content handy. :-)

--
73 de Bert
WA2SI

"jack D" <jackinariz@webtv.net> wrote in message
news:19662-3D9498D7-286@storefull-2133.public.lawson.webtv.net...
> Thanks guys, that is the site I wanted...This time I will make sure I
> have the site saved..Jack D.
>

5800. Hy-gain 10-meter 3 el. Yagi - LJ-103BA

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-28 15:22:24 UTC
From: Bert Craig <wa2si@arrl.netNOSPAM>
Message-ID: <RRjl9.501$9d3.31659@news4.srv.hcvlny.cv.net>
Source record: 133941

Does anybody have any experiences they'd like to relate re. the Hy-gain 10-meter 3 el. Yagi, LJ-103BA. I just picked one up NIB at a great price and am curious. I'm considering the use of a Centaur or Radio Works 1:1 Yagi balun instead of the Hy-gain BN-86/BN-4000B balun(s). Thanks. :-)

--
73 de Bert
WA2SI

5801. Re: 26MHz CB antenna: OK for 6M?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-28 15:37:10 UTC
From: Dan/W4NTI <w4nti@mindspringnospam.com>
Message-ID: <an4ib8uve1@slb6.atl.mindspring.net>
Source record: 133942

NO.

Dan/W4NTI

"Chris" <xyl56@hotmail.com> wrote in message
news:eemapu4e81k1ofdm8qssn5mrfdavlu23me@4ax.com...
> I've been offered an unused unwanted base station CB antenna (26-27
> MHz).
> Could this be safely used to transmit on 6m given the harmonic would
> take it up to around 6m?
>
>

5802. Re: Want a Good Tuner??

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-28 16:09:08 UTC
From: n2ey@aol.com
Message-ID: <20020928120908.04751.00001219@mb-mw.aol.com>
Source record: 133943

In article <25eb70d7.0209261527.7af832fc@posting.google.com>, nm5k@wt.net (Mark Keith) writes:

>CAM <Cecil.A.Moore@ieee.org> wrote in message
>news:<3D86A118.1BB0AB4C@ieee.org>...
>> StarGazer wrote:
>> > Why is 5/16 wavelength such a magically length?
>>
>> Not magical, just convenient. A 1/4WL monopole has a feedpoint
>> impedance of about 35+j0 ohms. A 5/16WL monopole has a feedpoint
>> impedance of about 50+j80 ohms. For a perfect 50 ohm match, use
>> a series cap with a reactance of -j80 ohms. But 35 ohms is an
>> acceptable feedpoint impedance without an antenna tuner.
>
>I've never needed a tuner for a normal 1/4 wave inv L. I have one up
>now, and it's fed with coax and no tuner at all. Has a good match.

That's probably because the 1/4 wave monopole only has a feedpoint Z of 35 + j0 ohms when used over a perfect ground plane. Loss resistance in the ground connection can easily reach 15 ohms.

I've heard of cases where a ham installed a vertical and got 1:1 SWR on certain freqs from Day 1. Then said ham installed a flock of radials, and complained because the SWR went up.

73 de Jim, N2EY

5803. Re: Where to get aluminium tubing???

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-28 16:50:24 UTC
From: Clark <dclark7@tampabay.rr.com>
Message-ID: <k5ll9.14301$O8.744227@twister.tampabay.rr.com>
Source record: 133944
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.equipment,rec.radio.amateur.misc,uk.radio.amateur

Lawn sprinkler companies are a great source for aluminum for antenna projects.

"M3SEM" <ff@vv.vv> wrote in message news:%0Xk9.1165$hS4.8997@newsfep3-gui.server.ntli.net...
> Wondering if anyone can point me in the direction of a supplier of aluminium
> tubing in the UK, for some antenna projects??
>
> Thanks in advance :)
>
>
>

5804. Re: Imax-2000:<Bert>

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-28 17:24:37 UTC
From: jackinariz@webtv.net
Message-ID: <19664-3D95E5D5-117@storefull-2133.public.lawson.webtv.net>
Source record: 133945

Thanks Bert, thats a darn good idea. Jack D.

5805. ATAS 100

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-28 21:21:20 UTC
From: Scott Vanzandt <vzandt@midsouth.rr.com>
Message-ID: <a37cpu039skgc66t2tvd3elrs9v64bv630@4ax.com>
Source record: 133946

Has anyone found a way to make the ATAS 100 antenna tune on the MARS
bands near 80 Meters? I have heard there is a mod or tuner available
to do this, but have found nothing on it. Any ideas?
Scott
N2WMD
>and for the spam bots:
>president@whitehouse.gov
>vicepresident@whitehouse.gov
>vento@mail.house.gov
>gephardt@mail.house.gov
>senator@feinstein.senate.gov
>senator_mccain@mccain.senate.gov
>senator@wellstone.senate.gov
>senator_byrd@byrd.senate.gov
>classonde@psbgm.qc.ca
>root@localhost
>admin@localhost
>root@mailloop.com
>Chairman Reed Hundt: rhundt@fcc.gov
>Commissioner James Quello: jquello@fcc.gov
>Commissioner Susan Ness: sness@fcc.gov
>Commissioner Rachelle Chong: rchong@fcc.gov
>postmaster@localhost
>admin@localhost
>
>Eat that, spam! PLEASE copy this and paste it to your sig card.

5806. Re: Where to get aluminium tubing???

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-28 21:57:26 UTC
From: G-zero <geezeroNOSP@Mbtopenworld.com>
Message-ID: <an58k6$64v$1@venus.btinternet.com>
Source record: 133947
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.equipment,rec.radio.amateur.misc,uk.radio.amateur

"M3SEM" <ff@vv.vv> wrote in message
news:%0Xk9.1165$hS4.8997@newsfep3-gui.server.ntli.net...
> Wondering if anyone can point me in the direction of a supplier of
aluminium
> tubing in the UK, for some antenna projects??
>
> Thanks in advance :)
>
>

This place purports to sell all you may need for homebrew antenna's

http://www.montycom.co.uk/

though site is mainly *under construction*, there is an address/phone
number.

hth

--
G-zero.....
Remove the obvious from the email addy.

5807. Re: 26MHz CB antenna: OK for 6M?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-28 22:13:59 UTC
From: nm5k@wt.net
Message-ID: <25eb70d7.0209281413.78f0c044@posting.google.com>
Source record: 133948

"J. Harvey" <JM002.Harvey_ANTI*SPAM_@Sympatico.ca> wrote in message
news:<SHhl9.8281$wj3.1800594@news20.bellglobal.com>...
> "Chris"
> > I've been offered an unused unwanted base station
> > antenna (26-27 MHz). Could this be safely used to
> > transmit on 6m given the harmonic would take it up
> > to around 6m?
>
> Trim with a hacksaw.

That would be needed unless he wants a cloud warmer. If the CB ant is
a 1/4 ground plane, this would be a simple conversion. Just trim all
the elements to a 1/4 wave for 6m. If it's a 1/2 wave or 5/8 wave,
it's not so simple. Most 5/8's have a loading coil inside the tubing
at the base, and it's not easy to get to. And to make things worse,
most are using a grounded coil. This will cause real problems trying
to use it on 6m if you can't get to it to bypass, or reduce the number
of turns. IE: converting the 5/8 CB ant to a 5/8 6m antenna.
It might well be easier just to start from scratch with tubing and
make a 6m antenna. A 1/2 wave antenna , base fed, would be good for
6m, and fairly easy to build and match using a single turn loop and
cap. A 1/4 wave ground plane would be simple to make from scratch. If
you use a 1/2 or 5/8 cb antenna on 6m without trimming the radiator,
the antenna is way too tall, and will show mainly high angle
radiation. Will be the pits for 6m FM use. If SSB use is planned , I
would use a simple horizontal dipole. But a vertical is preferred for
FM use in most cases.
MK

5808. Re: Where to get aluminium tubing???

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-29 00:08:51 UTC
From: M3SEM <ff@vv.vv>
Message-ID: <kwrl9.5248$Sh1.35689@newsfep3-gui.server.ntli.net>
Source record: 133949
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.equipment,rec.radio.amateur.misc,uk.radio.amateur

Many thanks to all the suggestions, it's been a great help and I'll
definately be paying my local B&Q's a visit.

73's
Shane
M3SEM

5809. Re: Wide band HF vertical

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-29 00:19:41 UTC
From: 'Doc <w5lz@icok.net>
Message-ID: <3D964700.790D326E@icok.net>
Source record: 133950

trees,
If it has to be explained, there's probably no
point to explaining it.
One other person on this NG has complained about
my using "'Doc" as a user name. As I told him, it
is a nick-name given to me at work. I didn't pick
it, it has nothing to do with academic degrees, I'm
not a medical doctor, and I've never claimed either
of those distinctions. If it really bothers you that
much, all I can do is quote someone named 'Simpson',
and say, "Eat my shorts."...
'Doc

5810. Re: Wide band HF vertical

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-29 00:21:18 UTC
From: 'Doc <w5lz@icok.net>
Message-ID: <3D964763.4D2524C8@icok.net>
Source record: 133951

Dick,
Ever had a bowl of chicken and 'rubber ducks'?
'Doc

5811. Re: ATAS 100

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-29 01:40:11 UTC
From: W6DKN <w6dkn-nospam-@qsl.net>
Message-ID: <2Msl9.2857$p03.2696@fe01>
Source record: 133952

"Scott Vanzandt" <vzandt@midsouth.rr.com> wrote in message
news:a37cpu039skgc66t2tvd3elrs9v64bv630@4ax.com...
> Has anyone found a way to make the ATAS 100 antenna tune on the MARS
> bands near 80 Meters?

Pretty hard to do since the FT-100 firmware will not tune below 40 meters
with it in ATAS mode.

> I have heard there is a mod or tuner available
> to do this, but have found nothing on it. Any ideas?

> Scott
> N2WMD

I have used an LDG AT-11MP autotuner with the ATAS on 75 and 80 meters with
marginal results. I extended the ATAS to it's maximum, then took the FT-100
out of ATAS mode and into TUNER mode, then activated the LDG tuner. It will
tune well enough to keep the FT-100 happy , but there's not enough antenna
there to radiate very well at these frequencies...

73 de W6DKN

5812. Re: 26MHz CB antenna: OK for 6M?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-29 02:58:43 UTC
From: Sam <2smoore@nemontel.net>
Message-ID: <3Vtl9.2873$p03.342@fe01>
Source record: 133953

My Kenwood TS-570S(G) tuned an old 11 meter vertical and all my initial 6 meter contacts were made with that. How much power was going out and what the radiation pattern is a mystery, but, when the "Magic Band" is open anything will work, or so it seems. Does this mean it works, yes, does it work well, no, but it was better than nothing at the time. Have since built a 5 element beam, needless to say it works much better.

K7SAM

5813. Re: Wide band HF vertical

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-29 03:01:40 UTC
From: Dick Carroll <dixie@townsqr.com>
Message-ID: <3D966CE2.59A29626@townsqr.com>
Source record: 133954

'Doc wrote:

> Dick,
> Ever had a bowl of chicken and 'rubber ducks'?
> 'Doc

No, and I think I'll pass.

Dick

5814. Re: hey CAM aka JC

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-29 03:06:46 UTC
From: Dick Carroll <dixie@townsqr.com>
Message-ID: <3D966E14.CCF14757@townsqr.com>
Source record: 133955

Dan Richardson wrote:

> That should be: http://www.mailwasher.net/
>
> Great software. I've been using for some time and wouldn't be without
> it.
>
> Danny
>
> On Sat, 28 Sep 2002 13:32:47 GMT, Dick Carroll <dixie@townsqr.com>
> wrote:
>
> >mike c wrote:
> >
> >
> > if you want a good anti-spam tool, try http://www.mailwasher.com
> >
> >>
> >> tha app really is good and it's free.
> >>
> >> --
> >
> > Mike, I carefully searched that website and could find no hint of that
> >software. Where did I go wrong?
> >
> >Dick

Thanks, Dan. I need something like that.

Dick

5815. Re: 26MHz CB antenna: OK for 6M?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-29 03:33:39 UTC
From: CAM <Cecil.A.Moore@ieee.org>
Message-ID: <3D967493.BF5560BB@ieee.org>
Source record: 133956

Chris wrote:
>
> I've been offered an unused unwanted base station CB antenna (26-27
> MHz).
> Could this be safely used to transmit on 6m given the harmonic would
> take it up to around 6m?

I'm assuming it is a 1/4WL monopole with radials designed for 11m.
The problem with using it on 6m where it will be close to 1/2WL is
the feedpoint impedance which will be too high to use coax without
base matching. As someone else suggested, you can trim it to resonance
on 6m by cutting all the dimensions to a little more than half their
present length. Note that 27MHz x 2 = 54MHz.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

5816. Re: When to use a Balun

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-29 05:04:58 UTC
From: Dick Carroll <dixie@townsqr.com>
Message-ID: <3D95025B.1C18E992@townsqr.com>
Source record: 133957

Rich McMahon wrote:

> All
>
> With wire antennas when is it appropriate and necessary to use a
> balun.. I understand that basically its an impedance matching
> transformer.

I never would use a transformer type balun on a dipole antenna. A choke balun can be advisable. When the coaxial feedline is a halfwave or a multiple thereof, or something even close, the outer surface of the coax can become a third "leg" of your dipole. and can also change the resonant frequency of the basic dipole itself with the added length. In such cases it is very much advisable to use a "choke balun". If the coax feedline happens to be a quarterwave or multiple, or close to it, it will present a high impedance and should pose no such problem.

> Does it also isolate RF and keep it off the feed line and
> out of the shack..

A choke balun, which is no more than an RF choke which can consist of a few turns of coax wound into a "hank" and hung below the dipole feedpoint, can serve to decouple the coax outer shield surface and both prevent it from acting as a third element to the dipole, as above, and also keep RF out of the shack.

Transformer baluns are mostly more trouble than they are worth for a large portion of hams. Actually they are provide false sense of security since they raise your expectations. Sure, they can be made to work properly on a narrow range of frequencies with little hassle, but most hams don't want to be constrained to a narrow range of frequencies. Wideband baluns are special cases.

> Oh i'm using a G5RV full size and a differential T
> turner from MFJ..

If you want to use a balun to keep RF out of the shack, wind a dozen turns of coax into coil and place it just before the junction of the coax and the balanced line.

Dick

5817. Do those large Loops for AM radios work well?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-29 09:13:56 UTC
From: StarGazer <pti@capnet.com>
Message-ID: <3D96C454.787F403B@capnet.com>
Source record: 133959

Seen one in a magazine. A large heavy tunable loop antenna
for AM radios.
Anyone know how well they work?

5818. Re: Mil Sat Antennas etc.

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-29 09:16:53 UTC
From: The Freak <scanner_freakSPAM@hotmail.com>
Message-ID: <4xzl9.10012$Sr6.333865@ozemail.com.au>
Source record: 133958

Thank you for those reply's gents, I am very sorry that my post caused such an outrage. I can't speak for how you feel about the Sept 11 issue, although I feel deeply for those who lost folk or knew those involved.

Again, thanks for your time.!

Oh and if I did speak those languages, guess where I'd be now, not here that's for sure.

Take care, stay safe

The Freak!

"J. Harvey" <JM002.Harvey_ANTI*SPAM_@Sympatico.ca> wrote in message news:PFhl9.8275$wj3.1800285@news20.bellglobal.com...
> "The Freak" asked...
>
> Freak, meet Google.com.
> http://www.google.com/
> http://www.google.com/search?q=UHF+SatCom
> (you can try other search terms of course)
>
> Some selected results...
> http://www.uhf-satcom.com/
> http://www.uhf-satcom.com/uhfsatcom/
> http://www.ute-monitor.org/satcom/
> http://www.pjmarsh.co.uk/satcom1.htm
> etc. etc. etc.
>
>
>

5819. Re: hey CAM aka JC

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-29 11:58:04 UTC
From: hasan schiers <schiers@netins.net>
Message-ID: <an6psd$bil8l$1@ID-52642.news.dfncis.de>
Source record: 133960

I downloaded and installed this software and it's the greatest thing for spam since sliced bread. Thanks a bunch for the tip. My ever increasing number of unwanted emails is shrinking day by day.

The one thing I wish it would do that it doesn't do:

After calling up the mailer automagically (which is does just fine), I wish it would initiate the download...it doesn't do that and when I start Outlook Express manually myself, it does automatically start a download. A small matter, given what other things the program does, however.

73,

hasan, N0AN

"Dan Richardson" <k6mhe@mendolink.com> wrote in message news:3mcbpusr2qgkk4b93vs11hcinsvc0pn9f5@4ax.com...
> That should be: http://www.mailwasher.net/
>
> Great software. I've been using for some time and wouldn't be without
> it.

5820. Homebrew 6:1 balun?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-29 12:12:51 UTC
From: cprstn54zz@att.net
Message-ID: <3d96eaf8.4064250@news-server.optonline.net>
Source record: 133961

I want to use a QRP CW transceiver (7.000-7.060) having an SO-239 jack that expects a 50 ohm unbalanced antenna. I, however, will be using a resonant, balanced dipole and a 300 ohm twinlead feedline. And no tuner. I believe I will need a 6:1 balun.

I see a diagram for a 4:1 voltage balun in Fig. 36 of Chapter 26 of the ARRL Antenna Book. What makes this a 4:1 balun? Can it be adapted to 6:1? Are there any diagrams for a 6:1 balun? Does anyone sell a 6:1 balun for QRP backpacking? I see big ones on the web, but no little ones. How come almost of the references to 6:1 and 9:1 baluns are in German? Is RF different in Germany?

Ken KC2JDY

Ken
(to reply via email
remove "zz" from address)

5821. Spira; Wrap on Vertical Antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-29 12:58:34 UTC
From: Al <ABurzynski@nojunk.satx.rr.com>
Message-ID: <_NCl9.34452$8o3.894111@twister.austin.rr.com>
Source record: 133962

On my Ford Ranger the antenna has a spiral wrap of about one turn per inch
on the outside of the antenna. What is the purpose of this wrap, please?

Thanks.

Al
KA5JGV

5822. Re: Homebrew 6:1 balun?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-29 13:24:20 UTC
From: cprstn54zz@att.net
Message-ID: <3d96fe38.8992515@news-server.optonline.net>
Source record: 133963

Never mind.

I found the old discussions on Google. 4:1 is good enough. But if
you really want 6:1 you have to cascade a 4:1 balun and a 1.5:1 unun
as per Sevick's book.

Ken KC2JDY

Ken
(to reply via email
remove "zz" from address)

5823. Re: Do those large Loops for AM radios work well?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-29 13:53:31 UTC
From: Bob Miller <bamiller@texas.net>
Message-ID: <uwOXPXKYhGsAQNG08Lo5gvr73e9m@4ax.com>
Source record: 133964

StarGazer <pti@capnet.com> wrote:

>Seen one in a magazine. A large heavy tunable loop antenna
>for AM radios.
>Anyone know how well they work?

They work well. I have the one sold by CCRadio, the Select-a-tenna. If there is just the tiniest sliver of signal present, the loop will amplify it quite a bit.

How practical the loop is, is something else. If you're in a large city where there is an AM station every few clicks of the dial, they will interfere with trying to pull in faint signals, unless the signals are totally in the clear.

Bob
k5qwg

5824. Re: Do those large Loops for AM radios work well?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-29 14:21:52 UTC
From: Bill M <exray@no>
Message-ID: <upe333pdr0q193@corp.supernews.com>
Source record: 133965

Bob Miller wrote:
>
> StarGazer <pti@capnet.com> wrote:
>
> >Seen one in a magazine. A large heavy tunable loop antenna
> >for AM radios.
> >Anyone know how well they work?
>
> They work well. I have the one sold by CCRadio, the Select-a-tenna. If there is
> just the tiniest sliver of signal present, the loop will amplify it quite a bit.
>
> How practical the loop is, is something else. If you're in a large city where
> there is an AM station every few clicks of the dial, they will interfere with
> trying to pull in faint signals, unless the signals are totally in the clear.
>
> Bob
> k5qwg

I built one of the larger loops for BCB DXing. Actually its a bit
medium-sized because they can really be unwieldy in the shack. Mine is
18" on a side.
It works quite well and of course is very directional which was the
original intent. A random-wire outdoors will certainly catch more RF
out of the air but having the directional characteristic is a great
advantage for DXing.
No pre-amp involved...in fact the tuning Q is high enough to provide a
fair amount of rejection to nearby frequencies.
This page has all the scoop, including a great calculator.
http://www.mindspring.com/~brucec/amloop.htm

-Bill

5825. Rohn 25 Foldover f/s

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-29 15:04:05 UTC
From: majorwiseandhammer <pcarpenter@charter.net>
Message-ID: <upe7atsm2m92f7@corp.supernews.com>
Source record: 133966

Rohn 25 Foldover on the ground, ready to transport. Standard 48ft or add extra sections for $25 each. Basic price $250. Location, central Massachusetts. Doesn't include guys, anchors, turnbuckles or bolts. Questions: use email. Phil, Thanks

5826. Re: Homebrew 6:1 balun?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-29 15:40:40 UTC
From: CAM <Cecil.A.Moore@ieee.org>
Message-ID: <3D971EF8.B0F4DE57@ieee.org>
Source record: 133967

Ken wrote:
> I want to use a QRP CW transceiver (7.000-7.060) having an SO-239 jack
> that expects a 50 ohm unbalanced antenna. I, however, will be using
> a resonant, balanced dipole and a 300 ohm twinlead feedline. And no
> tuner. I believe I will need a 6:1 balun.

Nope, you won't. Make the twinlead 1/2WL on 40m (~63 ft) and the
impedance seen by the transmitter will be close to the same as the
antenna feedpoint impedance. Your SWR will be close to 1:1 requiring
no tuner and all you will need is a 1:1 balun/choke.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

5827. Re: Homebrew 6:1 balun?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-29 15:43:51 UTC
From: CAM <Cecil.A.Moore@ieee.org>
Message-ID: <3D971FB7.D8155493@ieee.org>
Source record: 133968

Ken wrote:
>
> Never mind.
>
> I found the old discussions on Google. 4:1 is good enough. But if
> you really want 6:1 you have to cascade a 4:1 balun and a 1.5:1 unun
> as per Sevick's book.

Ken, you don't need a 6:1 or 4:1 balun. You are confusing the
characteristic impedance of the twinlead with the impedance
that will be seen by the transmitter. When feeding a resonant
dipole with 300 ohm twinlead, the transmitter will NEVER see
300 ohms. If it was a resonant folded dipole, the transmitter
would see about 300 ohms and you would need a 6:1 balun. You're
not talking about a folded dipole are you?
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

5828. Re: How many people have insulted radials??

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-29 16:15:28 UTC
From: raiar@bbs.galilei.com.nospam
Message-ID: <3d972599.1529893890@news.galilei.com>
Source record: 133869

It's not a good idea to insult your radials.

They invariably will get even with you, by popping their nose up just as you pass over them with the rotary mower and grab onto it.

Then the mower takes off across the yard, ALWAYS in the direction of the antenna and often smashes right into it damaging a coil somewhere.

So they can hear you insult them!

All of my radials have the insulation still on them, so it may act a little like earmuffs to them, and they don't always hear the insults<G>

TTUL
Gary

5829. hygain ham IV rotor question

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-29 16:21:06 UTC
From: Papabluto <genzx001@yahoo.com>
Message-ID: <Xns92987379836A2Papablutonospambeerc@63.240.76.16>
Source record: 133870

Greetings all,

I have an control box for my hax IV rotor that blew the 1/8 A fuse on the meter. So far around town the lowest amp fuse i can find is 1/4 A fast acting. I know the amperage rating is twice that of the 1/8, but does anybody know if i can safely put this is with out blowing the meter if the fuse were to go aout again?

TIA for any replies,

73 de Steve, wi0e

5830. Re: Spira; Wrap on Vertical Antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-29 16:43:22 UTC
From: ON5MJ <on5mjREMOVE@skynet.be>
Message-ID: <3d972dad$0$216$ba620e4c@news.skynet.be>
Source record: 133871

If you speak about your cellphone antenna, this wrap is just a dielectric wire for stopping the modal sound vibration of the antenna due to wind when you drive. This has no effect on the wave propagation.

--
on5mjREMOVE@skynet.be - please remove "REMOVE" from e-mail address

5831. Re: How many people have insulted radials??

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-29 17:17:16 UTC
From: Alan Beagley <abeagley@optonline.net>
Message-ID: <3D97359C.2060509@optonline.net>
Source record: 133872

Good one!

-=-
Alan, AB2OS

Gary V. Deutschmann, Sr. wrote:

> All of my radials have the insulation still on them, so it may act a
> little like earmuffs to them, and they don't always hear the
> insults<G>

5832. Re: Do those large Loops for AM radios work well?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-29 17:20:36 UTC
From: nm5k@wt.net
Message-ID: <25eb70d7.0209290920.19278bb0@posting.google.com>
Source record: 133873

Bob Miller <bamiller@texas.net> wrote in message
>
> How practical the loop is, is something else. If you're in a large city where
> there is an AM station every few clicks of the dial, they will interfere with
> trying to pull in faint signals, unless the signals are totally in the clear.
>
> Bob
> k5qwg

If your loop has an active preamp, that may be the reason for the strong signal problems. I have a passive 16 inch loop, and it's the opposite. It's a much better antenna for city use than my wire antennas. It's so sharp in tuning that any nearby local station will be attenutated quite a bit. If you can null the local station, and still hear the desired station, it's way better than my wire antenna as far as blocking locals. And here in Houston , we have a few local stations..MK

5833. Re: Want a Good Tuner??

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-29 17:49:17 UTC
From: nm5k@wt.net
Message-ID: <25eb70d7.0209290949.45aed6b1@posting.google.com>
Source record: 133874

n2ey@aol.com (N2EY) wrote in message news:<20020928120908.04751.00001219@mb-mw.aol.com>...

> That's probably because the 1/4 wave monopole only has a feedpoint Z of 35 + j0
> ohms when used over a perfect ground plane. Loss resistance in the ground
> connection can easily reach 15 ohms.

Yep. That can help. But I don't think my loss is that bad here. But we
have pretty conductive soil here.
>
> I've heard of cases where a ham installed a vertical and got 1:1 SWR on certain
> freqs from Day 1. Then said ham installed a flock of radials, and complained
> because the SWR went up.

Thats no problem though usually. Even with 35 + jo, the SWR is still
under 2:1. I think an inv L actually models even lower than 35 +j0
ohms due to being a short , top loaded vertical, but in the real
world, I've never needed a matching device for one. Mine is about
40-45 ft tall I think as far as the vertical section. But on 160m, I
can take a fairly high SWR without problems. At least as far as my
TS-830 or drake T4XB is concerned anyway. They can usually handle 3:1
or worse, and still be within loading range. But even my 706 is fine,
as long as I don't stray too far from my design freq, which is about
1.835 or so. My present version is tuned mainly for the lower end of
the band. I'd have to double check, but it's SWR is under 1.5 to 1
where resonate. If the SWR changes, and the bandwidth is reduced when
adding radials, at least you know you needed them , and they are doing
their job. The bandwidth can be used as an indicator of radial
saturation. Once you get to the point where adding radials produces
little change in bandwidth, you usually have enough for "gov" work.
MK

5834. Re: Homebrew 6:1 balun?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-29 19:26:06 UTC
From: Tarmo Tammaru <t-tammaru@home.com>
Message-ID: <htIl9.25556$li4.1083469@bin2.nnrp.aus1.giganews.com>
Source record: 133875

Ken,

Assuming you are using a folded dipole, its actual impedance is closer to 250 rather than 300 ohms. A 4:1 balun will be just fine. If it is a straight, rather than folded dipole, why bother with the 300 ohm twin lead? Just use a 1:1 balun, or no balun and 50 or 75 ohm coax. If you use 75 ohm coax, an SWR meter will say your WSR is 1.5:1.
That's because it is calibrated for 50 ohms. The actual SWR will be near 1:1.

With QRP you are not going to be greatly concerned about RF in the shack; so, I would go with a conventional wire dipole, no balun, and RG59, RG8X, or RG58.

Tam/WB2TT

"Ken" <cprstn54zz@att.net> wrote in message
news:3d96eaf8.4064250@news-server.optonline.net...
> I want to use a QRP CW transceiver (7.000-7.060) having an SO-239 jack
> that expects a 50 ohm unbalanced antenna. I, however, will be using
> a resonant, balanced dipole and a 300 ohm twinlead feedline. And no
> tuner. I believe I will need a 6:1 balun.
>
> I see a diagram for a 4:1 voltage balun in Fig. 36 of Chapter 26 of
> the ARRL Antenna Book. What makes this a 4:1 balun? Can it be
> adapted to 6:1? Are there any diagrams for a 6:1 balun? Does anyone
> sell a 6:1 balun for QRP backpacking? I see big ones on the web, but
> no little ones. How come almost of the references to 6:1 and 9:1
> baluns are in German? Is RF different in Germany?
>
> Ken KC2JDY
>
> Ken
> (to reply via email
> remove "zz" from address)

5835. Where do I purchased an AM loop... active or passive??

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-29 19:57:29 UTC
From: StarGazer <pti@capnet.com>
Message-ID: <3D975B29.7D641BF5@capnet.com>
Source record: 133876

asdf

5836. Mark Keith? radials

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-29 20:01:02 UTC
From: StarGazer <pti@capnet.com>
Message-ID: <3D975BFE.65A54719@capnet.com>
Source record: 133877

If the SWR changes, and the bandwidth is reduced when
adding radials, at least you know you needed them , and they are doing
their job.

Why is this true?

5837. Re: Do those large Loops for AM radios work well?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-29 20:23:39 UTC
From: Bob Miller <bamiller@texas.net>
Message-ID: <QI2XPWfJFey7AICavwjopser6aB2@4ax.com>
Source record: 133878

nm5k@wt.net (Mark Keith) wrote:

>Bob Miller <bamiller@texas.net> wrote in message
>>
>> How practical the loop is, is something else. If you're in a large city where
>> there is an AM station every few clicks of the dial, they will interfere with
>> trying to pull in faint signals, unless the signals are totally in the clear.
>>
>> Bob
>> k5qwg
>
>If your loop has an active preamp, that may be the reason for the
>strong signal problems. I have a passive 16 inch loop, and it's the
>opposite. It's a much better antenna for city use than my wire
>antennas. It's so sharp in tuning that any nearby local station will
>be attenutated quite a bit. If you can null the local station, and
>still hear the desired station, it's way better than my wire antenna
>as far as blocking locals. And here in Houston , we have a few local
>stations..MK

It's a passive loop, about 8-10 inches in diameter, and I bought it in the hopes that I could pick up some Houston stations from San Antonio, especially the sports talk shows on AM 610 and AM 950 in Houston, but AM stations in San Antonio are too close to those frequencies. Only thing I can get reliably from Houston is AM 740, and that comes in at night, mainly.

Bob
k5qwg

5838. Re: Spira; Wrap on Vertical Antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-29 20:36:06 UTC
From: Gerald Schmitt <KK5YY@ARRL.NET>
Message-ID: <nnoepuc2i5f4pj22kuj9no3cif62v9p2pa@4ax.com>
Source record: 133879

On Sun, 29 Sep 2002 12:58:34 GMT, "Al" <ABurzynski@nojunk.satx.rr.com>
wrote:

>On my Ford Ranger the antenna has a spiral wrap of about one turn per inch
>on the outside of the antenna. What is the purpose of this wrap, please?
>
>Thanks.
>
>Al
>KA5JGV
>

To break up laminar flow whichhad caused vibration of
Mr. Ford's antennae in the past.

73 Jerry

5839. Re: Homebrew 6:1 balun?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-29 20:43:24 UTC
From: Reg Edwards <g4fgq.regp@btinternet.com>
Message-ID: <an7olb$6me$1@venus.btinternet.com>
Source record: 133881

CAM sez,

> Ken, you don't need a 6:1 or 4:1 balun. You are confusing the
> characteristic impedance of the twinlead with the impedance
> that will be seen by the transmitter.
==========

Hello CAM,

- and from where does this and similar confusions arise ?

They arise from the ancient but still popular mis-conception the common or garden SWR meter, in its usual location immediately between transmitter and tuner, actually indicates an SWR anywhere on the transmitting site. Its name is a horribly misleading misnomer. We are are now in the 21st Century.

The meter's function is better described as a "Magnitude of Reflection Coefficient Relative to 50-ohms Indicator". But this implies all transmitters require a 50-ohm load resistance - which they don't. This is a far too long-winded title anyway.

Since it doesn't actually measure anything, on this Great ever-to-be-remembered Day of 29th September 2002, let it be announced that this undoubtedly indispensible instrument will henceforth be referred to as the TLI - the Transmitter Loading Indicator.

Unless someone can think of a better name before tomorrow. ;o)

How about marking the indicator face with green and red bands - good and bad ?

If you MUST have some numbers on it, mark the scale 0 to 9.

It can continue to serve the double purpose of TLI and S-meter (the other indispensible indicator) for transceivers.

Equipment manufacturers and handbook editors please force yourselves to consider.

Yours, Reg, G4FGQ

5840. Re: Mark Keith? radials

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-29 20:43:25 UTC
From: Reg Edwards <g4fgq.regp@btinternet.com>
Message-ID: <an7old$6me$2@venus.btinternet.com>
Source record: 133880

"StarGazer" wrote -.
> If the SWR changes, and the bandwidth is reduced when
> adding radials, at least you know you needed them , and they are doing
> their job.
>
> Why is this true?
======================

It's very true if the bit about bandwidth is deleted. The time to stop
adding radials is when the TLI stops changing. Then add two more for luck.

5841. Re: ATAS 100

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-29 20:45:04 UTC
From: Scott Vanzandt <vzandt@midsouth.rr.com>
Message-ID: <iapepucltb79817ve38hc0mvvgv4r0d2t9@4ax.com>
Source record: 133882

I plan to use it on an ICOM 706 s the FT100 Tune/ATAS settings will
not apply. I had heard there was a controller around that would allow
it to tune around 80, but I've had no luck finding it.
Might try a LDG and see what happens.
Scottt

On Sat, 28 Sep 2002 18:40:11 -0700, "W6DKN" <w6dkn-nospam-@qsl.net>
wrote:

>"Scott Vanzandt" <vzandt@midsouth.rr.com> wrote in message
>news:a37cpu039skgc66t2tvd3elrs9v64bv630@4ax.com...
>> Has anyone found a way to make the ATAS 100 antenna tune on the MARS
>> bands near 80 Meters?
>
>Pretty hard to do since the FT-100 firmware will not tune below 40 meters
>with it in ATAS mode.
>
>> I have heard there is a mod or tuner available
>> to do this, but have found nothing on it. Any ideas?
>
>
>> Scott
>> N2WMD
>
>I have used an LDG AT-11MP autotuner with the ATAS on 75 and 80 meters with
>marginal results. I extended the ATAS to it's maximum, then took the FT-100
>out of ATAS mode and into TUNER mode, then activated the LDG tuner. It will
>tune well enough to keep the FT-100 happy , but there's not enough antenna
>there to radiate very well at these frequencies...
>
>73 de W6DKN
>
>

>and for the spam bots:
>president@whitehouse.gov
>vicepresident@whitehouse.gov
>vento@mail.house.gov
>gephardt@mail.house.gov
>senator@feinstein.senate.gov
>senator_mccain@mccain.senate.gov
>senator@wellstone.senate.gov
>senator_byrd@byrd.senate.gov
>classonde@psbgm.qc.ca
>root@localhost

>admin@localhost
>root@mailloop.com
>Chairman Reed Hundt: rhundt@fcc.gov
>Commissioner James Quello: jquello@fcc.gov
>Commissioner Susan Ness: sness@fcc.gov
>Commissioner Rachelle Chong: rchong@fcc.gov
>postmaster@localhost
>admin@localhost
>
>Eat that, spam! PLEASE copy this and paste it to your sig card.

5842. Re: Mark Keith? radials

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-29 21:23:15 UTC
From: ON5MJ <on5mjREMOVE@skynet.be>
Message-ID: <3d976f44$0$178$ba620e4c@news.skynet.be>
Source record: 133883

TLI is not usual to me. Can you explain this acronym. Thank you.

5843. SWAP: Cushcraft ATB-34 for 6 Mtr Beam

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-29 21:39:11 UTC
From: w1ksz@tiac.net
Message-ID: <3d977296.1167428@news.tiac.net>
Source record: 133884

I have a Cushcraft ATB-34 I will swap for a 6 Meter Beam.
ATB-34 on my deck, dis-assembled. Pick-up only in
Lexington, MA.

73, Dick, W1KSZ

5844. Re: Mark Keith? radials

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-29 21:57:53 UTC
From: Reg Edwards <g4fgq.regp@btinternet.com>
Message-ID: <an7t11bcg1@helle.btinternet.com>
Source record: 133885

"ON5MJ" wrote -
> TLI is not usual to me. Can you explain this acronym. Thank you.
====================================

TLI = Transmitter Loading Indicator.

TLI is the new logical name for the confusing so-called SWR meter.

See an explanation elsewhere on this newsgroup.

Regards, Reg, G4FGQ

5845. Re: Where do I purchased an AM loop... active or passive??

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-29 22:16:24 UTC
From: Bob Miller <bamiller@texas.net>
Message-ID: <znmXPbGqLMPS81JpG6rFuvod5xo7@4ax.com>
Source record: 133886

StarGazer <pti@capnet.com> wrote:

>asdf

http://www.ccrane.com/ has both kinds. check under radios, accessories,
antennas, am... they have various select-a-tenna models, and other brands, too

bob
k5qwg

5846. Re: Ideas on copper wire stretching and sagging

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-29 22:26:56 UTC
From: dan <danlx@execpc.com>
Message-ID: <3d977e89$0$1426$272ea4a1@news.execpc.com>
Source record: 133887

Hi all,
I came in on this thread late but...
Has anyone out there tried the fishing line called Fireline? It is damn near invisible and can be found in, I think, 50lb test which is much thinner than regular mono or nylon. It is very slippery and tough. Would work for putting wires through trees with just about anything and probably would support wire for a long time. I also have used rope with screen door springs to tension and expand when the wire is under wind load. They work great. Another thing I have used is a few window weights attached to ropes and run through pulleys to tension and let the wire move. I never did like the idea of the window weights falling on some ones head though. (I am a safety director :<)
JMHO
On Fri, 27 Sep 2002 12:39:21 +0200, "ON5MJ" <on5mjREMOVE@skynet.be> wrote:

>Thank you for advise. I will check with my suppliers.
>
>Jacques.
>

Dan
N9JBF

I've rambled enough, back to the rocking chair. ZZZZZZZZZ
Remove left x for e-mail reply.

5847. what type of wire should I use

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-29 22:57:33 UTC
From: Recordking@Hotmail.com
Message-ID: <e8d89b3f.0209291457.1cd47e44@posting.google.com>
Source record: 133888

What type of guy wire should I use to support my 50ft rohn telescoping antenna mast and how many feet of wire will I need. where can I get the wire cheap online and all the other guying supplies.

5848. Re: Hy-gain 10-meter 3 el. Yagi - LJ-103BA

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-29 23:23:13 UTC
From: Tarmo Tammaru <t-tammaru@home.com>
Message-ID: <BXLI9.306845$216.12863968@bin4.nnrp.aus1.giganews.com>
Source record: 133889

Bert,

I had a BN86 , on which the screws rusted shut after about 20 years. So, when I got a Hygain TH3MK4 a couple of years ago I replaced the BN 86 with a different brand (can't rermber which). Works great. Just get a balun that is meant to work with a BEAM. These have a bracket for fastening the balun to the boom. Either AES and/or HRO has these in their catalog. Note, the balun mounting instructions did not make sense for a Hygain beam, so I ignored them. From what I hear, a lot of baluns don't work right on 160; they should all work on 10m. I suspect the beam balun is more optimized for the 14 - 30 MHz range.

Tam/WB2TT
"Bert Craig" <wa2si@arrl.netNOSPAM> wrote in message
news:RRjl9.501$9d3.31659@news4.srv.hcvlny.cv.net...
> Does anybody have any experiences they'd like to relate re. the Hy-gain
> 10-meter 3 el. Yagi, LJ-103BA. I just picked one up NIB at a great price
and
> am curious. I'm considering the use of a Centaur or Radio Works 1:1 Yagi
> balun instead of the Hy-gain BN-86/BN-4000B balun(s). Thanks. :-)
>
> --
> 73 de Bert
> WA2SI
>
>

5849. Re: Mark Keith? radials

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-29 23:28:02 UTC
From: hasan schiers <schiers@netins.net>
Message-ID: <an82a3$bjb0j$1@ID-52642.news.dfncis.de>
Source record: 133890

Hmmmm?

If a 1/4w vertical is approx 35 ohms at resonance and the vswr shows 1:1, 15 ohms is coming from somewhere, no? I had always thought that is from ground lossses. As you reduce ground losses, the vswr bandwidth will decrease, won't it? Is there some other variable that we aren't considering? Maybe I shouldn't go here, but if Q=Xl/R and R is increased, Q decreases and bandwidth increases, doesn't it? Maybe you can't apply the "Q" formula here, so please don't hammer me for it <grin>.

It seems to me the greater the part of a perfect 50 ohm match to an antenna that resistive losses play, the wider the vswr bandwidth, so I'm not sure why Reg says the part about "bandwidth" is wrong. I thought ground losses in a 1/4w vertical tended to "mask" the changing impedance of the antenna itself.

If this is all old wive's tales, someone please set me straight. I have always found that as ground losses are reduced, the vswr (and vswr bandwidth) both change. The resonant vswr increases and the 2:1 vswr bandwidth decreases. Is this generally true, nearly always true, or a complete myth? If it is a myth, what accounts for my actual measurements over the years? If it isn't always true, then what boundary conditions obtain at those times when it isn't true that:

With a 1/4w ground mounted vertical as ground losses are reduced vswr increases at resonance and 2:1 vswr bandwidth decreases. I think that is what Mark was saying, and I await an explanation that will prove him wrong.

...hasan, N0AN

"Reg Edwards" <g4fgq.regp@btinternet.com> wrote in message
news:an7old$6me$2@venus.btinternet.com...
> "StarGazer" wrote -.
> > If the SWR changes, and the bandwidth is reduced when
> > adding radials, at least you know you needed them , and they are doing
> > their job.
> >
> > Why is this true?
> ======================
>
> It's very true if the bit about bandwidth is deleted. The time to stop
> adding radials is when the TLI stops changing. Then add two more for luck.
>
>
>

5850. Re: Boycott The Body Shop !!! 8624

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-29 23:31:53 UTC
From: Moe Hailstone <colonelnospamdax@hotmail.com>
Message-ID: <J3MI9.379003$w17.39230@post-02.news.easynews.com>
Source record: 133891
Cross-posted to: rec.outdoors.fishing.fly.tying,rec.radio.amateur.antenna,rec.music.artists.springsteen,uk.rec.crafts.sewing

Why--are you trying to prove her point?

5851. Re: Hy-gain 10-meter 3 el. Yagi - LJ-103BA

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-29 23:49:29 UTC
From: kelly@dvol.com
Message-ID: <d22b54c3.0209291549.513b8358@posting.google.com>
Source record: 133892

"Bert Craig" <wa2si@arrl.netNOSPAM> wrote in message
news:<RRjl9.501$9d3.31659@news4.srv.hcvlny.cv.net>...
> Does anybody have any experiences they'd like to relate re. the Hy-gain
> 10-meter 3 el. Yagi, LJ-103BA. I just picked one up NIB at a great price and
> am curious. I'm considering the use of a Centaur or Radio Works 1:1 Yagi
> balun instead of the Hy-gain BN-86/BN-4000B balun(s). Thanks. :-)

I had one of it's big brothers a 204BA 4 el. Hy-Gain 20m beam up for
30 years, the thing boomed and had a nice F/B ratio. I'd do any
Hy-Gain HF single-bander in a wink. Baluns: Install a string of beads
on the coax at the feedpoint of the hairpin match and be done with it.
Run a search on "Bytemark" for info on the beads.

w3rv

5852. Re: Boycott The Body Shop !!! 8624

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-30 00:23:35 UTC
From: "Bass Boss"
Message-ID: <bQMl9.13707$om2.279129@twister.rdc-kc.rr.com>
Source record: 133893
Cross-posted to: rec.outdoors.fishing.fly.tying,rec.radio.amateur.antenna,rec.music.artists.springsteen,uk.rec.crafts.sewing

You foreigners just don't get it do you.

You see, the reason GW wants to attack Iraq and kill Saddam is because as Bush said:

"He tried to kill my daddy."

<demkne@britshit.org> wrote in message news:3d97791d$0$70251$edfadb0f@dspool01.news.tele.dk...
> Description: Anita Roddick (founder and CEO of The Body Shop) commentary for the London Independent regarding American civil liberties since 9/11/2001
>
> ---
>
> How has the world changed since Sept. 11? For one thing, Europeans no longer aspire to *be* Americans.
>
> Who would, given how that country moves steadily and inexorably toward dictatorship? The American people, in a scant 12 months, have had their once-enviable civil liberties outrageously eroded in the name of patriotism. The ideals of freedom and democracy which America pledges to export across the globe have been perverted so spectacularly at home that America's admirers hardly recognise her anymore.
>
> Where once Americans reveled in their uniquely American right and willingness to criticize their government, they are now told that those who dissent are no better than terrorists, or terrorists themselves. They have had their pride of country, their patriotism, hijacked by a self-interested and short-sighted government which steals freedoms from its own people and gives riches to corporations and "security" infrastructures such as the military, FBI, and CIA, all of which which have proven, in the past 12 months, to be either fatally incompetent and totally corrupt.
>
> Those Americans who would question their government are told to "watch what they say." The FBI has been given broad reign to spy on citizens with phone taps and email snoops. Long-held ideals of fair and speedy trials are thrown out the window as suspected terrorists and sympathizers are "disappeared" like the enemies of Pinochet 20 years ago in Chile.
>
> In exchange for their freedoms, Americans are not safer now than they were a year ago; in fact, they are probably less so. Their government is a rogue state, rejecting international consensus on every front and threatening first-strike nuclear attacks and politically expedient invasions of

sovereign nations. America has more nuclear, biological, and chemical weapons that any other country, and it is the only nation to have used such a weapon against another. And still it stubbornly refuses any international effort or treaty to regulate, minimise, or eliminate such weapons, even as it uses Iraq's suspected possession of (or mere desire for) them as reason for wholesale attack.
>
> America's us-against-the-world mentality has managed to wear away almost all of the remarkable international sympathy it built up just after Sept. 11. Bush & Co. has slapped the international community in the face as the it tried to embrace and console the United States. Now the enmity has left America alone, more reviled and isolated internationally than before.
>
> The scars of Ground Zero will heal, the grief at the loss of so many innocents will ease, but the damage the United States has inflicted on itself will last far longer. To hell with George Bush; God save America.
> ---
>
> A version of this article appeared in the London Independent on Sept. 11, 2002
> jdwsixvfbqheshutpohmgmgtzmnhvjccfeginhzbnztfdhccinytpydcjxuoqtjyin
>

5853. marine band radio antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-30 00:58:00 UTC
From: jcooper874@webtv.net
Message-ID: <7334-3D97A198-273@storefull-2337.public.lawson.webtv.net>
Source record: 133895

i would like to build a quad or yagi for ths band please help me .
you can email me also thank u

http://community.webtv.net/jcooper874/doc
click here

5854. FS: Antennas and More

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-30 00:59:30 UTC
From: George Kinzer <horseflygk@worldnet.att.net>
Message-ID: <SINl9.74983$jG2.4076225@bgtnsc05-news.ops.worldnet.att.net>
Source record: 133894

Plans on how to make your own base and mobile antennas, from quarter waves
to beams, quads, and MORE.

Understanding coax, swr's, line loss, co-phasing, grounding and MORE.

CD also includes tuning and modifications on just about every cb as well as
most 10 meter radios and MORE

Mic wiring to all popular cbs, D104, Sedelata, Turner, standard and of
course MORE.

PLL convertions, adding talk-back, swing kits, roger beeps and MORE
Packed with pictures, how toos, parts and MORE.
How bout takin a radio and electronics course?

email for more info, over 130 megs of info in easy to understand format.

Organized for EASY reference.

.* *)) -:*:-
*.** .****))
George Kinzer
((**.** ..**

--
If first you don't succeed, do the same thing again...see what happens

5855. Re: Mark Keith? radials

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-30 02:36:30 UTC
From: richardharrison@webtv.net
Message-ID: <5425-3D97B8AE-339@storefull-2317.public.lawson.webtv.net>
Source record: 133896

StarGazeer wrote:
"If SWR changes, and the bandwidth is reduced when adding radials, at least you know that you needed them, and they are doing their job."

The addition of radials usually reduces earth loss to some extent. Q is X / R or R /X , depending on series or parallel connection.

A standing-wave antenna is most often a series-resonant system. Reducing R by adding radials increases Q.

Bandwidth is inversely proportional to Q and StarGazer is correct in saying "bandwidth is reduced when adding radials".

The purpose of radials is to increase efficiency by lowering loss in the earth, unless the antenna is far from the earth.

SWR changes because antenna impedance is the sum of radiation resistance, loss resistance, and reactance if the antenna is not resonant. SWR is an indication of mismatch between the antenna and the feedline. Changing the antenna impedance by reducing its loss also changes SWR.

StarGazer is correct in assuming SWR changes when radials are added, but you may not "know you needed them" because the change may be so small that the effort isn`t justified.

Best regards, Richard Harrison, KB5WZI

5856. Re: Mark Keith? radials

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-30 02:56:14 UTC
From: Dick Carroll <dixie@townsqr.com>
Message-ID: <3D97BD18.AF200C62@townsqr.com>
Source record: 133897

StarGazer wrote:

> If the SWR changes, and the bandwidth is reduced when
> adding radials, at least you know you needed them , and they are doing
> their job.
>
> Why is this true?

Because you have lowered the radiation resistance of the antenna system and moved it away (lower) from the feedpoint impedance of 50 ohms...now you have more of a mismatch. But you have less loss so the system will radiate better.

IOW if the vertical had 35 ohms and the poor ground 15, you would have had a lossy antenna system but one which would show a broader bandwidth and an SWR of 1:1.
So you have improved the ground plane, it has less resistance, say now 5 ohms for a system total of 40 ohms, and now the SWR no longer has a 1:1 match. It shows worse SWR but radiates better because you're losing less RF as heat into the ground. And it will also be narrower banded.
Of course the world won't end if you go on the air with the lossy system, and you will make plenty of contacts. And unless your problem is fairly significant it wouldn't be easy for most hams to notice the difference.

Dick

5857. FA: Vintage AC voltmeter

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-30 03:25:38 UTC
From: Dave <jeronamo@REMOVE.aol.com>
Message-ID: <SuPI9.1654$Mk7.53850243@newssvr21.news.prodigy.com>
Source record: 133898

http://cgi.ebay.com/ws/eBayISAPI.dll?ViewItem&item=1771461792

5858. Re: Boycott The Body Shop !!! 8624

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-30 04:09:45 UTC
From: tdonaly@aol.com
Message-ID: <20020930000945.03119.00007796@mb-cs.aol.com>
Source record: 133899

From now on, I will buy my skin cream, and hair conditioner, elsewhere.

Tom Donaly, KA6RUH

5859. HamTalk.com - Message Forums

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-30 04:19:27 UTC
From: "HamTalk.com" <rclproductions@yahoo.com>
Message-ID: <upflvm16flc79d@corp.supernews.com>
Source record: 133900

An interactive Ham Radio message forum has been setup on the web. Be sure to visit and sign up at www.HamTalk.com

This is a great resource (free) to all Ham Radio operators, and makes mingling with other Ham's on the 'net alot of fun. Lot of great folks, so be sure to take a look...

5860. Re: Do those large Loops for AM radios work well?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-30 07:43:39 UTC
From: nm5k@wt.net
Message-ID: <25eb70d7.0209292343.490d616a@posting.google.com>
Source record: 133901

Bob Miller <bamiller@texas.net> wrote in message
>
> It's a passive loop, about 8-10 inches in diameter, and I bought it in the hopes
> that I could pick up some Houston stations from San Antonio, especially the
> sports talk shows on AM 610 and AM 950 in Houston, but AM stations in San
> Antonio are too close to those frequencies. Only thing I can get reliably from
> Houston is AM 740, and that comes in at night, mainly.
>
> Bob
> k5qwg

Hummm, I listen the other way around quite a bit. "San Antonio from Houston". Haven't had much trouble on this end. I can be only 10kc off from 740, and hear just fine on 750 if I use a narrow filter. A little crud on a wide filter...But it's quite usable. 20 kc away, I can use the wide filter. It's a lot better than using my wire antennas. I can listen to 590 with a wide filter, and no crud at all from 610. 740 is 50kw I'm pretty sure, and semi clear channel I think. It's fairly stout. My loop is a 16 inch circle. I built it on a junked humidifier blower housing, which is plastic. It's about 12 turns, and with the cap I have, tunes from 500-2000 kc. At the moment, I'm using a 2 turn coupling loop to fead it. But it worked quite well even directly fed. I think the balance is slightly better with the coupling loop though. It's on a stand with a short appx 2 ft tall mast and rotates. Almost looks like some kind of microwave dish or something with the housing it's on. Many local stations in the daytime, I can almost totally null out if needed. The null is very sharp, so the chances of nulling the desired station is fairly slim. It's usually in another direction. But say in the case with 740 and listening on 750, which I just tried with the 706, I didn't even bother nulling 740. I usually can't get a total null at night, although I can knock em down a good bit.
MK

5861. Re: Mark Keith? radials

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-30 08:04:33 UTC
From: nm5k@wt.net
Message-ID: <25eb70d7.0209300004.7f5fb4d8@posting.google.com>
Source record: 133902

"hasan schiers" <schiers@netins.net> wrote in message news

>
> With a 1/4w ground mounted vertical as ground losses are reduced vswr
> increases at resonance and 2:1 vswr bandwidth decreases. I think that is
> what Mark was saying, and I await an explanation that will prove him wrong.

I'd like to hear this too. I sure don't want to be spreading old wives
around. But what I've seen here with my antennas doesn't jive with his
statement that this is not true. I've also seen this phenomenon quoted
many times in books, so I'm not the first to say that. Wide bandwidth
doesn't always equate to a lossy antenna. But as far as ground mounted
or even elevated monopoles, "ground planes" , and the number of
radials used over a less than optimum ground, I think it does. If you
are over seawater, adding radials shouldn't change a thing as far as
bandwidth as they were not needed. It's like laying radials over a
solid copper plate. Silly... But radials over rocky ground I bet do
make a difference according to the number of them. They seem to make a
difference here over my fairly decent ground. "a reduction of
bandwidth or a higher Q with more radials"
MK

5862. Re: Where to get aluminium tubing???

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-30 11:23:16 UTC
From: Steve G1XOW <steve@wragge.fsworld.co.uk>
Message-ID: <an9c75got1@newsg2.svr.pol.co.uk>
Source record: 133903
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.equipment,rec.radio.amateur.misc,uk.radio.amateur

Try ASC Metails in Lincolnshire. Very good and next day delivery in
Midlands.

http://www.ascmetals.com/

Cheers, Steve G1XOW

"M3SEM" <ff@vv.vv> wrote in message
news:%0Xk9.1165$hS4.8997@newsfep3-gui.server.ntli.net...
> Wondering if anyone can point me in the direction of a supplier of
aluminium
> tubing in the UK, for some antenna projects??
>
> Thanks in advance :)
>
>

5863. FS: KENWOOD AT-130 ANTENNA TUNER

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-30 12:16:36 UTC
From: aokd5fxt@aol.com
Message-ID: <20020930081636.13307.00006040@mb-cn.aol.com>
Source record: 133904

Good condition, clean...

http://members.aol.com/aokd5fxt/at130top.JPG
$110 shipped conus

Bill, KD5FXT

5864. Re: Mark Keith? radials

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-30 12:22:08 UTC
From: Reg Edwards <g4fgq.regp@btinternet.com>
Message-ID: <an9flg$n3l$1@paris.btinternet.com>
Source record: 133905

> Bandwidth is inversely proportional to Q and StarGazer is correct in
> saying "bandwidth is reduced when adding radials".
==========

There's no argument about this characteristic of a simple LCR tuned circuit.

But in practice, how is the operation of a 'tuned-up' transmitter affected by this change in Q? And how is adjusting knobs affected? Where does SWR come into the act?

And would the operator be aware of the change in resistance of the antenna+ground other than it being necessary to readjust the tuner for SWR=1:1? He also does this if inductance changes or if capacitance changes. He has no means of distinguishing which is which.

So what do you mean by bandwidth in connection with operating a radio transmitter. Can it be measured ?

5865. Re: Spira; Wrap on Vertical Antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-30 12:57:25 UTC
From: Al <aburzynski@swri.nojunk.edu>
Message-ID: <upgihlrav6quc4@corp.supernews.com>
Source record: 133906

Thanks for the information, I appreciate it.
Al
KA5JGV

5866. Re: Mark Keith? radials

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-30 12:58:41 UTC
From: hasan schiers <schiers@netins.net>
Message-ID: <an9hq2$cam36$1@ID-52642.news.dfncis.de>
Source record: 133907

"Reg Edwards" <g4fgq.regp@btinternet.com> wrote in message
news:an9flg$n3l$1@paris.btinternet.com...
> > Bandwidth is inversely proportional to Q and StarGazer is correct in
> > saying "bandwidth is reduced when adding radials".
> ================================
>
> There's no argument about this characteristic of a simple LCR tuned
circuit.

<snip)

That's really good news. I was afraid I'd been hanging around to many aged
married females.

>
>
> So what do you mean by bandwidth in connection with operating a radio
> transmitter. Can it be measured ?

Not only can it be measured...it has a very practical effect. If the antenna
system is lossy, you don't have to re-adjust your tuner as much. You can run
all over the band without touching the tuner. It has "wide vswr bandwidth",
or if you prefer, "impedance bandwidth". The TX sees a fairly stable load
over a wider freq range when the system being discussed is lossy.

I have never put up an antenna that I didn't measure the following for:

1. Freq of lowest VSWR.
2. The two freq (above and below resonance) where the vswr has risen to 2:1
vswr.

In a ground mounted 1/4 wave vertical, measurement 1 is a good indicator of
efficiency, esp if adding/subtracting radials.

In a ground mounted 1/4 wave vertical, measurement 2 is a clear indicator of
efficiency, esp if adding/subtracting radials.

Further, repeated measures over long periods of time or after significant
weather events are good indicators of other variables.

Example:

If you have a very wet spring following your dry fall install of the antenna
and you find that your vswr at the low point has gone up and the vswr
bandwidth has gone down, you may be seeing the effect of improved ground
losses. If so, it's time for more radials!

I have made graphs of every antenna I have in the air and saved to my hard disk. Every graph has the date, the freq of lowest vswr and the 2:1 vswr bandwidth. I bet I'm not unusual in this respect. It doesn't matter what the vswr meter is measuring. What matters is how far does it deviate from 50/37.5 ideal. Any 1/4w ground mounted HF vertical that shows 50 ohms or a 1:1 vswr without any matching network has problems, period and they are most certainly ground losses. Nothing more than a cheap vswr meter and your tx is required to figure this out and to fix it.

I'm now convinced that Reg was just trying to pull our chain (and to some extent, he succeeded).

73,

hasan, N0AN

>
>

5867. Re: Mark Keith? radials

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-30 13:05:22 UTC
From: Reg Edwards <g4fgq.regp@btinternet.com>
Message-ID: <an9i6iqnd1@paris.btinternet.com>
Source record: 133908

> I'm not sure
> why Reg says the part about "bandwidth" is wrong.
==========
I did not say the part about bandwidth was wrong. I said delete it -
implying it was not relevant.

Reg

5868. Re: Homebrew 6:1 balun?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-30 14:14:23 UTC
From: richardharrison@webtv.net
Message-ID: <739-3D985C3F-128@storefull-2311.public.lawson.webtv.net>
Source record: 133910

Ken, KC2JDY wrote:
"---will be using a resonant, balanced dipole and a 300-ohm twinlead feedline."

Ken also wrote: "What makes this (Fig 36) a 4:1 balun?"

This is a centertapped choke or a 2:1 turns ratio autotransformer. The impedance ratio is the turns ratio squared or 4:1.

For a 6:1 impedance ratio to match 300 ohms to 50 ohms requires a turns ratio of about 2.5:1.

The pictorial in Fig 26 shows 5 bifilar turns. About 12 turns would produce 300 ohms impedance when using 5 turns for 50 ohms impedance. You could tap a 12-turn coil on the core at 5 turns or wind separate coils on the core. Separate coils are likely to improve balance but may have a little more loss. In an autotransformer, primary and secondary currents flow in opposite directions in the shared coil turns. Another coupling problem is reduced permeability with core materials for higher frequencies.

Were a folded dipole made osf the same 300-ohm twinlead used for the feedline, by shorting the ends od a 1/2-wave section and breaking one side in its middle to attach the feedline, the antenna could match the feedline. For this to happen, the dipole would need to be erected about 50 feet above the earth (1/2-wave).

A single-wire dipole has the same radiation as a folded dipole. Its drivepoint impedance is about 72 ohms in free space or at 1/2-wave elevation when the usual wire is used for its construction.

It can often be fed directly from an unbalanced
50-ohm coax at the usual too-low height used by amateurs and a fair match is obtained. If the radio has a good ground and the feedline is around 1/4 or 3/4-wavelength, 25 or 75 feet in this case, a high impedance is presented to the antenna by the outside of the coax and radiation from the coax should not be a problem.

Best regards, Richard Harrison, KB5WZI

5869. Re: Mark Keith? radials

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-30 14:30:26 UTC
From: CAM <Cecil.A.Moore@ieee.org>
Message-ID: <3D986002.AAE21E3E@ieee.org>
Source record: 133909

Reg Edwards wrote:
> So what do you mean by bandwidth in connection with operating a radio
> transmitter. Can it be measured ?

From the ARRL Antenna Book, 15th edition.

SWR bandwidth = 100% x (F(high) - F(1ow))/F(center)

Any SWR can be chosen but 2:1 is common in ham
radio.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

5870. Re: Homebrew 6:1 balun?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-30 15:09:03 UTC
From: richardharrison@webtv.net
Message-ID: <9136-3D98690F-807@storefull-2314.public.lawson.webtv.net>
Source record: 133911

I wrote:
"Its drivepoint impedance is about 72 ohms in free space or at 1/2-wave elevation when the usual wire is used for its construction."

I was perhaps remiss not to say that the lowest elevation to find free space impedance in an ordinary dipole is about 1/4-wave. These are cloud warmers.

Best regards, Richard Harrison, KB5WZI

5871. Re: Want a Good Tuner??

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-30 15:09:07 UTC
From: Robert Spooner <rls19@psu.edu>
Message-ID: <3D986913.3090204@psu.edu>
Source record: 133912

N2EY wrote:
> That's probably because the 1/4 wave monopole only has a feedpoint Z of 35 + j0
> ohms when used over a perfect ground plane. Loss resistance in the ground
> connection can easily reach 15 ohms.
>
> I've heard of cases where a ham installed a vertical and got 1:1 SWR on certain
> freqs from Day 1. Then said ham installed a flock of radials, and complained
> because the SWR went up.

They also complain that the bandwidth of the antenna decreased as well.
Less loss means higher Q. Of course, my dummy load has a wider
bandwidth by far than any of my "other" antennas.

73,
Bob AD3K
--
Robert L. Spooner
Registered Professional Engineer
Associate Research Engineer
Intelligent Control Systems Department

Applied Research Laboratory Phone: (814) 863-4120
The Pennsylvania State University FAX: (814) 863-7841
P. O. Box 30
State College, PA 16804-0030 rls19@psu.edu

5872. Re: what type of wire should I use

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-30 15:19:50 UTC
From: Tarmo Tammaru <t-tammaru@home.com>
Message-ID: <qYZl9.46585$li4.2257732@bin2.nnrp.aus1.giganews.com>
Source record: 133913

You need steel cable, not wire. Try ww.texastowers.com

Tam/WB2TT

"DJboutit" <Recordking@Hotmail.com> wrote in message
news:e8d89b3f.0209291457.1cd47e44@posting.google.com...
> What type of guy wire should I use to support my 50ft rohn telescoping
> antenna mast and how many feet of wire will I need. where can I get
> the wire cheap online and all the other guying supplies.

5873. Re: Homebrew 6:1 balun?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-30 15:30:59 UTC
From: richardharrison@webtv.net
Message-ID: <9136-3D986E33-808@storefull-2314.public.lawson.webtv.net>
Source record: 133915

I wrote:
"You could tap a 12-turn coil on the core at 5 turns---."

I would center-tap the 12-turn coil for a ground connection and place the 50-ohm connection at one turn from either end of the coil. End-to-end, the center-tapped coil would present about 300 ohms if loaded with 50 ohms across 5 turns.

Best regards, Richard Harrison, KB5WZI

5874. Re: 26MHz CB antenna: OK for 6M?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-30 15:36:40 UTC
From: Tom <truckdrivingman@hotmail.com>
Message-ID: <an9r2aqvn06$1@news.t-online.com>
Source record: 133914

Why is everybody trying to use cb aerials with a 6m rig ?? Are 6m antennas
so expensive ?

HEADBANGING
Tom

"Chris" <xyl56@hotmail.com> schrieb im Newsbeitrag
news:eemapu4e81k1ofdm8qssn5mrfdavlu23me@4ax.com...
> I've been offered an unused unwanted base station CB antenna (26-27
> MHz).
> Could this be safely used to transmit on 6m given the harmonic would
> take it up to around 6m?
>
>

5875. Re: 26MHz CB antenna: OK for 6M?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-30 16:26:32 UTC
From: Vito <vito@crosslink.net>
Message-ID: <3D987B38.F8CA62C7@crosslink.net>
Source record: 133916

Chris wrote:
>
> >> > I've been offered an unused unwanted base station
> >> > antenna (26-27 MHz). ...
> I've had a chance to inspect the CB antenna now, it's a 1/2 wave with
> 3/4 wave feed point.

It's prolly good for parts, but not without modification. I got one comprising a 1/2 wave aliminum pipe stuffed into a 2' f'glass insulator with a coax matching section. With the matching section removed and a short piece of tubing added it became a good 1/4 vertical on 20m. You otta get two or more 6m 1/4 sections with which you could make a horizontal dipole or a 2-element beam. Never turn down junk!
73, K3DWW

5876. Using IC-735 with AT-250 Auto Tuner

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-30 16:34:22 UTC
From: Richard Jones <rjones@mail.cccd.edu>
Message-ID: <3D987D0E.52385E4D@mail.cccd.edu>
Source record: 133917
Cross-posted to: rec.radio.amateur.equipment,rec.radio.amateur.antenna

Hello all,

I thought I would see if anyone else has successfully interfaced the Kenwood AT-250 automatic antenna tuner with an ICOM IC-735 transceiver. I would think this is has been done and would prefer not to re-invent the wheel if I don't have to. I'm not particularly interested in the automatic band selection feature as the IC-735 and the Kenwood methods of relaying this information to the tuner are quite different.

If you've done this, I would appreciate the appropriate pin out information from the IC-735 accessory port to the AT-250 port. Many thanks in advance.

73,

Rick, KG6RJ

5877. Re: Hy-gain 10-meter 3 el. Yagi - LJ-103BA

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-30 16:35:12 UTC
From: Vito <vito@crosslink.net>
Message-ID: <3D987D40.89D2BF23@crosslink.net>
Source record: 133918

Bert Craig wrote:
>
> Does anybody have any experiences they'd like to relate re. the Hy-gain
> 10-meter 3 el. Yagi, ...

Took one down to Dog Beach (Near San Diego) to QSL Oz without QRMing my neighbors too many years ago. Left the YL holding up the mast while I pulled a car out of the sand with the RV. Naturally, a crowd formed wondering what she was doing. "Talking to Australia, of course .... CQ Oz! CQ Oz!" They merely said "Oh" and wandered off ... such behavior being normal in/around OB.
73, K3DWW

5878. Re: Antennas And The Alinco EDX2

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-30 16:59:30 UTC
From: KA9CAR <nospam@nospam.usa>
Message-ID: <an9vof$28cu$1@news1.tribune.com>
Source record: 133819

I will add one comment.
Although I ran the tuner into several different "Balanced" loads, I ALWAYS grounded the ground terminal. No point in letting stray RF toast the CPU in the tuner. If the antenna is not designed to work against ground, there should be no ground currents to upset the balance.

KA9CAR

Owen Duffy <owen@oda.com.au> wrote in message news:3D94DD8B.336BC028@oda.com.au...
>
>
> Dave wrote:
> >
> > Could anyong give me some information on using the Alinco EDX2 with a wire
> > antenna, or can the EDX2 be used with other antennas, e.g the G5RV, the
> > information sheets dont come with much information at all...
>
> Although the information supplied with mine is scant, it does show its
> application for end feeding a vertical or wire (including advice on
> selection of radiator length). It does not show how to feed a balanced
> line.
>
> You could use a balun to transition from the unbalanced EDX2 to a
> balanced load, but given that the EDX2 is designed to match a very wide
> range of impedances, the design of a balun that is not unduly lossy and
> does not restrict the impedance and frequency range of the tuner would
> be a challenge.
>
> If you look at the circuit diagram, you might reasonably form the
> opinion that the earth terminal is meant to be earthed rather than
> connected to one side of a balanced load. Nevertheless, you will find
> plenty of OMs who will assure you that it (and others like the AHx and
> SGCxxxx) works just fine used on balanced loads, and that some have had
> to eliminate RF conducted into the shack on the feedline and control
> cable. I would not operate it in that way.
>
> In my experience, the lack of information on the EDX2, especially
> alignment information, and the patent lack of interest in support of
> Alinco products by Alinco and their dealers is the worst aspect of the
> tuner. When I properly calibrated the detectors in mine, and rebuilt in
> in a new box when the original enclosure cracked up within a few months
> of purchase (http://u01.owenduffy.com.au/~owen/edx201.jpg), it works
> real well.

>
> I use it frequently in a portable situation and it almost always
> achieves a match better than 1.2 (enabling full output power from the
> DX70TH) on any HF band on a 26m sloper that is 15m above ground at the
> high end and ground level at the EDX2 end. Whilst the sloper loads up on
> any band, it lacks the low angle radiation that is generally desired for
> 20m and up, but the high angle radiation is just what is needed for
> local contacts on 160, 80 and 40m. The 26m was chosen to not be within
> 5% of an odd or even quarter wave resonance on any HF band so as to
> avoid very high voltages impressed on the tuner at even multiples, or
> excessive influence of earth system loss at odd multiples.
>
> Owen
>
> >
> > Thanks..
> >
> > Dave

5879. TV antenna for a specific channel?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-30 17:00:57 UTC
From: JELo <jelo@nospammail.com>
Message-ID: <3d987f2e_3@corp.newsgroups.com>
Source record: 133820

I live in a rural area and there is one television station
that I would like to get but it just barely comes in with
my current setup (broadband TV antenna with rotor,
pre-amp, distribution system). I am interested in building
a separate antenna to improve reception of that specific
station. Anybody got any good links on how to do
such a thing? What type of antenna should I try - dipole,
folded dipole, Yagi, . . . ? Does SWR matter in a receive
only antenna? Any insight would be helpful. JELo

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
------== Over 80,000 Newsgroups - 16 Different Servers! =-----

5880. Re: TV antenna for a specific channel?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-30 17:40:44 UTC
From: Bill M <exray@no>
Message-ID: <uph33stetun47b@corp.supernews.com>
Source record: 133821

JELo wrote:
>
> I live in a rural area and there is one television station
> that I would like to get but it just barely comes in with
> my current setup (broadband TV antenna with rotor,
> pre-amp, distribution system). I am interested in building
> a separate antenna to improve reception of that specific
> station. Anybody got any good links on how to do
> such a thing? What type of antenna should I try - dipole,
> folded dipole, Yagi, . . . ? Does SWR matter in a receive
> only antenna? Any insight would be helpful. JELo

Check this page for some examples.
http://starkelectronic.com/winp12.htm
It will be difficult to build anything with substantially more gain than the antenna you have now and even these single channel yagis won't offer more than a couple db extra gain than a big broadband antenna.
What channel number and how far away is it? Maybe struggling for more height is the best answer.
And of course the obvious caveat would be to first check and make sure everything about your existing system is working as well as it should.
If the channel of interest is just 'barely visible' you'll need to snatch about 20db more signal out of the air somehow to get a 'snowy but watchable' picture.

-BM

5881. Re: Homebrew 6:1 balun?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-30 17:47:30 UTC
From: CAM <Cecil.A.Moore@ieee.org>
Message-ID: <3D988E32.99DD2A40@ieee.org>
Source record: 133822

Richard Harrison wrote:
>
> I wrote:
> "You could tap a 12-turn coil on the core at 5 turns---."
>
> I would center-tap the 12-turn coil for a ground connection and place
> the 50-ohm connection at one turn from either end of the coil.
> End-to-end, the center-tapped coil would present about 300 ohms if
> loaded with 50 ohms across 5 turns.

Why isn't this solution used more in practice? Are transformers made
from air-core coils a lot lossier than 4:1 baluns? Are ordinary
transformers made using toroids a lot lossier than 4:1 baluns?
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

5882. Re: 26MHz CB antenna: OK for 6M?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-30 17:48:45 UTC
From: CAM <Cecil.A.Moore@ieee.org>
Message-ID: <3D988E7D.346282C7@ieee.org>
Source record: 133824

Tom wrote:
> Why is everybody trying to use cb aerials with a 6m rig ?? Are 6m antennas
> so expensive ?

Very expensive compared to free. :-)
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

5883. Re: TV antenna for a specific channel?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-30 17:52:37 UTC
From: Richard Fry <rfry@adams.net>
Message-ID: <Ob0m9.23668$V64.4997502@newsfeed.slurp.net>
Source record: 133823

If you are now using a multi-element wideband antenna it probably has more gain on the channel you want than you will get with any kind of single dipole. You might try a single channel yagi if you can find one with more gain on your desired channel than what you already have.

SWR on the feedline from the antenna probably is less important than the signal loss in the line. Your preamplifier probably more than compensates for both. Note that the noise figure of most modern TV sets is quite good, and sometimes using preamps ahead of them can actually produce a noisier picture than without them. The signal level may be higher out of the preamp, but noise is added also.

Antenna height is important. But if you are quite distant from the TV station, and/or you have hills/mountains or just earth curvature in the way, you may already be getting the best picture practical.

Richard Fry, CPBE

_____

"JELo" <jelo@nospammail.com> wrote in message
news:3d987f2e_3@corp.newsgroups.com...
> I live in a rural area and there is one television station
> that I would like to get but it just barely comes in with
> my current setup (broadband TV antenna with rotor,
> pre-amp, distribution system). I am interested in building
> a separate antenna to improve reception of that specific
> station. Anybody got any good links on how to do
> such a thing? What type of antenna should I try - dipole,
> folded dipole, Yagi, . . . ? Does SWR matter in a receive
> only antenna? Any insight would be helpful. JELo

5884. Re: 26MHz CB antenna: OK for 6M?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-30 18:53:43 UTC
From: W6DKN <w6dkn-nospam-@qsl.net>
Message-ID: <l_0m9.1916$4c.97@fe01>
Source record: 133825

"CAM" <Cecil.A.Moore@ieee.org> wrote in message
news:3D988E7D.346282C7@ieee.org...
> Tom wrote:
> > Why is everybody trying to use cb aerials with a 6m rig ?? Are 6m
antennas
> > so expensive ?
>
> Very expensive compared to free. :-)
> --
> cheers, CAM http://www.qsl.net/w5dxp

Why not build a real 6 meter antenna? A 4 element 6 meter quad can be built from PVC and wire very easily for around $10, and will perform much better than a converted 11 meter vertical.

As far as that goes, a 6 meter vertical dipole can be built from the same materials for even less...

73 de W6DKN

5885. Re: TV antenna for a specific channel?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-30 19:10:54 UTC
From: JELo <jelo@nospammail.com>
Message-ID: <3d989da0_3@corp.newsgroups.com>
Source record: 133826

> If you are now using a multi-element wideband
> antenna it probably has more gain on the channel
> you want than you will get with any kind of single
> dipole.
I suspected as much.

> You might try a single channel yagi if you can find
> one with more gain on your desired channel than
> what you already have.
I will have to try and dig up the specs on what I
currently have and figure out where I stand.

> SWR on the feedline from the antenna probably is
> less important than the signal loss in the line.
When I rewired the (new) place a while back, I used
all RG-6 cable but I should check the antenna feed line.

> Your preamplifier probably more than compensates
> for both. Note that the noise figure of most modern
> TV sets is quite good, and sometimes using preamps
> ahead of them can actually produce a noisier picture
> than without them. The signal level may be higher out
> of the preamp, but noise is added also.
Good point. Out here the signal strength varies considerably.
I initially pieced together my set up at another residence with
different end equipment then dissassembled it and re-installed
at the new residence. I should probably backup and see what
of the pieces are really needed at the new place. When I first
put things together, of the six available retransmitted TV
stations, three could be picked up fairly easily without the
pre-amp, two could be gotten with it and one needed more
help even with the pre-amp.

> Antenna height is important. But if you are quite distant
> from the TV station, and/or you have hills/mountains or
> just earth curvature in the way, you may already be getting
> the best picture practical.
I do happen to live in the foothills of a mountainous area
in Wyoming. I am guessing the clean stations are the ones
coming from the transmitting towers up on the mountain face
while the difficult stations are coming off the towers in the
rolling hills east and far north of town.

Thanks for the info, certainly gave me some things to
think about , JELo

>
> Richard Fry, CPBE

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

5886. Re: what type of wire should I use

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-30 19:31:54 UTC
From: Alan Beagley <abeagley@optonline.net>
Message-ID: <3D98A6AA.1070504@optonline.net>
Source record: 133827

Don't Rohn's specs (and/or your local building inspectors) tell you?

-=-
Alan

DJboutit wrote:
> What type of guy wire should I use to support my 50ft rohn telescoping
> antenna mast and how many feet of wire will I need. where can I get
> the wire cheap online and all the other guying supplies.

5887. Re: 26MHz CB antenna: OK for 6M?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-30 20:00:30 UTC
From: Lou <tech@dp.net>
Message-ID: <anaaqo$1074$1@news.dp.net>
Source record: 133828

The guy asking was being "given" a CB antenna and wanted to try to use it for 6 meters. Maybe his funds are limited or "maybe" he wanted to "experiment". After all, that is what Ham Radio is all about! Anyone can go "buy" an antenna.
As for the rest of the replies, they were merely - as mine, an opinion of how he should/could proceed using that particular antenna. That is the extent of the thread as "I" have seen.....

Lou/Tech@DP.NET

"Tom" <truckdrivingman@hotmail.com> wrote in message news:an9r2aqvn06$1@news.t-online.com...
> Why is everybody trying to use cb aerials with a 6m rig ?? Are 6m antennas
> so expensive ?
>
> *HEADBANGING*
> Tom

5888. Re: hey CAM aka JC

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-30 20:37:01 UTC
From: mike c <md_removeunderscores_cola@evenlink.com>
Message-ID: <MPG.18027ff7411c198d9896a9@news.evenlink.com>
Source record: 133829

In article <3D95AF4C.B0C604E4@townsqr.com>, dixie@townsqr.com says...
> mike c wrote:
>
>
> if you want a good anti-spam tool, try http://www.mailwasher.com
>
> >
> > tha app really is good and it's free.
> >
> > --
>
> Mike, I carefully searched that website and could find no hint of that
> software. Where did I go wrong?
>
> Dick
>
>
oops! .net sorry.
--
Best Regards,
Mike Colasono

5889. Re: hey CAM aka JC

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-30 20:43:02 UTC
From: mike c <md_removeunderscores_cola@evenlink.com>
Message-ID: <MPG.18028164c2ea87e49896aa@news.evenlink.com>
Source record: 133830

In article <an6psd$bil8l$1@ID-52642.news.dfncis.de>,
schiers@netins.net says...
> I downloaded and installed this software and it's the greatest thing for
> spam since sliced bread. Thanks a bunch for the tip. My ever increasing
> number of unwanted emails is shrinking day by day.
>
> The one thing I wish it would do that it doesn't do:
>
> After calling up the mailer automagically (which is does just fine), I wish
> it would initiate the download...it doesn't do that and when I start Outlook
> Express manually myself, it does automatically start a download. A small
> matter, given what other things the program does, however.

what i do is double click the message and read it in mailwasher if
i'm not sure. then i delete or bounce it. blouncing it, IIRC, puts
the sender on the blacklist. after getting rid of the crap, "Process
Mail", i download the rest into my reader.

you can also set mail washer to start your email app after
processing. with mine "PegasusMail" i have to find a command line
argument because calling the app with it's exe name alone opens a new
mail message.

but i guess that's what you mean. IIRC you need to set OE to download
mail automatically or find a command line argument that does that.

--
Best Regards,
Mike Colasono

5890. Re: Ideas on copper wire stretching and sagging

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-30 20:56:34 UTC
From: mike c <md_removeunderscores_cola@evenlink.com>
Message-ID: <MPG.18028490a512f4149896ab@news.evenlink.com>
Source record: 133831

In article <3d977e89$0$1426$272ea4a1@news.execpc.com>,
danlx@execpc.com says...
> Hi all,
> I came in on this thread late but...
> Has anyone out there tried the fishing line called Fireline? It is
> damn near invisible and can be found in, I think, 50lb test which is
> much thinner than regular mono or nylon. It is very slippery and
> tough. Would work for putting wires through trees with just about
> anything and probably would support wire for a long time. I also have
> used rope with screen door springs to tension and expand when the wire
> is under wind load. They work great. Another thing I have used is a
> few window weights attached to ropes and run through pulleys
> to tension and let the wire move. I never did like the idea of the
> window weights falling on some ones head though. (I am a safety
> director :<)

use a piece of pvc so the weight's inside. don't forget drain holes
or something.

fishing line would be hard to coil and keep neat. i like the 1/4 in
hollow braid poly. stretch it between 2 trees, pull it at midpoint,
tighten it, repeat, leave overnight. that gets the memory out of it.
now you can coil it up. the CATV eye nut is small and heavy and goes
through trees. i can hit a beer can at 25 feet or better with it. use
one of those dog snaps that open outward and don't snag branches as
much. the hollow braid stuff is cool because you can stick the end
back through the rope to make an eye without having to braid. it even
comes in a bag with a polastic i forget what it's called to help
thread it.
--
Best Regards,
Mike Colasono

5891. Re: tower paint

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-30 20:57:56 UTC
From: mike c <md_removeunderscores_cola@evenlink.com>
Message-ID: <MPG.180284dc790ce1299896ac@news.evenlink.com>
Source record: 133832

In article <o0d6pusr9eu48hftgki4r4aashea33icbr@4ax.com>,
kb7qhc@attbi.com says...
> On Thu, 26 Sep 2002 07:19:45 -0400, mike c
> <md_removeunderscores_cola@evenlink.com> wrote:
>
> >
> >but the flexing would be greater at the bottom of the stick which is
> >why a mobile spring base is at the base, not the top. the paint we
> >used in army basic training seemed to have a rubbery feel when dry.
> >it was water resistant an d i got the impression that it would stand
> >up to expansion/contraction well.
> >
> >mike c
>
> Hi Mike,
>
> The tension of the flex is greater at the base, but the flex itself is
> an indication of the resolution of stress into deformation, and that
> occurs well above the base with a vengence

interesting

>- otherwise the structure
> would tip, or break. The spring at the base is a method to overcome
> tip or break (i.e. the base does not flex well at all without it).
>
> 73's
> Richard Clark, KB7QHC
>

--
Best Regards,
Mike Colasono

5892. What gauge wire for Windom?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-30 21:04:55 UTC
From: Max <ve3tmt@yahoo.ca>
Message-ID: <t03m9.4404$Kg4.416280@news20.bellglobal.com>
Source record: 133833

Some diagrams I see say 10 ga. other use 12 ga. I have some 10 ga. here
but it looks awfully heavy. The antenna will be used for field day use.
Can I get away with 14 gauge? Maximum power to antenna will be 100W.

Thanks,

Max

5893. Re: TV antenna for a specific channel?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-30 21:32:45 UTC
From: Bill M <exray@no>
Message-ID: <uphgmuntf31f51@corp.supernews.com>
Source record: 133834

JELo wrote:
>

> I do happen to live in the foothills of a mountainous area
> in Wyoming. I am guessing the clean stations are the ones
> coming from the transmitting towers up on the mountain face
> while the difficult stations are coming off the towers in the
> rolling hills east and far north of town.
>
> Thanks for the info, certainly gave me some things to
> think about , JELo
>
> >
> > Richard Fry, CPBE

You can use this link to find out where the stations are located.
http://www.radiostation.com/kodis/

-Bill

5894. Re: 26MHz CB antenna: OK for 6M?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-30 21:43:04 UTC
From: Tom <truckdrivingman@hotmail.com>
Message-ID: <anaghb$2p4$05$1@news.t-online.com>
Source record: 133835

"Lou" <tech@dp.net> schrieb im Newsbeitrag news:anaaqo$1074$1@news.dp.net...
> The guy asking was being "given" a CB antenna and wanted to try to use it
> for 6 meters. Maybe his funds are limited or "maybe" he wanted to
> "experiment". After all, that is what Ham Radio is all about! Anyone can
go
> "buy" an antenna.

Fully ACK,but playing coy with physics ain't ham radio too,and that's what
the guy wants to do.Of course,everybody can tune any antenna to (almost) any
frequency....

73
Tom

5895. Re: What gauge wire for Windom?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-30 21:46:31 UTC
From: KC1DI <elbc2@gwi.net>
Message-ID: <7ehhpuolocefp1n8qs5c0lmjd3mp7718ur@4ax.com>
Source record: 133836

On Mon, 30 Sep 2002 17:04:55 -0400, "Max" <ve3tmt@yahoo.ca> wrote:

>Some diagrams I see say 10 ga. other use 12 ga. I have some 10 ga. here
>but it looks awfully heavy. The antenna will be used for field day use.
>Can I get away with 14 gauge? Maximum power to antenna will be 100W.
>
>Thanks,
>
>Max

Hi Max and all,
The Size will matter little except for strength.. #14 should work
well for the standard windom of about 136 feet long or so. If it's
for 160 that's 200 feet plus go with the 12 ga.
73 Dave
kc1di // always qrp

5896. Singer NM-25T

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-30 22:01:21 UTC
From: maxshiloh@yahoo.com
Message-ID: <8c7550c8.0209301401.2193664@posting.google.com>
Source record: 133837
Cross-posted to:
rec.radio.amateur.antenna,sci.electronics.equipment,misc.industry.electronics.marketplace,alt.ham-radio.marketplace

3 Singer model NM-25t EMI/RFI recivers for sale. Frequency range of
150Khz to 32Mhz. Detectors include field intensity and Quasi-peak.
It can be run off of AC or internal batteries. 127db dynamic range.
Will be sent calibrated and certified. All three are in extremely
nice pyshical shape. Buyer pays actual shipping charges. Asking
$1500.00 each.

Thank you.

email address: maxshiloh@yahoo.com

5897. Re: Homebrew 6:1 balun?

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-30 22:11:35 UTC
From: richardharrison@webtv.net
Message-ID: <24567-3D98CC17-1@storefull-2317.public.lawson.webtv.net>
Source record: 133839

CAM, W5DXP wrote:
"Why isn`t this solution (transformer) used more in practice? Are ordinary transformers using toroids a lot lossier than 4:1 baluns?"

My speculation is that an ordinary transformer is no lossier than a 4:1 balun. Loss has to come from the core material or the copper coils wound around that core. Some losses are functions of frequency and some are functions of power handled by the transformer and these should be about the same regardless the transformer application. This was for a QRP application so we won`t worry about core saturation. The turns per volt if good enough for the baluns in the example should serve as well for a slightly different ratio. We really haven`t increased current in the primary.

The original questioner referred to Fig 36 on page 26-25 of the 19th edition of the "ARRL Antenna Book". The difference in a 2:1 turns ratio and a 2.5:1 turns ratio only means adding one turn on either side of the center-tapped coil in figure 36. As 1/2 the coil is the 5-turn primary in the balun, and 5 turns of the 6-turn coil on one side of the center-tap is proposed as the primary for the 2.5:1 turns ratio transformer, not much has changed.

Power flow should be the same. Copper and iron losses should be about the same. A slight difference in losses results from a transformation ratio other than 1:1 in an autotransformer, but at the levels involved, I doubt that it`s significant. I haven`t seen many 1:1 autotransformers, but that doesn`t mean they wouldn`t be useful.

I seem to recall an air core r-f transformer problem caused by coupling decline in longer coils. This may be a cause for Q decline and the reason an optimum solenoid is kept fairly short. Is it no longer than 2x the diameter? I forget. But I believe it is a reason coils get link coupled in their mid-sections instead of at their ends.

Coils are not my speciality. Better gualified people might comment on the disuse of air core r-f transformers. The toroids have better permeability and coupling and this must be the reason they are used in baluns.

Best regards, Richard Harrison, KB5WZI

5898. Re: Singer NM-25T

Newsgroup: rec.radio.amateur.antenna
Date: 2002-09-30 22:31:10 UTC
From: Fred Hambrecht <w4jle@charter.net>
Message-ID: <uphk5iabp49e1b@corp.supernews.com>
Source record: 133838
Cross-posted to:
rec.radio.amateur.antenna,sci.electronics.equipment,misc.industry.electronics.marketplace,alt.ham-radio.marketplace

Wow! I haven't seen one of these since the 70's.
As I remember these were actually made by Stoddard.

"max" <maxshiloh@yahoo.com> wrote in message
news:8c7550c8.0209301401.2193664@posting.google.com...
> 3 Singer model NM-25t EMI/RFI recivers for sale. Frequency range of
> 150Khz to 32Mhz. Detectors include field intensity and Quasi-peak.
> It can be run off of AC or internal batteries. 127db dynamic range.
> Will be sent calibrated and certified. All three are in extremely
> nice pyshical shape. Buyer pays actual shipping charges. Asking
> $1500.00 each.
>
> Thank you.
>
> email address: maxshiloh@yahoo.com